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**THE EFFECTIVENESS OF AN ADVENTURE TRAVEL SUMMER CAMP
PROGRAM ON THE LIFE EFFECTIVENESS OF ADOLESCENTS**

BY

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Bachelor of Science, State University of New York, 1997

THESIS

**Submitted to the University of New Hampshire
in Partial Fulfillment of
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in

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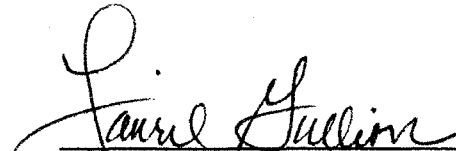
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TABLE OF CONTENTS

| | |
|---|------|
| TABLE OF CONTENTS..... | iii |
| LIST OF TABLES..... | vi |
| LIST OF FIGURES..... | vii |
| ABSTRACT..... | viii |
| | |
| I. INTRODUCTION..... | 1 |
| Focus of Inquiry..... | 9 |
| Research Questions..... | 9 |
| Limitations..... | 10 |
| Rationale..... | 11 |
| Justification..... | 12 |
| Definition of Terms..... | 13 |
| II. REVIEW OF LITERATURE..... | 15 |
| Adolescence: A Critical Stage of Development..... | 15 |
| The Emergence of Positive Youth Development..... | 17 |
| Adventure Travel Summer Camps..... | 26 |
| III. METHODS..... | 35 |
| Research Questions..... | 35 |
| Specific Hypotheses..... | 36 |
| Research Design..... | 38 |
| Sampling..... | 39 |

| | |
|---|----|
| Intervention..... | 40 |
| Instrumentation..... | 42 |
| Data Collection..... | 43 |
| Data Analysis..... | 43 |
| IV. RESULTS..... | 46 |
| Group Demographics..... | 47 |
| Analysis of LEQ Scores..... | 48 |
| Demographic Variables..... | 51 |
| V. DISCUSSION..... | 57 |
| Limitations of the Study..... | 57 |
| Discussion of the Research Questions..... | 60 |
| Implications for Longacre Expeditions..... | 64 |
| Recommendations for Future Research..... | 65 |
| Conclusion..... | 66 |
| LIST OF REFERENCES..... | 68 |
| APPENDICES..... | 74 |
| APPENDIX A..... | 75 |
| Longacre Expeditions Program Descriptions..... | 76 |
| APPENDIX B..... | 80 |
| Life Effectiveness Questionnaire Version H..... | 81 |
| APPENDIX C..... | 83 |
| IRB Approval Letter..... | 84 |

| | |
|---|----|
| APPENDIX D..... | 85 |
| LEQ Subscale Score Analysis Statistics..... | 86 |

LIST OF TABLES

| | |
|--|----|
| Table 1: <i>Participant Demographics by Age and Gender</i> | 49 |
| Table 2: <i>Means and Standard Deviations of Composite LEQ Score</i> | 50 |
| Table 3: <i>Means and Standard Deviations of Change Scores by Gender</i> | 54 |
| Table 4: <i>Means and Standard Deviations of Change Scores by Age</i> | 55 |
| Table 5: <i>Means and Standard Deviations of Change Scores by Program</i> <i>Duration</i> | 58 |
| Table D.6: <i>LEQ Subscale Means and Standard Deviations</i> | 87 |
| Table D.7: <i>LEQ Subscale ANOVA Results</i> | 87 |

LIST OF FIGURES

| | |
|--|----|
| Figure 1: Changes in Composite LEQ Scores Over Time..... | 51 |
| Figure 2: Changes in Social Competence and Emotional Control LEQ Subscale Scores..... | 52 |
| Figure 3: Changes in Composite LEQ Scores by Gender..... | 54 |
| Figure 4: Changes in Composite LEQ Scores by Age..... | 56 |
| Figure 5: Changes in Composite LEQ Scores by Program Length..... | 57 |

ABSTRACT

THE EFFECTIVENESS OF AN ADVENTURE TRAVEL SUMMER CAMP PROGRAM ON THE LIFE EFFECTIVENESS OF ADOLESCENTS

By

Jeffrey Lane

University of New Hampshire, September 2008

The field of positive youth development encompasses a broad spectrum of youth programs and organizations. Outdoor and adventure education programs are well-positioned to be a part of the movement toward a positive developmental approach to youth programming. The purpose of this study was to determine whether an adventure-travel summer camp program (Longacre Expeditions) had positive effects on the life effectiveness of adolescent participants. The study measured attributes of Life Effectiveness of participants using the Life Effectiveness Questionnaire Version-H (LEQ-H). The instrument was administered at the commencement, conclusion, and six months following the program. Composite LEQ data and subscale data were analyzed using one-way repeated measures ANOVA with follow-up pairwise comparisons. Independent-samples t-tests were used to examine for differences related to demographic variables. The analysis showed significant improvement in participants' LEQ scores between the start and end of the program; however,

increases in scores were not maintained at a significant level six months after the program. Significant increases in participants' scores were found in the two subscales of social competence and emotional control between the start and end of the program. Social Competence is defined as a person's degree of personal confidence and self-perceived ability in social interactions; Emotional Control is defined as the extent to which an individual perceives he or she maintains emotional controls when he or she is faced with potentially stressful situations (Neill, Marsh, & Richards, 2003). For mean composite LEQ scores, social competence subscale, and emotional control subscales effect sizes were small. Neither age nor gender was found to have made a difference in composite LEQ scores. Significant differences were found between short and long programs from the start of the program to six months afterward. These specific findings provide some additional evidence of this program's ability to affect the life effectiveness of its participants immediately following the program. The findings also suggest that longer programs (18+ days) have greater potential to affect lasting change. Generalizations based on these results should take into account the strength of the effect sizes as well as the diminishing effects over time.

CHAPTER I

INTRODUCTION

On their paths to becoming adults, youth encounter an infinite array of experiences. Such experiences typically play a large role in who they become and how successful they are in their lives. Indeed, the long-term health of our society largely depends upon the adequate preparation of youth for adulthood, yet consensus has not been reached among scholars, educators, and policy-makers regarding how to best accomplish this task. This can be a difficult task, given the wide range of ideas concerning which strategies for youth development work best. However, one idea that is generally agreed upon is that inadequate growth during childhood can have negative consequences on adulthood, both for the individual and for society. For example, Cohen (1998) estimates the total economic and social costs of the typical career criminal to be \$1.3 to \$1.5 million. Certainly not all youths become career criminals; however, it is not only crime that creates costs. Other examples may include health problems caused by unhealthy diets, a lack of exercise, a lack of education limiting an individual's employment prospects, or a decline in traditional community values created by underdeveloped social skills.

Given the potential negative effects of inadequately preparing youths to lead positive, productive lives, it is no surprise that researchers and scholars are interested in this area. However, this has not always been the case. Much

of the impetus for establishing programs for youth has evolved from a changing view of how youth actually grow into adulthood. Catalano and colleagues described the beginnings of this trend:

With the twentieth century's discovery of childhood and adolescence as special periods in which children should be given support to learn and develop, American society assumed an increased sense of responsibility for the care of its young people. Increases in juvenile crime and concerns about troubled youth led in the 1950s to the beginning of major federal funding initiatives to address these issues. These trends accelerated during the 1960s, as did national rates of poverty, divorce, out-of-wedlock births, family mobility, and single parenthood (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004, pp. 98-99).

Growing out of the concern to address negative issues, many programs focused on prevention and intervention. It is unclear as to how effective these programs actually were, as research on program effectiveness has shown mixed results (Irvy & Doolittle, 2003; Gambone, Klem, & Connell, 2002; Pittman, Irby, & Ferber, 2000). While prevention and intervention programs have not disappeared, in recent years there has been a paradigm shift in the way youth development programs have been considered (Catalano et al., 2004; Connell, Gambone, & Smith, 2000; Gambone et al., 2002; Irvy & Doolittle, 2003; Leffert et al., 1998). The phrase "problem free is not fully prepared" has come to symbolize the current movement toward a positive framework of youth development (Pittman et al., 2000, p. 20). This proactive shift focuses on promoting healthy developmental outcomes for all youth, in addition to reducing long-term negative outcomes of youth-at-risk. This new way of looking at youth development has emerged into its own as an independent field of study known as Positive Youth Development (PYD).

As the field of Positive Youth Development evolved and matured, an operational definition was developed by Catalano et al. (2004) in order to help bring the field to consensus. According to the researchers, positive youth development programs are approaches that seek to achieve one or more of the following objectives:

1. Promote bonding
2. Foster resilience
3. Promote social competence
4. Promote emotional competence
5. Promote cognitive competence
6. Promote behavioral competence
7. Promote moral competence
8. Foster self-determination
9. Foster spirituality
10. Foster self-efficacy
11. Foster clear and positive identity
12. Foster belief in the future
13. Provide recognition for positive behavior
14. Provide opportunities for pro-social involvement
15. Foster pro-social norms

The shift toward positive youth development has taken place in policy as well as theory and practice. Reflecting the shift, the Centers for Disease Control and Prevention (CDC) recently revised its “Goals for the 21st Century” to

include positive youth development. The new goals aim to increase the number of adolescents who are prepared to be healthy, safe, independent, and productive members of society (About CDC, 2006). The CDC believes that both the prevention of detrimental behaviors, as well as promotion of factors that support healthy behaviors, can help achieve these goals.

By some measures, the shift toward positive youth development is working. In New Hampshire, risky behaviors among adolescents have declined in many areas since data was first collected in 1993 (New Hampshire Department of Education, 2007). The behaviors measured are related to the leading causes of mortality and morbidity among both youth and adults; this longitudinal study assesses how these risk behaviors change over time. These figures are representative of the most readily measurable variables related to youth's risky behaviors, yet they do not measure outcomes of a more positive nature.

While measuring risky behaviors does provide some insight into current trends, it doesn't speak to the effectiveness of positively-oriented programs. In order to help overcome this obstacle, Benson & Saito (2001) contributed a conceptual framework to be applied to youth development theory and research. This framework can be a useful tool for researchers, as it takes into account the context in which the theory is developed, categorizes inputs which lead to youths building developmental strengths, and ultimately results in promotion of short and long term outcomes.

Other frameworks have been advanced to describe the outcomes we would expect to see in a well-developed adolescent. The Search Institute offers one such example in the 40 Developmental Assets, which are considered to be the building blocks of positive youth development (e.g. important developmental outcomes are enhanced when these assets are present in youth). These positive outcomes range from reduction in health-compromising behaviors (e.g. those measured by the CDC), to increases in healthy lifestyles (e.g. proper nutrition and exercise), and to increased resiliency when facing difficult situations (Leffert et al., 1998).

The 40 Developmental Assets are divided into internal and external assets. Internal assets include subcategories such as: commitment to learning, positive values, social competencies, and positive identities. Some examples of the internal assets are achievement motivation, integrity, restraint, interpersonal competence, peaceful conflict resolution, and personal power. External assets include the subcategories of support, empowerment, boundaries and expectations, and constructive use of time. Examples of the external assets are positive family communication, service to others, positive peer influence, and participation in youth programs (Search Institute, 2007).

Other researchers have put forth similar models. Neill, Marsh, & Richards (2003) identified eight domains of life effectiveness. These domains are based on the idea that people who are effective in their lives possess personal skills that assist in achieving their desires or wishes in life. These eight domains are: (a) time management, (b) social competence, (c) achievement

motivation, (d) intellectual flexibility, (e) task leadership, (f) emotional control, (g) active initiative, and (h) self-confidence. While these models are different in many aspects, they are similar in their belief that the greater the development of these assets, the more likely adolescents will be effective and successful in their lives.

A significant amount of overlap exists between these models and the objectives of positive youth development programs outlined by Catalano et al. (2004). Social, emotional, cognitive, and behavioral competencies are all objectives of PYD programs, and they are expected to be found in effective and productive adults in our society (Leffert et al., 1998; Neill et al., 2003).

Many researchers believe structured out-of-school activities play a significant role in developing these assets among adolescents (Eccles, Barber, Stone, & Hunt, 2003; see also Hanson, Larson, & Dworkin, 2003; Larson, 2000; Mahoney, Eccles, & Larson, 2004; Roth & Brooks-Gunn, 2003). The benefits of structured leisure activities (versus unstructured activities such as watching television) include the opportunity:

(a) to acquire and practice specific social, physical, and intellectual skills that may be useful in a wide variety of settings including school; (b) to contribute to the well-being of one's community and to develop a sense of agency as a member of one's community; (c) to belong to a socially recognized and valued group; (d) to establish supportive social networks of peers and adults that can help in both the present and the future; and (e) to experience and deal with challenges" (Eccles et al., 2003, p. 866).

Many of the benefits of structured leisure activities are congruent with the benefits believed to be achieved through participation in outdoor and adventure education programs. Researchers have found a wide variety of benefits related

to outdoor and adventure education programs including: 1) increases in self-concept measures such as self-esteem and self-confidence (American Camp Association [ACA], 2007; Cason & Gillis, 1994; Hattie, et al., 1997; Kaly & Heesacker, 2003; Propst & Koesler, 1998; Westervelt et al., 1998), 2) a more internalized locus of control (Hans, 2000; Newberry & Lindsay, 2000; Hattie et al., 1997; Marsh, Richards, & Barnes, 1986), 3) development of pro-social behaviors (Moore & Russell, 2002), 4) spiritual growth (Griffin, 2003), 5) moral reasoning (Conrad & Hedin, 1981), and 6) leadership and autonomy (Hattie et al., 1997; Gass, 1990). As researched outcomes of outdoor and adventure education programs are similar to those outcomes defined by youth development researchers (e.g. Lerner, Fisher, & Weinberg, 2000 and Catalano et al., 2004), a theoretical link exists between outdoor and adventure education programs and PYD programs.

One type of outdoor and adventure education program particularly well-suited to facilitate development of characteristics which may lead to positive developmental outcomes are summer camps, primarily due to their ability to reach large numbers of adolescents. Each year, more than 11 million children and adults are served by 12,000 camps (ACA, 2007), and some of these participants choose adventure-travel summer camps. This particular type of overnight summer camp makes use of multiple adventure activities such as bicycle touring, hiking, rock climbing, and whitewater kayaking. Marketing literature from these companies frequently promotes their ability to develop positive youth outcomes such as personal responsibility, leadership, self-

confidence, group problem-solving skills, tolerance of differences, and communication skills. (e.g. Broadreach, 2006; Longacre Expeditions, 2007). These claims are loosely based on research findings (ACA, 2007) and heavily based on anecdotal evidence and instinct (Hattie et al., 1997).

In addition to the purported benefits of participating in an adventure-travel summer camp, many other facets of the experience make this type of structured, out-of-school activity well suited for promoting positive youth development. In these programs, high-risk or high-thrill activities are common. The perception of risk often creates dissonance in the participant (Walsh & Golins, 1976), which can create openness to change. Adventure-travel summer camps frequently use the naturally occurring group dynamics to help maintain a positive, safe, and supportive atmosphere (Priest & Gass, 2005). This reliance on the group for success presents another opportunity for adolescents to develop effective life skills. Also, these programs are typically staffed by young adults who care a great deal about the well-being of their participants and can be effective role models for them.

It is clear that there is no magic bullet for youth development; one program or experience alone can never sufficiently provide a young person with the competencies and skills to successfully navigate through adolescence to adulthood. Adventure-travel summer camps may be effective as one component of the overall positive developmental environment experienced by a young person. These programs include many of the attributes of PYD programs as defined by PYD researchers (e.g. caring staff, a safe and supportive

atmosphere, and a commitment to positive growth). Existing research has also shown that outdoor and adventure education programs positively influence in number of developmental domains. In consideration of the similarities in process and outcomes, the current study seeks to further investigate the relationship between adventure-travel summer camp experiences and the positive developmental growth of adolescents.

Focus of Inquiry

The specific purpose of this study was to determine if participation in a Longacre Expeditions adventure-travel summer camp program influenced the life effectiveness of adolescents as measured by the Life Effectiveness Questionnaire (LEQ) (Neill et al., 2003).

Research Questions

The research questions this study addressed related to composite LEQ scores, LEQ subscale scores, participant demographics, and length of program were as follows:

1) Composite LEQ scores

- a) Was there a significant difference in composite LEQ scores between pre-program scores and post-program scores?
- b) Was there a significant difference in composite LEQ scores between pre-program scores and six-month follow-up scores?
- c) Was there a significant difference in composite LEQ scores between post-program scores and six-month follow-up scores?

2) LEQ subscale domains

- a) Were there significant differences in any of the eight LEQ subscale scores between pre-program scores and post-program scores?
 - b) Were there significant differences in any of the eight LEQ subscale scores between pre-program scores and six-month follow-up scores?
 - c) Were there significant differences in any of the eight LEQ subscale scores between post-program scores and six-month follow-up scores?
- 3) Is there a difference in participants' composite LEQ scores between gender?
- 4) Is there a difference in participants' composite LEQ scores between ages?
- 5) Is there a difference in participants' composite LEQ scores between programs of different lengths?

Limitations

There are several limitations and threats to this research study:

- 1) Lack of control or comparison group/non-experimental design. This is a commonly recognized limitation of research in both youth development programs and adventure programs. The use of a control or comparison group would allow for greater isolation of the adventure summer camp as the cause of the change, versus the natural process of maturation.
- 2) Self-report data. Validity of self-report data is diminished to the extent that participants do not have reasonable self-insight and honesty in their reporting.
- 3) Reactive effect of testing. Participants may report scores that do not accurately reflect reality due to awareness of being tested. Also, reported

scores may be inaccurate due to familiarity with the instrument at post-test and follow-up.

- 4) Participant retention. Of the 50 subjects who completed the pre-test and post-test, only 30 returned the follow-up tests mailed to them six months following the program.
- 5) Timing of testing. Participants were tested twice during their summer vacations and once during the winter months. It is possible that factors related to timing of testing, such as the recent completion of a grade level, influence the participants' responses to the instrument.
- 6) Generalizability to other programs. Due to the individuality and uniqueness of the Longacre Expeditions experience, certain factors that are unique to the individual company may facilitate development. These may not transfer to other programs utilizing a similar adventure-travel format but with different unique qualities of their own.
- 7) Researcher bias. The principal researcher has worked for Longacre Expeditions for six summers as a trip leader and course area director. It is possible that this experience has led to a belief that this type of program is inherently good for the participants.

Rationale

Development of competencies, skills, and assets such as those outlined by Connell et al., (2000), Leffert et al. (1998), and Neill et al. (2003) have been identified as important for the successful transition from adolescence to adulthood. Research shows these skills may be important in the resistance to

common factors influencing poor life outcomes such as: alcohol and other drug abuse, tobacco use, violent activity, sexual activity, and poor school performance (Ayers & Shavel, 1997; Scales, Benson, Leffert, & Blyth, 2000). Additionally, researchers argue that structured out-of-school activities can have a significantly positive influence on the development of youth (ACA, 2007; Eccles et al., 2003; Roth & Brooks-Gunn, 2003). Each year approximately 11 million people attend summer camp programs (ACA, 2007). A wide variety of programs fall within the category of summer camps, including adventure-travel summer camp programs. In order to understand the influence these types of activities have on youth development, further research is needed. This study attempts to understand the extent of influence an adventure-travel summer camp program has on its participants, and to offer greater insight into to how youth development outcomes can be maximized through the intentional structure of the experience.

Justification

This research study will make contributions to Longacre Expeditions, other similar programs, and other professionals interested in understanding how adventure programming can play a role in the positive development of youth.

Specifically, this study aims to:

- 1) Increase Longacre Expedition's understanding of the effects their programs have on the life effectiveness of youth,
- 2) Provide feedback to Longacre Expeditions as to how they may adapt programming to more strongly impact youth,

- 3) Contribute to the body of knowledge in the fields of summer camp and adventure programming, and
- 4) Provide evidence of the effectiveness of this type of programming for parents and educators.

Definition of Terms

Adventure-travel summer camp

An adventure-travel summer camp is a type of summer program in which participants take part in adventure activities such as rock climbing, kayaking, cycling, hiking, or other activities. These programs are differentiated from traditional summer camps in that they do not utilize a permanent camp facility. Participants travel to and from various activity sites and camping areas as an intact group lead by staff members.

Longacre Expeditions

Longacre Expeditions is a for-profit, privately owned company providing adventure-travel summer camp experiences for adolescents. It is their belief that individuals grow when they surmount challenges both physically and interpersonally. A more comprehensive description of the courses involved in this study is presented in Appendix A (Longacre Expeditions, 2007).

Life Effectiveness Questionnaire

Life Effectiveness refers to a set of personal skills which influence factors linked to personal achievement. This instrument was developed to measure the

extent to which a person's actions, behaviors, and feelings are effective in achieving his or her desires or wishes in life (Neill et al., 2003). The LEQ-H, as used in this study, is presented in Appendix B. The eight subscale definitions are as follows:

- 1) Time management: The extent that an individual perceives that he or she makes optimum use of time.
- 2) Social competence: The degree of personal confidence and self-perceived ability in social interactions.
- 3) Achievement motivation: The extent to which the individual is motivated to achieve excellence and put the required effort into action to attain it.
- 4) Intellectual flexibility: The extent to which the individual perceives he or she can adapt his or her thinking and accommodate new information from changing conditions and different perspectives.
- 5) Task leadership: The extent to which the individual perceives he or she can lead other people effectively when a task needs to be done and productivity is the primary requirement.
- 6) Emotional control: The extent to which the individual perceives he or she maintains emotional control when he or she is faced with potentially stressful situations.
- 7) Active initiative: The extent to which the individual likes to initiate action in new situations.
- 8) Self-confidence: The degree of confidence the individual has in his or her abilities and the success of their actions.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter presents a review of the literature pertaining to adventure travel summer camps and the Positive Youth Development movement. First, the importance of adolescence as a time for growth is discussed. Second, how research and theory in the Positive Youth Development movement have merged to present a coherent foundation for the field is presented. Finally, adventure programming and summer camp research is examined.

Adolescence: A Critical Stage of Development

Adolescence is a critically important time of growth and development for young people. Youth can become successful adults by developing social, emotional, cognitive, moral, and behavioral competencies, by developing a sense of identity, spirituality, and a belief in the future, and by participating in opportunities that foster pro-social involvement (Catalano, et al., 2004) Much of the current efforts in youth programming and research are based on the work of prominent developmental psychologists, including Jean Piaget, Lev Vygotsky, Erik Erikson, and Lawrence Kohlberg. Studying the cognitive, social, and moral development of youths, these researchers have provided a foundation from which current adolescent development theory and practice has emerged.

According to Piaget's and Vygotsky's studies of cognitive development, during the period of adolescence youth are learning to think abstractly, reason logically and draw conclusions from available information (Sprinthall, Sprinthall, & Oja, 1998). These reasoning skills are then carried with them into adulthood. Erikson's theory on psychosocial development describes the period of adolescence as a conflict between identity and role confusion. Adolescents are trying to figure out who they are and what their goals are for life (Sprinthall et al., 1998). These developments are taking place in the presence of a wide variety of influences, which may include their families, social circles, and media, as well as extracurricular activities and programs they may be a part of.

Adolescence is also believed to be a time of moral development. According to Kohlberg's theory of moral development, during adolescence youth are usually in either the conventional or post-conventional stage of growth. These stages are marked by increasingly nuanced bases for morality, requiring more complex and higher levels of thought (Sprinthall et al., 1998). Again, the environment surrounding youths provides a wide variety of influences which have the potential to affect an individual's developing morality.

The works of Piaget, Vygotsky, Erikson, and Kohlberg stand out for their fundamental contributions to developmental psychology. Although there have been many additional contributions, expansions, and challenges to their theories, these researchers have provided a solid theoretical foundation for the current interest in Positive Youth Development. From this foundation, it is clear that the growth that occurs during adolescence is complex and multi-

dimensional, thus creating both opportunities and complications for youth development professionals (Henderson, Scheuler, Bialeschki, Bialeschki, & Thurber, 2007).

The Emergence of Positive Youth Development

In recent years, there has been an emerging paradigm shift in the youth development arena. (Catalano et al., 2004; Connell et al., 2000; Leffert et al., 1998; Pittman et al., 2000; Roth & Brooks-Gunn, 2003) Early programs tended to be problem-focused, concentrating their efforts on intervening with high-risk youth. The predominant view was that the public good would be best served by reducing the number of youths experiencing negative outcomes. The raising of children had largely been a private domain; the problem-reduction focus was seen by some as legitimizing the authority of government and organizations to intervene how children were raised (Gambone et al., 2002). As a result, interest in intervention grew, and programs were put in place to combat common problems such as teen pregnancy, alcohol and drug abuse, violence and crime, etc.

In the 1980's, interests expanded from intervention programs, which focused only on those youth who exhibit negative or problematic behaviors, to include prevention programs. One well-known example is the "Just Say No to Drugs" campaign, spearheaded by First Lady Nancy Reagan. This program, like other prevention programs, aimed to protect all youths from negative influences, not just those youths already engaged in high-risk behaviors (Reagan Foundation, 2007). While the scope broadened with the expansion

from intervention to prevention, the focus remained on problem behaviors. Research on these programs has shown mixed results at best (Catalano et al., 2004; Connell et al., 2000; Gambone et al., 2002; Irvy & Doolittle, 2003; Leffert et al., 1998). Without conclusive evidence showing that these programs had the intended effects on adolescence, and with problem behavior among youth not on the decline, the question of how best to provide youth the opportunity to navigate adolescence successfully was left the unanswered.

Since the late 1990's, there has been an increasing interest in Positive Youth Development (Gambone et al., 2002), making youth development somewhat of an industry buzzword (Roth & Brooks-Gunn, 2003). As Pittman et al., (2000) state, "youth development has generated a surprising amount of energy and enthusiasm from Washington D.C. and across the country" (p. 18). Reflecting this energy and enthusiasm, there is a thriving body of literature, much of which offers theoretical definitions of various aspects of the Positive Youth Development movement. The potential benefits related to the growth of this body of literature include both the ability to improve programming available to youth as well as providing direction for future research into the field. Henderson et al. (2007) synthesize recent developments in the field into one of the most comprehensive definitions of youth development available. They state, "Youth development encompasses a process that prepares young people to meet the challenges of adolescence and adulthood by providing supports and activities that contribute to their growth and development. Models of youth

development today focus on creating opportunities and developing assets to move beyond simply problem prevention.” (p. 988)

The advancement of a science of youth development is necessary to sustain the growth of the Positive Youth Development movement. In order to do this, there is a need to articulate models to guide this science (Benson & Saito, 2001). Within the body of Positive Youth Development literature is a myriad of models and frameworks related to PYD programs (Gambone et al., 2002). In order to begin systematically defining what PYD is and how communities and programs can embark on their missions to foster Positive Youth Development, Connell et al. (2000) created the Community Action Framework. This framework describes a systematic community-based approach to providing the conditions needed by all youths in order to be successful, beginning by asking what exactly it is that we expect youth to be developing into. Without understanding what the expectations are for youth development, the PYD movement would continue to be a haphazard and scattered effort. As consensus is built on the expected goals and outcomes, examination of how best to reach these goals can begin. The Community Action Framework presented by Connell et al. (2000) addresses five questions about youth development:

1. What are our basic long-term goals for youth?
2. What are the critical developmental milestones or markers that tell us young people are on their way to the goals?
3. What do young people need to achieve these developmental milestones?

4. What must change in key community settings to provide enough supports and opportunities to all youth that need them?
5. How do we create the conditions and capacity in communities to make these changes possible and probable?

The first and third of these questions are addressed throughout the remainder of this section.

Long-Term Goals for Youth Development

Goals of youth development are frequently stated in terms of desirable competencies, skills, or assets that youth should possess as they transition from adolescence to adulthood. This is in contrast to the prevention and intervention sciences, whose goals are framed in terms of the absence of deficits. For example, prevention science may view reduction in alcohol abuse among teens as a goal of an educational program. From a PYD perspective, youth develop appropriate self-concept and social competencies necessary to ward off negative peer influences, such as excessive drinking. Many researchers have sought to define the goals of youth development using this asset-based or competency-based perspective.

In a precursor to the Positive Youth Development movement, Ryff & Singer (1996) define six dimensions of psychological well-being for adults. These dimensions include: 1) self-acceptance, 2) positive relationships with others, 3) autonomy, 4) environmental mastery, 5) purpose in life, and 6) personal growth. According to Ryff & Singer, adults who have a good grasp of these six dimensions tend to do well psychologically.

In their model for national youth policy, Lerner et al. (2000) promote the “Five C’s,” a list of outcomes necessary for youths to move from adolescence into a successful, healthy adult life. The Five C’s include: 1) competence in academic, social, and vocational areas, 2) confidence or a positive self-identity 3) connections to community, family, and peers, 4) character or positive values, integrity, and moral commitment, and 5) caring and compassion. Lerner et al. view the youth development outcomes to be intergenerational, that is, as youth develop these outcomes and move into adulthood, they then have the opportunity to provide subsequent generations with what is needed to achieve these outcomes. The passing of these outcomes from one generation to the next is what will promote the long-term and sustainable growth of a civil society (Lerner et al., 2000).

Devaney, O’Brien, Tavegia, & Resnik (2005) categorize outcomes of adolescence from the perspective of social and emotional learning (SEL). They describe SEL as the “process of acquiring the skills to recognize and manage emotions, develop caring relationships, make responsible decisions, and handle challenging situations effectively” (p. 107). Five SEL competency areas necessary for healthy development are: 1) self-management, 2) self-awareness, 3) social awareness, 4) relationship skills, and 5) responsible decision-making. While SEL approaches are most frequently applied in school settings (Kress, Norris, Schoenholz, Elias, & Seigle, 2004), it is reasonable to expect SEL approaches to be effective in other structured setting such as those promoted by the PYD movement.

The Search Institute has developed one of the most widely-recognized frameworks for youth development outcomes, the 40 Developmental Assets. Their research has found strong relationships between the number of assets possessed by youths and the degree to which they develop in positive and healthful ways (Search Institute, 2007). The 40 Assets are categorized into internal and external assets. External assets are those that focus on positive experiences youth have from people and institutions in their lives. They include the sub-categories support, empowerment, boundaries and expectations, and constructive use of time. Two examples of external assets are 1) positive peer influence, i.e., a young person's best friends model responsible behavior, and 2) other adult relationships, (i.e. a young person receives support from three or more non-parent adults). Internal assets are the internal qualities that guide positive choices and foster a sense of confidence, passion, and purpose. The sub-categories of internal assets include commitment to learning, positive values, social competencies, and positive identity. Examples of internal assets are 1) achievement motivation, i.e., a young person is motivated to do well in school and 2) interpersonal competence, i.e., a young person has empathy, sensitivity, and friendship skills. (Leffert et al., 1998)

In developing the instrument used in the present study, the LEQ-H, Neill et al. (2003) argue that a multi-dimensional construct of personal life effectiveness can be used to measure the impact of personal development programs. These dimensions include: 1) managing emotions, 2) managing time, 3) having confidence, 4) communicating effectively with others, 5) being

intellectually flexible, 6) being motivated to achieve, 7) being able to take leadership when the opportunity or need presents, and 8) actively taking initiative. Many of these domains of life effectiveness overlap with other youth development outcome frameworks, such as the 40 Developmental Assets, SEL competencies, and the 5 C's.

Whether developmental outcomes are viewed in terms of Life Effectiveness, the Five C's, the 40 Developmental Assets, SEL competencies, or dimensions of psychological well-being, it is the end result that is most important. From its own perspective, each of these outcome frameworks describes the ultimate goal of youth development as a pathway to creating a healthy, successful adulthood. Moreover, they highlight the idea that adolescent development is indeed multi-dimensional. In order for youth to succeed as adults, they need to be well-rounded with skills, competencies, and assets from a variety of sources.

What's needed to achieve developmental milestones

In order to allow young people to achieve the goals of youth development, we need to have an understanding of what their needs are. Connell et al. (2000) state the needs of young people as: adequate nutrition, health, and shelter; multiple supportive relationships with adults and peers; meaningful opportunities for involvement and membership; challenging and engaging activities and learning experiences; and safety. Similarly, Zeldin & Price (1995) state youth need access to safe places, challenging experiences, and caring people in order to develop into healthy adults. The National

Research Council (2002) identified the characteristics of positive developmental settings. These settings often address the needs of youth by providing: 1) physical and psychological safety, 2) appropriate structures, 3) supportive relationships, 4) opportunities to belong, 5) support for efficacy and mattering, 6) positive social norms, 7) opportunities for skill building, and 8) integration of family, school, and community. Encompassing all of the aforementioned needs, Catalano & colleagues (2004) developed their list of fifteen objectives of PYD programs, specifically noting that it is not necessary for a single program to address all of the objectives. Rather, a program must only have one or more of the stated objectives in order to be considered a PYD program. Since adolescence is filled with a wide variety of experiences, over time youth need to be presented with sufficient opportunities to collect and develop the competencies, skills, and assets that will help them achieve the aforementioned developmental milestones.

Thurber et al., (2007) argue that youth develop best when presented with a wide variety of supports and opportunities offering multidimensional avenues for growth. With exceptions for school and family life, the best opportunities for development come from voluntary, structured programs that include challenging activities, where youth are motivated intrinsically, and have a supportive environment (Gambone et al., 2002; Larson, 2000). In order to successfully achieve the goals of youth development, it is important that appropriate opportunities are offered to young people. However, there is no single program or opportunity that can provide all that a young person needs for healthy

development, nor should one program attempt to do so, Catalano et al. (2004) argue. In order to be successful, youth development must take place on a variety of levels, which may include time spent at school, with family, or in structured and unstructured leisure time.

It's important to note that not all youth programs should be considered Positive Youth Development programs, and furthermore, not all PYD programs are effective at achieving their goals. According to Roth & Brooks-Gunn (2003), three characteristics of PYD programs set them apart from other youth programs. First, their stated goals need to be aimed toward positive development. Second, the atmosphere created must be safe, supportive, and hopeful; and they must set high expectations for youth. Third, the activities must nurture interests, provide opportunities to learn new skills, and be substantively different from school. Many youth programs often do not set developmental goals or intentionally design their programs for youth development (Devaney et al., 2005), thus missing out on a potential opportunity. It's been suggested that programs created consciously and intentionally offer the best opportunities for youth development (Henderson et al., 2007). Without an intentional design and delivery of programming, opportunities for positive developmental growth may be overlooked.

The American Camp Association (ACA) recently conducted a large scale research effort aimed at determining what effects summer camps have on outcomes of Positive Youth Development. While the ACA reports positive effects of a camp experience, the increases found were not significant. As

Henderson et al. (2006) state, "this national ACA outcomes study showed positive growth based on the pre and post test results from both, campers and parents. Therefore, elements of camp components seemed to be working, even though no statistically significant differences were found." The researchers then attempt to show what programmatic factors cause the positive growth. These findings are similar to those of other adventure programs.

Adventure Travel Summer Camps

Currently there exists little empirical research specifically studying adventure travel summer camps; however, these programs share many similarities with both residential summer camps and outdoor and adventure education programs. Although limited in depth, the body of literature related to both of these types of programs can offer helpful insights into the potential benefits of adventure travel summer camps.

Outdoor and Adventure Education Programs

Adventure programming takes on many forms. Adventure is commonly used for the purposes of personal growth, therapy, recreation, rehabilitation, education, leadership development, and organizational development (Friese, Hendee, & Kinzinger, 1998; Hans, 2000; Priest & Gass, 2005).

Common features of adventure programs include: 1) wilderness or backcountry settings, 2) small group sizes, 3) challenging objectives, 4) frequent group problem-solving and decision-making, 5) trained leadership, and 6) a duration of two to four weeks (Hattie, et al., 1997) Similarly, Walsh & Golins

(1976) described the processes involved in an Outward Bound program as a motivated learner being placed into a unique physical and a unique social environment. The group, led by trained leaders, is then presented with characteristic problem solving tasks, which brings about a sense of adaptive dissonance. In this state of adaptive dissonance the learner may succumb to the challenge, cope with it, or thrive. These adventure program models not only define the processes involved in adventure programs, they also highlight the connections between adventure programming and the current Positive Youth Development movement.

Researchers have shown that adventure education programs can have an impact on a wide variety of developmental outcomes (e. g. Cason & Gillis, 1994; Hans, 2000; Hattie et al., 1997). Perhaps the most commonly studied outcomes are measures of self-concept. Self-concept refers to the many different ways a person may feel about himself or herself. Self-confidence, self-esteem, self-awareness, and self-efficacy are all part of a person's self-concept, and have been researched as possible outcomes of adventure programs.

In their meta-analysis of 96 unique studies of adventure programs, many of them Outward Bound programs, Hattie et al. (1997) found moderate effect sizes on such outcomes as self-concept, leadership, and locus of control. Their study suggests that adventure programs may indeed affect youth development outcomes; however, they clearly state that not all programs are equally effective. They state "Only some adventure programs are effective, and then on only some outcomes, and it is probable that only parts of the programs are

influencing these outcomes” (p. 72). They found the three most important variables to influence a program’s effectiveness to be age of the participants, program length, and whether or not the program was an Australian Outward Bound program. Again, they are clear to state that there are other significant factors that could not be measured through their meta-analysis and may be affecting their results. Hattie et al. (1997) lament the lack of quantitative studies investigating the processes that cause the changes observed, and recommend future research investigate not only whether programs are effective, but also why they are effective. Hans (2000) made similar suggestions in her meta-analysis of adventure programs’ effects on locus of control (LOC); she suggests that in order to better understand what adventure programming does for participants, there needs to be a better definition of outcomes and more thorough investigation of which variables moderate changes in participants. The recent developments in the PYD field may offer solutions to some of the issues noted by Hans, such as better outcome definitions.

Cason & Gillis (1994) also conducted a meta-analysis of adventure programs. They examined 43 unique studies, including 147 effects, and found moderate average effect sizes (.31) for a variety of outcomes. Although the average effect size was moderate, the range of effect sizes was considerable (from -1.48 to 4.26). This suggests that there are strong differences between individual programs’ effectiveness at developing outcomes. Additionally, they found that lower quality studies tended to result in greater effect sizes, which gives reason to be wary of inflated results caused by less than ideal

methodology or non-standardized instrumentation. In spite of these findings, the analysis by Cason & Gillis (1994) provides further support to the notion that adventure programming can have a positive developmental effect during adolescence.

Other researchers have also shown outcomes of adventure education programs similar those expected outcomes of PYD programs. Martin & Leberman (2005) qualitatively studied life effectiveness changes resulting from Outward Bound New Zealand programs. Findings were consistent with the previous work of Hattie et al. (1997), with small to moderate effect sizes. Their qualitative studies describe increases in self-awareness and self-confidence resulting from an adventure experience. Although using qualitative methodology, this study is important because it specifically studied the construct of life effectiveness.

While the literature in this area is generally favorable toward adventure programs, not all research has shown significant results. Russell (2006) believes there may be a tendency to only publish results from studies that find significance in their results (Russell, 2006). Moreover, Hattie et al. (1997) state that many published studies read similar to program advertisements. In one example, Sheard & Golby (2006) failed to find significant results on several positive psychological constructs in their comparison of an outdoor adventure education curriculum to a travel and tourism curriculum for university students. Although the lack of significance in this study can be partly attributed to a small sample size, it underscores suggestions (e.g. Cason & Gillis, 1994; Hattie et al.

1997; Sibthorp, 2003) that differences between programs, participant factors, or a combination of both may be more influential towards developmental outcomes than simply whether or not they are adventure programs. Whether or not there actually exists a bias in the publication of studies, simply that the question has been raised brings into question the ability to conduct a comprehensive and accurate review of adventure programming literature.

While strong evidence exists to suggesting adventure programs are effective at encouraging positive developmental growth of adolescence, it certainly is not conclusive. Given the differences in research methodologies, the individuality of various programs, and the differences in participant antecedent factors, the need for further research to close the existing gaps becomes apparent.

Summer Camp Programs

Adolescents spend an enormous amount of time outside of school hours. Research has shown that unstructured leisure time carries risks such as developing social and emotional problems and experiencing accidents (Mahoney et al. 2004). Structured voluntary activities, on the other hand, can be particularly well-suited for promoting youth development (Larson, 2000). The wide range of out-of-school experiences available to adolescents, including extracurricular activities, community programs, and summer camp programs, provide opportunities and conditions that may be particularly suited to fostering positive development (Hansen et al., 2003).

As the Positive Youth Development movement is a relatively new phenomenon, there has also been a recent push to conceptually link summer camp programs to the Positive Youth Development movement. Numerous similarities exist between camp programs and other Positive Youth Development programs. For example, camps are frequently staffed by caring, supportive adults; they offer opportunities for youths to practice leadership and social skills; they foster and celebrate a sense of community among participants. In addition, they are safe, supportive environments where youth are encouraged to grow. If young peoples' needs to achieve developmental milestones, as outlined by Connell et al. (2000), are adequate nutrition, health, and shelter; multiple supportive relationships with adults and peers; meaningful opportunities for involvement and membership; challenging and engaging activities and learning experiences; and safety, then indeed summer camp programs are well-suited to meet these needs. The ACA recognizes the potential for positive youth development. The benefits and anticipated outcomes of the camp experience include social skills development (e.g. leadership, communication, and participation), self-respect and character-building (e.g. responsibility, resourcefulness, and resilience), and community living and service skills (e.g. caring, fairness, citizenship, trustworthiness) (ACA, 2007). The link between summer camp experiences and PYD is not only being promoted by the ACA, it is frequently found in marketing literature of summer camps (e.g. Longacre Expeditions, 2007). Longacre Expeditions' first three stated goals for participants are 1) "to return home a more confident, more

communicative, more grounded individual, with an enhanced sense of his or her personal style of leadership,” 2) “to reach beyond his or her perceived limitations,” and 3) “to develop basic skills necessary to communicate on an emotional level and share in the problem solving and decision-making of the group” (Longacre Expeditions, 2007). These stated goals are well aligned with the objectives of PYD programs as described by Catalano, et al. (2004).

Adventure Travel Summer Camps

While there has been more depth of research into the effects of both adventure education programs and traditional summer camp programs, there have been only a few investigations into programs using an adventure travel summer camp model. In many ways these programs resemble traditional summer camp programs. One notable difference is that the program does not make use of a residential facility, rather, the participants and leaders travel together as an intact group for the duration of the program. Participants may experience a variety of activities, or they may only do one or two activities. Each provider offers a slightly different program model, which makes generalizing research based on this type of program problematic. Similar to adventure education programs and residential summer camps, research has been conducted to examine these program’s effects on various developmental outcomes.

Hazelworth & Wilson (1990) found variable results when measuring changes in self-concept resulting from an adventure camp experience. Some domains of self-concept showed significant increases (moral-ethical, identity,

and self-satisfaction) but other domains showed either non-significant results or significant negative changes. They reason that certain programmatic differences between the four sessions of the camp they studied affected the outcomes measured. They imply that these differences can be mitigated through intentional implementation of the program design based on the individual needs of the group.

In one study involving an adventure travel summer camp, Sibthorp (2003) investigated whether participants' antecedent factors (e.g. motivation to attend camp, age, gender, expectation to learn something) or perceptions of the characteristics of the experience had an effect on self-efficacy. He found greater developmental gains from programs in which students felt more empowered and more supported. However, the evidence did not sufficiently support the hypothesis that motivation to participate was linked to developmental outcomes.

Larson (2007) studied the effects of a five-day adventure-based summer camp program on self-concept and social skills of youths with behavioral problems. This study used a quasi-experimental non-randomized control group design, due to the limitations of sampling the population. The author found no significant differences between the treatment group and control group; however, he did find a significant increase within the treatment group. Although promising, this further implies that the current research on adventure travel summer camps does not provide conclusive evidence of their effectiveness at promoting developmental outcomes.

To summarize, it is well established that adolescence is a critical period of growth for young people, and during this time a wide variety of experiences present themselves to adolescents, such as outdoor and adventure education programs and summer camps. The theoretical link between these programs, including adventure travel summer camps, and the PYD movement is strong. Unfortunately, little research exists examining summer camps and adventure programs. What does exist suggests that these programs have some effect on the positive development of youth. However, there are numerous deficiencies in the literature, which limit the ability of researchers to generalize outside of each individual study to the field as a whole. Furthermore, the widespread belief in the power of adventure programs and camps to affect youth development has lead researchers to publish non-significant results in a positive light.

CHAPTER III

METHODS

This chapter describes the process and procedures used to conduct this study. Sections of the chapter include: research questions, specific hypotheses, research design, sampling, intervention, instrumentation, data collection, and data analysis.

Research Questions

The research questions this study addressed related to composite LEQ scores, LEQ subscale scores, participant demographics, and length of program were as follows:

1) Composite LEQ scores

- a) Was there a significant difference in composite LEQ scores between pre-program scores and post-program scores?
- b) Was there a significant difference in composite LEQ scores between pre-program scores and six-month follow-up scores?
- c) Was there a significant difference in composite LEQ scores between post-program scores and six-month follow-up scores?

2) LEQ subscale domains

- a) Were there significant differences in any of the eight LEQ subscale scores between pre-program scores and post-program scores?

- b) Were there significant differences in any of the eight LEQ subscale scores between pre-program scores and six-month follow-up scores?
 - c) Were there significant differences in any of the eight LEQ subscale scores between post-program scores and six-month follow-up scores?
- 3) Is there a difference in participants' composite LEQ scores between gender?
- 4) Is there a difference in participants' composite LEQ scores between ages 13-14 and 15-16?
- 5) Is there a difference in participants' composite LEQ scores between programs of different lengths?

Specific Hypotheses

The following hypotheses are related to the research questions listed above:

1) **Composite LEQ scores**

- a) H_O: There is no difference between pre-program and post-program composite LEQ scores.
H_A: There is a difference between pre-program and post-program composite LEQ scores.
- b) H_O: There is no difference between pre-program and six-month follow-up composite LEQ scores.
H_A: There is a difference between pre-program and six-month follow-up composite LEQ scores.
- c) H_O: There is no difference between post-program and six-month follow-up composite LEQ scores.

H_A: There is a difference between post-program and six-month follow-up composite LEQ scores.

2) LEQ subscale domains

a) H_O: There are no differences between pre-program and post-program scores in each of the eight LEQ subscale domains.

H_A: There are differences between pre-program and post-program scores in each of the eight LEQ subscale domains.

b) H_O: There are no differences between pre-program and six-month follow-up scores in each of the eight LEQ subscale domains.

H_A: There are differences between pre-program and six-month follow-up scores in each of the eight LEQ subscale domains.

c) H_O: There are no differences between post-program and six-month follow-up scores in each of the eight LEQ subscale domains.

H_A: There are differences between post-program and six-month follow-up scores in each of the eight LEQ subscale domains.

3) Differences between gender

a) H_O: There is no difference in composite LEQ scores between gender.

H_A: There is a difference in composite LEQ scores between gender.

b) H_O: There are no differences in LEQ subscale scores between gender.

H_A: There are differences in LEQ subscale scores between gender.

4) Differences between age groups

a) H_O: There is no difference in composite LEQ scores between ages 13-14 and 15-16.

H_A: There is a difference in composite LEQ scores between ages 13-14 and 15-16.

b) H_O: There are no differences in LEQ subscale scores between ages 13-14 and 15-16.

H_A: There are differences in LEQ subscale scores between ages 13-14 and 15-16.

5) Differences in length of program

a) H_O: There is no difference in composite LEQ scores between programs of different lengths.

H_A: There is a difference in composite LEQ scores between programs of different lengths.

b) H_O: There are no differences in LEQ subscale scores between programs of different lengths.

H_A: There are differences in LEQ subscale scores between programs of different lengths.

Research Design

This study used a single-group quasi-experimental design with repeated measures. This design was chosen due to the unavailability of a control or comparison group. Unfortunately, this limitation is common in outdoor education research, and does present some threats to the internal validity of this study. Possible threats to internal validity include natural maturation over time, familiarity with the test instrument, and regression toward the mean over time. Use of a control or comparison group would have been beneficial in mitigation

of the maturation threat as well as to allow for comparisons between similar programs. Multiple measures are an important component of the study because they show changes over time on the dependent variables (i.e. the use of the pre-test provides a baseline from which to analyze for changes over time). A follow-up survey was conducted at six months after the program conclusion to evaluate the effects of time on the potential changes related to the adventure-travel summer camp program.

Sampling

This study recruited adolescents from the enrollment pool of Longacre Expeditions participants taking part in an expedition in one of two Pacific Northwest program areas. These areas were chosen due to the close proximity of the researcher during the course of the study. This also allowed for greater control over the proper use of the instruments.

Participants and their parents were sent a letter two months prior to their program introducing the study and asking for consent. Participants were informed that this study was being conducted under the supervision of Dr. Keith Russell of the University of New Hampshire, was supported by Roger Smith, Merry Shuler, and Matt Shuler, owners of Longacre Expeditions, and had been approved by the University of New Hampshire Institutional Review Board for the Protection of Human Subjects in Research (see Appendix C). One hundred forty two participants were invited to participate in the study. While consent was obtained from 86 participants, only 50 completed both pre- and post-program questionnaires. The remaining 36 consenting adolescents were dropped from

the study due to errors in administration of the survey (e.g. one leader team administered surveys to all program participants, rather than only those whose consent was received, and subsequently did not have blank surveys for the final program day). Of those participants who successfully completed both pre- and post-program questionnaires, 35 were male and 15 were female. The age range of participants was 13-16 years, and the mean age was 14.4 years.

Intervention

Longacre Expeditions is a privately owned summer camp program which provides adolescents with adventure-travel expeditions. These expeditions have a strong and intentional focus on developing effective life skills in participants. Longacre Expeditions believes that when youth successfully overcome physical or interpersonal challenges they will grow more confident, communicate more effectively, become more responsible and caring individuals, and are able to reach beyond perceived limitations. (Longacre Expeditions, 2007)

The programs take place across the globe; however, most are located in the continental United States. Programs are differentiated from traditional summer camps in that there is no physical camp facility. The trip leaders meet participants at a designated location (in this case, either the Seattle-Tacoma airport or the Portland, OR airport), and travel from one activity site to the next. Longacre uses a mix of both frontcountry and backcountry expeditions, and has programs of varying length and levels of physical challenge.

In addition to the physical nature of the expeditions, the opportunity exists for structured emotional growth. Staff members at Longacre are trained to facilitate group discussions, known as "Group," which take place approximately every other night or more frequently if needed. These meetings are intentionally designed to allow participants to practice communicating on a feelings level in an emotionally safe environment. Longacre believes these facilitated meetings to be effective at promoting the growth and development of its participants (R. Smith, personal communication, July, 2005).

"Group" at Longacre has several ground rules designed to encourage an emotionally safe environment, independent of the facilitation skills of the trip leaders. These include physical positioning (e.g. everyone in a circle sitting at eye level with one another), speaking one at a time, not responding to comments, and keeping comments action-oriented rather than person oriented (i.e. speaking to the effects of a person's actions, not speaking about general personality traits). Additionally, staff participate in training related to facilitation of "Group." Among the topics covered in this training are the stages of group development (Tuckman & Jensen, 1977) and the Johari Window (Luft & Ingham, 1984).

"Group" at Longacre has two main components. The first is an unstructured period where participants may express whatever feelings they may have. This time is frequently used to thank someone for their help earlier in the day, to express frustrations, or to otherwise share feelings with the rest of the group. The second component of "Group" is a facilitated exercise lead by the

leaders. These are designed as either self-disclosure or feedback exercises. Self-disclosure exercises are intended to allow the participants to offer information about themselves that they would like the rest of the group to know, whereas feedback exercises provide an environment for other participants to give feedback to their fellow group members in a structured manner.

Instrumentation

The Life Effectiveness Questionnaire Version-H (LEQ-H) measures the extent to which a person's actions, behaviors, and feelings are effective in achieving his or her desires or wishes in life (Neill, et al., 2003). The LEQ has been developed over a period of 20 years and has been used with over 5,000 individuals, and was specifically designed for outdoor adventure programs. It has shown good reliability for both male and female adolescents. The instrument uses an eight point Likert scale to measure responses for eight domains. Each response ranges from 1 (False, not like me) to 8 (True, like me). The domains and the related questions are:

1. Time Management: sum of questions 1, 9, 17
2. Social Competence: sum of questions 2, 10, 18
3. Achievement Motivation: sum of questions 3, 11, 19
4. Intellectual Flexibility: sum of questions 4, 12, 20
5. Task Leadership: sum of questions 5, 13, 21
6. Emotional Control: sum of questions 6, 14, 22
7. Active Initiative: sum of questions 7, 15, 23
8. Self Confidence: sum of questions 8, 16, 24

Data Collection

Data were collected during the summer of 2005 from those participants who had consented to take part in the study. Trip leaders administered the first round of surveys as participants arrived to the designated meeting area; in most cases this took place at the airport immediately upon arrival. The second round of surveys was administered on the final full day of the program, not including the day of departure. This day is typically used for travel to a final campsite, cleaning equipment, and conducting final day debriefing and reflecting. Administration of the survey at this time presented no significant interruption in the normal routine of this day. Follow-up surveys were mailed to participants just prior to six months following the end of the program.

Data Analysis

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS). Each participant was given an identification code to maintain anonymity, and their responses were entered into the SPSS data set.

Composite LEQ scores for Time 1, Time 2, and Time 3 were computed, as were subscale scores for each LEQ domain for Time 1, Time 2, and Time 3.

Analysis of Composite LEQ Scores

Multivariate repeated-measures ANOVA tests were run to assess for differences in composite LEQ scores. The multivariate tests were chosen over univariate tests based on the ability to analyze multiple dependent variables without the requirement of a valid sphericity assumption. Where significance

was found, post-hoc pairwise comparisons were conducted by using paired sample t-tests to determine between which levels significant changes were found. Significance was determined as $p < 0.05$.

Analysis of Subscale LEQ Scores

Similar to the composite LEQ score analysis, multivariate repeated-measures ANOVA tests were run to assess for differences in subscale LEQ scores for each of the eight LEQ subscales. Where significance was found, post-hoc pairwise comparisons were conducted by using paired sample t-tests to determine between which levels significant changes were found. Significance was determined as $p < 0.05$.

Analysis of Gender Differences

To evaluate for differences in composite LEQ scores related to gender, a difference score was computed for each individual. These variables were computed from composite LEQ scores as the difference between Time 1 and Time 2, Time 2 and Time 3, and Time 1 and Time 3. Three independent samples t-tests were then conducted using gender as the grouping variable and each difference score as the test variables.

Analysis of Age Differences

To evaluate the differences in composite LEQ scores related to age, participants were categorized as younger (13 and 14 year olds) or older (15 and 16 year olds). The differentiation in age groups was based on the numbers of participants of each age, as well as these ages being representative of typical

Longacre Expeditions groups. Each category contained approximately half of the participants (27 in the younger group, 23 in the older group.) Three independent-samples t-tests were conducted using the age category as the grouping variable and each composite LEQ difference score as the test variables.

Analysis of Trip Length Differences

To evaluate the differences in composite LEQ scores related to trip length, participants were categorized similar to those categories created for age differences. Two categories were established: short trips (14, 16, and 18 days) and long trips (22 and 24 days). Again, the categories were created in this manner to facilitate statistical analysis by keeping group size approximately equal (30 participants in the short trip category, 20 in the longer trip category). Independent-samples t-tests were conducted using the age category as the grouping variable and the composite LEQ difference scores as the test variables.

CHAPTER IV

RESULTS

The purpose of this chapter is to examine potential changes in scores on the Life Effectiveness Questionnaire (Neill et al., 2003) among adolescents participating in an adventure-travel summer camp program. Research inquiries included the following:

1. Potential differences in composite LEQ scores between (a) pre-program and post-program, (b) pre-program and six-month follow up, and (c) post-program and six-month follow up.
2. Potential difference in subscale LEQ scores between (a) pre-program and post-program, (b) pre-program and six-month follow up, and (c) post-program and six-month follow up.
3. Potential differences between the composite LEQ scores of males and females in the study group.
4. Potential differences between the composite LEQ scores of 13-14 year olds and 15-16 year olds in the study group.
5. Potential differences between the composite LEQ scores of participants in 15-18 day programs and 22-24 day programs.

Group Demographics

A total of 50 participants completed the pre-program and post-program questionnaires. Of these 50 participants, 35 (70%) were male and 15 (30%) were female. At the time of the study, six participants (12%) were 13 years old, 21 (42%) were 14 years old, 19 (38%) were 15 years old, and four (8%) were 16 years old. Descriptive statistics for gender and age of the participants are presented in Table 1.

Table 1: *Participant Demographics by Age and Gender*

| Age | Male | | Female | | Total | |
|-------|------|----|--------|----|-------|-----|
| | N | % | N | % | N | % |
| 13 | 4 | 8 | 2 | 4 | 6 | 12 |
| 14 | 17 | 34 | 4 | 8 | 21 | 42 |
| 15 | 13 | 26 | 6 | 12 | 19 | 38 |
| 16 | 2 | 4 | 3 | 6 | 4 | 8 |
| Total | 35 | 70 | 15 | 30 | 50 | 100 |

The length of the programs varied in duration from 15 to 24 days. Of the 50 participants, 30 (60%) took part in 15-18 day programs and 20 (40%) took part in a 22-24 day programs.

Analysis of LEQ scores

Composite Scores

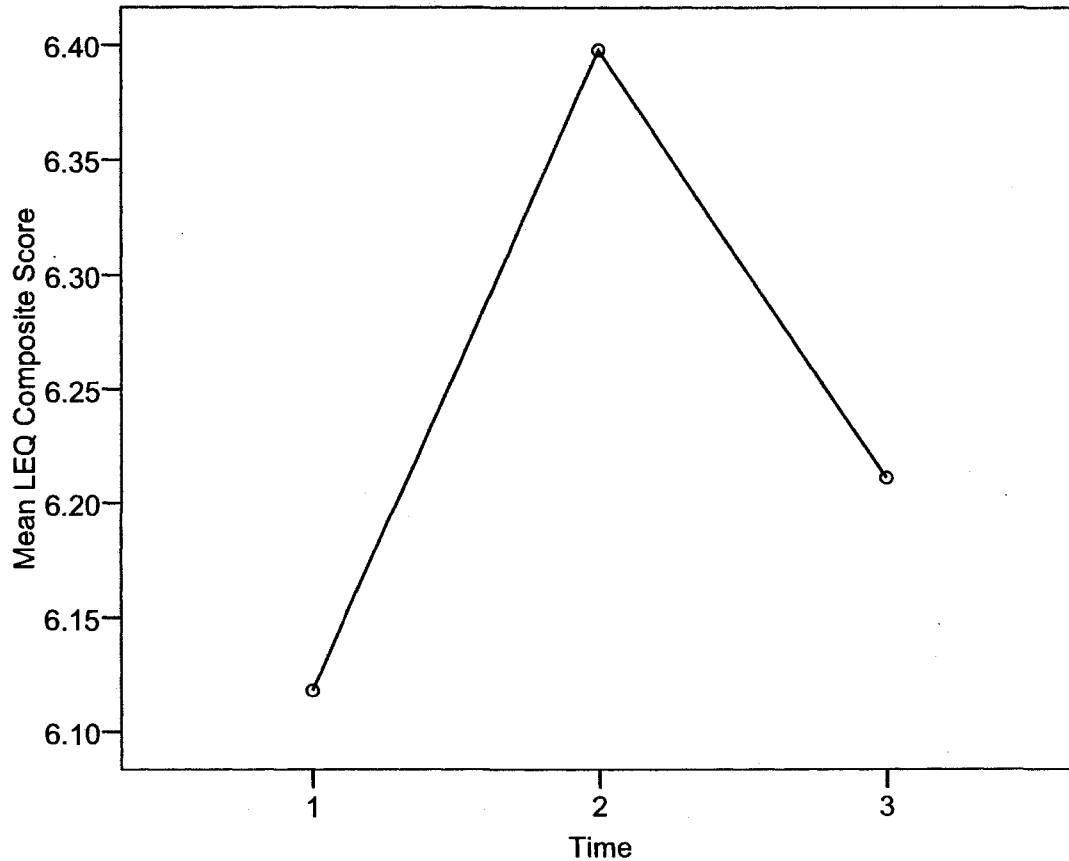
In order to evaluate for significant differences in composite LEQ scores, a one-way repeated measures ANOVA was conducted. In this analysis, the factor was the time at which the subjects completed the LEQ and the dependent variable was the composite LEQ score. The means and standard deviations are presented in Table 2.

Table 2: Means and Standard Deviations of Composite LEQ Scores

| | Time 1 | | Time 2 | | Time 3 | |
|------------------|--------|-----|--------|-----|--------|-----|
| | M | SD | M | SD | M | SD |
| All Participants | 6.12 | .77 | 6.40 | .77 | 6.21 | .86 |

Results of the ANOVA indicated a significant effect over time on the composite LEQ scores of the participants, Wilks's $\lambda = 0.76$, $F(2, 30) = 4.71$, $p = .02$, partial $\eta^2 = .24$. Follow-up pairwise comparisons showed a significant increase in composite LEQ scores between the pre-test and the post-test, $t(49) = 2.91$, $p < .01$. No significance was found either between pre-test and follow-up test, $t(31) = 0.60$, $p > .05$, or between post-test and follow-up test, $t(31) = 1.34$, $p > .05$. Although the effect size is small, these results suggest a greater degree of life effectiveness among participants at the conclusion of the program. However, at the time of the follow-up test increases had diminished to an insignificant level. Figure 1 illustrates these changes over time.

Figure 1: Changes in Composite LEQ Scores Over Time

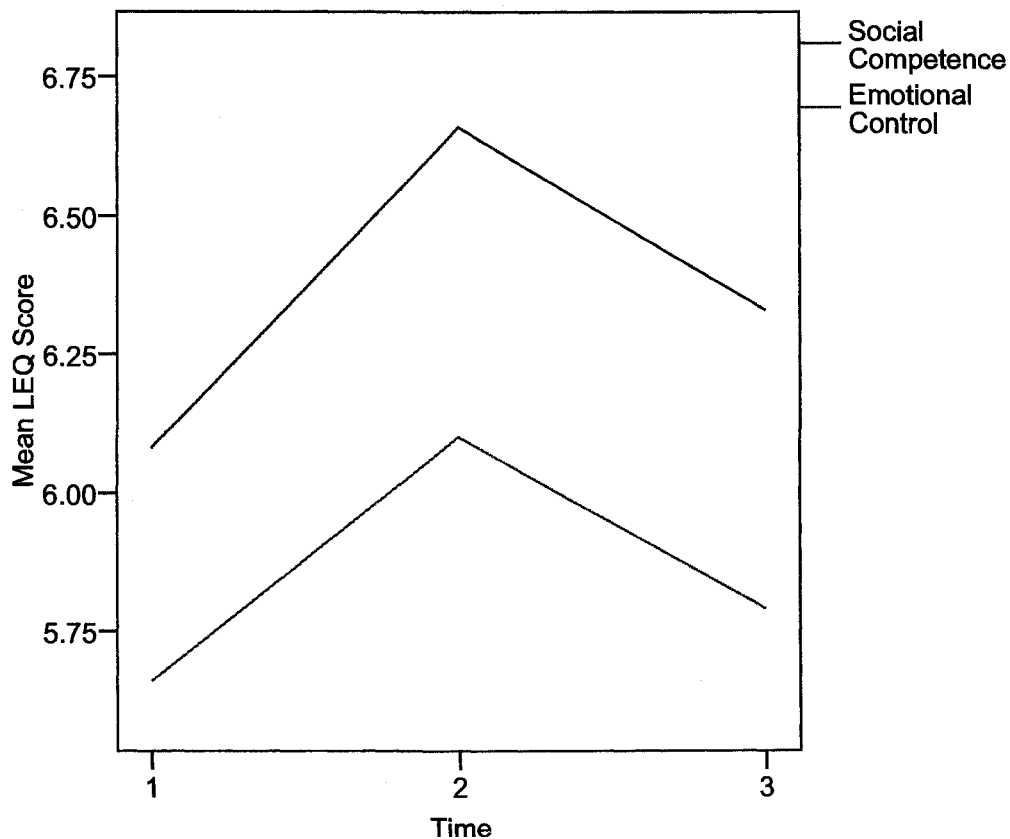


Subscale Scores

For each of the eight domains, a one-way repeated measures ANOVA was conducted. The means and standard deviations of each domain are presented in Appendix D. Only two of the eight subscales showed significant results, Social Competence, $F(2, 30) = 7.09, p < .01$, partial $\eta^2 = .17$, and Emotional Control, $F(2, 30) = 4.10, p = .05$, partial $\eta^2 = .22$. Figure 2 shows changes over time in these two domains. Follow-up pairwise comparisons demonstrated significant results for both domains only when comparing means

of pre-program and post-program scores. Similar to the composite LEQ scores, neither of these domains showed significant differences between the means of post-program and follow-up scores or between the means of pre-program and follow-up scores. This suggests that the increases observed at the end of the program had diminished to an insignificant level during the months following the camp experience. As with mean composite LEQ scores, effect sizes for both social competence and emotional control subscales were also small.

Figure 2: *Changes Over Time in Social Competence and Emotional Control LEQ Subscale Scores*



No significant differences were measured in any of the other six domains: Time Management, Achievement Motivation, Intellectual Flexibility, Task Leadership, Active Initiative, or Self Confidence. However, each of these

domains did measure increases in mean score from pre-program to post-program, which, although not significant in and of themselves, may have helped to drive the significance of the composite LEQ scores for this interval. ANOVA results for all eight LEQ subscale analyses are presented in Appendix D.

Demographic Variables

Gender

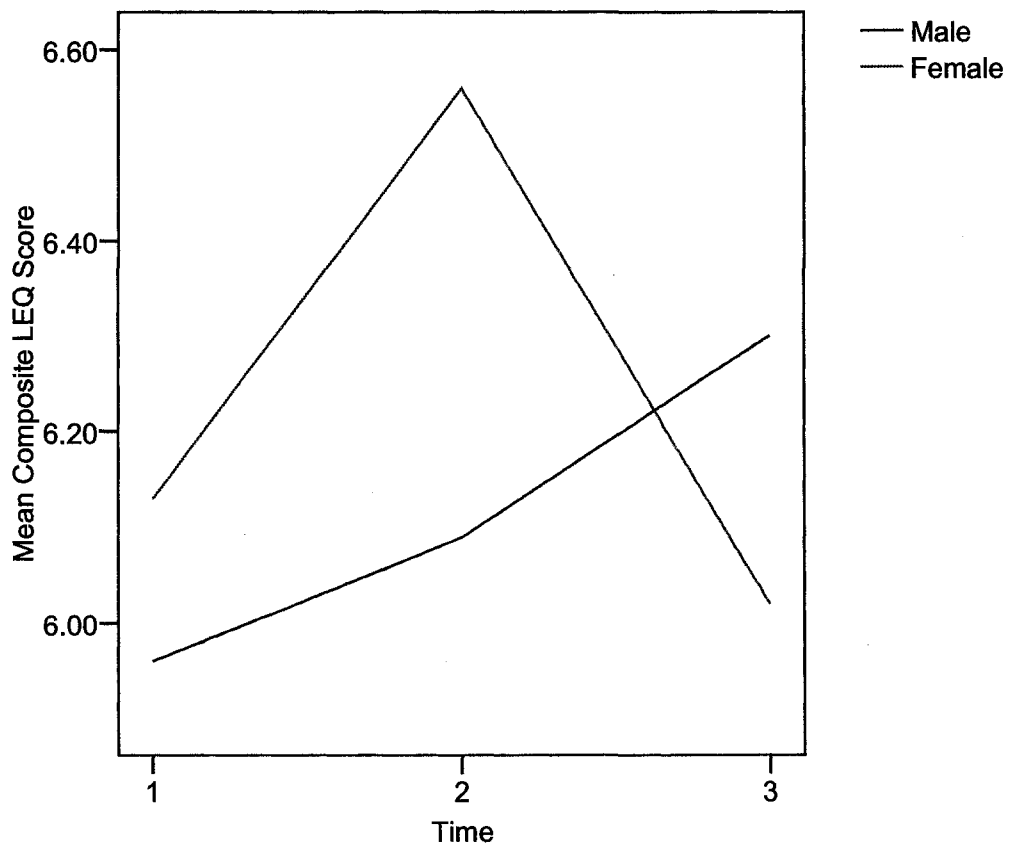
Independent-samples *t*-tests were conducted to evaluate the hypothesis that there is no difference between genders in composite LEQ change scores. The means and standard deviations of these groups are presented in Table 3. The test results were not significant for any of the time intervals. This suggests that neither male nor female campers' life effectiveness was likely to be influenced by the program to a greater degree than the other gender.

One interesting observation about the differences between males and females in the study is visible in Figure 3. In contrast to female participants, males' LEQ scores increased at each testing point, while female's scores showed an initial increase then dropped precipitously between the end of the program and six months afterward. This might indicate females are more susceptible to short term fluctuations in LEQ scores than males.

Table 3: Means and Standard Deviations of Change Scores by Gender

| | Time 1-Time 2 | | Time 1-Time 3 | | Time 2-Time 3 | |
|--------|---------------|-----|---------------|------|---------------|-----|
| | M | SD | M | SD | M | SD |
| Female | .42 | .37 | .04 | .49 | -.07 | .60 |
| Male | .13 | .56 | .12 | 1.02 | -.43 | .85 |

Figure 3: Changes in Composite LEQ Scores by Gender



Age

Independent-samples *t*-tests were conducted to evaluate the hypothesis that there is no difference in composite LEQ change scores between younger and older participants. The means and standard deviations of these groups are

presented in Table 4. The test results were not significant for any of the three time intervals. Based on these findings, the null hypothesis that there is no difference in composite LEQ scores between age groups is accepted.

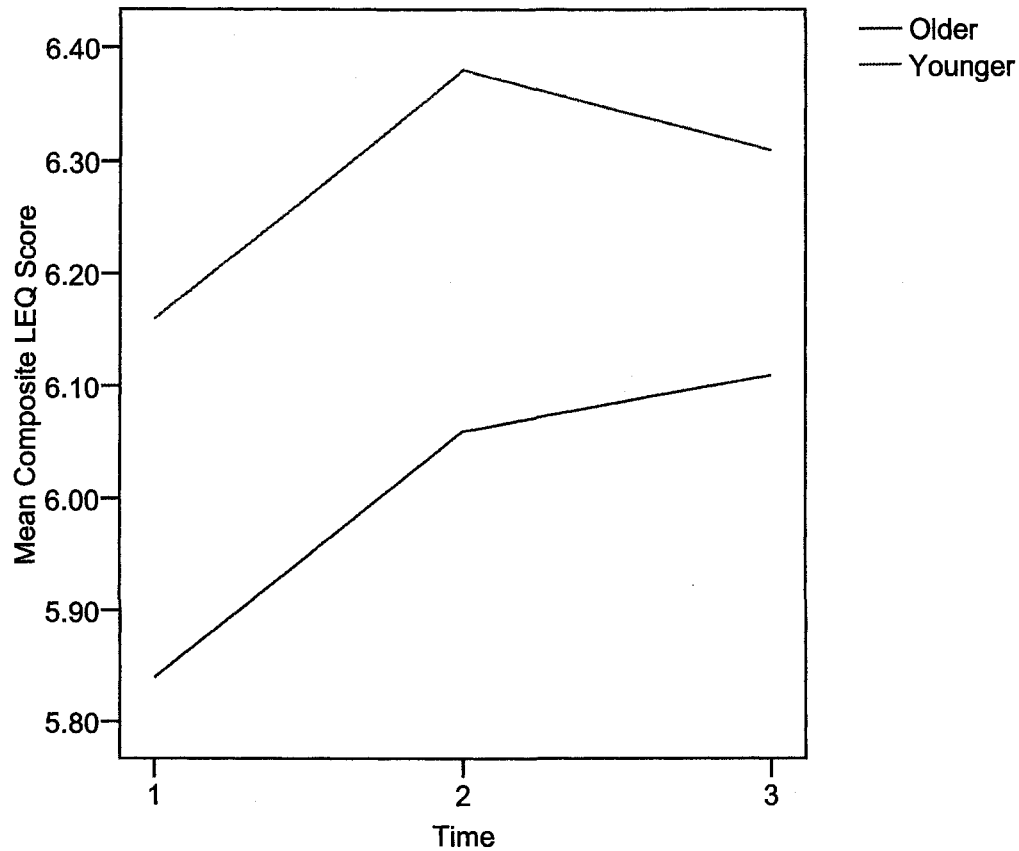
Furthermore, these results suggest that neither younger nor older campers are more likely to be influenced by their participation in this program.

Figure 4 shows changes in composite LEQ scores over time for both age categories. Although neither is statistically significant, the trend for the two groups is noticeably different. Younger participants' mean scores more closely resemble the overall mean composite LEQ scores than older participants. The older participants' trend resembles that of male participants, with increases at each testing point. These results suggest older participants are more likely to maintain a higher degree of life effectiveness beyond the end of the program.

Table 4: Means and Standard Deviations of Change Scores by Age

| | Time 1-Time 2 | | Time 1-Time 3 | | Time 2-Time 3 | |
|-------------|---------------|-----|---------------|------|---------------|-----|
| | M | SD | M | SD | M | SD |
| 13-14 years | .22 | .64 | -.03 | 1.03 | -.29 | .82 |
| 15-16 years | .22 | .36 | .24 | .70 | -.08 | .76 |

Figure 4. Changes in Composite LEQ Scores by Age



Trip Length

Independent-samples *t*-tests were also conducted to evaluate the null hypothesis that there is no difference in composite LEQ change scores between participants in short or long trip categories. The means and standard deviations of these groups are presented in Table 5. Test results were not significant for differences in composite LEQ scores between Time 1 and Time 2. However, between Time 1 and Time 3 the *t*-test showed significance, $t(30) = 3.72, p < .01$. Composite LEQ change scores for the short trip group actually decreased from Time 1 to Time 3, while change scores for the long trip group increased. To understand why there is significance between Time 1 and Time 3 but not

between Time 1 and Time 2, it is important to recognize that this test measured changes over time in composite LEQ scores of the two groups compared to one another. While the short trip group initially increased between Time 1 and Time 2, their mean scores ultimately decreased to below their initial value. On the other hand, the long trip group scores continued to increase at each measurement, leading to a greater difference in change scores. These results suggest that programs between 22 and 24 days in length are more likely to have a positive influence on life effectiveness than programs of 15-18 days in length.

Figure 5: *Changes in Composite LEQ Scores by Program Length*

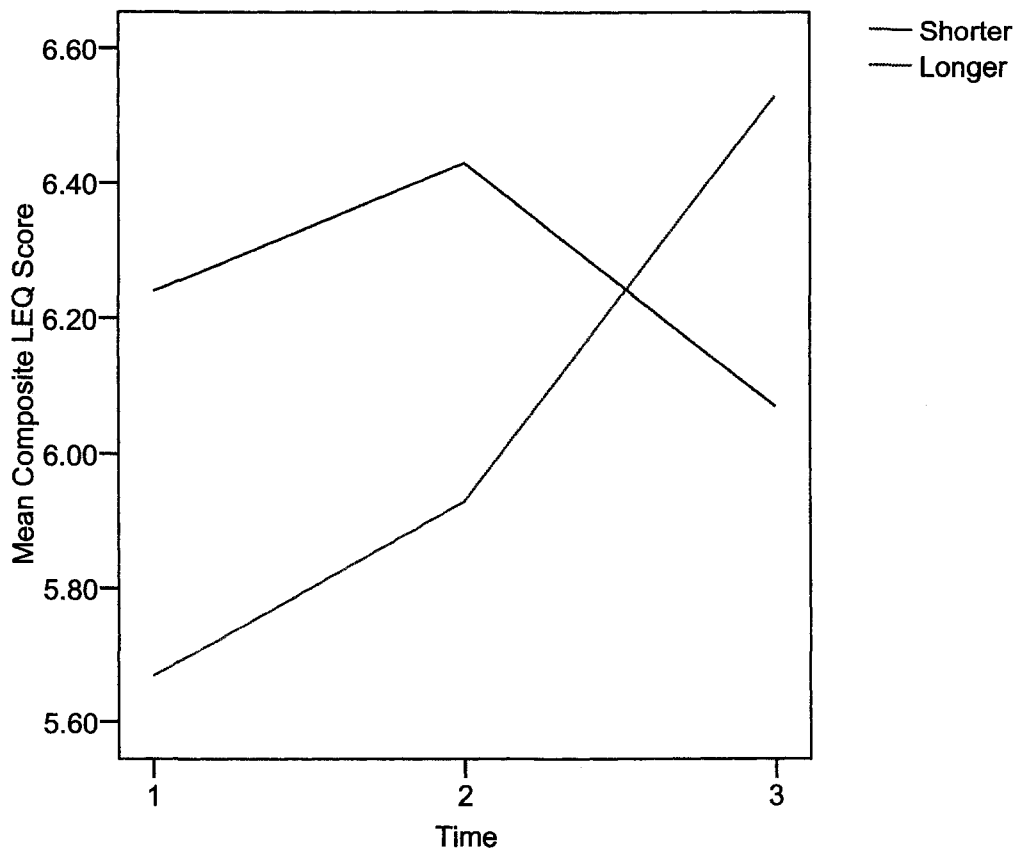


Table 5: Means and Standard Deviations of Change Scores by Program Length

| | <u>Time 1-Time 2</u> | | <u>Time 1-Time 3</u> | | <u>Time 2-Time 3</u> | |
|------------|----------------------|-----|----------------------|-----|----------------------|-----|
| | M | SD | M | SD | M | SD |
| 15-18 days | .19 | .49 | -.24 | .71 | -.45 | .69 |
| 22-24 days | .26 | .59 | .82 | .81 | .40 | .70 |

CHAPTER V

DISCUSSION

This study investigated the effects of an adventure-travel summer camp on the life effectiveness of adolescents who participate in such a program. While the results do support this general idea as well as some of the specific hypotheses, not all hypotheses were supported by the study. This chapter presents limitations of the study, a discussion of each research question, implications of the research to Longacre Expeditions, and suggestions for future research.

Limitations of the Study

Several limitations may have influenced outcome of this research. While some of these limitations are common among studies of this type of program, others are unique to this study.

Limited Sample Size

One of the most significant limitations of this study is the small sample size. The study began with a pool of 142 potential participants. The pool shrank to 86 after parental consent was obtained. Parents objected to their children's participation in the study for numerous reasons. One common comment was related to the fact that they are paying a substantial amount of money for the

experience and therefore did not want the trip leaders to be doing anything other than providing the best experience possible for their children. While this is an understandable position, it contributed to the reduction of the participant pool by about 40%.

The participant pool was further reduced by errors in administering the instrument by the trip leaders. Instructions were given both verbally and in writing to each set of trip leaders. However, for various reasons three trip leader teams did not administer the survey in an appropriate manner. Of the 86 consenting participants, only 50 completed both pre-program and post-program responses. These 50 participants were sent an identical survey six months following their programs. Of these 50, only 35 returned the surveys. Follow-up letters were sent to the 15 who did not return their surveys; however, none of these were returned.

With a small sample size larger differences are required in order to show statistically significant changes. It requires a greater mean change to be confident that the change is a result of the intervention rather than due to normal measurement error. With a larger sample it is less likely that changes measured resulted from error and more likely that they resulted from the intervention. In many of the analyses insignificant increases were present which may have been significant if present in a larger sample.

Lack of Control or Comparison Group

Control or comparison groups were unavailable for use in this study. It would have been preferable to use a control group, such as a group of

adolescents who did not participate in any organized program during the time of the study. Without the influential effects of an organized program natural maturation and the effects of time would have been the dominant influence on these adolescents. The use of a control group would have allowed the changes found in the adventure-travel program to be measured against changes of a similar group of teenagers who have not taken part in a program. It would therefore increase internal validity, as it would be clearer whether or not changes were due to the program or due to normal adolescent growth during the time period.

A comparison group would have provided a similar measuring stick, although rather than taking part in no organized program this group might have taken part in a different type of program, or perhaps even another adventure-travel summer camp program. With a comparison group, it is possible to analyze for changes between different types of programs, and to compare one with the other. This would have improved the external validity of the study.

The lack of a control or comparison group is a significant limitation to this study. For this reason, results from this single study should not be used to generalize externally to other adventure-travel summer camp programs. While many of these programs utilize very similar physical activities and group process activities, the differences between programs may be strong enough that findings are not generalizable.

Use of Self-Report Data

This study used a self-reported instrument, which relies on honest and accurate perceptions of self in order to measure life effectiveness. It is entirely plausible that an adolescent would have an accurate view of how well he or she functions in life; however, the instrument represents only a snapshot in time taken at the moment the instrument is given. In the complex world of adolescence, self-concept and self-efficacy are capable of wide fluctuations. Also, the timing of the administration of the instrument has the potential to affect how each person rated themselves.

Discussion of the Research Questions

Composite LEQ scores

The primary research question of this study asks whether or not participation in an adventure-travel summer camp affects adolescent life effectiveness. According to the marketing literature for many of these companies (e.g. Longacre Expeditions, 2007), the answer to this question is definitively affirmative. However, according to Hattie et al. (1997) these claims have been based mostly on anecdotal evidence and program evaluations rather than research. If adventure-travel summer camps are to be considered to be an effective component of the overall positive development of youth, this would be a critical question to have answered.

In this study, composite LEQ scores improved significantly in the short term, but then dropped to an insignificant level six months later. The mean

composite LEQ scores at the six month follow-up time are higher than the pre-program scores, but not high enough to be statistically significant.

The rise from pre-program scores to post-program scores can likely be attributed to the program. Since the participating in the program involves a 24-hour-a-day commitment, many usual threats to internal validity are less of a concern. However, it is unclear whether or not this increase actually represents a genuine improvement in the life effectiveness of the participants. Participants generally enjoy themselves in these experiences, and during the course of their program they are challenged physically, emotionally, and socially. The trip leaders are caring adults who want the participants to succeed. Also, most individuals in each group are frequently very supportive of other group members. These aspects of the experience are similar to those that researchers (e.g. National Research Council, 2002; Zeldin & Price, 1995) believe are necessary for youth to succeed.

Although statistically insignificant, the decline in mean composite scores from their highest level post-program to slightly greater than the pre-program level is explainable by a couple of factors. The scores show the personal growth that occurs in a program does fade over time after the program ends. However, that the scores six months after the termination of the program are greater than initial scores does indicate that some of the growth may last. In the structured supportive environment created within the program, adolescents have the opportunity to overcome challenges and practice new behaviors. It is possible that outside of this type of supportive environment the participants cannot

maintain the perceived levels of life effectiveness, which results in lower composite LEQ scores at the six-month follow up time.

A less favorable rationale for the trend is that the program did not significantly affect the long term life effectiveness of the participants. Rather than a genuine increase in self-perceived life effectiveness, the spike in mean composite scores could simply be a short-lived feeling felt by participants at the end of their expedition. This possibility exists as a result of using a self-reported measure of life effectiveness; to be able to distinguish the difference between feeling good about oneself and genuine improvements in life effectiveness would present incredible challenges to researchers. With this line of reasoning, it would follow that adventure-travel summer camps do not have a long term effect on adolescents' life effectiveness. If this is the case then adventure-travel summer camps should not be regarded as Positive Youth Development programs. Instead, they would be simply recreational programs that should not claim to have a lasting developmental impact on their participants.

LEQ Subscale Scores

Two of eight LEQ subscales showed significant improvements from pre-program scores to post-program scores—Emotional Control and Social Competence. Like many other similar programs, participants in a Longacre Expeditions program enter into a unique social environment. Living with the same group of people for 15 to 24 days can be a challenging experience for most people. In this environment, the interpersonal challenges that are faced on a daily basis need to be overcome in order to enjoy oneself. The role of the trip

leaders is to facilitate this process so that it is easier for the participants to be successful when faced with these challenges. Based on the intention of Longacre to challenge its participants to communicate effectively, it is logical to expect Emotional Control to show gains during the course of a trip. Similarly, the social nature of the trips offers the opportunity for participants to develop their social competencies. It is understandable then, that Social Competence scores showed significant improvement between pre-program and post-program scores.

Other subscales did not show significant differences, although the nature of the program might be expected to create the conditions necessary for growth in these areas. Subscales that were expected to increase but did not included Intellectual Flexibility and Self-Confidence. All other subscales are unrelated to intentionally designed factors within the Longacre program, and would not be expected to show increases.

Demographic and Trip Length Differences

This study also addressed the question of whether differences existed between different groups of participant demographics, particularly age and gender, as well as whether differences existed between LEQ scores of participants grouped by the length of their trip. No significant differences were found between male and female campers or between older and younger campers. This suggests that age and gender do not affect the ability of an adventure-travel summer program to improve the life effectiveness of participants.

On the other hand, the length of the trip did make a difference in the lasting power of the changes observed. On shorter trips, participants' six-month follow up scores returned to almost the level measured at the beginning of the trip. On longer trips, participants six-month follow up scores were actually higher than the post-trip scores. These results suggest that longer trips have a more lasting effect on participants. This seems logical, as the participants have much more time to practice effective communication, behaviors, and group living skills. It also allows participants the time to receive feedback from their peers related to how their actions are affecting the group and to adjust their behaviors based on this feedback. This ability to receive feedback, adjust behaviors, and receive further feedback after the adjustments not only leads to more successful group dynamics, but perhaps translates into lasting life effectiveness skills.

Implications for Longacre Expeditions

As mentioned earlier, due to the methodology employed in this study and the limited sample size, the results should not be generalized outward to other similar adventure-travel summer camp programs. However, the findings provide some valuable insight for Longacre Expeditions into how their programs impact the lives of their participants.

It is clear that LEQ scores improved significantly from the beginning of the trip to the end. How and why this occurs remains unclear. Of the eight LEQ subscales, Social Competence and Emotional Control are the only ones where significant improvement in LEQ scores took place. The causes for the changes

are clearly programmed into a Longacre expedition, through the group living situation and facilitated evening discussions. If Longacre would like to impact any of the six other LEQ subscales, their best opportunity would be to intentionally create programming that address these subscale areas. For example, if better Time Management was a goal, participants could be given more control over the logistics of the trip. This would allow participants to experientially learn to manage their time better, and perhaps this would be reflected with significant improvements in the Time Management subscale.

Another implication for Longacre is related to the finding of longer trips having more of a lasting effect on participants. When marketing the program, some parents may be looking for nothing more than a recreational experience for their child. However, if a parent wishes for a more educational or life effecting experience, they may be steered toward a longer trip instead of a shorter one.

Recommendations for future research

Much research is currently being done in the field of Positive Youth Development. With many of the qualities of PYD programs inherent in adventure-travel summer camp programs, there exists an opportunity for these programs to increase their visibility and standing within this field. In order for this to take place, more high quality empirical research will need to be performed. The following recommendations are intended to help guide this process.

This study was limited by a number of factors. Although difficult to do, future researchers can overcome many of these limitations with a more rigorous study design. The quality of future studies will be enhanced if these limitations are not present. Larger sample sizes, use of a control group, longer follow up times, and further validation of self-report instruments are examples of where improvements in study design and methodology can be made.

Positive Youth Development refers to a system of supports and opportunities available to youth that assist them along their path to adulthood. Adventure-travel summer camps are just one of many experiences a youth may have during critical growth years. There is a strong case for examining other antecedent factors in the lives of adolescents that might have a synergistic effect on life effectiveness. For example, trying to understand whether family structure has an effect on retention of life effectiveness skills would be one way to examine how the antecedent factors impact life effectiveness. Another potential study could examine the link between adventure-travel summer camps and other organized programs that adolescents take part in. The lives of adolescents are complex, and any attempt to understand the interactions between the many factors at play would be a step closer to understanding how we can best offer the supports and opportunities that youth need.

Conclusion

It is clear that participants in the Longacre Expeditions adventure-travel summer camp program increased their self-perceptions of their life effectiveness at the immediate conclusion of the program. However, it remains

in doubt whether participation in this type of program has a significant effect on the life effectiveness of the participants. As Positive Youth Development scholars repeatedly state, in order for youth to be fully prepared for a successful adulthood more than a single program is required. There needs to be an interconnected network of positive influences over time. Although questions remain regarding the effectiveness of adventure-travel summer camps at developing positive life skills, it remains likely that these programs can indeed have an effect when viewed in the complex context of adolescent development. No single program has the ability to fully prepare all youth for adulthood. Each program can be viewed as a part of the greater mosaic of experiences available to youth, and in this manner adventure-travel summer camps can have positive effects on youth.

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APPENDICES

APPENDIX A

Sample Longacre Expeditions Itinerary
Wind & Waves
15 days

Days 1-2: Arrival and Orientation

Arriving in Portland, our group assembles and we head to the coast. A day of orientation with games and team-building activities helps us get to know one another.

Days 3-5: Sea Kayaking and Sandboarding

The Siltcoos River Trail runs from Siltcoos Lake to the Pacific Ocean. We paddle through dense rainforest-like environments and between huge sand dunes. Days end with swims in the lake and soaking up the sun on the shore. Moving on to Honeyman State Park, we try our luck at sandboarding.

Days 6-8: Whitewater Rafting

The Deschutes River lies in the rain shadow of the Cascade Mountains, so we are almost guaranteed hot, sunny days and cool, starry nights. We spend 3 days on the river, camping out along the way with food prepared by our guides.

Days 9-11: Surfing and Travel

Devil's Punchbowl is a protected beach perfect for learning how to surf. Sheltered from the prevailing wind, beginning surfers take advantage of predictable waves to get up on their boards. At the end of the day, there is time to explore a natural arch formed by the ever-present surf.

Days 12-15: Windsurfing, Wrap-up, and Depart

The Columbia River Gorge provides some of the best windsurfing in the world. With a steady breeze and top-notch instructors, we gain in skill and confidence. Just as we are getting the hang of it, it's time to retire our boards and say our goodbyes.

Sample Longacre Expeditions Itinerary
British Columbia
18 days

Days 1-2 Arrival, Ferry Travel.

Our group meets at Seattle-Tacoma International Airport and heads to our staging area near Bellingham, WA, where we engage in getting-to-know you games and other activities that start pulling our group together. With our new friends we make our way to Galiano Island to begin our first activity.

Days 3-6 Sea Kayaking, Travel.

Starting at Galiano Island, we slip into tandem sea kayaks and paddle to pristine primitive campsites. Our kayaking specialist supplies the expertise, which includes knowledge of tidal charts and a keen understanding of local weather patterns. Wildlife abounds and the chances are highly likely that we will encounter seals and bald eagles.

Days 7-11 Backpacking.

Backpacking is an activity that helps mold individuals into a group. Before we hit the trail, we spend a day learning essential skills like how to pack a backpack and take care of our feet. Kids learn to rely on each other as they develop confidence in themselves and comfort in the backcountry. Garibaldi Provincial Park in British Columbia is remote, lightly traveled, and phenomenally beautiful. Glaciated peaks loom in the background as we hike by mountain lakes and over ridges.

Days 12-14 Rock Climbing, Travel .

Squamish draws serious rock climbers from all over the world. Our rock specialist sets top-rope routes for any ability level from beginner to seasoned veteran. With the 1800' granite wall known as The Chief overlooking our efforts, we take on the very personal challenge of "moving over stone."

Day 15 Snowboarding/Skiing or Zip-Line Tour.

On the July session we travel to Whistler Ski Resort for snowboarding or skiing on Blackcomb Glacier. We are treated to spring-time conditions and the joy of downhill runs in the summer. On the August session we take a zip-line eco-tour, getting a bird's-eye view of this unspoiled area on cables as long as 2100 feet.

Days 16-18 White Water Rafting, Wrap-up, Depart.

We top off our expedition with some rigorous paddling down the Class III rapids of the Nooksack River. After de-issuing gear and final meetings, we head back to Sea-Tac for fond farewells.

Sample Longacre Expeditions Itinerary
Surf Oregon
18 days

Days 1-2: Arrival and Orientation

We fly into Portland International Airport in Oregon, head directly to the coast, and establish our first campsite within earshot of the soothing sound of rolling breakers.

Days 3-6: Bicycle Touring

With the help of our biking specialist, we go on a sequence of incredibly scenic and challenging rides. Each day we see new scenery as we pedal along the legendary Oregon Coast. Tide permitting we ride on the sand next to the Pacific, cruise along the mighty Yaquina River, and blaze on single track under the cover of massive old growth forest.

Days 7-12: Surfing and Sandboarding

Devil's Punchbowl is a secluded beach that is perfect for our group to get some experience surfing. Under the guidance of our experienced teachers, we practice skills, master our boards, and catch the "perfect wave". Later, we cruise down huge dunes on sandboards and declare this raging new sport a great success.

Days 13-15: Travel and Snowboarding/Skiing

No trip to Oregon would be complete without 2 days of skiing or snowboarding on Mt. Hood. This trip truly gives us the best of all "board" worlds.

Days 16-18: White Water Rafting, Wrap-up, and Depart

The Deschutes River lies in the rain shadow of the Cascade Mountains, so we are almost guaranteed hot, sunny days and cool, starry nights. We say our farewells in Portland, filled with memories of friendship and accomplishment.

Sample Longacre Expeditions Itinerary
Ultimate Oregon
24 days

Days 1-2: Arrival and Orientation

We fly into Portland International Airport in Oregon, establish our first campsite, and revel in the awesome beauty of the Oregon Coast.

Days 3-5: Surfing

Devil's Punchbowl is a perfect spot for beginning surfers. Its sheltered arc creates predictable, consistent waves. Under the guidance of our local surfing specialist, we learn about currents and waveology, practice paddling techniques, and master the art of catching the perfect wave.

Days 6-11: Backpacking and Crater Lake

Prep for hiking in the southern Cascades includes clinics on proper clothing, packing a backpack, and taking good care of your feet. Then...amazement. Following the Upper Rogue River Trail, we wind through old growth forests and make our way along the river as it rushes through lava tubes and by natural bridges. Our trek ends at majestic Crater Lake, one of the most beautiful places in the world. We emerge from our trek quite transformed; confident, interdependent, unified

Days 12-17: Mountain Biking and Rock Climbing

We mountain bike for three days, pedaling through groves of junipers and around patches of snow near Mt. Bachelor, stopping to camp by quiet mountain lakes. Smith Rocks State Park, in Oregon's high desert plateau, is home to some of the best climbing in North America. We test ourselves for three days as our climbing specialist belays us up these ancient walls.

Days 18-20: Overnight White Water Rafting

The Deschutes is known for hot days, cool water, high desert canyons, exhilarating rapids, and beautiful campsites. Class III rapids are broken by stretches of flat water that are perfect for swimming, soaking up the sun, and spotting herds of wild horses in the nearby foothills.

Days 21-24: Snowboard/Skiing, Wrap-up, and Depart

The Deschutes is known for hot days, cool water, high desert canyons, exhilarating rapids, and beautiful campsites. Class III rapids are broken by stretches of flat water that are perfect for swimming, soaking up the sun, and spotting herds of wild horses in the nearby foothills.

APPENDIX B

L.E.Q. - H[©]

PLEASE DO NOT TURN OVER YET

READ THESE INSTRUCTIONS

This is a chance for you to consider how you think and feel about yourself in some ways. **This is not a test** - there are no right or wrong answers, and everyone will have different responses. It is important that you give your own views and that you be honest in your answers and do not talk to others while you think about your answers. They will be used only for research purposes and will in no way be used to refer to you as an individual at any time.

Over the page are a number of statements that are more or less true (that is like you) or more or less false (that is unlike you). Please use the eight point scale to indicate how true (like you) or how false (unlike you), each statement is as a description of you. **Answer the statements as you feel now**, even if you have felt differently at some other time in your life. Please do not leave any statements blank.

| FALSE NOT LIKE ME | | | | TRUE LIKE ME | | | |
|--|---|-------------------------|---|-------------------------|---|--|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| This statement doesn't Describe me at all; it isn't like me at all. | | More false than true | | More true than false | | This statement describes me very well; it is very much like me. | |

SOME EXAMPLES

A. I am a fast thinker. 1 2 3 4 5 **6** 7 8
(The 6 has been circled because the person answering believes the statement "I am a fast thinker" is sometimes true. That is, the statement is sometimes like him/her.)

B. I am a good storyteller. 1 **2** 3 4 5 6 7 8
(The 2 has been circled because the person answering believes that the statement is mostly false as far as he/she is concerned. That is, he/she feels he/she does not tell good stories.)

C. I enjoy working on puzzles. 1 2 3 4 5 6 7 **8**
(The 8 has been circled because the person really enjoys working on puzzles a great deal, therefore the statement is definitely true about him/her.)

**** ARE YOU SURE WHAT TO DO? ****

If yes, then please turn the page over, write your name, today's date, and circle your answers for all the statements.

If still unsure about what to do, ASK FOR HELP.

PLEASE GIVE HONEST, PRIVATE ANSWERS

L.E.Q. - H[©]

NAME: _____ AGE: _____ (years) DATE: ____/____/____

MALE / FEMALE (circle one) TRIP NAME : _____

| STATEMENT | FALSE not like me | TRUE like me |
|--|----------------------|-----------------|
| 01. I plan and use my time efficiently. | 1 2 3 4 5 6 7 8 | |
| 02. I am successful in social situations. | 1 2 3 4 5 6 7 8 | |
| 03. When working on a project, I do my best to get the details right. | 1 2 3 4 5 6 7 8 | |
| 04. I change my thinking or opinions easily if there is a better idea. | 1 2 3 4 5 6 7 8 | |
| 05. I can get people to work for me. | 1 2 3 4 5 6 7 8 | |
| 06. I can stay calm in stressful situations. | 1 2 3 4 5 6 7 8 | |
| 07. I like to be busy and actively involved in things. | 1 2 3 4 5 6 7 8 | |
| 08. I know I have the ability to do anything I want to do. | 1 2 3 4 5 6 7 8 | |
| 09. I do not waste time. | 1 2 3 4 5 6 7 8 | |
| 10. I am competent in social situations. | 1 2 3 4 5 6 7 8 | |
| 11. I try to get the best results when I do things. | 1 2 3 4 5 6 7 8 | |
| 12. I am open to new ideas. | 1 2 3 4 5 6 7 8 | |
| 13. I am a good leader when a task needs to be done. | 1 2 3 4 5 6 7 8 | |
| 14. I stay calm and overcome anxiety in new or changing situations. | 1 2 3 4 5 6 7 8 | |
| 15. I like to be active and energetic. | 1 2 3 4 5 6 7 8 | |
| 16. When I apply myself to something I am confident I will succeed. | 1 2 3 4 5 6 7 8 | |
| 17. I manage the way I use my time well. | 1 2 3 4 5 6 7 8 | |
| 18. I communicate well with people. | 1 2 3 4 5 6 7 8 | |
| 19. I try to do the best that I possibly can. | 1 2 3 4 5 6 7 8 | |
| 20. I am adaptable and flexible in my thinking and ideas. | 1 2 3 4 5 6 7 8 | |
| 21. As a leader I motivate other people well when tasks need to be done. | 1 2 3 4 5 6 7 8 | |
| 22. I stay calm when things go wrong. | 1 2 3 4 5 6 7 8 | |
| 23. I like to be an active, 'get into it' person. | 1 2 3 4 5 6 7 8 | |
| 24. I believe I can do it. | 1 2 3 4 5 6 7 8 | |

APPENDIX C



UNIVERSITY of NEW HAMPSHIRE

May 3, 2005

Lane, Jeff
Kinesiology, New Hampshire Hall
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Durham, NH 03824

IRB #: 3442
Study: Investigation of Program Characteristics and the Effects on Development
Approval Date: 05/02/2005


The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed protocol for your study as Expedited as described in Title 45, Code of Federal Regulations (CFR), Part 46, Subsection 110.

Approval is granted to conduct your study as described in your protocol for one year from the approval date above. At the end of the approval date you will be asked to submit a report with regard to the involvement of human subjects in this study. If your study is still active, you may request an extension of IRB approval.

Researchers who conduct studies involving human subjects have responsibilities as outlined in the attached document, *Responsibilities of Directors of Research Studies Involving Human Subjects*. (This document is also available at <http://www.unh.edu/osr/compliance/IRB.html>.) Please read this document carefully before commencing your work involving human subjects.

If you have questions or concerns about your study or this approval, please feel free to contact me at 603-862-2003 or Julie.simpson@unh.edu. Please refer to the IRB # above in all correspondence related to this study. The IRB wishes you success with your research.

For the IRB,


Julie F. Simpson
Manager

cc: File
Keith Russell

APPENDIX D

Table D.6: LEQ Subscale Means and Standard Deviations

| LEQ Subscale | Time 1 | | Time 2 | | Time 3 | |
|--------------------------|--------|------|--------|------|--------|------|
| | M | SD | M | SD | M | SD |
| Time Management | 5.50 | 1.40 | 5.80 | 1.19 | 5.58 | 1.18 |
| Achievement Motivation | 6.69 | 0.93 | 6.73 | 1.01 | 6.67 | 0.95 |
| Intellectual Flexibility | 6.38 | 1.03 | 6.42 | 0.93 | 6.21 | 1.07 |
| Task Leadership | 5.77 | 1.17 | 6.07 | 1.27 | 6.30 | 1.29 |
| Emotional Control | 5.66 | 1.47 | 6.10 | 1.14 | 5.79 | 1.36 |
| Active Initiative | 6.34 | 1.15 | 6.63 | 1.03 | 6.23 | 1.37 |
| Self Confidence | 6.48 | 1.18 | 6.74 | 0.91 | 6.56 | 1.22 |
| Social Competence | 6.08 | 1.05 | 6.66 | 0.98 | 6.33 | 1.15 |

Table D.7: LEQ Subscale ANOVA Results

| LEQ Subscale | Wilks's λ | F | P | η^2 |
|--------------------------|-------------------|------|------|----------|
| Time Management | .92 | 1.30 | .29 | .08 |
| Achievement Motivation | .995 | .07 | .93 | .01 |
| Intellectual Flexibility | .91 | 1.47 | .25 | .09 |
| Task Leadership | .84 | 2.94 | .07 | .16 |
| Emotional Control | .79 | 4.11 | .03 | .22 |
| Active Initiative | .88 | 2.15 | .13 | .13 |
| Self Confidence | .89 | 1.85 | .18 | .11 |
| Social Competence | .68 | 7.09 | .003 | .32 |