EFFECTS OF ROPES COURSE THERAPY ON INDIVIDUAL PERCEPTIONS OF THE CLASSROOM ENVIRONMENT

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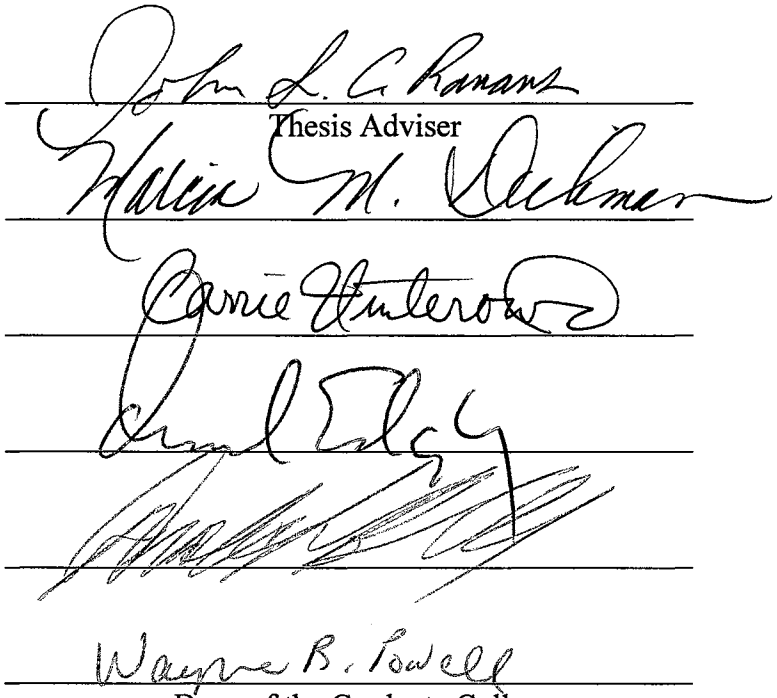

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Trust in God!

Believe in yourself!

Dare to dream!

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Over the course of the past twenty years, adventure-based education has gained extensive acceptance (Bacon & Kimball, 1989; Capron, 1991). Outward Bound and Project Adventure, the original founders, have been instrumental in advancing the adventure-based education field to a noteworthy level.

More recently, the adventure-experiential model, has found its way into a variety of clinical and nonclinical populations in a wide range of settings, including schools, hospitals, businesses, and community agencies (Blanchard, 1993). Such programs have proven to be effective with adolescents to increase responsibility, enhance self-esteem, develop trust, and increase pro-social behaviors (Gass, 1993). These programs have assisted many participant to improve awareness of self, develop self-confidence, and build self-reliance. Coupled with excitement and a challenging activity, the adventure experience provides a means for the participant to express and achieve success, to develop self-confidence, and to increase personal growth (Schoel, Prouty, & Radcliffe, 1988).

Researchers have often reported the positive results of community-based adventure activities for a host of individuals, including: juvenile delinquents, underprivileged adolescents, adults, college-age students, and emotionally disturbed

adolescents (Gibson, 1979; Hunter, 1987; Munson, Stadulis, & Munson, 1986, Ongena, 1982; Schoel et al., 1988; Smith, 1984; Voight, 1988; Witman, 1987; Zook, 1986). Additionally, many professionals from different disciplines have considered adventure-based programs to be creative and extremely useful (Berman & Davis-Berman, 1989; Stich & Senior, 1984). Therefore, as programs have increased over the years, adventure therapy has been beneficial in variety of settings, particularly in the school systems where it is viewed as a legitimate treatment modality (Gass, 1993).

The literature describes a variety of programs and research projects which project positive effects from adventure and ropes course programs (Grass, 1993). Further, experiential education programs relate to success in education, advancing positive social skills and behaviors, and increasing positive self-concepts. Founded in the educational theory of Kurt Hahn, these programs have been established in all levels of education.

One of the most common forms of adventure-based counseling found in the school system is the ropes course, due to its ease of availability and length of treatment (Gass, 1993). The ropes course consists of a series of structures and obstacles that is very similar to a military obstacle course. It is designed to facilitate activities that are challenging to the participants. Through the success and mastery of performance-based situations, participants are able to discover previously unrecognized inner strengths and resources, to increase their sense of personal confidence, and to raise mutual support within a group (Gass, 1993).

Although there has been a large amount of expectancy and notoriety of adventure-based education in the past, current research in the area is mixed and many researchers question whether their is enough empirical support to substantiate the validity of these

programs. Obviously, further research in this area needs to be conducted to support these interventions and up-build its theoretical basis, particularly within the domain of at-risk adolescents (Hunter, 1987).

The present study examined the impact of an experiential intervention program used in a school setting as a means to improve favorably the classroom environment. Three groups were used: two experimental groups and a control group. The first experimental group consisted of at-risk adolescents and their teachers who participated in a ropes course program together. The second experimental group consisted of at-risk adolescents who took part in a ropes course program without teacher participation. Finally, the control group consisted of at-risk adolescents who did not participate in a ropes course program. Variables examined for impact by the intervention were individual perceptions of classroom environment before treatment and four weeks following the ropes course program.

The rationale for using the two different treatment groups stemmed from research that has consistently indicated that the classroom climate is created by the teacher and is determined primarily by teacher-student relationships (Allen, 1984; Ames,1992; Conant, 1992; Emmer, 1986; Fraser, 1987; Mickle, 1990). Therefore, it was necessary to understand the influence, if any, a teacher's participation with his/her students in the ropes course program may have had on a student's individual perception of the classroom environment.

Significance of the Study

Over the past twenty years, adventure programs have developed into wilderness programs, leisure courses, and therapeutic, corporate, and educational programs. Despite their increasing popularity, little empirical data exists to validate substantially the effectiveness of these programs as therapeutic tools. Much of the literature has been based exclusively on Outward Bound experiences (Blanchard, 1993; Capron, 1991; Roland, Keene, Dubois, & Lentini, 1989). However, many professionals have acknowledged that these programs which incorporate ropes course activities have positive and often dramatic benefits to many individuals (Bacon & Kimbal, 1989; Berman & Davis-Berman, 1989; Capron, 1991; Kaplan & Talbot, 1983; McBride, 1985; Teaff & Kablach, 1987; Wright, 1987). Braverman, Brenner, Fretz, and Desmond (1990) have pointed out that "while many ABC proponents believe that these popular programs inspire change in their participants, there is a widely felt growing need to learn more about them in a systematic way" (p. 23).

An overview of the current research in this area revealed many articles and abstracts describing the personal benefits and emotional experience of the participants (Allen, 1984; Long, 1987; Nicholson, 1986; Stremba, 1989); however, few authors have invested the time and effort necessary to provide solid empirical data to adventure-based education (Gass, 1993). Additionally, the majority of these studies examined treatments that involved multifaceted programs in which the ropes course was only one aspect of the therapy (Schoel et al., 1988). Ultimately there is a great need to look at ropes course therapy as a separate entity. Finally, much of the existing research has focused on

adventure-based counseling and education programs in which ropes elements impact self-concept and locus of control in a wide variety of populations (Gass, 1993). Few studies have investigated the ropes course as impacting team building and relationship interaction, particularly as they relate to dynamics of the classroom environment. Further, no previous studies related to this area of classroom environment has incorporated a control group in their research. Consequently, this study provides empirical support for the treatment benefits of the ropes course program as it relates to the classroom environment. Ultimately, this research is important because consistently strong associations have been found between student learning outcomes and the nature of the classroom environment (Haertel, Walberg, & Haertel, 1981).

This lack of research on ropes course programs in the area of team building and relationship interaction, particularly with the classroom environment, leads to the question: "Is there measurable change in students' individual perception of classroom environment when students participate in a ropes course program or when students and teachers participate together in a ropes course program?" This question is salient for two reasons. First, many education and treatment facilities are using ropes course programs. Research that isolates the effectiveness of this modality can be used to educate practitioners of the nature of change with regard to ropes course programs, and, therefore, to provide a knowledge base for future treatment. Secondly, studies on ropes course programs may allow professionals in the counseling field to obtain funding that would not only allow a greater number of individuals to be served but also permit the execution of more extensive research.

In conclusion, all local and stated agencies presently using adventure-based programs and those considering the implementation of such programs in the future should incorporate into their policy and decision making processes conclusive data concerning the costs and benefits of these programs. Therefore, as local and state agencies use adventure-based alternatives, and, in light of the apparent absence of sound evaluative data on the impacts of these programs, the need for research in this area is clear, particularly in relation to classroom environment.

Statement of the Problem

There are many problems and issues confronting youth in today's complex society including social problems, poverty, dysfunctional family life, lack of positive role models, poor medical care, inadequate diet, substance abuse, suicide, teen-pregnancy, runaways, and criminal activity. Whether labeled troubled youth or at-risk, these children are having difficulty functioning according to societal standards in some area of their lives. Teenagers confronted with these problems and stresses have little chance of completing high school. The majority of these youth will drop out of school prior to graduation. Statistics from the U.S. Department of Education (1987) highlight this problem by indicating a nationwide dropout rate of 30%. The dropout rate is estimated to be even higher, up to 50%, in urban environments where poverty is concentrated.

Given these statistics, educators, politicians, and researchers raise serious questions concerning the performance and responsibility of the nation's schools, particularly as they relate to the "at-risk" learner (Conant, 1992). As mentioned above, many of the characteristics underlying the "at-risk" learner are complex and outside the

control of the school. Nonetheless, many people maintain that the obligation of the school is to serve these students in ways that are helpful, while avoiding practices that can enhance the student's problems (Fraser, 1989). Unfortunately, the recent pressure put on schools to have their students perform well on academic achievement test has encouraged classroom teachers to focus more on immediate learning outcomes and less on classroom structure, which increases the alienation and frustration of the "at-risk" learner. (Goodlad, 1984). Therefore, decisions concerning classroom organization are made without an understanding of the role played by classroom climate toward academic achievement. This is especially important when teaching the "at-risk" learner.

Many state and private agencies are attempting to develop the type of programs that best meet the educational needs of these "at-risk" youth. Some educational researchers like Conrad & Hedin (1982) emphasize that students need real experiences as a means of giving value to the skills and concepts which are taught in school. This methodology has come to be termed "experiential education." Experiential education is based on the premise that "in real-life situations students will learn to recognize their successes and failures, their challenges and responsibilities, and the consequences of their action or inaction. Life's situations are real, as are the lessons it teaches" (Conrad & Hedin, 1982, p. 57). One clear method used to provide this type of treatment is the use of experiential programs in the school systems.

The purpose of the current research was to evaluate an experiential program conducted by Tulsa Youth Services that attempts to create a classroom environment that diminishes the risk factors involved in learning for at-risk students and, as a result, increases the students' level of academic achievement. If therapeutic programs such as this

are going to be seen as viable treatment approaches to this problem, more research is needed to support their utilization.

Purpose of the Study

The purpose of the study was to determine if the treatment of a ropes course program could affect individual perceptions of classroom environment. More specifically, the study measured the adventure program's impact on individual perceptions of classroom environment in a formal educational environment.

Research Questions

This study investigated the effects of ropes course intervention on classroom environment. The following questions are addressed:

Research Question 1a:

Is there a significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the first treatment group (youth with teacher participation) regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 1b:

Is there a significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the first treatment group (youth with teacher participation) regarding individual perceptions of the Personal

dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 1c:

Is there a significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the first treatment group (youth with teacher participation) regarding individual perceptions of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 2a:

Is there a significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the second treatment group (youth without teacher participation) regarding individual perception of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 2b:

Is there a significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the second treatment group (youth without teacher participation) regarding individual perception of the Personal dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 2c:

Is there a significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the second treatment group

(youth without teacher participation) regarding individual perception of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 3a:

Is there a significant difference between pre-test and post-test scores of those students who are in the first treatment group (youth with teacher participation) and the second treatment group (youth without teacher participation) regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 3b:

Is there a significant difference between pre-test and post-test scores of those students who are in the first treatment group (youth with teacher participation) and the second treatment group (youth without teacher participation) regarding individual perceptions of the Personal dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 3c:

Is there a significant difference between pre-test and post-test scores of those students who are in the first treatment group (youth with teacher participation) and the second treatment group (youth without teacher participation) regarding individual perceptions of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 4a:

Is there a significant difference between pre-test and post-test scores of the control group regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 4b:

Is there a significant difference between pre-test and post-test scores of the control group regarding individual perceptions of the Personal dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 4c:

Is there a significant difference between pre-test and post-test scores of the control group regarding individual perceptions of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 5a:

Is there a significant difference between pre-test and post-test scores of the first treatment group (youth with teacher participation) regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 5b:

Is there a significant difference between pre-test and post-test scores of the first treatment group (youth with teacher participation) regarding individual perceptions of the Personal dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 5c:

Is there a significant difference between pre-test and post-test scores of the first treatment group (youth with teacher participation) regarding individual perceptions of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale?

Research Question 6a:

Is there a significant difference between pre-test and post-test scores of the second treatment group (youth without teacher participation) regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by Classroom Environment Scale?

Research Question 6b:

Is there a significant difference between pre-test and post-test scores of the second treatment group (youth without teacher participation) regarding individual perceptions of the Personal dimensions of the classroom environment as measured by Classroom Environment Scale?

Research Question 6c:

Is there a significant difference between pre-test and post-test scores of the second treatment group (youth without teacher participation) regarding individual perceptions of the Systems dimensions of the classroom environment as measured by Classroom Environment Scale?

Hypotheses

Data for this study were collected from institutional records and from evaluations administered in the classrooms of participating schools. The hypotheses were tested one week before and four weeks following participation in a ropes course. A statistical significance level of .05 was used for this study. The following hypotheses were tested:

Hypotheses 1a:

There will be no significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the first treatment group (youth with teacher participation) regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale.

Hypotheses 1b:

There will be no significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the first treatment group (youth with teacher participation) regarding individual perceptions of the Personal dimensions of the classroom environment as measured by the Classroom Environment Scale.

Hypotheses 1c:

There will be no significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the first treatment group (youth with teacher participation) regarding individual perceptions of the Systems

dimensions of the classroom environment as measured by the Classroom Environment Scale.

Hypotheses 2a:

There will be no significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the second treatment group (youth without teacher participation) regarding individual perception of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 2b:

There will be no significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the second treatment group (youth without teacher participation) regarding individual perception of the Personal dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 2c:

There will be no significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the second treatment group (youth without teacher participation) regarding individual perception of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 3a:

There will be no significant difference between pre-test and post-test scores of those students who are in the first treatment group (youth with teacher participation) and

the second treatment group (youth without teacher participation) regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 3b:

There will be no significant difference between pre-test and post-test scores of those students who are in the first treatment group (youth with teacher participation) and the second treatment group (youth without teacher participation) regarding individual perceptions of the Personal dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 3c:

There will be no significant difference between pre-test and post-test scores of those students who are in the first treatment group (youth with teacher participation) and the second treatment group (youth without teacher participation) regarding individual perceptions of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 4a:

There will be no significant difference between pre-test and post-test scores of the control group regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 4b:

There will be no significant difference between pre-test and post-test scores of the control group regarding individual perceptions of the Personal dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 4c:

There will be no significant difference between pre-test and post-test scores of the control group regarding individual perceptions of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 5a:

There will be no significant difference between pre-test and post-test scores of the first treatment group (youth with teacher participation) regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 5b:

There will be no significant difference between pre-test and post-test scores of the first treatment group (youth with teacher participation) regarding individual perceptions of the Personal dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 5c:

There will be no significant difference between pre-test and post-test scores of the first treatment group (youth with teacher participation) regarding individual perceptions of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 6a:

There will be no significant difference between pre-test and post-test scores of the second treatment group (youth without teacher participation) regarding individual

perceptions of the Relationship dimensions of the classroom environment as measured by Classroom Environment Scale?

Hypotheses 6b:

There will be no significant difference between pre-test and post-test scores of the second treatment group (youth without teacher participation) regarding individual perceptions of the Personal dimensions of the classroom environment as measured by Classroom Environment Scale?

Hypotheses 6c:

There will be no significant difference between pre-test and post-test scores of the second treatment group (youth without teacher participation) regarding individual perceptions of the Systems dimensions of the classroom environment as measured by Classroom Environment Scale?

Definitions

Adventure-based counseling (ABC)

Drawing from the experience and theoretical basis developed by Outward Bound, adventure-based counseling incorporates the use of challenging and carefully designed activities with group processing to create a positive environment that supports psychological development (Project Adventure, 1991). Adventure-based counseling combines goal-setting, trust building, physical and mental challenge, peak experiences, problem solving, and fun within an outdoor group setting. One of the main goals of adventure-based counseling is the acquisition of problem-solving skills and personal

growth (Bacon & Kimball, 1989; Schoel et al., 1988). Examples of adventure programming include backpacking, rock climbing, ropes courses, and river rafting.

Ropes Course

The ropes course is an adventure-based program that uses a series of obstacles made of rope, cable, and wood to facilitate group cooperation and individual survival. The physical appearance of a ropes course is similar to that of an obstacle course used by the military. The course is designed to facilitate activities that offer a varying degree of involvement, difficulty, and perceived risk. These activities range from group-building games requiring no props to high elements that are perched high above the ground. Each activity is presented as a problem to solve or a goal to reach. Other names such as "challenge course" or "team course" are sometimes substituted for the ropes course. A more detailed description of the course is outlined in the methods section (Gass, 1993).

At-risk

An at-risk student is one who exhibits a wide range of educational problems which have been determined by the school district to be a drop-out risk including the failure to respond positively to the instruction offered in basic academic skills, the manifestation of unacceptable social behavior in school, the inability to keep up with their classmates in academic subjects, a limited repertoire of experiences that provide background for formal education, past patterns of absenteeism, or poor academic performance (Wasylyshyn, 1988).

Students were considered to be at-risk if they possessed one or more school characteristics associated with dropping out of school. These characteristics included: (a) lack of credits (less than the required amount designated for that grade level), (b) past

patterns of absenteeism (a total that puts the student in jeopardy of being suspended from school, usually more than 4 unexcused absences), (c) poor academic achievement (grade point average lower than 1.7), and (d) past conduct problems (behavior that has resulted in at least one in-school suspension). These characteristics were designated by authorities within the school districts studied and students had been previously assigned to these at-risk classrooms prior to the enrollment in the ropes course program.

Classroom Environment

The classroom environment is the general atmosphere of the classroom as perceived by students and teachers (Harwood, 1992). For the purpose of this study, classroom environment will be defined operationally as scores on the Classroom Environment Scale (Moos & Trickett, 1987).

Summary

The focus of this study centered on the ropes course program, used as an intervention for at-risk adolescents within the school system, and its potential impact on the classroom environment. The research problem was identified as the discrepancy between claims made about the positive impact that ropes course programs have on the classroom environments and the failure of research findings to empirically support such claims. Ultimately, this study investigated the effects of a ropes course program on at-risk adolescents, in terms of classroom environment.

Organization of the study

Chapter 1 has identified issues relevant to the study of ropes course programs as it relates to the classroom environment. The need for this statistical evaluation of the relationship between a ropes course program and the classroom environment has been discussed. The significance of the current study was outlined as well as the specific questions to be addressed. Chapter 2 contains an overview of the literature related to ropes course programs. This review provides an overview of the history and theoretical foundations for the ropes course, the rationale for the selection of the individual perceptions of the classroom environment, the research related to classroom environment, and the empirical research associated with experiential education. Described in Chapter 3 are the procedure and design of the study including a description of the sample, instrument used, data collection methods, and the method by which the data was analyzed. Chapter 4 consists of the presentation of the results. Chapter 5 provides a summary and discussion related to the results, limitations of the current study, and recommendations for further research.

CHAPTER II

REVIEW OF THE LITERATURE

Over the past 20 years an enourmous amount of research has accumulated regarding the effects of adventure-based programs. Much of the research has been focused on the success of Outward Bound programs; however, resent studies have centered on ropes course therapy. A review of the historical and theoretical foundation of therapeutic outdoor programs is presented. The review is intended to familiarize the reader with the varied experiential adventure programs directed toward students and to summarize programs effectiveness on specific outcomes measures.

Through the years, educational programs have been created, curriculas modified, and appropriate concepts adopted by different areas of study. The literature relating to experiential education is an example of diverse programs, needs, and goals. Because the literature is diverse, this review will highlight specific programs and areas of emphasis that focus on ropes course therapy.

Additionally, this chapter provides background information regarding experiential education and how it relates to classroom environment. A survey of the relevant research literature is provided. A summary concludes Chapter 2.

History

Ropes course therapy was primarily derived from Outward Bound, a wilderness challenge program dating back to 1941. It was during this time in Aberdovey, Wales, that the first Outward Bound school began as an instrument to prepare young seamen for the hazards of maritime service. The foundational philosophy of this school was generated from a German educator named Kurt Hahn (Schoel et al., 1988). Hahn was the founding headmaster of the Salem School in southern Germany which utilized the educational concepts of experiential learning. His educational philosophy focused on developing a student's inner resources through both physical and mental challenges. During the rise of Hitler, Hahn was forced to leave the country for sanctuary in Scotland due to his Jewish heritage. There he founded a school that implemented his experiential learning styles of teaching and eventually developed into a training facility for enhancing young British seamen's chances of surviving the dangers of war by promoting inner character and survival skills (Zook, 1986). The popularity of the program grew worldwide and many schools were established with the same principles. By 1979, there were 34 Outward Bound Schools around the world and many more programs that followed the same experiential philosophy (Gass, 1993).

In 1971, Jerry Pieh, the principal for a large Massachusetts High school, decided to incorporate the Outward Bound teaching philosophy into the traditional school system (Gass, 1993). Utilizing his principles within the school setting was always the central idea and dream of Kurt Hahn. Pieh and his staff developed a curriculum that could be incorporated into a school setting by trained personnel.

Implementation of Outward Bound into the school structure was not easy because most programs were designed to last 23 to 28 days. This lengthy format was not practical for most schools. Therefore, Pieh and a colleague named Gary Backer submitted a proposal to the Federal Office of Education and received a substantial three-year grant to pursue the project of adapting the Outward Bound program to meet the needs of the school system (Rohnke, 1989).

Project Adventure was chosen as the new name for the program, which focused on wilderness experiences for high school students. The program applied adventure activities that included and adapted many elements of the Outward Bound ropes course. The intention of the program was for participants to "achieve gains in personal and group goals related to outdoor activities as well as having the opportunity to master stressful situations, to improve awareness of self, and to develop self-confidence, self-reliance, cooperation, and awareness of others" (Marsh, Richards, & Barnes, 1986, p. 201).

Through grant moneys, research, and training, Project Adventure exploded across the country, becoming a sweeping success. Due to this enormous growth, Project Adventure is recognized as one of the leading educational curriculum-based adventure programs in the world (Little, 1987). Project Adventure became so popular that by 1982 more than 5,000 educational professionals and more than 500 educational institutions were using some form of the original model (Schoel et al., 1988).

Due to the success and popularity of Project Adventure, an experiential model of outdoor therapy was developed called "Adventure Based Counseling" (ABC). Adventure Based Counseling consists of a mixture of experiential learning, outdoor education, and group counseling techniques. Based on the original theories of Outward Bound,

adventure-based counseling can be adapted to almost any setting where group work is practiced (Gass, 1993).

Over the past 15 years many agencies have begun using ropes course programs based on the principles of the ABC model and designed to meet the needs of different populations. Many large corporations have benefited from using ropes courses to train executives in stress management, team-building, problem-solving, and personal management (Long, 1987). Additionally, family therapy practitioners have found ropes courses to be very useful in treating the dysfunctional family systems through a creative and physically active technique (Bandoroff, 1990).

Juvenile offender programs have used ropes courses to improve self-concept, locus of control, and pro-social behavior with teens who are on probation or are participants in a diversionary program for first time offenders. Other courts are using ropes courses and adventure programming as a last chance treatment program where the only alternative for the youth is incarceration (Schoel et al., 1988).

Another large area of growth for ropes courses has been in the area of residential treatment centers. Hospitals and treatment facilities have invested a lot of money into building their own ropes course and training their own personnel to administer the program. In many hospitals across the country, ropes courses have become a regular part of the treatment program (Cohen, 1989; Schoel et al., 1988).

Finally, as Kurt Hahn wished, schools have continued to use ropes courses and other adventure-based programs as a significant part of the school curriculum. Some schools have even made the ropes course a regular part of a student's experience in the physical education department. Some schools have incorporated ropes courses into their

alternative education programs for students who do not do well in the traditional classroom (Schoel et al., 1988). Other school systems are using ropes courses as part of their drop-out prevention programs (Wasylyshyn, 1988).

Obviously, Adventure Based Education has been extensively developed across many modalities and the trends in research reflect the direction programs have taken since their emergence. Some of these research efforts and thoughts associated with adventure education will be discussed in the following sections.

Theoretical Basis for the Ropes Course

The theoretical basis of ropes course activities can be traced back to the principles of experiential education (Kraft, 1990). These principles, as explained by Crosby (1981), have their roots in classical ideas of educational philosophy, dating back to Socrates. These are the most fundamental beliefs associated with learning. For example, work by Piaget (1959) and Lewin (1936) maintained that through concrete experiences one learns how to think and adapt to a complex society. Therefore, this mode of learning is essential to survival.

Consequently, developers of experiential learning programs believe that learning and/or behavior change can not take place without the incorporation of concrete experiences (Dewey, 1963; Gass, 1993). The Hahnian approach to education not only incorporates this experience-centered focus but also embodies ideas related to these values.

In spite of wide variation among experiential adventure programs, there are five important common principles that form the underlying conceptual framework of these

types of programs (Kimball, 1983). First, stress has been examined as one of the primary principles underlying Adventure programs. Kalisch (1979) described the anxiety-producing effects of Outward Bound as a critical factor in the whole process determining whether successful learning will take place or not. He stated that "unless a student experiences enough anxiety to put their confidence in doubt, they will probably not put forth much energy to make any changes in themselves" (p. 53). Therefore, the anxiety produced from the experience throws the individual into a state of dissonance, providing a rich opportunity for change.

Researchers like Abraham Maslow (1968) maintained that these "peak experiences" were necessary for individuals to realize their real potential. Maslow (1968) asserted that perceived risk situations intensify feelings and perceptions which allows that individual to become fully functioning and ultimately unifies them with others.

The second common principle identified as important in adventure programs is its orientation toward action and experience as opposed to didactic and verbal processing. Kimball (1983) noted that adventure programs work on the assumption that attitude change follows behavior change. Thus, these programs are primarily action-oriented, intervening in ways that help the participant confront misguided beliefs and unsuccessful behavior patterns. Consequently, action provides therapists the opportunity to observe behaviors and then implement interventions that influence positive change. This type of action-oriented approach is much more captivating for adolescents than traditional models of talk therapy. Adolescents have a natural attraction for activities that are exciting and dangerous. Consequently, therapies that expose adolescents to natural consequences are

more successful. Further, adolescents usually are aversive to adult authority and prefer to learn in an environment conducive to peer interaction.

The third central principle of adventure programming focuses on putting an individual in an unknown environment that is new and unusual. Removing an individual from his/her common environment forces them to learn new skills in order to adapt. All preconceived notions about how to respond to situational problems are rendered useless, leaving room for opportunities to develop new ways of relating and resolving problems. Thus, the "unfamiliarity of the adventure environment provides an opportunity for increased emotional arousal and access to constructive anxiety" (Bandoroff, 1990, p. 31). Minuchi and Fishman (1981) described this process as an important therapeutic tool that is difficult to achieve in traditional therapy situations.

The fourth key principle of adventure programs emphasizes the fact that these experiences are ultimately centered on the group process. Through the process of presenting a series of physically challenging activities that require the cooperation of the whole group, participants develop their abilities to interpersonally communicate, resolve conflicts, and trust others in the group. This type of emotional bonding with peers creates an openness for personal growth and evaluation (Greene, 1988). Kimball (1983) noted that it is the cohesiveness of the group that creates an atmosphere conducive to the honest sharing of feelings. Frant, Roland, and Schempp (1982) stated that "improvement in socialization skills, interpersonal relationship skills, and level of independence" are specific goals of an adventure education program (p. 146).

This type of group influence is best understood in Yalom's (1970, 1975, 1985) model of interactional group psychotherapy. In all of Yalom's work on group therapy, he

emphasizes that the key therapeutic factor leading to human change is "interpersonal learning." This is understood in the group setting as being the process of reality testing and consensual validation. This consists of receiving feedback from group members regarding one's behavior and learning successful ways of relating to other group members.

Yalom's (1985) model also identified eleven curative or therapeutic factors that are the mechanisms of change. Of these eleven factors, cohesion and universality are best represented in the experiential literature (Blanchard, 1993). Cohesion refers to the attraction and the sense of belonging members have for the group and other group members. With the acceptance, support, and feelings of being cared for and understood in the group, members are more likely to express and explore unknown and unacceptable parts of themselves (Yalom, 1985). Therefore, group cohesiveness sets the stage for change. Universality is the realization that "we are not alone," that other group members have similar problems and feelings. Many youth go through life with a sense of isolation, convinced that they are unique with distinctive stressors. In a group, the disconfirmation of a youth's sense of uniqueness comes as a powerful relief. Students are relieved to find out that they are not alone, that some of their problems are "universal," and that other group members share the same dilemmas leading to a greater desire to change.

Developmental theorist such as Erikson (1950) have described the importance of this type of interpersonal relating and the impact it has on psychological development during adolescence. Likewise, social learning theory (Bandura, 1977) emphasizes the importance of the ability to utilize relationships in the context of learning.

Finally, adventure programs elicit many opportunities for individual and group success. This type of success orientation produces an atmosphere favorable to optimism

and positive change. Success is built upon success. Consequently, participants are less likely to be resistant and more prone to put effort into altering self-perceptions (Gass, 1993).

These five principles are woven into all adventure-based programs and are the catalyst for change. Additionally, all programs in some way place an emphasis on the following dimensions: relationships, group identity, problem solving, physical challenge, and self-growth.

Research in Experiential Education

The research available regarding experiential education and adventure programming is diverse, covering a wide range of categories and populations. The majority of literature deals with the Outward Bound experience. This is understandable since it is the basis by which all other programs were founded. Teachers, executives, mental patients, college students, and those attending the general Outward Bound programs are written about most often (Schoel et. al., 1988). Most studies are short term and utilize no comparison groups. Pre- and post-testing of participants is most common. Very few programs administer a follow-up measure (Hunter, 1987). Many studies show significant changes in the areas studied. Some simply show a trend in a positive direction, and even negative results have been reported (Corsica, 1987; Sturdivant, 1990; Washburn, 1988). A sampling of studies follows.

In Ewert's (1987) summary of the past fifteen years of research in the field of Adventure Programming, he concluded that "experiential education research needs more sophisticated research methods, explanatory and replicable designs, and program issues

that address the optimal mix of activities to place in a course" (p. 5). These early research studies on Outward Bound-type programs often yielded conflicting results due to methodological problems and a lack of statistical sophistication. Despite praiseworthy claims, problems in research designs and techniques have led many to question to what extent change can be attributed to outdoor adventure activities for individuals and groups. The most common charges against objective data in adventure education research are that it lacks control groups for comparison, researchers often examine too few subjects, and they use weak measures in testing strategies (Ewert, 1983; McBride, 1985; Young, 1981). Others report problems of inadequate analysis of data and follow-up studies (Rife, 1984).

One of those who questioned the validity of adventure-based programs was Shore (1977), who critiqued over 80 studies related to the effects of Outward Bound Programs. In his study, Shore concluded that self-concept was not consistently affected by the adventure-based program. He further asserted that past studies in this field were spoiled with poor methodology and research designs. Although, Shore found a lot of studies noting positive outcomes, he cautioned readers to be skeptical about the empirical foundation by which the results were formulated.

In a study examining 72 studies of traditional Outward Bound type programs using meta-analytic techniques, Burton (1981) determined that out of the studies analyzed, 68% of them reflected positive outcomes and 32% reflected non-significant outcomes as a result of Outward Bound treatment. Both Burton (1981) and Shore (1977) emphasized that enough global efficacy studies had been done and that the field should focus on specific variables influenced by the program.

Agreeing with these assertions, Warner (1986) maintained that research literature in experiential education over the past 25 years focused too heavily on face validity, rather than build an empirical basis through quantitative data. He contended that most of the studies he looked at based their positive findings on the personal observations of program developers.

Supporters of adventure-based programs have claimed that there are distinct benefits and values derived from participation in experiential programs (Bacon & Kimball, 1989; Rourke, 1991). Perhaps the most cited benefits of these programs are the building of character (Roberts, White, & Parker, 1974), self-concept (Conrad & Hedin, 1982; Schoel et al., 1988; Washburn, 1983), and internal locus of control (Blanchard, 1993).

It is important to note that most of the studies cited above involved complete Outward Bound programs. Studies limited to ropes course experiences are more rare. One of the earliest extensive research studies on the effects of a ropes course experience was conducted by Project Adventure (1991) from 1980 through 1983. This study examined a ropes course experience within the public school systems of Massachusetts. The Tennessee Self-Concept Scale, the Piers-Harris Children's Self-Concept Scale, and a student attitude inventory were used as evaluation instruments. The results indicated significant positive effects related to self-concept and a significant reduction of anxiety (Schoel et al., 1988).

Like the Project Adventure (1991) study, several researchers examining the effects of adventure-based programs have utilized the self-concept scale as the primary dependent variable measure. Washburn (1983), who took a sample of college students, measured the impact of a high-risk ropes course program on individual perceptions of self-concept. She

found no significant difference between pre-test, post-test, and follow-up test groups. Additionally, Sturdivant (1990) found similar results when she looked at the effect of the ropes course on self-concept and affective behavior of college freshman.

Likewise, Corsica (1987) studied the effects of a one-week Neurolinguistic Programming High Ropes Course Camp on inner city youths at risk. Corsica found no statistically significant differences in self-concept or locus of control as measured by the Piers-Harris Children's Self-Concept Scale and the Nowicki-Strickland Locus of Control Scale.

In a study looking at a high school Project Adventure program, Pauling (1985) highlights positive statements made by school officials who believed that the program increased self-confidence, enthusiasm, and self-motivation in the students that participated. In a similar way, Bunting (1982) addressed five benefits of an Adventure program implemented with junior high students, these included: emotional release, social interaction, expanded perspectives, expanded personal limits, and singleness of mind or attention. Similar to most of the research cited above, these outcomes appeared to be the result of the researchers personal experience and observations, rather than reporting the empirical data.

Educational Benefits

After researching most of the studies related to adventure-based counseling, it is interesting to note that relatively few address its educational benefits, which is ironic since one of Kurt Hahn's main goals when developing his early program was to enhance academic achievement. The research connected with the educational benefits of adventure

programs focuses on the areas of academic achievement and school performance which are often studied in conjunction with self-concept and recidivism. Ewert (1983) in referring to Childs' (1980) study stated "a high positive self-concept does not cause high academic achievement, but is a necessary personal quality for this achievement, and a high self-concept does not guarantee high scholastic achievement" (p. 7).

In a study evaluating Project Adventure as a treatment modality for high school seniors, Fersch and Smith (1973) reported that the areas of achievement motivation and concerns increased significantly for females only. Fersch and Smith suggested student/teacher feelings of closeness developed because of Project Adventure. Additionally, in a project called Project Apollo, Hess (1973) studied 252 high school students from low income families subjected to courses in adventure activities ranging from 4, 7, and 14 days in length. Using the "How I See Myself Test" and an "On Site Achievement Test," results indicated academic achievement increased for all groups, as measured by grade point average. Hess also reported student self-concept increased especially in the areas of better regard for teachers, better emotional control, and better peer interpersonal relationships.

However, the validity of much of this research has been problematic due to the lack of control groups for comparison and the use of weak measures in testing strategies. The number of participants used in these studies also indicates problems. The instruments were administered to a small population creating statistical power difficulties and thereby calling results into further question (Shore, 1977). Further, all of these studies appear to be based on the author's personal experiences with these interventions, rather than on available research data. Many of these studies reported qualitative data that were

collected from surveys administered to participants (Gass, 1993). Additionally, the research cited above did not isolate the ropes course component of the program, limiting our understanding of the effects it may have on these variables. Clearly, there is a need for more rigorous research on ropes course programs that are integrated into school systems.

Finally, considering the ABC model's emphasis on cooperative interaction, trust, and supportive behaviors (Rohnke, 1990; Schoel et al., 1988), there has been remarkably little research reported that examines a participant's ability to participate successfully in interpersonal relationships and function within the context of the social group. It is also noteworthy that there have been no studies published specifically on the relationship of ABC programs and classroom environment.

Classroom Environment

The concept of learning environment has appeared with increasing frequency in the educational literature over the last decade (Fisher & Fraser, 1991). Research has supported that there is a close relationship between students' cognitive learning outcomes and their perceptions of classroom environment (Fraser, 1989; Linney & Seidman, 1989). Therefore, these characteristics of perceptions of classroom environment provide important process criteria of curricular effectiveness (Walberg, 1975). As Clark (1988) summed up: "The environment has far more impact than we previously assumed" (p. 323). With this knowledge, steps can now be taken within schools to address the learning environments of all students in an effort to meet their learning needs.

Early attempts to work within the context of the classroom environment include the works of Anderson (1939) and Whitehall (1949). Both researchers agreed with the

concept that the classroom is the mechanism by which students develop interpersonally and educationally. Subsequently, these classrooms have distinct environments which mediate this development. Anderson and Whitehall's work centered on the identification and construction of categories which coded teacher verbal behaviors as determiners of the classroom environment.

Much of the research regarding the classroom environment asserts that the environment is created significantly by the teacher and is determined primarily by student-teacher relationship (Nighswander, 1988). According to Schultz (1982), students' perceptions of classroom environment involved perceived teacher support. This is greatly influenced by the degree to which teachers talk openly with students and show genuine interest in their ideas. Conant (1992) stressed that teachers can develop positive student attitudes and values by "respecting students, accepting them as worthy individuals, and communicating with them" (p. 11).

Fry and Coe (1980) conducted a study which identified connections between classroom climate and academic motivation. They found that classes with less active and involved teachers were associated with students who reported significant negative feelings about school and less interest in learning and self-improvement. Likewise, Emmer (1986) looked at the effects that different classroom management programs had on discipline referrals, learning, and student attitudes toward school, and found that classroom management programs which had a more humanistic approach were related to greater achievement.

Finally, Haertel, Walberg, and Haertel's (1981) extensive meta-analysis involving 734 correlations from a total of 12 studies from 823 classes with over 17,000 students in

four nations revealed staggering results showing consistently strong associations between student learning outcomes and the nature of the classroom environment.

According to Mickle (1990), a students' academic motivation is either enhance or detract by the classroom environment. Added to this, Mickle asserts that many educators are unaware of the influence of the emotional, attitudinal, and feeling dimensions of schooling. Therefore, they may find it difficult to define and measure the affective indicators of the classroom environment.

Moos (1979) attempted to narrowing down the different components of the classroom environment to four factors thought to be influential in the make up of the classroom environment. These factors are conceptualized into four major domains: (a) the physical setting, (b) the organizational factors, (c) the human aggregate, and (d) the social environment (Nighswander & Mueller, 1985).

Summary

This chapter has been a review of the literature regarding the history of the ropes course, its theoretical basis, and research background. Literature was also presented concerning classroom environment and its place in this study. This review has pointed out the lack of data and information on the use of ropes course experiences with interpersonal relationships and particularly with classroom environment. In conclusion, this review indicated that a ropes course experience has the potential to impact classroom environment.

Research literature supported the belief that adventure challenge activities were enhancing to groups and individuals. Models relevant to adventure learning were

presented. Adventure studies were examined which related to educational programs including: academic achievement, special populations and drop-out prevention. Studies were discussed which utilized outdoor adventure activities for therapeutic purposes with a wide verity of populations. Common problems associated with research in adventure education were presented as well.

What we can derive from experiential education, social learning theory, systems theory, and group theory cited above, is that the ropes course program may contribute to enhancing interpersonal relatedness, help the participants learn to give and receive support to and from others and then generalize these skills back to the classroom environment.

CHAPTER III

METHODS AND PROCEDURES

The purpose of the study was to determine if the treatment of a ropes course program could affect individual perceptions of classroom environment. This chapter provides an explanation of the research design and the statistical analysis used in this study. It also includes a description of the participants, the sampling procedures used, , and a description of the ropes course as the independent variable. A review of the psychometric instrument is presented.

Participants

The individuals who participated in this study included 153 junior high students from five classrooms in one school district and three classrooms from another school district in a large metropolitan area of central Oklahoma. Of these, 69 participants were male and 84 were female. They ranged in age from 11 to 15 years. The mean age was 12.7, and the median age was 12.9 years. The classroom grade varied from 6th grade through 7th grade. The racial composition of the sample was largely African-American (41 percent) and Caucasian (34 percent). The social economic status of the overall group, as measured by reported family income, fell within two main levels: 44 percent in the

$15,000 to $25,000 and 29 percent in the $26,000 to $35,000. Table 1 illustrates the demographic data elicited from the students.

Table1
Demographic Characteristics

Variable	Overall		Group 1 (control)		Group 2 (w/ teachers)		Group3 (w/o teachers)	
	Freq	%	Freq	%	Freq	%	Freq	%
Gender								
Male	69	45	18	12	26	17	25	16
Female	84	55	25	16	30	20	29	19
Total	153	100	43	28	56	37	54	35
Grade	6th & 7th		6th		7th		7th	

	Freq	%	Overall SES	
Race				
American Indian	2	1	Below $15,000	8%
African-American/Black	63	41	$15,000 to $25,000	44%
Anglo/Caucasian	52	34	$26,000 to $35,000	29%
International (Non-U.S.)	0	0	$36,000 to $45,000	11%
Asian or Pacific American	0	0	$46,000 to $55,000	5%
Hispanic/Latino	9	6	Above $55,000	3%
Multi-Ethnic/Racial	19	13		
Other	8	5		

Participants were enrolled in a one day ropes course conducted by Tulsa Youth Services. The eight classrooms were included in the study on a volunteer basis. In other words, schools that were asked to participate in the study were already scheduled to participate in the ropes course program. Students and teachers were asked to volunteer from classrooms that had been designated at-risk or as alternatives to suspension classrooms. Students were considered to be at-risk if they possessed one or more characteristics associated with dropping out of school. These characteristics included: (a) lack of credits, (b) past patterns of absenteeism, and (c) poor academic achievement.

These characteristics were designated by authorities within the school districts studied, and students had been previously assigned to these at-risk classrooms.

The essential difference in treatment between the three groups was that the first experimental group took part in the ropes course with the involvement of their teachers, the second experimental group took part in the ropes course without the participation of their teachers, and the control group did not participate in the ropes course program. Teachers who participated in the ropes course program were asked to volunteer in order to obtain the sample for the first experimental group. This was necessary since teachers are traditionally not required to participate with their class in the ropes course program and in the past very few have chosen to do so. Three female teachers, two African-American and one Caucasian, volunteered to participate in the ropes course program with their classroom. The control group was made up of students from the sixth grade classes that were not scheduled to participate in the ropes course program until next year.

No attempt was made to create a strictly random sample. There was no preselection of participants among students, except for sampling mortality of those students who failed to attend class the day of the ropes course. Therefore, it was a sample of convenience and accessibility. Of the 56 participants in the first treatment group (ropes course with teacher participation), 26 were male and 30 were female. The second treatment group (ropes course without teacher participation), contained 25 males and 29 females. The control group consisted of 18 males and 25 females. Consent of a parental or legal guardian was required in order for a student to participate.

Description of Ropes Course

The ropes course chosen for this study is located in Tulsa at the YMCA facility. Youth Services of Tulsa coordinates the operations of the course through a program called Adventure Based Counseling. The Adventure Based Counseling Program is an experiential program in which the participants are engaged in a highly active and structured therapeutic process. The ropes course activities were developed to provide individuals with opportunities to "experience physically challenging activities combined with a sense of adventure, a willingness to move beyond previously set limits, and a feeling of accomplishment in problem solving with a group" (Schoel et al., 1988, p. 41). The process is thought to develop skills in cooperation, problem solving, identity development, trust, tolerance for others, leadership, responsibility, and self-worth.

The ropes course activities usually take eight hours to complete and build from the lesser obstacles to the more complex. The ropes course is best described as an obstacle course constructed of ropes, cables, platforms, ladders, and poles usually twenty-five to forty feet above the ground. Participants were harnessed to insure maximum safety; however, each element of the course provides an opportunity for risk and challenge.

It is important to note that although every ropes course is unique in terms of setting, selection and arrangement of elements, the basis principles are universal. These principles originated from Outward Bound and Project Adventure over three decades ago (Rohnke, 1990).

This particular course is comprised of sixteen elements or different activities that participants try to negotiate using a combination of their cognitive and physical energies.

The course is designed to facilitate activities that offer a varying degree of involvement, difficulty, and perceived risk. Participants have to work together to solve various challenging obstacles. A group may have to repeat an element several times before they are allowed to advance to another element.

Low elements are no more than six feet above the ground and require the group to come together to accomplish problem solving situations. The objective of each low element require team work, communication, and problem-solving skills. As the group's ability to be more cohesive and trusting of one another increases, the group becomes more team-oriented and is better prepared to move on to the high elements.

In order to process what took place during each element, time is taken after each activity to discuss personal reflections regarding the group experience. This processing might include a discussion regarding the relationship dimensions, personal performance, and personal insight in order to increase the transfer of the experience to daily lives (Jensen, 1979).

The high elements are performed on poles, cables, ropes and platforms positioned 30 feet above the ground. At this point each person on the team attempts to master the element by themselves, while the rest of their team members watch and support them from the ground. Many individuals find this the highlight of the day since they are asked to accomplish task that appear to be unachievable.

To ensure consistency between administrations of each ropes course treatment, the instructors for the ropes course were paired together and did not change throughout the entire treatment process. These leaders were certified ropes course instructors, one female Caucasian and one male Caucasian. They had been employed by Tulsa Youth

Services as administrators of the program for three years prior to the study and both hold masters degrees, one in counseling and the other in social work. A general ropes course training manual and set of guidelines served as the basis for conducting ropes therapy.

Instrument

The Classroom Environment Scale (CES), first published in 1974 by Moos and Trickett (Moos and Trickett, 1987), is designed to assess the psychosocial environment of the classroom. The CES contains nine scales with ten items of forced-choice (True-False) response format in each scale. Table 2, adopted from Moos and Trickett (1987, p.1), outlines these nine scales.

While developing the Classroom Environment Scale, Moos and Trickett (1987) factor analyzed the instrument and came up with three general dimensions: (a) a relationship factor which measures the nature of personal relationships within the environment and assesses the extent to which people are involved; (b) a personal growth/goal orientation factor that measures those aspects of the environment which relate to the learning goals of the classroom; and (c) a system maintenance and system change factor that yields information about the structure and organization of the classroom as well as its emphasis on methods of instruction. Many other researchers cluster analyzed the CES and came up with similar factors (Hughes, 1984; Keyser &Barling, 1981, Mayano-Diaz, 1984). The CES conceptualizes the classroom as having these three general dimensions into which the nine subscales fall.

Table 2
CES Subscales and Descriptions

Relationship Dimensions

1. Involvement: the extent to which students are attentive and interested in class activities, participate in discussions, and do additional work on their own.

2. Affiliation: the friendship students feel for each other, as expressed by getting to know each other, helping each other with homework, and enjoying working together.

3. Teacher Support: the help and friendship the teacher shows toward students; how much the teacher talks openly with students, trusts them, and is interested in their ideas.

Personal Growth/Goal Orientation Dimensions

4. Task Orientation: the emphasis on completing planned activities and staying on the subject matter.

5. Competition: how much students compete with each other for grades and recognition; how hard it is to achieve good grades.

System Maintenance and Change Dimensions

6. Order: emphasis on students behaving in an orderly and polite manner and on the organization of assignments and activities.

7. Rule Clarity: emphasis on establishing and following a clear set of rules and on students knowing what the consequences will be if they do not follow them; the extent to which the teacher is consistent in dealing with students who break rules.

8. Teacher Control: how strict the teacher is in enforcing the rules, and the severity of punishment for rule infractions; how much students get into trouble in the class.

9. Innovation: how much students contribute to planning classroom activities; the extent to which the teacher uses new techniques and encourages creative thinking.

In scoring, the totals for each of the nine scales range from one to ten. A score of ten represents a high importance of that dimension, a score of five represents a moderate significance, and a score of one indicates low emphasis on that given scale. The scales are added up to represent the three dimensions discussed above; such as, the Relationship

dimension totals 30 points, the Personal dimension totals 20 points, and the Systems dimension totals 40 points.

The CES has been shown to possess both adequate reliability and validity. The nine dimensions have an average intercorrelation of about .25 and possess adequate internal consistencies of .67 to .86 and six week test-retest reliability of .72 to .92 (Moos & Trickett, 1987). Studies involving the CES have been shown to correlate with student satisfaction and moods (Trickett and Moos, 1974), teacher-student verbal interactions (Trickett & Todd, 1972), and absenteeism (Moos & Moos, 1978). Moos and Trickett (1987) also reported subscale intercorrelations for 465 students in 22 classrooms to be from .45 to .49 for the subscales of Involvement, Affiliation, Teacher Support, Order and Organization, and Innovation. Teacher Support was negatively correlated with Task Orientation (-.25) and Teacher Control (-.48) but had a high positive correlation with Innovation (+.51).

Smith (1989), who reviewed the CES, commented that construct validity of the CES was excellent. She reported strong subscale associations with classroom observational teacher interview data. Harwood's (1992) review of instruments used to study classroom climates reported that the CES was one of the first to use student ratings of classroom environment. Chevez (1984) also concluded that the CES was reliable for measuring a variety of interactions that take place in the classroom. Fraser and Fisher (1982) further reported that CES scales "displayed satisfactory internal consistency and discriminant validity, and each scale differentiated significantly between the perceptions of students in different classrooms" (p. 514).

Fraser (1987) also reviewed the results of several studies and reported that "numerous research programs have shown that student perceptions account for appreciable amounts of variance in several students learning outcomes (including grades, examination results, inquiry skills, school attendance, attitudes, interest, and anxiety)" (p. 31). These past studies (Cort, 1979; Fraser, 1979; Fraser & Fisher, 1982; Fry & Coe, 1980; Haladyna, Shaughnessy, & Redsun, 1981; Moos & Moos, 1978; O'Reilly, 1975; Trickett & Moos, 1974; Walberg, 1969) emphasized the usefulness of the CES as a means to make inferences about the learning environments of schools.

Research Design and Statistical Procedures

This study employed a 2 X 3 Split Plot Factorial quasi-experimental design (Kirk, 1982). Although not randomly selected, three groups formed: 1) a treatment group made up of students who participated with teachers in the ropes course program, 2) a treatment group made up of students who participated in the ropes course program without teacher participation, and 3) a control group made up of students who did not participate in a ropes course program. The dependent variable was the scores of individual perceptions of classroom environment as measured by the Classroom Environment Scale. This scale has three dimensions: Relationship Dimensions, Personal Growth/Goal Orientation Dimensions, and System Maintenance and Change Dimensions. Outcome was determined by taking two measures of the dependent variable, one week prior to and four weeks following the completion of the ropes course, and comparing the mean improvement of each group over that time. Multivariate analysis of variance with repeated measures on the pre-test post-test factor was used since there were three different measures of

performance employed (Relationship Dimensions, Personal Growth/Goal Orientation Dimensions, and System Maintenance and Change Dimensions). All hypotheses were tested using an experimentwise error rate of .05.

Data Collection Procedures

Prior to testing, permission to do the study was granted from the superintendent of both school districts. Additionally, a contact person was assigned from each school to provide standardized instruction and to respond to any questions raised by participants. The control group was selected from sixth-grade students scheduled to take the ropes course program during their seventh-grade year and participants for the two treatment groups were obtained from seventh-grade classes already scheduled to participate in the ropes course program.

Prior to participation in the ropes course, students received an Informed Consent Form. The participants were informed that the study was part of a dissertation project which attempted to evaluate the Adventure Based Counseling Program. They were informed that their participation was entirely voluntary and independent of their progress in the program. A parent or legal guardian signed this consent form before a student was considered a participant in the study (See Appendix A).

Participants were pre-tested one week prior to their participation in the ropes course program. The same testing procedures were used at all eight sites. Participants were asked to complete a brief demographic questionnaire prior to receiving formal instruction regarding the experimental tasks. Demographic information was obtained for descriptive purposes included age, sex, grade in school, race, parent's marital status, and

number of persons in the family. Several questions designed to provide an estimate of socioeconomic level were also included in the form. This one-page form was designed to be completed by students (See Appendix B).

Following the standardized instructions provided by room supervisors, participants filled out the Classroom Environment Scale. The contact persons administered the pretest material to the classrooms themselves without the assistance of the teachers. It was asked that the questionnaires not be administered during the first or last period. The pre- and post-tests were administered either as written questionnaires or read aloud, depending on the participants' preference. Appendix C outlines the detailed testing procedure given to each contact person. Contact personnel were asked to report any unusual incidences that might have taken place in the lives of any of the participants that could have had a significant influence on the relevance of the study.

Several steps were taken to assure that teacher and students participation was anonymous. First, administrators were asked to select a code number that was used to identify each classroom and participant separately. Teacher names were not put on the coding sheet in order to prevent the identification of the class. Additionally, students were instructed not to put either teacher name or their own name on surveys. Envelopes were sealed and delivered to the researcher by the contact persons. This assured that student responses were not read by teachers or administrators.

On the day of the treatment, students were instructed regarding the ropes course procedures. The ropes course program consisted of high elements and low elements that are standard to most ropes layouts. The planning and construction of the ropes course were based on the concepts, experience, and practices developed by Outward Bound and

Project Adventure (Schoel et al, 1988). The high and low elements found at this site were identical to those found at many other courses. The treatment facility's ropes course featured 8 high elements and 10 low elements, all based on construction guidelines presented by Rohnke (1990). In addition to the structural high and low elements, the program utilized a variety of problem-solving tasks, games, and exercises, collectively called "initiatives" (Schoel et al., 1988). Initiatives were used as ice-breakers to develop group cohesiveness, and introduce ideas of trust, risk-taking, and communication. The day's activities began at 8:30 a.m. with these types of warm-up activities.

During the ropes course program, the instructor facilitated processing at several points throughout the session. This was a method used to encourage the learner to reflect and discuss what was recently experienced. Following the completion of the ropes course elements, participants were encouraged to process the ropes course experience with the assistance of the instructors. The purpose of this was to exchange affective and cognitive meaning for and between group members. It is believed that this processing assists with the transfer of learning (Gass, 1993). The ropes course program was concluded by 3:30 p.m..

In the fourth week following the completion of the ropes course, the two treatment groups and the control group were administered the post-testing material. Again, the Classroom Environment Scale was administered by the same contact person with standard procedures and coding. These tests were then placed back into a group envelope to assure proper coding and sent to the researcher for analysis.

CHAPTER IV

RESULTS OF THE STUDY

Results of the statistical analyses used to test the null hypotheses are presented. The purpose of the study was to determine if the treatment of a ropes course program could affect individual perceptions of classroom environment. In order to achieve this, three independent variables were manipulated in a Split Plot Factorial design (Kirk, 1982). The repeated measure factor was individual perceptions of classroom environment, consisting of Relationship Dimensions, Personal Growth/Goal Orientation Dimensions, and System Maintenance and Change Dimensions. The independent variable consisted of a control group and two different treatment groups: youths participating in a ropes course program with teacher participation, and youth participating in a ropes course program without teacher participation.

Data analysis were conducted in order to test the following hypotheses:

Hypotheses 1a:

There will be no significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the first treatment group (youth with teacher participation) regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale.

Hypotheses 1b:

There will be no significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the first treatment group (youth with teacher participation) regarding individual perceptions of the Personal dimensions of the classroom environment as measured by the Classroom Environment Scale.

Hypotheses 1c:

There will be no significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the first treatment group (youth with teacher participation) regarding individual perceptions of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale.

Hypotheses 2a:

There will be no significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the second treatment group (youth without teacher participation) regarding individual perception of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 2b:

There will be no significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the second treatment group (youth without teacher participation) regarding individual perception of the

Personal dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 2c:

There will be no significant difference between pre-test and post-test scores of those students who are in the control group and those who are in the second treatment group (youth without teacher participation) regarding individual perception of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 3a:

There will be no significant difference between pre-test and post-test scores of those students who are in the first treatment group (youth with teacher participation) and the second treatment group (youth without teacher participation) regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 3b:

There will be no significant difference between pre-test and post-test scores of those students who are in the first treatment group (youth with teacher participation) and the second treatment group (youth without teacher participation) regarding individual perceptions of the Personal dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 3c:

There will be no significant difference between pre-test and post-test scores of those students who are in the first treatment group (youth with teacher participation) and

the second treatment group (youth without teacher participation) regarding individual perceptions of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 4a:

There will be no significant difference between pre-test and post-test scores of the control group regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 4b:

There will be no significant difference between pre-test and post-test scores of the control group regarding individual perceptions of the Personal dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 4c:

There will be no significant difference between pre-test and post-test scores of the control group regarding individual perceptions of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 5a:

There will be no significant difference between pre-test and post-test scores of the first treatment group (youth with teacher participation) regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 5b:

There will be no significant difference between pre-test and post-test scores of the first treatment group (youth with teacher participation) regarding individual perceptions of

the Personal dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 5c:

There will be no significant difference between pre-test and post-test scores of the first treatment group (youth with teacher participation) regarding individual perceptions of the Systems dimensions of the classroom environment as measured by the Classroom Environment Scale?

Hypotheses 6a:

There will be no significant difference between pre-test and post-test scores of the second treatment group (youth without teacher participation) regarding individual perceptions of the Relationship dimensions of the classroom environment as measured by Classroom Environment Scale?

Hypotheses 6b:

There will be no significant difference between pre-test and post-test scores of the second treatment group (youth without teacher participation) regarding individual perceptions of the Personal dimensions of the classroom environment as measured by Classroom Environment Scale?

Hypotheses 6c:

There will be no significant difference between pre-test and post-test scores of the second treatment group (youth without teacher participation) regarding individual perceptions of the Systems dimensions of the classroom environment as measured by Classroom Environment Scale?

Research Findings

Means and standard deviations for the three independent variables (pre-test and post-test) and all the dependent measures are presented in Table 3. The higher the scores on the three dimensions of the Classroom Environment Scale, the higher the level of prescription to that specific type of dimension.

Table 3
Means and Standard Deviations
for Groups on the Three Dependent Measures

Summaries of Relationship Dimensions (pre-test)			
Variable	Mean	Std Dev	Cases
GROUP 1 (Control)	18.0000	4.1547	43
GROUP 2 (w/ teachers)	16.5000	5.0668	56
GROUP 3 (w/o teachers)	16.2778	5.4128	54

Summaries of Relationship Dimensions (post-test)			
Variable	Mean	Std Dev	Cases
GROUP 1 (Control)	18.0465	2.9354	43
GROUP 2 (w/ teachers)	20.7857	3.3559	56
GROUP 3 (w/o teachers)	20.0926	3.4601	54

Summaries of Personal Dimensions (pre-test)			
Variable	Mean	Std Dev	Cases
GROUP 1 (Control)	11.5349	2.1196	43
GROUP 2 (w/ teachers)	11.0714	2.0526	56
GROUP 3 (w/o teachers)	11.1852	1.7383	54

Summaries of Personal Dimensions (post-test)			
Variable	Mean	Std Dev	Cases
GROUP 1 (Control)	11.4186	1.6795	43
GROUP 2 (w/ teachers)	10.5536	2.3192	56
GROUP 3 (w/o teachers)	11.0370	1.9997	54

Summaries of Systems Dimensions (pre-test)			
Variable	Mean	Std Dev	Cases
GROUP 1 (Control)	20.9302	3.8938	43
GROUP 2 (w/ teachers)	20.0000	3.0689	56
GROUP 3 (w/o teachers)	20.1296	2.9142	54

Summaries of Systems Dimensions (post-test)			
Variable	Mean	Std Dev	Cases
GROUP 1 (Control)	21.1163	3.9893	43
GROUP 2 (w/ teachers)	19.8571	2.9507	56
GROUP 3 (w/o teachers)	21.4074	2.2780	54

A Split Plot Factorial 3 x 2 multivariate analysis of variance was performed for the data summarized in Table 3. The results of this analysis are presented in Table 4.

Table 4
MANOVA Summary

Source of Variance	Wilks Lambda	Exact F-Ratio	Hypoth. D.F.	Error D.F.	Sig. of F
Group	.95023	1.27559	6.00	296.00	.268
Time	.62180	30.00600	3.00	148.00	.000
Group x Time	.77143	6.83521	6.00	296.00	.000

As can been seen in Table 4, the main effect for Time revealed a statistically significant interaction at the .05 level as well as the two-way interaction of Group by Time. The main effect for Group was not significant at the .05 level. Given the significant two-way interaction of Group by Time, posthoc analysis focused on tests of simple main effects for Time and then for Group.

Follow-up Analysis

In order to be conservative in the error rate, the same per family error rate that was assigned to the overall F-ratio was divided evenly across the simple main effects tests (Kirk, 1968). Thus alpha equals .01 for the simple main effect for Time and .025 for the simple main effect for Group.

Results of the simple main effect for Time by Group 1 (control) failed to reach statistical significance, $F(3,148) = .14049$, $p = .936$. However, the simple main effect for Time by Group 2 (w/ teachers) was significant, $F(3,148) = 24.40700$, $p = .000$.

Additionally, the simple main effect for Time by Group 3 (w/o teachers) was significant, F (3,148) = 24.50454, p = .000. Given the significance found in Group 2 (w/ teachers) and Group 3 (w/o teachers), univariate analyses were performed. The results of the univariate analyses are reported in Table 5 and Table 6.

Table 5
Univariate Analysis for Group 2 (w/ teachers)

Variable	SS	F-ratio	Sig. of F
Relationship	514.28571	66.26347	.000
Person	7.50893	2.85433	.093
System	.57143	.13412	.715

Table 6
Univariate Analysis for Group 3 (w/o teachers)

Variable	SS	F-ratio	Sig. of F
Relationship	392.92593	50.62679	.000
Person	.59259	.22526	.636
System	44.08333	10.34656	.002

As can be seen from Table 5 and Table 6, the univariate analysis for Group 2 (w/ teachers) and Group 3 (w/o teachers) with the Relationship Dimensions reached statistical significance at the .01 level. Additionally, the univariate analysis for Group 3 (w/o teachers) with the System Dimension reached statistical significance at the .01 level.

Results of the simple main effect for Group by Time 1 (pre-test) failed to reach statistical significance, F (6,296) = 1.13635, p = .341. However, the simple main effect for Group by Time 2 (post-test) revealed statistical significance, F (6,296) = 4.97712, p =

.000. Given the significance found in the simple main effect analysis for Group by Time 2, a pairwise t-test was performed using an alpha level of .01. The results of pairwise t-test are reported in Table 7.

Table 7
Pairwise T-test

Source of Variance	Wilks Lambda	Exact F-Ratio	Hypoth. D.F.	Error D.F.	Sig. of F
Groups 1 and 2	.77515	9.18540	3.00	95.00	.000
Groups 2 and 3	.91083	.45893	3.00	106.00	.019
Groups 1 and 3	.88558	4.00533	3.00	93.00	.010

As can be seen in Table 7, the pairwise t-test for Groups 2 (w/ teachers) and 3 (w/o teachers) failed to reach statistical significance at the .01 level. However, the pairwise t-test for Groups 1 (control) and 2 (w/ teachers) revealed significance at the .01 level as well as the pairwise t-test for Groups 1 (control) and 3 (w/o teachers). Given that statistical significance was found, univariate analyses were performed using an alpha level of .01. The results of the univariate analyses are reported in Table 8 and Table 9.

Table 8
Univariate Analysis for Groups 1 (control) and 2 (w/ teachers)

Variable	SS	F-ratio	Sig. of F
Relationship	182.50284	18.03947	.000
Person	18.20065	4.26127	.042
System	38.56264	3.26040	.074

Table 9
Univariate Analysis for Groups 1 (control) and 3 (w/o teachers)

Variable	SS	F-ratio	Sig. of F
Relationship	100.21578	9.55447	.003
Person	3.48525	1.00214	.319
System	2.02889	.20430	.652

The Univariate analysis for Groups 1 (control) and 2 (w/ teachers) with the Relationship Dimensions reached statistical significance at the .01 level. Additionally, the univariate analysis for Groups 1 (control) and 3 (w/o teachers) with the Relationship Dimensions reached statistical significance at the .01 level.

These results lead to the rejection of Hypotheses 1a, 2a, 5a, 6a, and 6c. All other Hypotheses should be retained. The results of this study indicated that there was a significant difference between pre-test and post-test scores of the control group and the two treatment groups regarding individual perceptions of the Relationship Dimensions of the classroom environment. Additionally, univariate analyses for Time supported these results by revealing a significant increase from pre-test to post-test scores of the Relationship Dimensions for treatment group 2 (w/ teachers) and treatment group 3 (w/o teachers). However, results also indicated that there is no significant difference between pre-test and post-test scores of the two different treatment groups regarding all three of the independent variables. In other words, there was no relationship found between having a teacher participate and not having a teacher participate in the ropes course program. Furthermore, univariate analyses for Time revealed a significant increase between pre-test and post-test scores of the System Dimensions for treatment group 3

(w/o teachers). Figure 1, 2, and 3 presents graphical displays of the ordinal interaction of time and group on each of the three dependent measures.

Figure 1
The Ordinal Interaction of Time and Group
with the Relationship Dimensions

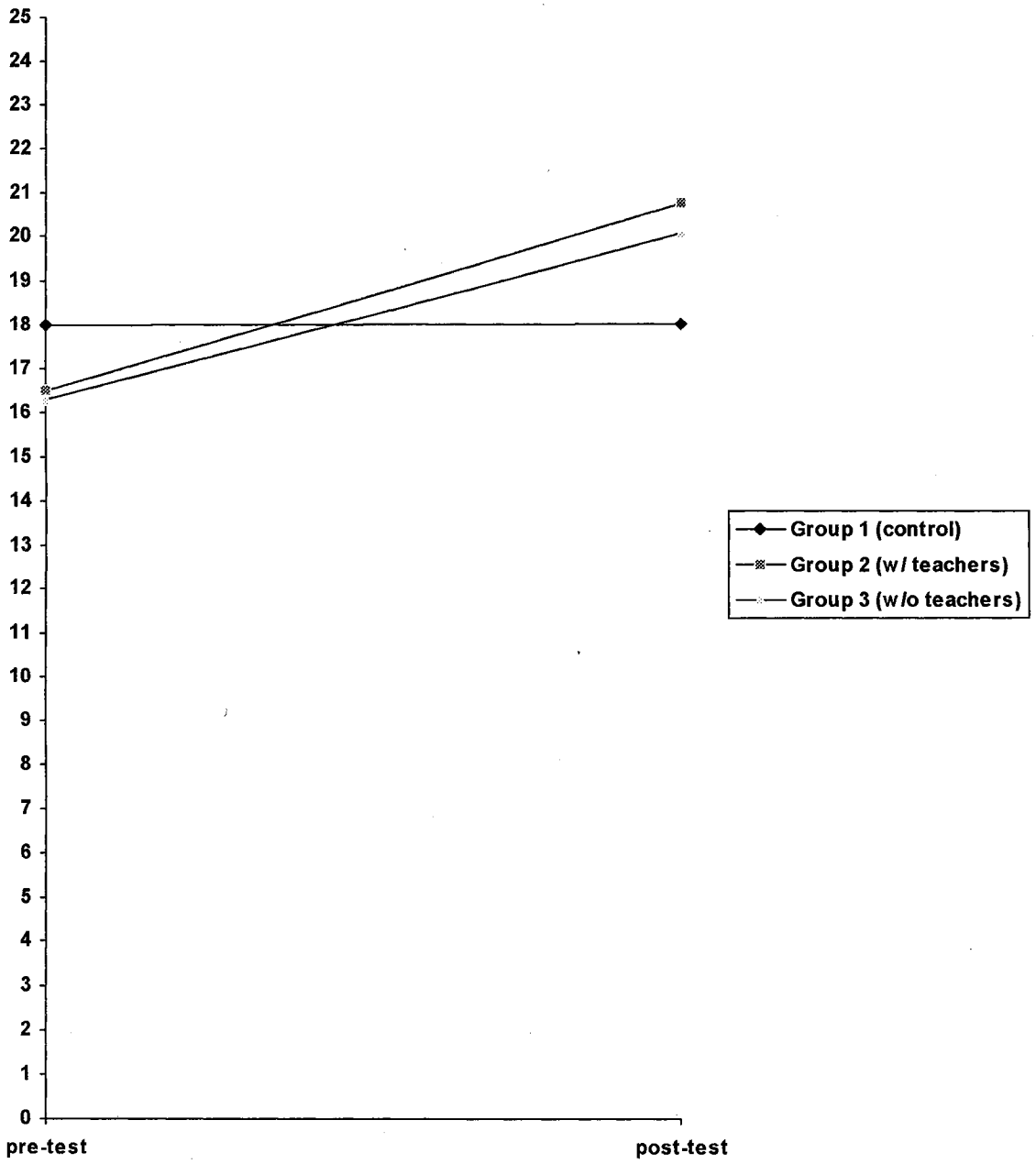


Figure 2
The Ordinal Interaction of Time and Group
with the Personal Dimensions

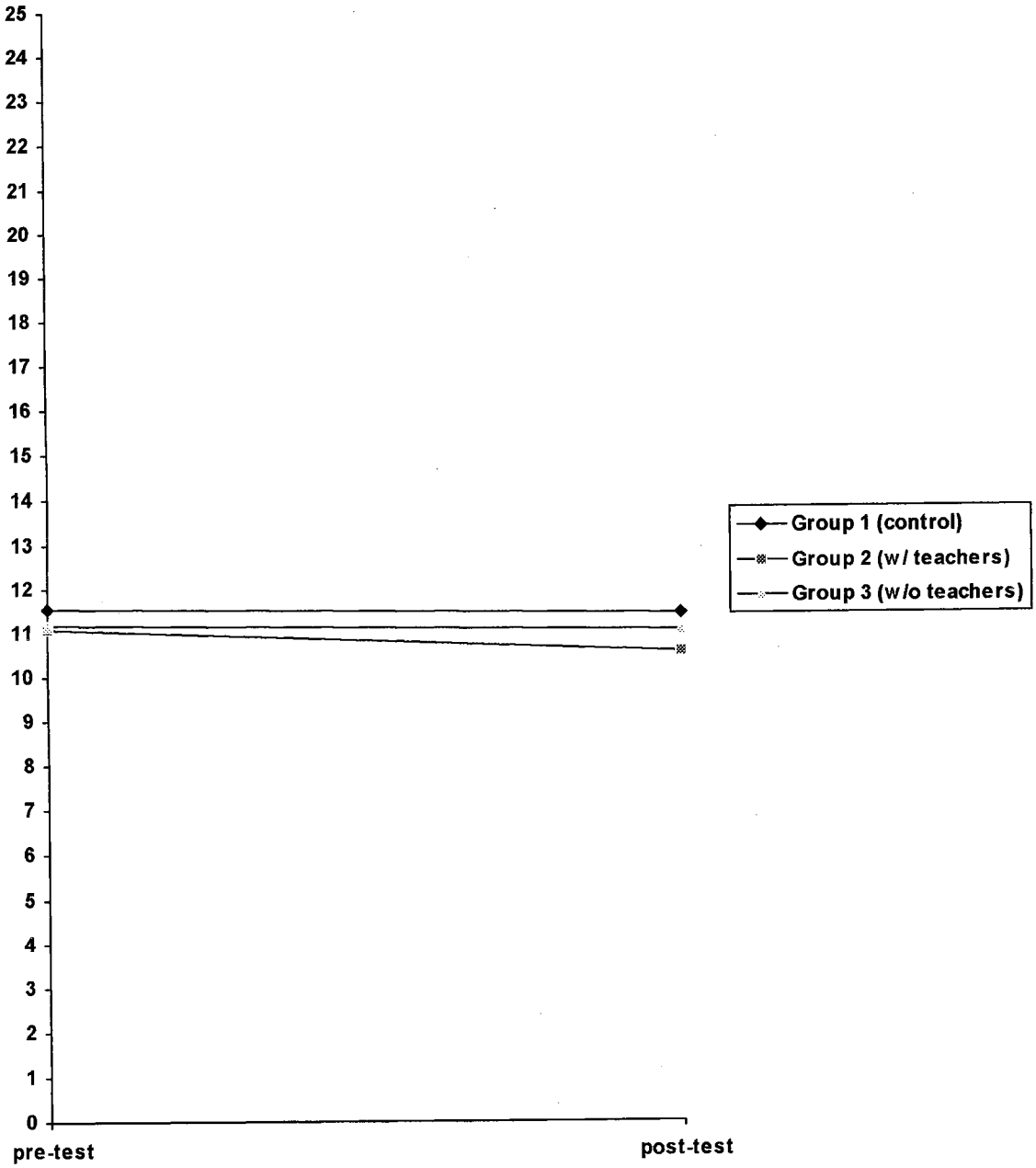
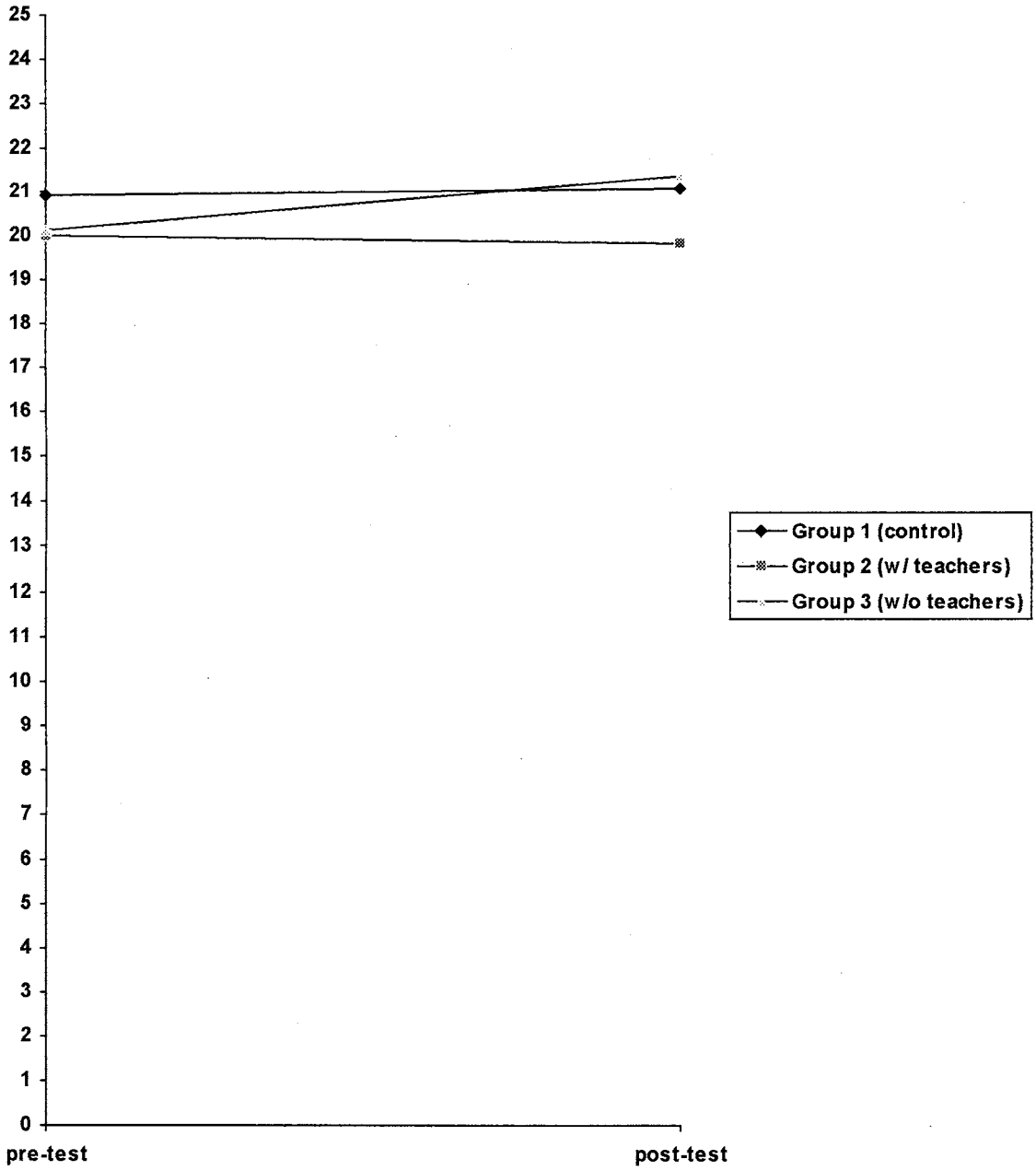


Figure 3
The Ordinal Interaction of Time and Group
with the Systems Dimensions



CHAPTER V

DISCUSSION

This chapter presents a summary of the study, conclusions and discussion based on the results, implications for theory and practice, and recommendations for future research.

Summary of Results

This study was designed to determine if the treatment of a ropes course program could affect individual perceptions of classroom environment. The design used was a 2 X 3 Split Plot Factorial design. The repeated measure factor was individual perceptions of classroom environment as measured by the Classroom Environment Scale, which has three dimensions consisting of Relationship Dimensions, Personal Growth/Goal Orientation Dimensions, and System Maintenance and Change Dimensions. The independent variable consisted of a control group and two treatment groups: youths participating in a ropes course program with teacher participation, and youths participating in a ropes course program without teacher participation.

Participants in this study included 153 junior high students from five classrooms in one school district and three classrooms from another school district in a large metropolitan area of central Oklahoma. The test data consisted of participants' pre-test and post-test scores on the Classroom Environment Scale. All data were collected during

the spring of 1997. The following is a summary of the results of to the study conducted.

Test of the hypotheses revealed a significant interaction between independent variables. Simple main effects tests indicated that the effects of the ropes course significantly increased individual perceptions of the classroom environment. More specifically, univariate analyses demonstrated that post-test scores of the Relationship Dimensions increased significantly for those students who participated in the ropes course. Results also indicated that there was no significant difference between the two treatment groups.

These results suggest that there is a strong relationship between involvement in a ropes course program and a student's individual perceptions of the Relationship Dimensions of the classroom environment. The following is a detailed discussion of these results and how they pertain to the classroom environment.

Discussion of Results

Overall, the results of the study generally support further research of the effects of a ropes course program on individual perceptions of the classroom environment. Specifically, results provide tentative support for the hypothesis that a ropes course program positively affects individual perceptions of the classroom environment, particularly regarding the Relationship Dimensions. In the general sample of participants in the ropes course program, students reported developing a stronger interest in being attentive and interested in classroom activities, participating in discussions, and doing additional work on their own. Additionally, they indicated increases in the level of the friendship they feel for each other as expressed by getting to know each other, helping

each other work with homework, and enjoying working together. Finally, students supported the notion that the help and friendship the teacher shows towards students, how much the teacher talks openly with students, trusts them, and is interested in their ideas, increased significantly following the experience of the ropes course program. From these results, it can be hypothesized that the impact of the ropes course program on the classroom environment tends to increase student morale and promote more positive interpersonal attitudes.

This concurs with much of the research and supports the idea that the environment created in such experiential programs is distinct and provides particular opportunities for individual and group change (Boudette, 1989; Cave, 1979; Gaston, Plouffe, & Chinsky, 1978; Gibson, 1979; Kelly & Baer, 1971; Kolb, 1984; Marsh et al., 1986; Morse, 1947; Stewart, 1978; Stogner, 1978; Weeks, 1985). These types of changed attitudes created by the experiential program translate into an improved ability to relate to others. These seem especially related to attitudes toward others and appear to reflect an increased feeling of social acceptance and sense of belonging.

The results of this study further support the work of a number of studies that address the idea that experiential programs positively affect interpersonal relatedness or social adjustment. Stewart (1981), who evaluated the Connecticut Wilderness School Program, revealed a significant positive increase in the Jesness Inventory subscales related to interpersonal functioning. Davidson (1987) found increases in social reasoning skills of those underachieving adolescent that participated in a 10 week ABC program. Young (1981) noted that university students who took an experiential group course showed a change towards personal growth and improved interpersonal relations. Hobbs and

Shelton (1972) concluded that there were favorable changes in the interpersonal skills, cooperation, and functional skills of emotionally disturbed adolescents as a result of an experiential program.

In contrast to the above findings, several other researchers have reported less affirming and optimistic outcomes. McBride (1985) concluded that the behaviors of adolescent inpatient boys who participated in a ropes course program were unaffected. He reach the conclusion that participation in adventure education did not lead to an increase in group interaction, cooperation, or support. Additionally, Stogner (1978) found no changes in academic performance based on teacher assessment and Grade Point Index following an Outward Bound experience.

One of the main drawbacks of the research cited above centers on its deficiency in measuring the successful transfer of increased interpersonal functioning back to the youths' everyday lives in the community or classroom (Kimball, 1983, Wright, 1987). Many youth lack the support at home, in school, and in the community needed to bridge the gap between the experience and its real-life utility (Wright, 1987). Follow-up programs are often recommended to help maintain changes and to alter expectations and contingencies in the adolescent's natural environment. Indeed, the existence of a systematic follow-up program seems to be correlated with lasting effects and may explain some of the contradictory findings regarding durability of change (Plouffe, 1980; Stewart, 1978). Despite this, the vast majority of experiential programs do not offer any substantial follow-up services (Gass, 1993). Therefore, it is apparent by the results of this study that the inclusion of the classroom as a unit in the ropes course program may provide one method

for increasing the transfer of learning from the adventure experience to the classroom environment.

Further evaluation of the results of this study were generally consistent with other research regarding this notion that adventure program participation has a positive impact upon subsequent involvement and investment in school (Robb and Leslie, 1987; Roland et al, 1989). More specifically, the findings in this study supported the conclusions reached by Churchard (1980) which confirmed that a ropes course program helped create a school environment rich in "collaboration, communication, and collegiality." In their studies they emphasize that this environment yielded an organizational climate which had significant effects on the productivity of the students.

Additionally, Stogner (1978) attributed adventure experiences with increasing positive interactions and teacher-student understanding. Childs (1980) reported significant increases in student teacher relationships for seventh-graders returning to school after a five day resident camping experience. Behar and Stephens (1978), found significant improvement in post-test teacher-rated interpersonal behavior following an adventure therapy that incorporated wilderness camping as an alternative residential treatment for emotionally disturbed boys.

A further look at the educational research of the last 20 years indicated that climate, as measured by students' perceptions of their classroom environment, was a useful construct in predicting achievement and school satisfaction (Galluzi, Kirby, & Zucker, 1980; Moos, 1979; Wright & Cowen, 1982). These studies consistently revealed that "emphasis on supportive relationships and student participation in a well-organized

classroom promoted student morale, interest in the subject matter, and a sense of academic self-efficacy" (Moos & Trickett, 1987, p. 35).

In addition, Nighswander (1988) discussed the notion that "environments in a school setting are often recognized as consisting of characteristics of the classroom which enhance student achievement" (p. 19). Nighswander and Mueller (1985) found that a supportive classroom environment was one of the most significant factors responsible for increasing a students willingness to cooperate with his/her teacher and fellow students within the classroom.

Unfortunately for the literature cited above, the ropes course component of the program was combined with several other activities. Furthermore, these past studies lacked a control group for comparison purposes (Conrad & Hedin, 1982; Shore,1977). Therefore, the findings of this past research cannot be solely attributed to the treatment. On the contrary, this study looking at the impact of a ropes course program on the classroom environment adds to this area of research by providing sound empirical data supported by a control group.

Finally, while a considerable body of information exists dealing with experiential learning (Fry & Coe, 1980; 1987; Joplin, 1981; Kolb, 1984; Kraft, 1990; Stich & Gaylor, 1983) and adventure-based education (Boudette, 1989; Gaston et. Al., 1978; Grass, 1993; Golins, 1978; Kelly & Baer, 1971; Kolb, 1984; Schoel et. al., 1988), it is largely qualitative and formative. Therefore, this research provides empirical evidence to support the genuine effectiveness of treatment interventions where ropes course programs are used as a tool for the enhancement of the classroom environment.

It is also important to note from the results of this study that the nonsignificance found in the Univariate analysis between the two treatment groups, indicate that the involvement of the teacher in the ropes course program has little influence on the individual perceptions of the classroom environment as a whole. Possibly, as the students participate together as a class in the ropes course program, their teacher is simulated into the experience, seeing them as an integral part of the experience even though they are not present. It may also suggest that the proportion of teacher participation to student participation, 3 out of 56 , was entirely too small to make an impact on the dependent variable. Therefore, with this minimal amount of participation by the teachers, the current study may not reveal the full complexity of this relationship.

Possible Reasons for Interaction

There are several possible explanations for the positive relationship found between the effects of the ropes course program and the Relationship Dimensions of the Classroom Environment. When viewed as a sequence of problem solving objectives, the ropes course program might include, but not be limited to, some of the following experiences: feeling satisfaction that arises from cooperating with others, experiencing fulfillment from attacking a problem and overcoming it, realizing that there may be more than one acceptable point of view in a situation, developing tolerance of other people's needs and interests, developing a willingness to take initiative, completing assigned tasks, developing higher levels of trust, assuming responsibility for duties as a group member, seeking new information about a task or skill, practicing rules of safety, actively and thoughtfully participating in group discussion, considering solutions, effectively solving group

problems, and overcoming personally challenging problems (Gass, 1993; Schoel et al, 1988). Thus, success experiences coupled with a satisfaction in responding to others may raise mutual support within a group that is carried back to the classroom environment. This would account for the high increase in morale of the classroom following the ropes course experience.

As mentioned in the literature review, one of the main principles of adventure-based counseling in the incorporation of high risk experiences. By successfully moving through progressively harder activities, a participant begins to develop true self-confidence. This type of self-confidence helps individuals develop social interactions within the group and ultimately increase group affiliation (Gibson, 1979). When going through the program, youth soon recognize that their behavior effects others in the group and learn that responding positively to other group members is a necessary element for success. This increases group process and encourages support within the group. Once a person feels secure in himself and the peer group, he/she will be willing to seek out challenges of which he/she was previously afraid. Achieving a high level of group involvement and cooperation is necessary for moving onto a more difficult activity within the ropes course program. This development of cooperation will often provide an avenue for behavior change in the adolescent.

Another possible explanation for this positive relationship between the ropes course program and the relationship dimensions may be connected to increased communication in general. The ropes activities incorporate many different levels and skills of communication, including verbal and non-verbal expression. Asking, listening, instructing, and interpreting are key elements in the communication process of the ropes

course. It may be that the expression of feelings, needs, and affection during the ropes course experience allows the adolescent an opportunity to get appropriate feedback on his/her behavior. By doing this within a group context, an individual may find new insight and support for change. It may also develop trust and provide for a sense of togetherness that helps the individual to feel more comfortable with peers. These types of group and individual encounters provide an opportunity for an adolescent to give and receive honest feedback and to learn positive communication styles.

Furthermore, one of the stronger points of the Adventure program is its presentation of trust-building activities which are physically demanding. Engaging in these activities proves to the participants that they can be trusted in high-risk situations, and that they in turn can rely on other group members. The basic nature of the program requires a group to successfully complete one level of physical trust activity before moving on to a more complex social interaction. The therapeutic value of these trust exercises lies in increasing the quality of group development which builds a sense of community and team support.

Finally, it may be the case that the "ropes course program assists students in learning to recognize their successes and failures, their challenges and responsibilities, and the consequences of their actions or inactions in a social environment" (Schoel et al., 1988, p. 103). Yalom (1970, 1975, 1985) best theorizes this when he asserted that one of the most essential therapeutic factors leading to human change developed from group therapy is "interpersonal learning." Yalom (1985) maintained that the therapy group evolves into a social microcosm -- " a miniaturized representation of each patient's social universe" (p.44) -- through which group members become aware of significant aspects of

their interpersonal behavior. This type of interpersonal learning appears to be a main premise in experiential education. Additionally, Yalom (1970, 1975, 1985) identified "universality" as another critical factor in group development. This is seen in the ropes course program; it builds a positive sense of group identity which fosters peer relationships. Therefore, adolescents respond to group therapeutic interventions because of the sense of universality created in groups. It is highly possible that a primarily supportive and challenging environment like the ropes course established high levels of classroom involvement and support.

Individuals tend to become more interpersonally related as a result of this treatment. This supports the theory that the development of the interpersonal aspects within the ropes course program experience serves as an active mechanism in changing people. This finding is important because, as the literature has point out, the enhancement of interpersonal relatedness is a key element in enhancing classroom achievement. Therefore, as other studies have postulated (Moos, 1979), prevention and intervention strategies should center on experiences that improve the classroom climate.

Previous studies have been based on perceptions of classroom environment of academic success but have not established specific interventions that contribute to this influence (Fry & Coe, 1980). Consequently, this study gives a practical indication of a specific technique that builds classroom environment.

Clearly, more questions have been raised than answers provided. While this study has built on the experience of related adventure programs of the past, it has focused on their application to the practice of school environment by establishing a basic

understanding of treatment efficacy. Future study will hopefully build upon the conclusions reached and improve upon the methodological difficulties.

Implications

The practical implication from this research is that student outcomes, such as subject-matter achievement and attitude towards a school subject, might be improved by creating classroom environments empirically found to be conducive to learning through ropes course programs. Therefore, school personnel are likely to be interested in the results of this study due to the positive effects regarding student's attitude towards the environment and relationships of the classroom.

By understanding the implications of this research and the positive effects that experiential programs have on classroom environments, teachers are encouraged to be more sensitive to the many important but subtle aspects of classroom life and to plan actions that will lead to improvement in this area; such as, encouraging group activities. Furthermore, given the information found in this research, it seems crucial that administrators consider the possibility of making experiential programs, where feasible, a regular part of the academic experience.

In addition, the study has important applications for program evaluation. This data can assist in enlisting both administrative and teacher support. It explains the potential value of the program. It reiterates the need for understanding alternate and important aspects of schooling, especially the social and psychological features of the learning environment of school classrooms.

Perhaps the strongest overall message resulting from this study is the need for additional research regarding the factors which influence the classroom environment. More specifically, further investigation of the effects of the ropes course program on academic measures is clearly indicated. By achieving a more thorough understanding of the effects of the ropes course program on perceptions of classroom environment, effective methods for controlling them may be developed.

Limitations and Assumptions

Like all research, the results of this study must be considered in the context of the conceptual and methodological framework chosen to answer the research questions. Problems common to research in general as well as elements particular to the design and implementation of this study are reviewed here to maintain healthy caution about the validity of the findings. While every effort has been made to anticipate and prevent the confounding influence of the research itself, the following areas must be considered as limitations of the study.

The first limitation is that this is a sample of convenience; it was not drawn from a random sample of schools in the United States or even from the populations of schools in the school districts studied. Therefore, the homogeneous nature of the sample does not reflect the greater variance in the population with regard to ethnicity, age range, or socio-economic status. Consequently, the generalizability of the results may be limited. Furthermore, due to limitations in the availability of the participants, the control group consisted of 6th graders, unlike the sample of 7th graders used for the two treatment groups. Although measures were taken to match the control group and the treatment

group with regards to the at-risk dynamic, the difference in grade level could have had an affect on the results.

Another limitation was that a true experiment with random assignment to groups was not possible. While the addition of a control group allows many of the threats to internal and external validity to be controlled, the problem of selection biases remains a dilemma. Additionally, students and teachers were asked to volunteer from classrooms that had been previously scheduled to participate in the ropes course program. Consequently, participants might have had a positive expectation towards the ropes course program prior to their participation. Also, a "Hawthorne Effect" may have operated in that the students could have shown improvement regardless of the actual intervention.

The third limitation centers on the lack of control over the participants in the study between the pre- and post-testing. Since the participants remained in their homes during the time of the testing, they may have had opportunities to engage in some activity or interaction that could effect their test scores. However, contact persons did not report any such significant influences on these students which might be of relevance to this study.

This study also lacks the ability to control the variables that typically vary among different classes (such as the types of activity, philosophical differences, and instructional techniques). Since the data was collected from eight different classes led by different teachers, the differences in leadership style or philosophy were not controlled.

Another limitation considered as a threat to this study is that the length of the ropes course may be too short. Treatment effect may not have been able to make its full impact in such a short amount of time, limiting its ability to obtain an optimum treatment effect. Furthermore, the length of the follow-up procedure may have been entirely too

short. The post-testing had to be set at four weeks following treatment due to the timing constrains associated with the ending of the school semester.

A larger sample more evenly assigned across the conditions would have been highly desirable in terms of better understanding the phenomenon examined here. Additionally, in a study using participant self-report, the assumption has to be made that students answered questionnaires honestly and that their answers reflected their true perception about the classes surveyed. This method of data collection can be subject to a number of response sets which could lead to spurious results.

Finally, there are additional threats to validity when using a pre- and post-testing protocol. Familiarity with the tests could have affected test scores on the post-test administration.

Recommendations for Future Research

This study provides general support for the efficacy of adventure programming designed to help troubled youth in the school system; however, additional research is needed to refine and validate findings. The problems youth are experiencing in schools today are complex and can be seen in the increased numbers of truancy and drop-out rates. If programs like the one presented in this study are going to be seen as viable treatment approaches, more research is needed to support their utilization.

Recommendations for further research based on the present study follow: Further investigation of the effects of the ropes course program on academic measures is clearly indicated. Further study with rural and suburb area school districts would aid in obtaining a more representative sample. A long term study evaluating efficacy based on recidivism

would help in determining successful treatment programs. Follow-up studies six to twelve months after treatment would be helpful in seeing if any of the effects of the treatment are maintained over time. Future studies could measure the transfer of behavior change beyond the group to other settings. Additionally, it would be helpful to know the optimal length of treatment effect by measuring different lengths of time spent in the therapeutic outdoor program; this would prove to be helpful in planning therapeutic programs. It is also recommended that more qualitative methods be used in future studies, particularly regarding students observations of how the ropes course program affects dynamics of the classroom environment. Finally, future researchers might use behavioral data to better measure this construct of classroom environment and to examine the continuing post-experience behavior of these subjects after their return to the community.

Conclusions

This study examined the effects of a ropes course program on individual perceptions of classroom environment. The results obtained in this study indicate that ropes course experiences influence perceptions of the classroom environment as they relate to Relationship Dimensions. Therefore, the study demonstrates that ropes course programs have a place as a successful enhancement to classroom environment.

Few studies have investigated this interaction between a ropes course program and the classroom environment. Further, no previous studies related to this area have incorporated a control group as a means of their research. Consequently, this study provides empirical support for the treatment benefits of the ropes course program as it relates to the classroom environment.

In general, it appears from the perspective of individual participants in the ropes course program that there were positive changes in the interpersonal aspects of the classroom environment. Students reported increases in the areas of better regards for teachers, better emotional control, better peer interpersonal relationships within the classroom, and increased feelings of teacher warmth toward the students. The specific changes have been discussed in detail in the proceeding pages.

This research is important because consistently strong associations have been found between student learning outcomes and the nature of the classroom environment. Ultimately, the classroom culture positively correlates with increased student achievement and these positive classroom environments create within a student the motivation to attend the classroom setting.

Considering the findings of this research, it is anticipated that program developers and course facilitators will be assisted in their efforts to implement successful experiences for participants and to maximize therapeutic impact of ropes course programs. Furthermore, such research should lend further understanding and credibility to the field of experiential adventure education as an alternative method of treatment in the school setting. In closing, this study will hopefully stimulate further research and practical applications involving ropes course programs that may contribute to the ultimate goal of improving the effectiveness of schooling.

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APPENDIX A

INFORMED CONCENT

INFORMED CONSENT TO PARTICIPATE IN THE EVALUATION OF THE ROPES COURSE PROGRAM

Your child has been asked to help us in a study to evaluate the effectiveness of a ropes course program that your child has registered for as part of a classroom experience. The program is sponsored by Tulsa Youth Services and the information will be used to make the program more effective for all future participants. As part of this study, your child will be asked to complete one short questionnaires before participating in the program and four weeks after the completion of the program. The following is the name of the questionnaire: Classroom Environment Scale. Your child will not be asked to put their name on the questionnaire so that their score will remain anonymous. The administration of the questionnaire will only take 20 minutes and will be administered by school administrative personnel. This administrative time will be built right into the regular school schedule so that your child will not miss any class time. Prior approval has been given by the school administration for this assessment. You have the right to request that your child not take part in this study and their non-participation in the study will not effect there involvement in the scheduled ropes course activity. You and your child also have the right to, at any time, discontinue participation in the study with no questions asked. Your cooperation is greatly appreciated. If you wish to see the results once the study is completed, please indicate by placing your name and address on the space provided below.

Thank You!
Tulsa Youth Services
Evaluation Committee

I give my permission for my child to participate in this study by completing the questionnaire described above. I understand that their participation is totally voluntary.

_____
(Your Signature)

If you wish to have results sent to you please fill out the following information:

Name:_____
Address:

_____
(Street)

_____
(City, State, Zip Code)

APPENDIX B

DEMOGRAPHIC SHEET

Date_____ School_____ ID No._____

Background Information Sheet

We are collecting the following information as part of a study for the Ropes Course Experience that your class has chosen to participate in. All your answers are strictly confidential, and will be used for research purposes only. Please do not put your name on this form.

1) Date of Birth_____Age_____ Male___ Female___ Grade In School____

2) Race or ethnic group: Please check one

____ American Indian/Alaskan Native
____ African American/Black
____ Anglo/Caucasian
____ International (Non-U.S. Citizen)
____ Asian or Pacific American
____ Hispanic/Latino
____ Multi-Ethnic/Racial
____ Other

3) Currently living in:

Large city urban area ___ Small town ___
Small city urban area ___ Rural area ___

4) Annual Family Income:

___ Below $15,000
___ $15,000 to $25,000
___ $26,000 to $35,000
___ $36,000 to $45,000
___ $46,000 to $55,000
___ Above $55,000

APPENDIX C

LETTER TO CONTACTS

Thank you for helping with the process of this study. Your assistance is greatly appreciated. The following information is a step by step procedure for the evaluation process. It may look ominous at first but that is because everything is spelled out in detail for your convenience. Please do not hesitate to call the Tim Daheim (405-744-9455) the main researcher at any time if you have a question. The following are the procedural steps.

1. Please read the solicitation statement printed on the cover sheet to the potential participants.

2. The request to provide consent to participate in the evaluation is to accompany the consent to participate in the Ropes Course Program that is sent home with the student. Please remember that these are separate forms.

3. Once the consent forms have been signed, please make a copy of this form and send it home with the student for parent/guardian records.

4. Collect consent forms and only administer tests to those students that have parental consent for participation in the study. All consent forms should be enclosed in the envelope that will be sent to the evaluator. Please do not put identification numbers on these consent forms for confidential purposes.

5. Please refer to instructions for pre-testing found on the next sheet.

6. Once pre-testing has been completed please enclose all the evaluations and the cover sheet that corresponds to the classroom in the envelope. Please mail this envelope to:

7. Four weeks following the completion of the ropes course program the classroom will need to be post-tested. This time please refer to the post-testing procedure form.

8. Again this information will need to be put into an envelope with the cover sheet enclosed and mailed to the researcher.

Thanks again for your assistance. Results will be sent to you as soon as all data has been compiled.

APPENDIX D

INSTRUCTIONS FOR PRE-TESTING

1. **When**: The evaluation forms are to be completed one week before participation in the ropes course program.

2. **General Instructions to Participants**: As you explain the session evaluation forms to the participants, please emphasize the following points:

* Their feedback is important in order to continue to improve the program and to provide useful information to others who will be going through it in the future.

* There are no right or wrong answers. We are just interested in their opinion.

- Remind them the completed forms will be sent to the people at Oklahoma State University to be summarized along with others who have completed the program, but their names will not be associated with this information. All information is
- help confidential.

3. **ID#**: Please assign a four digit number for each student and teacher beginning with 0001 and running sequentially until data collection for the evaluation is complete. Please fill out the number assignment log which is a record of the identification numbers you assign to students and teachers who complete the evaluations. This log is intended to be a reference for post-testing purposes and should not be sent to the evaluator. This list should be discarded at the end of post-testing procedures. Please tell each participant their Identification Number and instruct them to write it at the top of each evaluation. Please be very careful that the correct number is given to each participant. This number is critical in order for us to compare pre-test to posttest information. **Please have all teachers or staff participating if the study put a (T) at the top of every evaluation in order for us to differentiate between students and adults**.

4. **Classroom #**: Please put the classroom identification number on the cover sheet that will accompany the evaluation envelope. This should be a two digit number beginning with 01 and running sequentially for each classroom tested. Please identify the school with this number. Also, put this number on the log record for each class for post-testing purposes. We need to have the identification numbers from the posttest coincide with the numbers from the pre-test.

5. **Testing Procedure**: Please give out the inventories in the following sequence for standardization purposes. Please stress to the participants to read the instructions printed on the cover of each inventory.

APPENDIX E

IRB FORM

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 11-20-96 **IRB#: ED-97-029**

Proposal Title: EFFECTS OF ROPES COURSE THERAPY ON INDIVIDUAL PERCEPTIONS OF CLASSROOM ENVIRONMENT.

Principal Investigator(s): John S.C. Romans, Timothy J. Daheim

Reviewed and Processed as: Full Board

Approval Status Recommended by Reviewer(s): Approved

ALL APPROVALS MAY BE SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING, AS WELL AS ARE SUBJECT TO MONITORING AT ANY TIME DURING THE APPROVAL PERIOD.
APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL.
ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval are as follows:

Signature:  Date: December 13, 1996

Chair of Institutional Review Board

cc: Timothy J. Daheim

VITA

Timothy J. Daheim

Candidate for the Degree of

Doctor of Philosophy

Thesis: EFFECTS OF ROPES COURSE THERAPY ON INDIVIDUAL PERCEPTIONS OF THE CLASSROOM ENVIRONMENT

Major Field: Applied Behavioral Studies

Biographical:

Personal Data: Born in St. Paul, Minnesota, On December 17, 1961, the son of Warren and Betty Daheim.

Education: Graduated from Washington High School, Tacoma, Washington in May 1980; received Bachelor or Business Administration degree in Finance from Pacific Lutheran University, Tacoma, Washington in May 1984, respectively. Received Master of Arts degree with a major in Community Counseling at St. Mary's University, San Antonio, Texas in May 1994. Completed the requirements for the Degree of Doctor of Philosophy in Applied Behavioral Studies at Oklahoma State University in (July, 1998).

Experience: Raised in the suburbs of Tacoma, Washington; employed as a golf professional for one year after undergraduate degree, Seattle, Washington; employed by a national Catholic ministry for six years as a senior field supervisor; Oklahoma State University, Department of Health and Educational Psychology, 1994 to present.

Professional Memberships:
American Psychological Association
American Psychological Association of Graduate Students
Southwestern Psychological Association