THE EFFECT OF THE ONTARIO RANGER PROGRAMME ON THE
PARTICIPANTS' SELF-ESTEEM AND SELF-CONCEPT LEVELS

by

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THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE
in
NATURAL RESOURCE MANAGEMENT

(Melanie Jane Thompson, 1997

THE UNIVERSITY OF NORTHERN BRITISH COLUMBIA

May 1997

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Abstract

The purpose of this study was to determine the effects of an outdoor education residential camping programme on participants' levels of self-esteem and self-concept. During the summer of 1996, participants from Ontario Ranger Programme (ORP) camps completed the Rosenberg Self-esteem Scale (RSES) and the Tennessee Self-concept Scale (TSCS) on five occasions: Time 1 - upon their arrival at camp, Time 2 - halfway through the programme, Time 3 - at the completion of the eight week programme, Time 4 - four weeks after the camp experience and Time 5 - eight weeks after the camp experience.

The findings demonstrated no differences with regard to Gender and Gender by Time interaction, though there were minimal differences. Significant increases were found in the participants’ global self-esteem and self-concept levels while at camp. The self-esteem results significantly increased between Time 1 and Time 3. While the self-concept scores demonstrated a significant increase between Time 1 and Time 2, in addition to a significant increase demonstrated between Time 1 and Time 3. Upon completion of the programme, the respondents’ self-esteem and self-concept levels decreased slightly, although these decreases were not significant. Both the self-esteem scores and the self-concept scores demonstrated no significant decrease between Time 3 and Time 5. The self-concept scores demonstrated a significant difference between Time 1 and Times 5, the second follow-up test remained significantly higher than that first test.
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Acknowledgements

Thanks go to Alan Ewert who kept me on track and allowed me to laugh most of the way through the process. To Cindy Hardy and Dave Robinson for making themselves available for me to bounce ideas off and teach me that the process is as important as the product.

To my family and friends who have always been supportive, and there to calm me down and help me out. To my parents, grandmothers and sister for their encouragement and faith, it’s good to know that some people think you can do anything. Thank you. Hey Mom, I did it again!

To my friends at UNBC who encouraged me through their own work, mostly by constantly ensuring that I was made aware of the fact that I did not work nearly as hard as they did. In addition, they ensured that I had my fair share of weekly shopping excursions, afternoon cocktails and dinner parties, just what every student needs to keep them relaxed and keen. Thanks to Anny who knows the study nearly as well as I do.

And to Meghan, who stuck with me no matter what, and whom I hope will continue to do so. Who else would spend her vacation editing my thesis and still look as though she was having a good time? Your love, support, and encouragement always arrived at the right time. Thanks sweetheart.
CHAPTER I

Introduction

Overview

Every summer throughout much of North America thousands of young people attend residential camps for periods ranging from a few days to the entire summer. The social psychological effects of these residential camps and programmes on the participants have received limited research attention. The acquisition of camp-oriented skills in the residential camp setting, in addition to the accompanying group activities and group dynamics, facilitate the opportunity for positive social psychological impacts, including; confidence, self-awareness, self-concept, self-control, self-esteem, and self-image.

The social psychological impacts of the outdoor recreation experience is a realm of recreation studies that has received a great deal of attention, predominately with respect to experiential education adventure challenge programmes such as Outward Bound and National Outdoor Leadership School (NOLS). Research has demonstrated that adventure challenge programmes increase participants’ self-esteem and self-concept throughout the duration of the programme (Latess, 1992). However, the positive changes begin to decrease once the programme has been completed. Less research has been conducted regarding the effects of residential camps which involve both adventure and non-adventure components and the long-term effects of these residential camps on participants’ self-systems, specifically self-esteem and self-concept. Additionally, some research has indicated that gender and gender-specific development, (i.e. different development patterns for females and males) can influence a participant’s degree of
change as demonstrated by the participant's self-esteem and self-concept levels (Allen-Bem & Niss, 1994; Monaco & Gaier, 1992; Nelson & Keith, 1990).

A number of programmes have been developed that potentially increase participants' self-esteem and self-concept levels, and the Ontario Ranger Programme is one such programme. Since 1944, the Ontario Ministry of Natural Resources (MNR) has been operating the Ontario Ranger Programme (ORP). The ORP has five different components: work programme, experience, education, public relations, and career progression (MNR, 1991). The experience and education components of this programme concentrate on participants' social, psychological and personal growth. During the months of July and August the ORP offers residential seasonal employment to 17-year-old secondary school students (MNR, 1991). This study examined the effects of long term (greater than 30 days) residential camp experience by assessing the effect the ORP had on participants' personal growth. This study contained two follow-up surveys: the first, completed one month after completion of the programme, and the second, completed two months after completion of the programme.

**Purpose of Study**

The purpose of this study was to examine changes in participants' self-esteem and self-concept global levels as a function of participation in the ORP. Self-esteem and self-concept levels were assessed on a monthly basis five times from the beginning of the programme (beginning of July to the beginning of November, two months after the completion of the programme). Scores on the Rosenberg Self-esteem Scale (RSES) and the Tennessee self-concept Scale (TSCS) were used to chart and compare the
respondents' global self-esteem and self-concept levels, during and after the completion of the 1996 ORP.

If participation in outdoor recreation activities increases self-esteem and self-concept levels, it is reasonable to expect that the ORP participants would demonstrate an increase in their levels of self-esteem and self-concept.

Background of the Ontario Ranger Programme

Originally, the ORP began in July 1938 as the Dominion Provincial Youth Training Programme initiated by the Department of Education and Government Employment Services to assist in the employment of young men during a time of low employment (Proulx, 1990). The programme has since undergone a number of significant changes including two name changes, the last in 1990 from Junior Ranger Programme to the current Ontario Ranger Programme. The original purpose of the programme has been altered over the past 60 years. The primary goal of the programme is no longer to assist young people in finding employment but to educate the participants with regard to the function and responsibilities of the MNR, and to encourage independence and maturation through new experiences and the acquisition of new skills (MNR, 1986). The programme began accepting female participants in 1973. In addition, camps were established for First Nations and bilingual participants (Proulx, 1990).

The ORP is offered to Ontario secondary school students who are 17 years of age by December 31 of that particular year, and who are in good medical condition. The programme runs for eight weeks during the months of July and August (MNR, 1992). Ontario Rangers are accommodated in female or male camps located throughout the province, on Crown lands or in Provincial parks.
Generally, each camp is organised and staffed by one supervisor, two or three sub-supervisors, and two to four assistant sub-supervisors (MNR, 1991). These staff members work and live with the programme participants for the duration of the eight-week programme. The participants of the programme (referred to as Ontario Rangers or Rangers) are paid minimum wage, with deductions for room and board (MNR, 1991). Rangers work in crews of six to 12, with one or two sub-supervisors. Rangers perform manual labour for the MNR. Work projects include the hand releasing of Jack Pine or Red Pine plantations, portage and campsite maintenance, campground cleanup, painting, tree planting, moose surveys, and other similar tasks (Saunders, 1992). Ontario Rangers receive on-the-job training and education regarding the value and purpose of their natural resource-related work from camp staff members and various MNR employees with whom they work during the summer. The Rangers are formally instructed in first aid, canoeing skills, the use of fire suppression equipment, and various courses required of all government employees such as the Workers’ Hazardous Materials Information System, and the transportation of dangerous goods (MNR, 1992). Rangers are also educated in the various aspects of local primary and secondary industries such as lumber mills and pulp mills (White, personal communication, January, 1996).

The ORP provides participants with experiences ranging from learning work skills, to living away from their homes, friends, and families for an eight-week period. For example, moving away from their families and friends for the summer encourages the participants to take responsibility for their actions (Willett, personal communication, April 1996). The acquisition and use of new skills also assists the participants when they are confronted with new experiences. For example, the participants are instructed in basic
canoeing skills and then utilize these skills throughout the duration of the programme. The various new experiences provide the participants with the opportunity for personal growth and positive alterations to their self-systems (Willett, personal communication, April 1996).

**Importance of the Study**

There has been an increased interest in the social psychological benefits of outdoor recreation programmes (Priest, 1990a). One reason is the continual growth in the amount of leisure time available to many people in society (Cooper, 1989), which has resulted in an increased interest and participation in outdoor recreation, especially for the adventurous segment of the recreation market (Cooper, 1989). The ORP provides the opportunity for participants to experience adventure-based recreation activities (e.g. canoe trips) as well as a variety of new life experiences (e.g., living away from home) (MNR, 1992).

In the past, ORP has provided many 17-year-old participants with the opportunity to learn about and work in the natural environment through participating in a rewarding summer work and outdoor recreation experience. In a previous work, Proulx (1990) recommended that further research be conducted regarding the long-term effects of the programme on the participants. One of the ORP’s main objectives is to increase the maturity and accountability of the participants through responsibility and increased self-knowledge (MNR, 1991). Another objective of the programme is to increase the participants’ understanding of others through group work and group living conditions. Although the ORP teaches participants how to manage the natural environment (MNR, 1992), the question remains as to its effectiveness in increasing a participant’s self-
knowledge and understanding through increased levels of global self-esteem and self-concept.

Researchers have begun to utilize gender as an explanatory variable rather than only a descriptive variable (Henderson, 1990). Females and males develop differently psychologically. It is important to realise that the ORP may affect female and male participants differently.

This study is of importance to students and educators who are interested in the effects of residential camps and outdoor recreation activities on participants’ self-systems. The ORP offers many participants an enjoyable summer as well as interesting and new learning experiences. Because the ORP occurs at a critical time in adolescent development of identity, the programme has the potential to positively enhance the participants’ self-esteem and self-concept levels.

**Research Question and Hypotheses**

Based on previous research, the following research question was examined in this study: What effect does the residential camp experience have on participants’ self-esteem and self-concept levels? Hypothesises were as follows.

1. There will be an increase during the programme between each of the respondents’ first three of the five tests with regard to their self-esteem and self-concept levels as a function of their camp experience.

2. There will be a decrease in the respondents’ self-esteem and self-concept levels between the two follow-up tests administered after the respondents have left the camp setting.
3. There will be no gender differences demonstrated between the levels of change of the respondents’ self-esteem and self-concept.

Assumptions

For the purpose of this study, several assumptions were made with regard to the process of data collection. First, it was generally assumed that the concepts and ideas in the questionnaires were accurately understood and that the participants had sufficient knowledge to answer them accurately. It was also assumed that the participants would answer the questions accurately and the responses would represent their true feelings. However, two internal validity measures were used to minimise this concern, and are further explained in Chapter III.

Delimitations

This study contained the following delimiting factors. ORP participants from only four of the 18 camps, held during 1996, were selected as respondents for this study. The research design consisted of a pre-test completed upon the participants’ arrival at camp, the midway-test completed halfway through the ORP, a post-test completed slightly prior to the participants’ departure from camp, and two follow-up tests, one month and two months respectively, after the participants had completed the programme. There was no baseline test completed due to government regulations and restrictions. The government is prevented from releasing information about individuals who are not employees. The follow-up tests were limited to eight weeks, because of time and cost factors.

Limitations

The following limiting factors were considered in this study. The selection of programme participants was beyond the control of the researcher. It was not possible to
screen or manipulate the groups in any manner. The respondents may have come from different backgrounds with a variety of life experiences; therefore, some respondents may have established higher self-esteem and self-concept levels prior to their arrival at ORP camps. The respondents with higher self-esteem and self-concept levels prior to participation in the programme may not have been as obviously affected as respondents who started with average or low levels.

The Tennessee Self-Concept Scale (TSCS) and the Rosenberg Self-Esteem Scale (RSES) are self-reporting instruments which may influence how the respondents answered the questions. The respondent could have answered the instruments according to how she/he saw her/himself; how she/he believed others saw her/him; or how she/he wanted to be seen (Abbey-Livingston & Abbey, 1982). The validity of the questionnaires may have been affected by the following: the respondent’s maturation process, the respondent’s second guessing the test or answering the instruments inconsistently with her/his true feelings. The different styles and techniques of the various supervisors at the four camps could have impacted and affected the respondents differently.

Definitions

The following definitions expand upon some key terms used throughout this study. Definitions of the following terms are given in this section: self, self-system, self-concept, and self-esteem. According to Coon (1991), the “self” is defined as a continuously modifying and metamorphosing perception of an individual’s personal identity. The construct of self can be further conceptualised as being composed of smaller components, such as self-esteem, self-image, self-concept, self-knowledge, self-awareness, self-understanding, and the like.
The relationships, interactions, and associations between these various components of the self are described as the self-system. The self-system is a combination of the real self, the realistic view one has of oneself, and the perceived self, what an individual perceives as the view of her/himself (McDonald & Howe, 1989). The self-system reflects the individual’s attempts to understand and describe the differences and variations between the real self and the perceived self. The study of the self-system or any of its components is very complicated due to the enormous number of factors that influence one’s self-perceptions, such as friends, family, media, societal ideals, and personal judgement (McDonald & Howe, 1989).

This study examined two components of the self-system: self-concept and self-esteem. Self-concept and self-esteem were chosen as the focus of this study because of the relevance they have for development of identity during adolescence (Erikson, 1959). Self-concept and self-esteem are very closely linked. Self-concept is the image an individual has of her/himself and self-esteem is the affective evaluation of that image (McDonald & Howe, 1989).

Self-concept has various definitions depending upon who is consulted. Coon (1991) defines it as the “Knowledge of one’s own personality traits; a collection of beliefs, ideas, and feelings about one’s own identity” (p. G-20). Self-knowledge and evaluation include dimensions such as body image, personality traits and habits, and likes and dislikes about the self. Reber (1985) defines self-concept slightly differently, as “One’s concept of oneself in as complete and thorough a description as is possible for one to give” (p. 677). Reber’s (1985) definition is based on self-perception theory. Self-perception theory states that an individual bases her/his self-concept upon her/his own
evaluation of her/himself rather than opinions of and evaluations by other individuals or society (Reber, 1985). Just as one judges others by observing their actions and behaviours, one judges oneself through self-observation of one’s actions and behaviours. This theory allows for changes in an individual’s behaviour and self-perception (Reber, 1985). For the purpose of this study self-concept was defined as the understanding and knowledge one has of oneself.

Self-esteem is often defined as the component of the self that governs a person’s emotional evaluation of her/himself or her/his self-concept (Coon, 1991). Often the evaluation can result in a display of either anger or aggression triggered by situations where the individual feels insulted or criticised. Individuals with high and stable levels of self-esteem are less likely to respond to such situations with anger and aggression, while individuals with high but unstable levels of self-esteem are more likely to respond with anger and aggression because their self-esteem is threatened by insults and criticisms (Alcock, Carment & Sadava, 1994).

Block and Robins (1993) and Klein (1992) define self-esteem as the evaluation one has of oneself in relation to the person one desires to be and the person one does not desire to be. These desires are dependent upon the personal qualities one views as positive or negative. The above definition implies that the individual complete two tasks when evaluating the self. Firstly, the individual must assess her/his present self, her/his desired self, and her/his undesired self, and then evaluate the differences amongst the three selves. Secondly the individual is required to evaluate her/himself according to the characteristics she/he views as positive and negative (Klein, 1992). For the purposes of
this paper self-esteem is defined as the emotional evaluation an individual has of her/his self-concept.
CHAPTER II

Literature Review

Introduction

This chapter presents a review of literature relevant to the three hypotheses this study examined. The chapter is divided into six sections and subsequently subdivided into specific areas of interest. The sections are organized in the following manner to provide easy access and interpretation for the reader: The Personal Self-system; Outdoor Education/Recreation; Benefits of Outdoor Education/Recreation; Gender; and Summary. The Personal Self-System section is further subdivided into two sections: Self-Esteem; and Self-Concept; these three sections provide the reader with an understanding of the three terms and some of the previous research on the subjects. The section Outdoor Education/Recreation is divided further into three subsections: Informal Outdoor Education/Recreation Programmes, Formal Outdoor Education/Recreation Programmes, and Residential Camps. These subsections provide the reader with an understanding of the types of outdoor recreation programmes presently available. Informal Outdoor Education/Recreation Programmes represents information regarding programmes outside the regulated education or medical systems in addition to those programmes which are privately owned and operated, while Formal Outdoor Education/Recreation Programmes represents courses and programmes offered within or in conjunction with the educational and medical systems. The Residential Camps section details research regarding the types and styles of residential camps available and what these camps provide and offer the participants. The Benefits of Outdoor Education/Recreation section also includes a section on the Psychological Benefits of Outdoor Education/Recreation Experiences.
Each of these sections contains definitions, examples and current research to explain and expand upon the benefits of outdoor recreation/education experiences. The Gender section is divided into three parts: Gender and Recreation, Gender and Psychology, and Gender, Recreation, and Psychology. These sections will provide the reader with an understanding of how gender affects and is affected by each of these issues. The Summary section condenses the findings of each preceding section as they relate to the hypotheses.

The Personal Self-System

An individual’s self-system is a conglomeration of self-knowledge and self-awareness in its entirety (Ooterwegle & Oppenheimer, 1993). Understanding an individual’s self-system or portions of that system can greatly assist in the understanding of the person (Roid & Fitts, 1994). According to Ooterwegle and Oppenheimer (1993) the self-system is affected by alterations or changes in an individual’s surrounding social and physical environments. These changes in an individual’s surrounding environment can change how an individual’s self-system processes and interprets information (Ooterwegle & Oppenheimer, 1993). The self-system is a dynamic-model which incorporates all the information and understanding that an individual has of her/himself, from interactions with strangers to significant others, previous life experiences, daily experiences, and general involvement with society (McDonald & Howe, 1989).

Erikson (1959) developed a psychological theory of personal growth with eight stages of development that an individual must progress through during their lifetime. An individual must negotiate each stage before she/he can achieve the subsequent stage. The adolescent stage of development consists of forming a self-identity. Erikson also believed
that social environments greatly affect an individual’s development and progression throughout each stage of development (Thomas, 1992). During adolescence, individuals generally develop a greater understanding of themselves, as they start to establish their self-identity (Erikson, 1959). Erikson’s theory involves three different processes that an adolescent must progress through to achieve self-identity. First, the self-identity process is thought to include a mostly unconscious reorganization of personal needs and past identifications. Second, an adolescent must make the transition into adult societal norms and values, and develop a more intimate connection with society and personal culture. Third, an adolescent must increase her/his sense of personal unity, individuality, purposefulness, self-confidence leading to a new way of self experience (Blasi & Milton, 1991). As the self-identity develops, the ability to define oneself increases because the past and present identities are established and the ideals for the future identity are established (Blasi & Milton, 1991).

A young adult or adolescent away from home for the first time encounters new people, situations, and experiences which broaden her/his understanding of the world and encourage further thinking regarding previously believed norms and social behaviors (Kimmel & Weiner, 1995). A new experience away from familiar surroundings and people is likely to encourage the process of self-identity and perhaps accelerate the self-identity process due to the separation with the past.

According to Roid and Fitts (1994), individuals with an unrealistic image of themselves approach the world unrealistically. People who view themselves as deviant, ‘bad’, or worthless act accordingly. Individuals who experience rejection or who are negatively perceived by their peers possess a corresponding negative self-identity and
their entire self-system suffers (Vandell & Hembree, 1994). Often peer rejection is directly related to feelings of loneliness, disruptive behavior, and distractibility. The rapid change adolescents experience mentally, physically, and emotionally often results in feelings of isolation and loneliness (Newell, Hammig, Jurich & Johnson, 1990). These feelings of isolation and loneliness increase adolescents’ needs for acceptance and peer group interaction. The need for acceptance is at its strongest during adolescence. At this time, young adults are breaking childhood ties with parents and establishing more independent lines of thought, communication and lifestyle (Newell et al., 1990).

Adolescence is a period of great change and development, and it is, therefore, important that personal growth and positive changes to the self-system are encouraged and reinforced. Outdoor education/recreation programmes seem to be particularly effective with adolescent populations (Powch, 1994).

Self-esteem

The original purpose of leisure was to pursue a higher level of education (Hunt, 1990). In order to improve oneself, it was believed that one had to expend energy to achieve a sense of accomplishment and improve one’s self-esteem (Csikszentmihalyi & Kleiber, 1991). By achieving goals and completing tasks, an individual’s self-worth is improved. “One’s feelings of worth were determined by the ratio of one’s actual accomplishments to one’s supposed potentialities” (Harter, 1983, p. 320). Self-esteem is in fact the emotional evaluation of the self. Hence, self-esteem can be increased as an individual’s self-worth and general happiness is increased (Raymore, Godbey, & Crawford, 1994; Rosenberg, 1985).
According to Iso-Ahola, LaVerde, and Graefe (1988), self-esteem does not increase in a linear progression but, rather, self-esteem increases and decreases depending upon whether an individual perceives an experience as successful or unsuccessful. This non-linear growth pattern of self-esteem suggests that it is possible for short term recreation programmes and activities to increase self-esteem levels in participants (Gillett, Thomas, Skok, & McLaughlin, 1991: Iso-Ahola et al., 1988). According to Dusek (1991), once an individual becomes an adult or completes her/his self-identification, self-esteem remains relatively stable over the long term. Additionally, Lintunen, Leskinen, Oinonen, and Salinto (1995) found that as adolescents mature and achieve a stable self-identity their self-esteem gradually increases with age.

People with low self-esteem are more likely to experience periods of unhappiness, self-dissatisfaction, self-contempt, gloominess, and a lack of self-respect. In addition these people express sentiments of sadness, discouragement, and self-rejection more frequently than individuals with higher self-esteem levels (Rosenberg, 1965). Those people who have low self-esteem levels are less likely to participate in group activities than are individuals who possess higher self-esteem levels, and individuals with extremely low self-esteem are very unlikely to participate in any form of activity and will rarely voice negative feelings or sentiments (Rosenberg, 1965). The people who become invisible to society or whom others do not notice are individuals with extremely low self-esteem, who seem to blend into their surroundings and are rarely noticed (Rosenberg, 1985). These people have such low self-esteem that they say or participate in virtually nothing.
At the other end of the continuum, research has been unable to establish whether an individual with high self-esteem attracts attention, thus gaining popularity, or if an individual’s popularity increases their self-esteem (Rosenberg, 1985). An individual with high self-esteem can still think poorly of themselves. The individual could fail to meet their own standards resulting in a lower than expected self-esteem level. An individual with low self-esteem may think highly of her/himself compared to others, resulting in a higher than average self-esteem level (Rosenberg, 1965).

Individuals with high levels of self-esteem usually possess greater understandings of the self in addition to a positively articulated defined image of the self. Yet, individuals with low self-esteem do not necessarily possess the corresponding negatively defined view of the self (Cambell, Trapnell, Heine, Katz, Lavallee, & Lehman, 1996). Individuals with low self-esteem have self-concepts that are usually distinguished by slightly higher levels of uncertainty, instability, and inconsistency (Cambell et al., 1996).

Individuals with low self-esteem levels may try to assimilate themselves into a favourable group in an attempt to improve their social self-perception and self-esteem. When a group or an individual believes they are at a disadvantage, they will try to redefine the criteria on which they are receiving poor judgment. By altering the evaluation criteria, the individual attempts to salvage her/his self-esteem, often forming excuses for altering the criteria (Alcock, Carment, & Sadava, 1994). Recreation programmes often include group activities which can increase and affirm an individual’s self-esteem. Group and individual leisure activities are a fundamental source of positive self-image and self-esteem (Parks and Recreation Federation of Ontario, 1992). Group activities might result in the alteration of an individual’s behavior in the hopes of
achieving acceptance from the other group members, acceptance from the group usually results in an increase in the individual’s level of self-esteem. In addition, an individual gains acceptance and approval from the group without alteration of her/his behavior which increases her/his self-esteem (Ewert & Heywood, 1991). Group recreation activity requires that participants depend upon each other’s strengths and assist each other with their weaknesses.

An individual’s self-esteem level is connected with her/his perceived physical appearance (Lintunen et al., 1995). During the preliminary stages of the development of self-identity, an individual’s perceived external appearance is greatly affected by the opinions of society, family and friends (Blasi & Milton, 1991). Adolescent females often possess low physical appearance self-opinions for several reasons. Firstly, it is during childhood and early adolescence that “...girls have learned that physical attractiveness is a basic dimension of the female gender role” (Newell et al., 1990, p. 118). Secondly, during adolescence, many females desire to achieve body images “...of fashion models or actresses, and become disillusioned if their expectations are unfulfilled” (Newell et al., 1990, p. 122). By increasing an individual’s perceived physical appearance or improving their body image, self-esteem can be positively affected.

To increase the self-esteem levels of participants, programmes or courses should be planned with the intention of teaching new skills or advancing current skills to higher levels (Iso-Ahola et al., 1988). The development of new skills increases confidence and self-esteem. “Youth that enjoy full and active lives are much less likely to turn to self-destructive behavior (e.g., drug abuse, suicide)” (Parks and Recreation Federation of Ontario, 1992, p. 21). The quality, not the quantity, of the recreation activity is the
essential component in determining the effect on participants’ self-esteem (Iso-Ahola et al., 1988). Activities have to be carefully planned to ensure that the participants are challenged and pushed to their limits, but it is essential that participants are not pushed too far beyond their physical and psychological limits.

Parents and educators consider positive self-esteem level as a desirable outcome of the adolescent developmental process (Klein, 1992). Positive or a relatively high level of self-esteem has been associated with a reduced risk of depression, a stable personality, and a high level of academic performance, such that the individual is able to evolve into a productive member of society (Klein, 1992). The opportunity to increase self-esteem levels during the self-identity development stage of adolescence is vital.

**Self-concept**

The study of self-concept has been part of the social sciences since William James formulated the construct in 1890 (Byrne & Shavelson, 1996; Klint, 1990). There are many theories of self-concept development, according to Klint (1990). The following are the fundamental principles:

1. Self-concept is a function of social interaction.
2. Self-concept is a multidimensional component of the self-system.
3. Affect is associated with the development of self-concept.
4. The degree to which successes and failures influence self-concept is a function of the importance one attributes to the activity.
5. Self-concept levels influence motivation levels.

(Klint, 1990, p. 164)
Various theories expand and explain different portions of Klint’s (1990) fundamental principles.

Self-concept is the perceived image individuals form of themselves with regard to each of the sections of her/his life which they consider important. Though the image may or may not be realistic, the individual could negatively or positively alter her/his self-image (Kimmel & Weiner, 1995). An individual’s self-concept is an essential part of the self-system which assists in the formation of his/her self-identity (Roid & Fitts, 1994).

Roid and Fitts (1994) state that an individual’s self-concept can be altered as the result of significant experiences. Similarly, Young and Steele (1990) state that the foundation of outdoor recreation programmes is the challenges encountered by the participants that lead to desirable positive effects on their self-concepts. Improved self-concept is a desirable outcome of many educational, recreational, and psychological situations (Byrne & Shavelson, 1996).

Self-concept was originally thought of as a very broad global system, and theories of self-concept did not differentiate between self-perceptions in various domains or a multidimensional image of the self (Cambell et al., 1996; Marsh, Perry, Horsely, & Roche, 1995). The multidimensional theory of self-concept allows for a distinction to be formulated between the contents of an individual’s self-concept and the structure. “The contents can be usefully subdivided into knowledge components-Who/What am I?-and evaluative components-How do I feel about myself?” (Cambell et al., 1996, p. 141). The multidimensional facets of an individual’s self-concept may relate to various sections of the individual’s life, such as athletic abilities, personal traits, scholastic talents, and family relationships (Marsh et al., 1995; Roid & Fitts, 1994).
Generally, self-concept is referred to as a whole or as a total unless otherwise specified. Self-concept measures can be subdivided into various types. An individual can score differently depending upon whether the test measures an individual’s self-concept with regard to his/her athletic ability, physical appearance, quality of friendships, or academic achievements (Dusek, 1991; Marsh, 1992). Specific sections of an individual’s self-concept can be examined and studied, with the correct instruments.

Much of the previous research regarding self-concept has been categorized into academic and non-academic dimensions. These two categories were then divided into more specific facets (e.g., English self-concept, Science self-concept, physical self-concept, emotional self-concept and social self-concept) (Byrne & Shavelson, 1996). Byrne and Shavelson (1996) found that global self-concept and general academic performance were very highly correlated. Additionally, subject-specific academic self-concepts correlate highly with performance in the specified subject. Vandell and Hembree (1994) found a link between academic performance and students' self-concept levels. Though Marsh et al. (1995) found that academic achievement was more closely related to academic self-concept than to global self-concept, students with higher academic standing possessed higher levels of self-concept, while students who achieved lower academic standings possessed a lower level of self-concept. Dusek (1991) found that a positive, healthy or high level of self-concept is advantageous and mentally healthy. An individual with a positive self-concept possesses higher career achievements and aspirations and is generally more successful.

A study (Marsh et al., 1995) examining the self-concept differences between elite athletes and a normative sample demonstrated that only specific areas of the athletes’
self-concept were found to be different from the normative sample. The physical fitness of elite athletes was substantially related to the physical ability aspect of the athletes’ self-concept. In addition, the athletes’ physical appearance self-concept was slightly related to the physical fitness of the athletes, though unrelated to other areas of self-concept. Marsh et al. (1995) explained the smaller than expected differences between the physical ability self-concept scores of the elite athletes and the normative sample, which were not a standard deviation different, as a result of the pressure and expectations that these athletes encountered. Just as with self-esteem, individuals can possess a higher self-concept level in comparison to others but an average self-concept level when compared with their personal expectations. The study did demonstrate that individuals who have a positive physical fitness self-concept possess higher physical ability self-concepts and possibly slightly higher physical appearance self-concepts (Marsh et al., 1995).

Keltikangas-Jarvinen (1990) conducted a study using 894 randomly selected Finnish adolescents (between the ages of 12 and 15 years at the beginning of study). In a 6-year follow-up study, Keltikangas-Jarvinen (1990) found that between the ages of 12 to 18 years, individuals’ self-concept levels tend to decrease, while the levels tend to begin increasing again between the ages of 15 to 21 years. Self-concept levels increase to the point at which they were prior to the initial decrease during early adolescence.

The literature demonstrates that adolescence is a time of great change and fluctuation with regard to an individual’s self-concept. Peers, family, friends, and society affect an individual’s self-concept. The enhancement of self-concept is considered a desirable goal educationally and recreationally (Marsh & Richards, 1988). Due to the multidimensional theory of self-concept and development of multidimensional measures
of self-concept, it has become easier for researchers to demonstrate connections between sections of an individual’s self-concept and specific life experiences.

Outdoor Education/Recreation

Outdoor education and recreation programmes, courses, and schools offer many programmes with various objectives, styles and activities (Priest, 1990a). Different types of outdoor recreation exist, such as environmental education, adventure education, outdoor education, and outdoor pursuits. Outdoor recreation can encompass any activity that people participate in during their leisure time, including activities such as bird watching, taking children outside for educational activities, and climbing a mountain in the Himalayas without oxygen tanks (Priest, 1990a). Education by means other than lecturing, such as observation, practice, and experience, have been in existence and widely used since the beginning of recorded history. Adventurous outdoor activities or the perception of adventure has always provided an excellent learning experience (Kiewa, 1994). Hunt (1990) traces the roots of adventure education past the standard Outward Bound, Boy Scouts and Girl Guides organizations to Plato and Aristotle. One of Plato’s most famous philosophical works, the Republic, includes a minor section on the instruction of children, which suggests that the best way to learn is to experience. In addition, Plato stated that risk is a logical educational tool (Hunt, 1990). Outdoor recreation programmes usually involve some form of adventure activity which provide new challenges, which in turn improve the participants’ skills. Priest (1990b) describes adventure recreation as simply unpredictable leisure. Research demonstrates that participation in adventure activities and programmes increase participants’ self-esteem.
and self-concept levels as well as accelerate personal growth through experience (Gillett, Thomas, Skok, & McLaughlin, 1991).

Conceptual frameworks have been developed to interpret adventure experiences in an attempt to predict the beneficial outcomes of these activities (Priest, 1990b). The Adventure Experience Paradigm (AEP) model was designed to conceptualize the adventure experience in an attempt to explain and predict the potential benefits of outdoor recreation adventure activities. The model has two axes: one represents the participants' perceived competence level for a particular task, and the other represents the participants' conceived risk level (Priest, 1990b). Every participant has a window of potential benefits within the AEP model. If the participant is overly confident, and attempts a task that is too difficult, the end result is a feeling of failure and the possibility of physical harm. However, if the participant is very skilled at a particular task and the task is not challenging enough, the participant will miss the opportunity for a beneficial experience (Priest, 1990b). To achieve beneficial experiences, outdoor leaders and participants have to ensure that the tasks engaged in are appropriate for participants’ skill level, yet challenging enough to be beneficial.

Outdoor education takes place primarily, though not exclusively, in the natural environment and is an experiential form of learning that utilizes all the senses (Priest, 1990a). Outdoor education is more than learning about the natural environment, but utilizes the environment as a tool in the learning process. Though outdoor education programmes, courses, schools, and organizations vary in style and technique, the majority strive to instill the importance of interpersonal relationships, positive environmental attitudes and behaviors, personal growth, and responsibility (Priest, 1990a).
Outdoor experiential education/recreation experiential programmes such as Outward Bound and North American Outdoor Leadership School have been used as a means to increase participants' self-concept, improve social interaction, and create a positive relationship between participants and the natural environment (Haggard & Williams, 1991; Hazelworth & Wilson, 1990; McDonald & Howe, 1989). Outdoor recreation programmes were designed to encourage participants to explore their potential, expand their abilities, increase their self-understanding and confidence, while examining their values (Easley, 1991). Research has demonstrated that outdoor recreation programmes improve adolescents' practice and understanding of group leadership and the democratic processes. In addition, Latess (1992) also found that programmes which had participants from various ethnic backgrounds resulted in participants becoming more accepting and understanding of cultures different from their own.

Changes in personality and self-identity were dependent upon the stress, both physical and psychological, that participants experienced in the wilderness setting (Hendee & Brown, 1987). A participant's stress level was related to the challenges that the participant encountered during the programme, the belief in her/himself to effectively manage the particular challenge encountered, and her/his personal evaluation of the situation once the challenge had been met. Depending upon an individual's sense of self, her/his physical condition, and her/his optimum level of stress, the degree to which they benefited from the wilderness experience varied (Hendee & Brown, 1987). Participants should not be overwhelmed by the mental and physical demands placed upon them by the activity and situation. All individuals have an optimum stress level and a maximum threshold that governs their potential increase in personal growth. An individual can
become overwhelmed when her/his personal threshold is pushed beyond her/his maximum, resulting in no beneficial experience and possibly resulting in a negative experience (Hendee & Brown, 1987). Wilderness offers the possibility for real and perceived danger; when an obstacle is overcome, the release of tension and feelings of accomplishment can result in enormous positive change, indicating that stress can be a positive factor in wilderness experiences (Greene & Thompson, 1990; Kiewa, 1994).

Informal Outdoor Education/Recreation Programmes

Informal outdoor education and recreation programmes represent programmes and courses outside the governmentally regulated educational and medical systems. These programmes are usually privately funded, owned, and operated. In addition, there are organizations that are publicly funded but not as stringently regulated as formal programmes. Some groups have even begun collective organizations managed and run by programme participants. Goals of these programmes are reviewed below. Many focus on development of self-concept, self-esteem, and other factors relevant to participants’ self-systems.

Outward Bound, originally established in 1941, hoped to educate and prepare young sailors for their future career path on the North Atlantic during World War II (Powch, 1994). Current adventure/wilderness based recreation programmes have developed models utilizing the Outward Bound programme as a primary source. Since its foundation, Outward Bound has changed significantly; the programme’s goal is not to train sailors for a life at sea but now, to develop and encourage participants around the world to challenge themselves to cope with pressures of everyday life (Miner, 1990). Outward Bound was one of the first experiential education programmes with its roots in
Kurt Hahn’s 1920 educational idea of having students discover, through challenges, values such as compassion and tenacity (Powch, 1994).

Outward Bound utilizes unfamiliar wilderness and social environments, presenting participants with problem-solving tasks that the group must solve as a cohesive unit (Greene & Thompson, 1990; Kiewa, 1994). Outward Bound courses are demanding physically, mentally, and emotionally. Each course is constructed to challenge and push participants to their perceived personal limits and slightly beyond in some instances (Greene & Thompson, 1990). Outward Bound courses include an introductory section which incorporates physical conditioning, safety training, first-aid, food planning, evacuation techniques, orienteering, environmental ethics, and the acquisition of necessary skills for the activities associated with the course (Greene & Thompson, 1990). A typical course is three to four weeks long, and the group size usually ranges between eight and 12 participants, with an emphasis on working as a group. The participants are motivated, by the instructors, prior to presentation of the problem solving tasks or obstacles that are encountered. Successful completion of these tasks or overcoming these obstacles may result in possible increases in the participants' levels of self-esteem, self-awareness, and sense of belonging (Kiewa, 1994).

The Boy Scout and Girl Guide organizations began about the same time as Outward Bound and originated from the military experience of Baden Powell who established the first group for boys after his participation in the Boer War. Girls' organizations quickly followed. There were standards established for leadership such as the ability to lead by example, delegate responsibility, understand the needs of the participants, and an interest in the development of young people (Loynes, 1990). The Boy...
Scout and Girl Guide organizations are currently based on these same principles, and are the largest voluntary youth organizations in the world (Loynes, 1990). Personal development and growth remain the primary goals of the organizations.

A model closely related to the Outward Bound model is the Outdoor-Adventure based model. However, significant differences are present with regards to motivation and activity conclusion articulation (Kiewa, 1994). Participants are presented with an obstacle or problem to overcome or to be solved primarily through co-operation and group cohesiveness. Participants experience a sense of well being and accomplishment, resulting in positive changes toward themselves and the group. Neither the Outward Bound model nor the Outdoor-Adventure model factor in a participant’s freedom of choice; the participants must take part in all the activities (Kiewa, 1994). The ability to choose allows the participant to exercise her/his independence, which can increase his/her self-concept and self-esteem, these programmes do not take this into account.

Wilderness challenge programmes demonstrate the need for and importance of natural environments to participants’ lives, psychological development, and well-being. Outward Bound offers programmes created especially for specific segments of the population, such as rape and incest survivors, cancer treatment patients, and many other groups (Powch, 1994). Such wilderness therapy programmes and courses began to evolve out of the Outward Bound type programmes in the early 1980s (Powch, 1994). There are many programmes within North America and around the world which cater to incest, rape, and survivors of battering, both on an informal and formal basis, for example the Colorado-based Ending Violence Effectively (EVE) programme, the Santa Fe Mountain Center, and programme ‘Looking Up’ based in Maine. These programmes are primarily
wilderness based, with foundations in both outdoor recreation and psychology (Powch, 1994). One of the main goals of EVE is to have participants develop normal psychological responses to dangerous situations and to reconstruct their immediate reaction (Powch, 1994). Outdoor recreation programmes and courses can provide many physical and psychological benefits.

The Cooperative Wilderness Handicapped Outdoor Group (C.W.HOG) was started by Tom Whittaker in 1981, after he had a car accident and his right foot was amputated (Whittaker & Shepherd, 1990). C.W.HOG was created to provide outdoor recreation experiences for handicapped people, by utilizing the group members’ experiences and knowledge. No one person leads, guides or organizes a programme or activity. The activities are governed by the group members’ interests and wants (Whittaker & Shepherd, 1990). The positive benefits to participants’ personal growth and the increase in their self-esteem levels were not originally planned by the original planners of the programme. The participants learn to be creative and work as a cohesive group to accomplish the tasks and activities in which they choose to take part (Whittaker & Shepherd, 1990). The collective group concept is rare in large organizations but such an experience contributes to the collective group magnitude and effectiveness. The participants were involved in every aspect of the programmes planning, development, execution and conclusion (Whittaker & Shepherd, 1990).

The Alberta Junior Forest Ranger (JRF) programme began operation in 1964 when the first camp opened near Hinton, Alberta. The programme was designed for adolescents between the ages of 16 and 18 years, to allow practical experience with natural resources (Alberta Forest Service, 1989a). The programme is governed by four
primary objectives: to encourage an understanding of and appreciation for the natural environment; to assist the Alberta Forest Service; to provide practical career experience; and to increase participants' personal growth and responsibility while improving interpersonal relationships (Alberta Forest Service, 1989b)

The ORP began operation in 1944 with 21 positions disbursed throughout the province (Ministry of Natural Resources (MNR, 1992). The programme was designed to give 17-year-old participants practical experience, instruction, and training in the management of natural resources (MNR, 1991). The goals and objectives of the programme relate to five specific components as follows: work programme, experience, education, public relations, and career progression (MNR, 1991). The programme's aims are to broaden participants' knowledge, understanding, and experience with regard to the natural environment while developing personal responsibility and maturity.

The ORP is geared towards educating participants about issues and problems with which the MNR deals on a daily basis (MNR, 1991). The participants attend lectures regarding the position and duties of the MNR. In addition, participants complete work tasks for local community groups, which demonstrate the diversity of tasks supervised by the MNR and difficulties that MNR employees face.

The participants are exposed to a wide variety of beneficial experiences, such as positive reinforcement, the acquisition of new skills, personal responsibility, and the like (Willett, personal communication, April 1996). The programme planners hoped to instil in participants an increased maturity and accountability through the experience of living away from home and being responsible and accountable for oneself. The programme leaders operate under the belief that team or group work towards common goals would
greatly improve the social interaction of participants. Through providing an assortment of new activities that demand group co-operation, the programme exposes participants to numerous alternative ways of thinking and coping with problems (MNR, 1991). Sharing physically challenging and mentally stressful circumstances draws individuals closer together, “creates group cohesion, cooperation and a sense of team work” (Latess, 1992, p. 16). The programme planners' strive to allow the participants to experience natural and wilderness settings for an extended period of time for educational and experiential reasons (MNR, 1992).

**Formal Outdoor Education/Recreation Programmes**

Formal outdoor education programmes include those connected with the formal school system and utilizing the educational goals of the public or private school system to which they are connected. Formal programmes also include those which are offered by the medical profession as alternatives to traditional medical practices or which work in conjunction with the established medical community.

According to Davis-Berman and Berman (1996), alternatives to traditional education styles have become more common in post secondary educational institutions. Wilderness oriented programmes and courses are a particular type of alternative education that has been increasing in popularity in recent years (Miles & Priest, 1990). University and college programmes that have wilderness oriented activities and courses have demonstrated an increase in student retention levels due to the outdoor component of the programmes. Although other studies have found varying degrees of retention increases, there was no mention of negative results by any study (Davis-Berman & Berman, 1996).
Among the Ontario Ministry of Education’s 13 goals for the public education system, three goals directly relate to outdoor programmes. These three goals are as follows:

1. Develop physical fitness and good health.

2. Acquire skills and attitudes that will lead to satisfaction and productivity in the world of work.

3. Develop respect for the environment and a commitment to the wise use of resources. (Eagles & Richardson, 1992)

Ontario has specialised field centres which cater to outdoor education. As of the 1989-90 school term, 20.6% of the students in the Ontario public school system visited a centre during the school year on at least one occasion (Eagles & Richardson, 1992).

The National Outdoor Leadership School (NOLS) is a non-profit school which was founded in 1965 to provide instructors for leading groups in wilderness situations (Bachert, 1990). The following are the four NOLS objectives that graduates of the school should accomplish and be able to instill in others: leadership development, outdoor skills, minimum impact camping, environmental conservation techniques and expedition dynamics (Bachert, 1990). Although the creation of NOLS was greatly influenced by Outward Bound principles, the school has concentrated on the educational aspects of wilderness. The participants become involved for enjoyment, personal growth, education, and certification (Bachert, 1990). Students learn the practical necessities of guiding groups through various wilderness locations and the essentials of group interaction and cohesion (Bachert, 1990).
Similar to NOLS, the Wilderness Education Association (WEA), originally the Wilderness Use Education Association, began in 1977 with the intention to certify wilderness leaders. The WEA developed three levels of certification to cater to the variety of needs and interests of wilderness participants, which are as follows:

1. Skills - a user’s level of certification.
2. Leadership - a leader’s level of certification.
3. Instruction - an instructor’s level of certification.

(Lupton, 1990)

The WEA was established with the purpose of producing quality wilderness users and leaders by improving environmental conservation, safety practices, and experiences among wilderness participants through education (Lupton, 1990).

As with many of the outdoor educational institutions, the Association for Experiential Education (AEE) was established within the context of the progressive education movement (Garvey, 1990). Outward Bound programmes demonstrate the ability to increase academic performance and attitudes of poorly achieving and disinterested students (Gillette, 1990). Post secondary institutions have begun to examine the possibility of combining Outward Bound styles and techniques with classroom techniques to assist students to reach their full potential (Garvey, 1990).

In the Central Okanagan School District in British Columbia, there is an 11-year tradition at the high school allowing students the option of participating in a six day hiking trip taking place in the sub-alpine region of the Canadian Rockies. The students plan all aspects of the trip including equipment, menu, safety, and environmental etiquette (Gilletts et al., 1991). The purpose of the hiking trip is to allow participants the
experience of being away from home, and to provide an educational experience enabling students to learn more about the environment and themselves, while at the same time completing a difficult and rewarding task (Gillett et al, 1991).

The Field Studies Council in the United Kingdom (U.K.) followed quickly on the heels of the Boy Scout/Girls Guide movement and the Outward Bound organization by developing educational programmes utilizing the natural environment as a learning tool (Loynes, 1990). The Field Studies Council develop programmes primarily for geography and biology students. These programmes are designed to introduce interested students to environmentally-related subjects and field work, in preparation for high school and university science and environmental studies curricula (Loynes, 1990). In 1989, there were 10 centers operated by the council in the U.K. Students are encouraged to participate in the programme in order to achieve entrance into related school courses and to gain practical experience (Loynes, 1990).

Opportunities to Teach Ourselves (OTO) is an experiential education programme that incorporates outdoor recreation and adventure activities into the regular school day. In fact, the school’s curriculum is centered upon these adventure recreation activities. The student’s academic work is completed in conjunction with the activities in which the students participate (Gillette, 1990). There are four criteria that the administrators of OTO attempt to provide for the students: freedom to make choices, the feeling of power and importance, enjoyment and fun, and the feeling of love and belonging (Gillette, 1990). The school attempts to fulfill these four criteria and meet the needs of both the students and the teachers. One of the truly unique things about OTO is that students, staff and
teachers work together to develop the goals and the structure of the school (Gillette, 1990).

When adventure experiences are utilized for educational or therapeutic applications it is not just the immediate effect of the activity that is a concern but the future impacts of the experience (Gass, 1990). Cousineau (1987) states the educational goals for adventure education are as follows:

1. To increase the participant’s sense of personal confidence.
2. To increase mutual support within a group.
3. To develop an increased level of agility and physical coordination.
4. To develop an increased joy in one’s physical self and in being with others.
5. To develop an increased familiarity and identification with the natural world.

(Cousineau, 1987, p. 22)

Both informal and formal outdoor education programmes encourage personal growth and increased understanding and acceptance of the self. Programmes which utilize adventure components or which are based on adventure activities (i.e. canoe trips, rock climbing) often have Outward Bound principles.

Project Adventure began in the United States in 1971 as an attempt to deliver Outward Bound principles and strategies to the classroom (Prouty, 1990). The curriculum is designed to increase the students’ interest and responsibility inside the classroom.

Students in their sophomore year take a year-long physical education class grounded in Outward Bound ideology. The course includes group activities such as trust games, both high and low level rope courses, camping trips, and problem solving exercises. In addition, the course integrates components of several traditional style courses, including
English, Biology and Social Studies (Prouty, 1990). The programme evaluations demonstrate that students' experiences increase their self-concept levels, physical fitness, academic attitude, and achievement (Prouty, 1990).

The Santa Fe Mountain Center is a therapeutic recreation programme designed to function in conjunction with the mental health care system in New Mexico. The center offers programmes meeting the needs of many groups which include criminal offenders, both juvenile and adult, autistic persons, emotionally disturbed youth, rapists, pedophiles, families in crisis, and survivors of rape, incest, and battering (Kimball, 1990). As Kimball (1990) explains, "wilderness therapy as pill-popping doesn't work" (p. 11) A single wilderness experience is not going to result in long-term change in behavior, and participants must realize that change requires time and the desire to change. This is why the Center also emphasizes the importance of long term and continual treatment. The wilderness setting provides psychologists with critical information that would otherwise be very difficult to obtain. Kimball (1990) illustrates the phenomenon by stating "more than once clients have been model citizens before a judge or in a correctional facility, but revealed total sociopathic behavior during the stresses of the wilderness" (p. 12).

Simultaneously and systematically the center offers programmes that are beneficial to the participant and continues to collect necessary information to improve these programmes.

Formal outdoor education programmes and courses often strive to improve more than the participants' level of personal growth and well being. These programmes often achieve changes in participants' academic performance, psychological development, or psychological reconstruction of past events. Though the goals and objectives of the different programmes within both the informal and formal sections vary, personal growth
and development is consistently sought after by instructors, educators, leaders, and administrators.

Residential Camps

Historically, summer camps were intended for children whose parents could afford the expense of having their urban children experience the natural environment during the course of the summer, with stays ranging from a few days to a few weeks (Douglas, 1990). Summer camps have been and continue to be attended by substantial numbers of young people, generally ranging from ages eight to 16 years. In many camps older adolescents participate as junior staff members or staff-in-training at camps. However, camps are not limited to younger generations. Often, church organizations, communities, and other large organizations will host various non-profit camping experiences (Douglas, 1990). In addition, the popularity of elder hostels have increased the number of programmes offered to seniors based on outdoor recreation activities and programmes in residential camp settings. These camps play a large role in shaping the natural environment and resource-related attitudes and behaviors of the participants (Douglas, 1990).

The majority of the research conducted on residential camps and programmes has been in relation to the personal growth benefits experienced by participants of summer camps (Easley, 1991). Research addressing the benefits of summer camps suggest that the majority of the benefits occur within the five following categories: improvement in academic attitudes; improvement in personal habits and skills; increased ability to interact and understand others; increased self-confidence; and improvement in basic orientation to life (Easley, 1991).
Modern camping is a combination of styles, including that of the historical pioneering theories, and the current theories regarding the benefits of outdoor living (Shivers, 1989), and the military style or ‘boot camp’ approach (Douglas, 1990). Early residential camp experiences were centered around personal enjoyment, though some of the later camps which were founded after World War II were based on a very structured, military type style of behavior and conduct. Many camps, however, did not adopt these ideals and many others reorganized once the military style did not prove as effective and financially viable as the enjoyment-based style (Douglas, 1990). Camping is a way of living, individually or with a group, in a primitive or semi-primitive state that combines various activities with the benefits of the natural environment (Dusek, 1991).

Due to the large number of people and the time constraints involved in such programmes, residential camps have a tendency to be quite structured, particularly with full participation camp events. A residential camp usually has fixed buildings and facilities. The campers live at the camp, although they may leave the camp on designated trips throughout their stay. Residential camps usually have a dining hall, recreation center, athletic field, cabins, and an administration building if necessary (Shivers, 1989). Campers generally eat at the same time, and planned activities are usually scheduled. Generally camp groups are divided into a variety of sections to allow smaller groups to get to know each other. In addition, smaller groups are used in residential camps to decentralize the camp structured (Shivers, 1989).

There are many different types of camps catering to a wide variety of interest areas, such as camps dedicated to crafts, water-based activities, land-based activities, and camps specific to types of activities and participants. These camps for example, may cater
to hockey, water skiing, and special needs groups (Dusek, 1991; Higelmire & Hayes, 1988). Psychological benefits of the camp experience can increase due to the nature of some specialized camps which are segregated by gender. Single sex environments provide females with additional acknowledgment and recognition of their skills and achievements, which they tend to require. Historically, females in these environments have demonstrated higher levels of confidence and self-regard than females in environments with both genders (Monaco & Gaier, 1992). Dusek (1991) found that camps and participation in recreational activities can increase an individual's self-concept regardless of gender.

A well organized camp situation can improve the quality of life for a participant by assuring educational, social and recreation experiences in an encouraging, friendly environment (Shiver, 1989). Campers learn the value of living, working, and playing in the natural environment (Shivers, 1989). Camp Koinonia, a residential camp for multi-handicapped individuals, established four objectives to assist in the development and personal growth of the participants and the volunteer university student staff. The following objectives are to provide:

1. Each camper with an educational and fun oriented experience in an outdoor environment.
2. An educational experience for each university student involved in the program.
3. An enriching and rewarding experience that will foster the emotional, social and physical well-being of each camper.
4. An opportunity to establish personal interrelationships among campers,
counselors, and staff.

(Higelmire & Hayes, 1988, p. 31)

The results of the Camp Koinonia study demonstrated that the participants (multi-handicapped individuals) and the volunteer staff (university students) benefited greatly from the residential camp experience (Higelmire & Hayes, 1988).

The staff and leaders at residential camps play a critical role in the participants’ evaluations of their experience. It is essential that leaders are properly trained and are made aware of their influence and possible negative impacts on the participants. Robinson (1993) explored the negative impacts of leaders and programmes, which can result in the participants withdrawal from or dropping out of the activity because of a demoralizing experience. However, the certification and skills courses offered by many outdoor associations (NOLS, ORCA etc.,) help assure recreation leaders are very well trained and skilled at a variety of tasks (Phipps & Swiderski, 1990). In addition, it is vital that outdoor recreation leaders are trained in ‘soft skills’ including group dynamics, communication, trust building, motivation techniques, psychological support, empathy, and social skills (Phipps & Swiderski, 1990). Many different certification programmes (Outward Bound, NOLS, and WEA among others) attempt to include soft skills within the curriculum of the programmes, though there have been difficulties with the teaching and instruction of these skills (Phipps & Swiderski, 1990).

Outdoor education/recreation programmes cater to a wide variety of different groups with very diverse needs. Programmes can include everything from rock climbing to hockey camp, though the programmes share goals and objectives. Generally the programmes are intended to be enjoyable, to teach the participants new skills or improve
existing skills, to be challenging to the participants' skill level, and to ensure that the participants' new skills are used. In addition, group co-operation and cohesion is emphasized and encouraged. Both informal and formal outdoor education/recreation programmes and residential camps encourage personal growth and increase knowledge and understanding of the self, which is further explored in the next sections.

Benefits of Outdoor Education/Recreation

The recent increase in attention and involvement of the general public in outdoor recreation has lead to an increased interest in recreation benefits and outcomes (Shasby, Heuchert, & Gansneder, 1984). Ewert (1989) classified the potential benefits of outdoor recreation into four categories: psychological, sociological, educational, and physical. Ewert (1989) listed a number of positive outcomes associated with each of the four benefit categories. The psychological benefits included an increase in participants' self-concept, confidence, well-being, and self-efficacy. Sociological benefits included group co-operation, a sense of belonging, and an increase in compassion. The educational benefits included academic improvement, improved problem solving, and increased environmental conservation and awareness. Physical benefits encompassed an increase in skills, fitness level, strength, and coordination.

Similarly, Klint (1990) associated three categories of benefits with adventure experiences: the physical realm included benefits such as increased muscle development, cardiovascular improvement, greater strength and endurance, and a general feeling of positive well-being; the second category, improved cognitive development, which includes skill development, improved safety standard and performance, and an increase in environmental knowledge and conservation behavior; and associated personal
development with beneficial adventure experiences, which includes an increase in self-concept, a sense of achievement, and an increase in locus of control (Klint, 1990).

In addition, Wankel and Berger (1990) developed four categories to organize the benefits of recreation: personal enjoyment, personal growth, social harmony, and social change. Fun and enjoyment are stated by most participants as their reasons for partaking in recreation activities (Wankel & Berger, 1990). Participants experience personal growth including benefits such as increased strength, greater flexibility, and decreased anxiety and depression, as a benefit from sport and physical activity (Wankel & Berger, 1990). The social harmony benefits category includes group relations, community integration, and general improvement in socialization. Types of social change benefits include a positive change toward education and an increase in mobility of social status. Sports can specifically influence a participant’s values, conveying either the dominant societal norms and socially acceptable behavior or the values of a divergent sub-group (Wankel & Berger, 1990). Activities which emphasize winning over self-testing and improvement can result in negative relations between teammates and opposing teams (Wankel & Berger, 1990). Personal change occurs frequently when individuals collectively acquire similar perceptions of goals, beliefs, values, and actions concerning the changes in society. Group or community recreation decreases feelings of loneliness, isolation, and anti-social behavior (Parks and Recreation Federation of Ontario, 1992). Recreation is generally thought of as a conservative element in society. Wankel and Berger (1990) suggest that recreation and societal values influence each other. Sports and recreation have the tendency to reinforce traditional ideals regarding gender, age, and race.
In addition to societal influences, there are environmental influences that affect self-esteem and self-concept. Young and Crandall (1984) demonstrated that a relationship exists between participation in wilderness-related activities and self-actualization.

Maslow (1970) developed a model, the Hierarchy of Needs, with self-actualization as the pinnacle. According to the model, an individual has to meet their physiological, safety, and psychological needs prior to attaining a sense of self-actualization. Csikszentmihalyi and Kleiber (1991) agreed with Young and Crandall (1984) that leisure and recreation activities offer the opportunities for achieving self-actualization. However, a person must fulfill her/his self-esteem and self-concept needs prior to achieving self-actualization. Therefore, if wilderness experiences and leisure time can assist participants to achieve self-actualization, it follows that they must first increase participants’ self-esteem and self-concept levels.

Personal growth or changes in personality are more likely to occur in people who are open and receptive to change. People in transition from one stage of life to another, for example, from adolescence to adulthood, are more likely to be receptive to change and open to new experiences (Hendee & Brown, 1987). Given that recreation experiences have such a powerful effect on the self-identity process of adolescence it seems logical for recreation professionals to study self-esteem and self-concept levels (Haggard & Williams, 1991).

**Psychological Benefits of Outdoor Education/Recreation Experiences**

Although wilderness, adventure, and challenge programmes have demonstrated the greatest rise in self-concept scores compared to other outdoor recreation programmes, the literature regarding the capability of outdoor recreation programmes to increase
participants' self-concept has proven to be inconsistent, especially with long-term follow-up studies (McDonald & Howe, 1989). Schreyer, Williams and Haggard (1990) stated that the wilderness setting itself has the potential to influence participants' self-concept. The wilderness or pristine natural environments provide recreationalists with an environment conducive to positive personal growth. The majority of research regarding self-concept and recreation programmes has focused on the positive gains to participants' self-concept levels during and after survival courses and adventure programmes (Lateess, 1992). In addition, Hazelworth and Wilson (1990) and Iso-Ahola et al. (1988) found that outdoor recreation programmes or courses which include the acquisition of new skills and the practical use of these skills demonstrate the ability to foster psychological benefits. McDonald and Howe (1989) recommended enrollment or involvement of children with low self-esteem in wilderness or adventure programmes as a means of increasing their self-concept because of the positive psychological effects these programmes demonstrated upon children.

Outward Bound participants in 21-to 26-day programmes generally experienced a significant overall change in their global self-concept level (Gillett et al., 1991). The 26-day Outward Bound residential programme increased the participants' self-concepts for the duration of the programme. Furthermore, the participants' self-concept levels remained elevated for 18 months following the programme (Iso-Ahola et al., 1988). The Outward Bound Programme was both mentally and physically challenging with emphasis placed on both individual and group goals, with the acquisition and use of new skills.

A study using 47 juvenile delinquents (3 female, 44 male) demonstrated a significant difference of $p < .01$, between the experimental group and the control group.
with regards to the experimental group members’ self-concept levels after a 26-day Outward Bound programme (Wright, 1983). The experimental group participated in a 26-day Outward Bound programme, while the control group were on the waiting list for the programme. After participating in Outward Bound, the experimental group possessed a significantly higher level of self-empowerment, greater personal responsibility, an increase in internal locus of control, and a greater level of personal efficacy (Wright, 1983). In addition, the Outward Bound programme increased the experimental group members’ self-esteem levels, cardiovascular fitness, and sense of personal achievement (Wright, 1983).

A study involving recreation students (with a mean age of 20.3 years) and physical education students (with a mean age of 22.2 years) who participated in a college level Outdoor Recreation Practicum were tested for changes in their self-concept levels as a result of the practicum (Young & Steele, 1990). The self-concept level of both groups increased, demonstrating that it is not necessary to involve dramatic outdoor adventure activities in outdoor recreation programmes to significantly increase participants’ self-concept levels (Young & Steele, 1990).

Hazelworth and Wilson (1990) demonstrated various impacts on respondents’ self-concept levels during four 6-day outdoor adventure camp experiences. The study utilized the TSCS to evaluate the respondents’ self-concept levels, utilizing a pre- and post-test design. Respondents participated in one of the four sessions. Each session was designed to stress different skills. Session one, which stressed group co-operation and respect for other, had no impact on respondents’ self-concept levels. Session two, which concentrated on developing group co-operation, family units, and working with partners,
demonstrated a significant positive change in respondents’ self-concept levels with regard to the family self. Session three attempted to instill mutual respect. A contract was introduced regulating the behavior of the respondents, and resulted in campers demonstrating a significant positive change toward their family and moral-ethical components of her/his self-concept. During session four, respondents demonstrated a significant positive change in moral-ethical self and the social components of the TSCS, as a result of emphasizing a behavior contract and large group activities. Hazelworth and Wilson (1990) demonstrated that depending upon the type of activity and group interaction that was emphasized during the camping session, the corresponding self-concept dimension would be influenced.

A study was completed utilizing 66 male high school students between the ages of 13 and 16 years. Students were selected for the study if they were achieving low academic scores but appeared to have the potential for improved performance. In addition, the students’ parents had to demonstrate support and commitment to assisting their children and the programme’s goals (Marsh & Richards, 1988). The respondents attended one of five Outward Bound Bridging Courses which were six weeks long. As a result of the Outward Bound Bridging Course, the respondents’ academic performance improved, academic self-concept increased, and global self-concept increased (Marsh & Richards, 1988).

Overall, participants felt better about themselves after a successful experience than they did after an unsuccessful experience. Positive experiences often increase participants’ sense of personal control and well being (Iso-Ahola et al., 1988). Vealey (1992) demonstrated that exercise, fitness training, and recreation programmes improve
participants’ self-esteem and self-concept levels, regardless of their age. Most individuals feeling ‘good’ or ‘better’ about their physical abilities and appearance after a vigorous physical workout (Vealey, 1992). Wilderness programme participants experience a sense of relaxation or ‘slowing down’. By relaxing, participants are able to achieve increased levels of awareness regarding the natural environment, other group members, and themselves (Hendee & Brown, 1987). The combination of vigorous activity and relaxation allows participants to achieve goals, overcome obstacles, and reflect upon the importance of their achievements.

According to Iso-Ahola et al. (1988), self-esteem can be positively affected by the acquisition of new skills or the use of skills regardless of the participant’s skill level. It is the participant’s self-evaluation of her/his performance for the particular session or programme that influences her/his self-esteem levels.

Outdoor recreation programmes can result in beneficial outcomes for both the participants and society as a whole (Latess, 1992). One can conclude from the research that wilderness programmes result in small but significant increases in the participants’ self-concept and self-esteem levels (Cousineau, 1987; Gillett et al., 1991; Hendee & Brown, 1987). One of the reasons that outdoor recreation programmes and courses can result in positive changes in participants’ self-concepts is the locations in which these activities occur. Wilderness or pristine natural environments have the potential to affect self-concept levels (Kiewa, 1994; Schreyer et al., 1990). One of the factors contributing to the therapeutic experience is the unfamiliar environment of the wilderness (Powch, 1994).
Wilderness therapy, also known as adventure based therapy, challenge courses, and ropes courses have evolved from programmes such as Outward Bound. Though some of the means are different, the main objective is the same, namely, to increase participants’ personal growth and improve their self-image (Powch, 1994). One of the benefits of a wilderness setting for these courses is the lack of prejudice. The wilderness does not offer favoritism. It is irrelevant what minority group a person may or may not belong to; when it rains, everyone gets wet regardless of race, class or gender (Kiewa, 1994: Powch, 1994). In wilderness settings, the task and consequences are usually very clear and meaningful. The natural environment has a simplicity that is easily understood by participants (Kiewa, 1994). The participants know that they require the basic needs of food and shelter, and that they must work together to accomplish these goals and overcome various obstacles along the way (Kiewa, 1994).

**Gender**

Genders are socially constructed categories not simply a term that describes an individuals’ biological sex. The terms female and male also conjure up traditional roles and ideals that society expects of both sexes (Jackson & Henderson, 1995). Traditionally, females were thought of as weaker physically, mentally, and emotionally, and as demonstrating more caring and nurturing characteristics. Males were considered to be strong physically, mentally, and emotionally and were thought to rarely demonstrate concern, caring, and emotion (Jackson & Henderson, 1995). Social construction of gender is an ongoing process that is influenced by “social, economic, and political interactions between men and women” (Jackson & Henderson, 1995, p. 33). At present, no single theory adequately explains the differences and similarities between females and
males. The gender roles society has developed, both traditional and modern, can not be predicted or completely explained (Nelson & Keith, 1990). Leisure and recreation constraints and differences are often generated by society’s ideals of gender as much as they might be by physical difficulties, class, race, or age (McMeeking & Purkayastha, 1995).

Females and males differ greatly regarding their need for and dependency upon role models, family members, and friends. In addition, females and males develop and depend differently upon their self-concepts, group interaction patterns, leadership styles, and achievement motivation (Monaco & Gaier, 1992). It is important to gear programmes and activities in such a manner that these differences are recognized and catered to (Monaco & Gaier, 1992). A study by Eaton, Michell, and Jolley (1991) questioning 74 college students in late adolescence demonstrated that females required more social support, more group activities, and interactions than their male counterparts. Females and males develop differently psychologically, and according to Kimmel and Weiner (1995), female adolescents develop a social orientation while male adolescents develop a personal orientation (Klein, 1992).

Due to the ease of administering of questionnaires in scholastic environments, the majority of the gender differences research has taken place in academic situations (Harper & Marshall, 1991) with the primary focus being scholastic achievement, academic performance, and school activity participation. Recently, researchers have begun to use gender as an explanatory variable, thus increasing the different types of studies in which gender has become a relative factor in the results (Henderson, 1990).
Previous studies have stated that male adolescents are more achievement oriented or status oriented than female adolescent (Klein, 1992), thus making participation in athletics more desirable and rewarding for male adolescents than female adolescents (Steitz & Owen, 1992). This could explain why performance in athletics has been significantly related to male self-esteem but not female self-esteem (Steitz & Owen, 1992). Traditional benefits regarding females’ participation in athletics may continue to affect their level of participation and the importance connected with their performance and participation (Henderson, 1995). Female athletes may believe there is little point in pursuing their sporting goals because of the lack of acknowledgment and limited opportunity to achieve a professional career in the activity. Athletics may be seen as a waste of time by themselves and their families.

Traditionally, the natural environment and the wilderness were viewed as a male domain. Females were encouraged to stay at home and not to venture forth into the unknown. Hence, if a woman challenged these ideals and participated in the exploration of the wilderness, she was not rewarded as her male companions were (Cole, Erdman, & Rothblum, 1994). Female participation in the wilderness allows traditional ideals to be discarded along with gender barriers (Cole et al., 1994).

According to Monaco and Gaier (1992), both females and males have the tendency to assume that male students are more competent than female students in all academic settings and subjects, even though females generally score higher. Thus it is especially important that young women receive acknowledgment of their personal achievements. Single sex institutions and programmes are essential components in acknowledging achievements by young women (Monaco & Gaier, 1992).
Females are more socially oriented than males and it is important that leisure opportunities cater to the female need for companionship (Shinew, Floyd, McGuire, & Noe, 1995). The practical application of 'leisure partners' has helped to increase the leisure time of females (Henderson, 1995). In addition, females are recognizing the social value of leisure, the ability to meet and interact with different people, and in various settings (Henderson, 1995). Males tend to be more personally oriented than females, therefore it is important that leisure activities for males are designed to emphasize independence and goal achievement.

Henderson (1990) noted that women and men live and socialize differently; therefore it would be reasonable to assume that there are leisure differences between the two groups. By continuing to research various activities and the different impacts these activities have on females and males, it becomes easier to comprehend how leisure activities affect women and men differently (Henderson, 1990).

**Gender and Recreation**

In the study of leisure, there has been a recognition that gender, race, age, religion, class, culture, employment status and sexual orientation diversify leisure experiences and leisure demands (Mowl & Towner, 1995). The number of studies regarding the inequality of leisure between females and males has increased greatly over the past 15 years (Henderson, 1991). Much of the research has been founded in feminist theoretical understanding of patriarchal society and gender relations (Shinew et al., 1995). Henderson (1990) stated “...women overall share a common world in their inequality in leisure when compared to male privilege” (p. 236). In the majority of the cultures researched, females have less leisure time available than males (Henderson, 1995).
and Towner (1995) state that with a deeper understanding of gender characteristics and roles, future research will establish how, where, and why various leisure activities have different effects on female and male participants.

Henderson (1995) stated that financial constraints and the lack of available leisure time for women could easily hinder their opportunity for recreation or at least make equal opportunity an impossibility. Women earn one tenth of the world’s income, yet work two-thirds of the working hours, even though they represent approximately half of the world’s population and one-third of the workforce (Henderson, 1995). Jackson and Henderson (1995) demonstrated that, generally, women’s leisure time is more constrained than men’s.

During early adolescence both females’ and males’ leisure decisions are influenced by parental attitudes (McMeeking & Purkayastha, 1995). Hoff and Ellis (1992) studied the social interactions and influences of the leisure activities and actions of 490 university students. The study revealed that the leisure decisions of female students were significantly influenced by their families and peer groups, while the leisure decisions of male students were significantly influenced by their peers. McMeeking and Purkayastha, (1995) suggest that the leisure time of adolescents is greatly influenced by their requirement for group acceptance and identity confirmation, resulting in a significant peer influence and similar peer leisure activities.

Ibrahim and Cordes (1993) stated that risk recreationalists have a tendency to be closer to a Big T personality type than other types of recreationalists. Big T personalities tend to be extroverted, creative, experimental and tend to take more risks. This
have less difficulty socializing and working with them in the future. Receptive outdoor recreation professionals should treat all participants equally and fairly. It is critical that professionals do not treat anyone in a stereotypical manner, and educating participants about non-sexist and non-racial attitudes is an essential component of the recreational experience. The natural environment is not prejudiced, and neither should the users and professionals be (Henderson, 1996). Outdoor recreation and the wilderness were traditionally viewed as male domains, and it is interesting to note that females who enjoy and participate in these activities and environments consider themselves more masculine (Shinew et al., 1995).

**Gender and Psychology**

Although Western society is 51% female, women are marginalised in terms of their access to resources and power (Lesko, 1994), and thus continue to suffer from their subordinate status in society (Blackman & Funder, 1996). With the emergence of the modern women’s movement in the past 20 years, the visibility of women in all aspects of life, including leisure and recreation, has increased (Henderson, 1990).

Klein (1992) found no significant difference on the self-esteem level of 194 college students between the ages of 17 and 22 years. However, Block and Robins (1993) demonstrated in a longitudinal study that the self-esteem of females tended to decrease over time while that of males tended to increase. The study utilized the same respondents at three stages of development, early adolescence (average age 14.8, with an SD of 0.50), late adolescence (average age 17.85, with an SD of 0.50) and at early adulthood (average age 23.23, with an SD of 0.74). There were more females than males with low self-esteem during early adolescence and the difference continued to increase throughout the
duration of the study. Supporting this research was the higher risk of depression for females during adolescence (Klein, 1992).

Harper and Marshall (1991) sampled 201 adolescents between the ages of 14 to 16 years. The results indicated that females reported significantly more problems and lower self-esteem levels than the males. Females were concerned with interpersonal relationships, and family and health issues, though there were no differences found regarding educational and career goals (Harper & Marshall, 1991). The study also demonstrated that females had low self-esteem regarding health and physical development which was credited to North American society’s ideal body image and the difficulty in achieving this image (Harper & Marshall, 1991; Newell et al., 1990). Family and home problems affected females more than males, which is typical of female social-oriented development as opposed to the male individual-oriented development. Often the different development orientations result in unequal treatment or different imposed restrictions (Harper & Marshall, 1991). Newell, et al. (1990) found with their study of 40 adolescent females that the respondents demonstrated a lower physical self-concept than the standardization group by one standard deviation, which is not uncommon for females.

Self-esteem research has indicated that women and men have significantly different self-schema, resulting in very different formations of self-esteem development (Blackman & Funder, 1996). A study conducted by Blasi and Milton (1991) demonstrated that girls in sixth grade (average age 11.71 year) and the twelfth grade (average age 17.6 year) were more advanced in their understanding of the inner self or internal psychological reality (Blasi & Milton, 1991). Females and males rate themselves differently on self-esteem scales. Generally, females rate themselves higher socially and
lower personally, while males rate themselves lower socially and higher individually (Greene & Wheatley, 1992). This self-esteem phenomenon could be explained by North American societal norms that demand females develop more nurturing, giving, communicational, and sympathetic skills that are oriented toward family care taking. Males are encouraged, however, to develop more competitive, aggressive, ambition, and practical skills, which are more suited for career development (Blackman & Funder, 1996; Greene & Wheatley, 1992).

The last years of high school can be a very vulnerable time for young women due to their continued struggle with self-concept issues, such as attractiveness and intelligence (Hesse-Biber & Marino, 1991). During early adolescence, females and males with high self-esteem possess different personality characteristics, due to the gender-type behavior traits and characteristics expected by society (Block & Robins, 1993). Female students in elementary schools, high schools and post-secondary institutions are treated differently than their fellow male students. Male students receive more attention and praise from both female and male instructors. There is a considerable amount of research to indicate that female students suffer from discrimination throughout their academic careers, from elementary and secondary school through to college and university (Allen-Bern & Niss, 1994). In a situation where all the participants or students are female it follows that women would not suffer gender discrimination, and possibly would benefit from an increase in self-esteem (Allen-Bem & Niss, 1994). It is important at the adolescent stage of development that females actively participate in both traditional female and male roles and are encouraged and praised for their participation in the activities (Allen-Bem & Niss, 1994). Male adolescents should be encourage to participate in both traditional
female and male roles also to assist in the deconstruction of gender roles and stereotypes. Lack of encouragement could have a devastating effect on a young woman’s self-concept (Hesse-Biber & Marino, 1991).

Much of the research surrounding the effect gender has on individuals’ self-esteem and self-concept levels is contradictory, with little to no research to indicate what may cause the various results. Lintunen et al. (1995) found that the majority of research indicated that there were either no differences or slight differences between female and male levels of self-esteem. Harper and Marshall (1991) found that adolescent females had significantly lower self-esteem than did males. A study conducted by Greene and Wheatley (1992) demonstrated that there were significant differences between females and males in their self-esteem, self-concept, and psychological distress levels.

Gender, Recreation and Psychology

The source of self-esteem changes in females and males varies greatly though certain settings should provide an increase in self-esteem levels to both genders. According to Blackman and Funder (1991), females base their self-esteem levels on nurturing skills and compassion. Therefore, female self-esteem levels should increase in a caring environment with a high degree of social interaction and the development and encouragement of new friendships and relationships (Blackman & Funder, 1991). Group settings and activities, especially those in a camp surrounding, would provide such an environment. Blackman and Funder (1991) found that males base their self-esteem on independence and competence levels, therefore males should develop higher self-esteem levels in environments that encourage independence, goal setting, and accomplishment and competitive situations. Work camp activities and programmes that have set tasks and
goals to be accomplished with minimal intervention should increase self-esteem levels. It is important to note that females also benefit from independence, and goal setting just as males benefit from a caring and nurturing environment. Female and male participants often benefit from the same activities and tasks for both different and similar reasons.

According to a study conducted with 169 ninth-grade students (Koff, Rierdan, & Stubbs, 1990) females and male respondents view their bodies differently and utilize their appearances and abilities to achieve different means. Females generally view their bodies as a means of attracting others, while males generally view their bodies as a means to accomplish specific tasks and affect their surrounding environment (Koff et al., 1990). The results of a study conducted by Koff et al. (1990) demonstrated that females were significantly less satisfied with their bodies than were the male respondents. This dissatisfaction was one of the factors resulting in females possessing lower self-esteem levels than the male respondents.

According to Shaw, Kleiber and Caldwell (1995) females were less likely than males to classify themselves as physically active. Females who do consider themselves physically active with a high level of participation demonstrate more advanced development of their self-identity than do males who consider themselves highly active with a high level of participation (Shaw, Kleiber, & Caldwell, 1995).

Recreation has traditionally been a male domain. These traditional ideals are slowly changing as females participate in more recreation activities and become more comfortable in wilderness settings. It is important that recreation leaders recognize their potential prejudice and strive to treat all wilderness participants fairly, with the recognition of participant differences which make group activities beneficial.
Summary

Adolescents experience a great deal of change and development during the final development stages of self-identity. Due to the numerous changes that occur physically and emotionally during adolescence, it is common for self-esteem and self-concept levels to be lower than at other phases of the life cycle. As self-identity forms, it is important to have high stable levels of self-esteem and self-concept. High stable levels of self-esteem and self-concept have positive effects on individuals’ self-images.

Outdoor recreation programmes, wilderness experiences, and group involvement all contribute to the increase of participants’ levels of self-esteem and self-concept. The ORP includes these three elements as well as many other factors that have been credited with the ability to increase self-esteem and self-concept levels. Because of the connection between outdoor recreation programmes and the increase in self-esteem and self-concept levels, programmes such as the ORP should increase participants’ understanding of themselves and society, thus causing an increase in their self-esteem and self-concept levels.

Gender differences within North American society are still prevalent between females and males of all ages with females being more likely to suffer from low self-esteem and negative self-concept. Females and males begin to develop differently at birth and continue to progress differently throughout the majority of their lives. Although previous literature has not established whether the differences are innate or socially constructed, females have a tendency to be more socially oriented (i.e. nurturing, caring), while males have a tendency to be more individually oriented (i.e. aggressive, competitive). Due to these developmental differences, female and male self-esteem and
self-concept are affected and influenced by different stimulus. However, it is possible for the same treatment to result in the same effect for both genders, yet for different reasons. For example, a wilderness or adventure programme with a group of people that has to work as a team, help each other, care for each other and watch out for each other will likely increase the self-esteem and self-concept of female participants. However, the same programme will also include achieving set goals and objectives, taking personal responsibility, and the completion of specific tasks, and hence will be likely to increase the male participants' self-esteem and self-concept levels. In addition, both female and male participants will benefit from activities that traditionally are thought of as representing the other gender (e.g. females will benefit from goal accomplishment as males will benefit from teamwork). There will be other factors that will affect both the female and the male participants, such as the acquisition of new skills, the use of these new skills, formation of new friendships and breaking of family ties.

The camp or large group setting of the ORP could easily influence the participants' leisure concepts and future activities, since the camps consist of 24 peers and, generally, a young staff. Research has demonstrated it is possible that the participants' future leisure choice will be significantly influenced by the ORP experience (McMeeking & Purkayastha, 1995; Hoff & Ellis, 1992). Past leisure experiences strongly influence future leisure experiences. Though the majority of early leisure experiences are strongly influenced by family structures and activities, adolescents start to become highly influenced by their peer groups and interactions (Hoff & Ellis, 1992). The influence of the peer-group atmosphere of the ORP would influence future recreation decisions of participants.
CHAPTER III

Methods

The purpose of this study was to determine the impacts of the Ontario Ranger Programme (ORP) on the self-esteem and self-concept levels of the adolescent participants.

Research Process

Interviews and questionnaires are the most common research method used to study outdoor recreationalists (Heimstra & McFarling, 1974). These two methods are usually applied when the respondent is in the recreation setting or shortly after the respondent leaves the site (Heimstra & McFarling, 1974). Kidder and Sellitis (1981) stated that “surveys can be designed to answer questions about relationships, including cause and effect relationships, but they are better suited to answer questions of fact and description” (p. 5). The information that was collected for this study was gathered both in the respondents’ camps, at the recreational setting and from the respondents once they had returned home from their recreational experience. The information required was readily obtained with questionnaires.

A survey research design method was selected for this study because of the number of respondents to be studied, the difficulty of controlling the precise timeline of any other research method, and the cost factor of alternative research methods. The interview research method was considered for this study but was disregarded due to the time and cost factors of interviewing 96 participants on five different occasions, in which two of these interviews would take place when the
respondents were scattered throughout the province. The possibility of inconsistency between the interviewers and the interview process was sufficient to discourage the use of that particular research method.

Participants

The ORP is financed by the Ontario Ministry of Natural Resources (MNR) and the Environmental Youth Core (EYC) (White, personal communication, January 1996). To ensure an equal representation of female and male Rangers, half the camps accommodate female participants and the other half accommodate male participants. The participants in the ORP were randomly selected from applications received at the Youth Programme Office between November 1, 1995 and January 30, 1996. To be eligible for the programme during the summer of 1996, the participants had to be in good physical condition, be enrolled in the Ontario secondary school system, and be 17 years of age (M = 17, SD = .4) by December 31, 1996 but not 18 by July 31 of 1996 (MNR, 1992).

Sample Size

Sample method and sample size are critical considerations if the researcher is unable to survey or observe every member of the population (Abbey-Livingston & Abbey, 1982). "The best way to assure that the results can be generalised beyond a single study is to draw a representative sample" (Kidder & Selltis, 1981, p. 78). The ORP selection process was designed in such a manner as to allow every applicant the opportunity to be chosen for the programme. The ORP selection process divided the province into four sections: Northwest, Northeast, Southwest, and Southeast. The applicants were then selected for the programme from these four sections. The applicants
that were chosen for the programme were then placed in one of the 18 camps distributed throughout the province. In this study, the respondents were from four of the eighteen Ontario Ranger camps. The four camps are detailed in Table 1. The four camps selected for this study were selected for two reasons. First, it was necessary to select camps that were in close proximity to the researcher's location, to avoid travelling the majority of the province, which was not financially possible. Second, the researcher required the opportunity to train the camp supervisors who would be responsible for the administration and collection of the questionnaires.

Each of the four camps accommodated 24 rangers during the summer of 1996 (S. White, personal communication, June 1996). It was expected that the four camps participating in the study would have 24 rangers resulting in a sample size of 96. The number of respondents who completed each of the questionnaires varied across time. This phenomena is further discussed in Chapter IV.

Treatment

The ORP was designed with five specific component, as follows: work programme, experience, education, public relations, and career progression. These components must be integrated into the programme schedules of all of the camps. The work programme must consist of at least one 5-day canoe trip, which includes work tasks such as cleaning campsites, picking up garbage and maintaining portages. In addition, the camp must include a variety of work activities including such things as tree planting, tree pruning, the hand-releasing of tree plantation sites, painting MNR buildings, small construction projects (e.g. bridges, spawning beds, and docks), and general
Table 1

**Participating Ontario Ranger Camps**

<table>
<thead>
<tr>
<th>Location</th>
<th>Camp Name</th>
<th>Gender</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atikokan</td>
<td>Mink Lake</td>
<td>Female</td>
<td>24</td>
</tr>
<tr>
<td>Dryden</td>
<td>Sandbar</td>
<td>Male</td>
<td>24</td>
</tr>
<tr>
<td>Sioux Lookout</td>
<td>Cedarbough</td>
<td>Female</td>
<td>24</td>
</tr>
<tr>
<td>Fort Frances</td>
<td>Cuttle Lake</td>
<td>Male</td>
<td>24</td>
</tr>
</tbody>
</table>
maintenance of camp facilities (MNR, 1991). Each camp must provide the participants with eight educational days including lectures by local MNR employees about their jobs, tours of local resource related business and companies (e.g. canoe building companies, pulp mills, lumber mills, tree nurseries). The social component of the programme is assured by a minimum requirement of four recreational days. Scheduled recreational activities included such things as baseball games, jamborees, and participation in local parades, activities, and events (Willett, personal communication, April 1996). The ORP is a work programme operated by the MNR, and it is important that the camps are organized and managed according to government regulations and standards, including such things as work hours, accommodations, and qualified supervisors (White, personal communication, January 1996). The staff members of the four camps participated in the same government organized training process; the training schedule is provided in Appendix A.

Instrumentation

The Rosenberg Self-esteem Scale (RSES) and the Tennessee Self-concept Scale (TSCS) were pilot tested on a small group of university students to ensure that the accompanying instructions were easily understood and could be performed without difficulty. The pilot group were instructed to comment on readability, understandability and the language of the instruments to ensure simplicity and clarity. Both instruments had been revised during the past decade but to ensure that any common language would be understandable, the pilot group was also asked to comment on their level of understanding regarding the questions.
The ORP participants were completed five sets of questionnaires: Time 1 - completed upon the respondents' arrival at camp; Time 2 - mid-way test, four weeks into the programme; Time 3 - completed upon the respondents' departure from camp; Time 4 completed four weeks after completion of the programmes; and Time 5 - completed eight weeks after completion of the programme. A baseline test could not be completed because of government restrictions regarding the release of personal information of non-government employees. The baseline test would have been completed prior to the participants' notification of exceptance into the programme providing a baseline measurement of the participants' self-esteem and self-concept levels with no influence of the programme. The questionnaires required approximately 20 minutes to complete. The respondents were informed that the study would examine the potential effects of the ORP on participants' levels of self-esteem and self-concept.

There are a vast number of instruments that measure either self-esteem or self-concept. For example, the Texas Social Behaviour Inventory which measures self-esteem, and Self-Descriptive Questionnaire also measures self-esteem. The Self-perception for College students was designed to measure the self-concept of college students or young adults. The Self-esteem Index is meant to measure the respondents' perception of their personal traits and characteristics. Peer Q-sorts, personal descriptions of the participant made by the participant’s friends. In this study, two questionnaires were utilized to gather the required information to measure the respondents’ self-esteem and self-concept levels: the Tennessee Self-Concept Scale (TSCS) and the Rosenberg Self-Esteem Scale (RSES). These scales have been used extensively both in social psychological and recreational research.
questionnaires were relatively short in completion time (approximately 15-20 minutes),
which helped to ensure that the respondents answered all the questions, an important
attribute given that the questionnaires were completed five times. Additionally, both
instruments employ negatively and positively worded items to increase variation in the
answers and reduce response bias, such as acquiescence (Marsh, 1996). Although the
combination of negatively and positively worded items can affect the results with
younger children, research has indicated that adolescents are capable of understanding
and answering the combined items accurately (Marsh, 1996).

Each questionnaire was accompanied by a letter (see Appendix B) briefly
explaining the study and instructions to be followed. In addition, the follow-up
questionnaires were followed by reminder letters which were sent to the respondents
approximately ten days after they received the follow-up questionnaires. The reminder
letters (see Appendix B) were utilized with the intention of ensuring a good response rate.
The letters which accompanied the questionnaires and the reminder letters provided the
advisor’s name instead of the researcher’s name because the researcher worked at one the
camps and had direct contact with all the respondents during the programme. This was
done to ensure that the participants’ responses were not influenced by the contact with the
researcher.

**Questionnaire Design**

The RSES and the TSCS were selected for use in this study to determine whether
participation in the Ontario Ranger Programme (ORP) would significantly influence the
self-esteem and the self-concept levels of the participants. In addition, the questionnaires
were administered at four week intervals to measure the growth patterns of the
participants' self-esteem and self-concept levels. The questionnaire was composed of four sections. Section A gathered general information which would allow the researcher to match the questionnaires while maintaining the respondents' anonymity. The following information was solicited to ensure that the matching process was accurate and that confidentiality was assured, (i.e. the respondent’s birth date, name of camp she/he attended, and location of her/his permanent residency).

Section B contained the RSES, which measured the participant’s level of self-esteem via a four point Likert-type scale (Rosenberg, 1965). The RSES consists of four possible responses: strongly agree, agree, disagree, and strongly disagree. There are ten items in the RSES which measure global positive and negative attitudes toward the self and the respondents’ self-esteem level. The maximum instrument score on the RSES is 40. Negative and positive items are varied to reduce response set. High scores indicate low self-esteem and low scores indicate a high self-esteem. The RSES (or portions of the test) is one of the most widely used self-reporting questionnaires for measuring global self-esteem (Marsh, 1996). The RSES has a high level of reliability and has demonstrated construct validity (Rosenberg, 1985; Lintunen & Rahkila, 1995). The scale has a test-retest reliability of .80 to .95 (Steitz & Owen, 1992).

Section C of the questionnaire consists of the Tennessee Self-Concept Scale (TSCS). The scale is comprised of 100 self-descriptive statements. The respondent rates her/himself on a five point Likert scale, one (completely false) to five (completely true). The scale classifies the responses into eight self-concept categories, and each category had three negative and three positive questions. The eight self-concept categories are as follows: self satisfaction, behaviour, identity, physical self, moral-ethical self, personal
self, family self, and social self. The scores are grouped in two sections: Total Positive score (TP) and Self-Criticism score (SC). The TP scale represents the overall self-concept level of the respondents. Generally, respondents who score high (around 370 and higher) have a tendency to like themselves and act accordingly, while respondents who score low (around 300 and lower), doubt their own worth and abilities and suffer feelings of depression, unhappiness, anxiety, and undesirability (Roid & Fitts, 1994).

The TSCS has a test-retest reliability of .92 for the Total Positive score among 60 college students over a period of two weeks. The lowest test-retest reliability score achieved by the TSCS utilized psychiatric patients with a shortened time frame of only a few days. The reliability coefficient was .88 for the total positive self-concept score (Roid & Fitts, 1994).

The Self-Criticism score (SC) consists of ten items taken from the Minnesota Multiphasic Personality Inventory (MMPI) Scale. The ten items are slightly derogatory statements that most people admit to being true of themselves; an extreme low answer indicates that the respondent is not answering the questions accurately. Respondents who deny these statements are attempting to present a positive image of themselves. High SC scores indicate an openness to and capacity for self-criticism, which the majority of individuals achieve. Low scores indicate the inability for self-criticism and allow for the possibility that the respondent is answering the questions in a favourable direction or the way the respondent believes the questions should be answered, rather than how the respondent actually feels. The TSCS instruction manual provides the low and high SC scores that respondents should fall between (Roid & Fitt, 1994). Respondents with
consistently low SC scores would have been withdrawn from the study, if any had been evident.

**Data Analysis**

The examination of the data was derived through quantitative analyses. The quantitative analyses consisted of an overview of the changes in the self-esteem and self-concept levels of the participants in the ORP during the summer of 1996. Numerical values were assigned to the answers provided for the questions. These values were then stored in a computer data base and analysed with the Statistical Package for the Social Services (SPSS). Frequencies, analysis of variance, and Tukey’s post-hoc tests were the main types of analysis attempted. A significance level of $p < 0.05$ was used. An explanation for the use of these analyses are included in Chapter IV.
CHAPTER IV

Results

The purpose of this study was to determine the impacts of the Ontario Ranger Programme (ORP) on the self-esteem and self-concept levels of the participants. This chapter describes the procedures for and presents the results of the statistical analyses. Prior to the analysis of the self-esteem and self-concept scores, the data were screened for missing values and outliers, correlations between the dependent variables were conducted, and tests for skewness and homogeneity of variance were conducted.

Each of the five times in the series design will be referred to in the following manner: Time 1 - the instrument completed upon the respondents' arrival at camp; Time 2 - the instrument completed mid-way through the camp experience; Time 3 - the instrument completed upon the respondents' departure from camp; Time 4 - the first follow-up, instrument completed four weeks after the respondents' left camp; Time 5 - the second follow-up instrument, completed eight weeks after the respondents left camp.

Data Screening

None of the responses violated the two internal validity scales of the Tennessee Self-concept Scale (TSCS). All responses were within the normative range of the Self-criticism scale and respondents answered the reversed scored items accurately. The TSCS instruction manual states the normative range of the self-criticism scale to provide a reference for low and high scores (Roid & Fitt, 1994). The frequency at which the respondents were required to complete the questionnaire (five times) resulted in a varied response rate for the five tests. This variance is reflected in Table 2, due to the number
Table 2

Frequency of Questionnaire Completion

<table>
<thead>
<tr>
<th>Status</th>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
<th>Time 4</th>
<th>Time 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosenberg Self-esteem Scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed</td>
<td>81</td>
<td>67</td>
<td>68</td>
<td>68</td>
<td>63</td>
</tr>
<tr>
<td>Missing</td>
<td>13</td>
<td>27</td>
<td>26</td>
<td>26</td>
<td>31</td>
</tr>
<tr>
<td>Tennessee Self-Concept Scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed</td>
<td>81</td>
<td>66</td>
<td>65</td>
<td>68</td>
<td>64</td>
</tr>
<tr>
<td>Missing</td>
<td>13</td>
<td>28</td>
<td>29</td>
<td>26</td>
<td>30</td>
</tr>
</tbody>
</table>

Note. Time 1 - the instrument completed upon arrival at camp.

Time 2 - the instrument completed mid-way through the camp experience.

Time 3 - the instrument completed upon departure from camp.

Time 4 - the first follow-up instrument, completed four weeks after the camp.

Time 5 - the second follow-up instrument, completed eight weeks after camp.
of missing cases and the number of respondents who failed to answer all five of the instruments in the time series design. The missing cases include respondents who failed to answer all five of the tests. Only complete data sets were utilized in the statistical analysis, this resulted in the analysis of 31 cases for both the RSES and the TSCS (18 females and 13 males). Appendix C contains a table comparing the means and standard deviations of the data sets with missing responses and the 31 complete data sets for both the Rosenberg Self-esteem Scale (RSES) and the TSCS. At each time of testing, there were no significant differences between the complete data sets used in the analysis and the data sets with missing data.

The dependent variables of self-esteem and self-concept were not correlated (see Table 3). Had the self-esteem and self-concept scores been highly correlated then it would have indicated that the instruments were not sensitive enough to distinguish between the two dependent variables, making it difficult to interpret the results.

Outliers were defined as responses of greater than three standard deviations below or above the mean (Tabachnick & Fidell, 1989). There was one outlier found in the 31 complete data sets. Screening of the data established that the outlier was a female respondent in the RSES at Time 4. The outlying score was transformed to equal $z = -.3.0$.

**Overview of Analyses**

The assumptions of the repeated measures ANOVA were tested. The test of homogeneity of variance determines whether variances were similar across Time and Gender. Violation of the homogeneity of variance assumption can bias the F-ratio, leading to either inflation or deflation of the Type I error rate. The test of sphericity
Table 3

Correlations Between RSES and the TSCS Scores

<table>
<thead>
<tr>
<th>Correlation</th>
<th>One</th>
<th>Two</th>
<th>Three</th>
<th>Four</th>
<th>Five</th>
</tr>
</thead>
<tbody>
<tr>
<td>.175</td>
<td>-.066</td>
<td>-.273</td>
<td>.024</td>
<td>.026</td>
<td></td>
</tr>
</tbody>
</table>
determines whether correlations between pairs of scores are equivalent across Time and Gender. Violation of the sphericity assumption can artificially inflate the $F$-ratio, leading to inflation of the Type I error rate. The $\eta^2$ (eta squared) measures how much of the variation in self-esteem or self-concept scores is associated with Gender and Time with a scale of small, medium, and large (Howell, 1995). Cohen (1977, cited in Steven, 1992) identified $\eta^2 = .06$ as a medium effect and $\eta^2 = .14$ as a large effect size for psychological variables. Turkey’s post-hoc analyses was chosen for this study because of its considerable use in psychological research.

**Self-esteem**

Hypotheses 1, 2, and 3, with regard to the RSES, were examined utilizing a 2 (Gender) by 5 (Time) mixed-model analysis of variance (ANOVA) with Time as the repeated measure. Homogeneity of variance and sphericity were evaluated to ensure that the data sets were not in violation of the assumptions underlying ANOVA. The RSES data met both the assumption of homogeneity and the assumption of sphericity (see Table 4).

Table 4 presents the RSES Gender by Time ANOVA source table. Mean scores are plotted in Figure 1, displayed in Table 5, and plotted by Gender and Time in Figure 2. The Gender by Time interaction was of borderline significance, $F(4, 116) = 2.43, p = .052$. The Gender by Time interaction accounted for 8% (partial $\eta^2 = .077$) of the variance in RSES scores. The females’ and males’ mean RSES scores demonstrated no significant
Table 4

Source Table for the 2 (Gender) by 5 (Time) Mixed-model ANOVA of the Rosenberg Self-esteem Mean Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between subjects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (G)</td>
<td>1</td>
<td>0.59</td>
</tr>
<tr>
<td>$S$ within-group error</td>
<td>29</td>
<td>(10.51)</td>
</tr>
<tr>
<td><strong>Within subjects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time (T)</td>
<td>4</td>
<td>3.89**</td>
</tr>
<tr>
<td>G by T</td>
<td>4</td>
<td>2.43*</td>
</tr>
<tr>
<td>T by $S$ within-group error</td>
<td>116</td>
<td>(3.16)</td>
</tr>
</tbody>
</table>

Note. Values in parentheses represent mean square errors. $S$ = subjects.

*p < .10. **p < .01.
Figure 1. Mean Self-esteem scores as a function of Time. \(N = 31\).
Table 5

Self-esteem and Self-concept Mean Scores and Standard Deviations as a Function of Time

<table>
<thead>
<tr>
<th>Status</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td></td>
<td>23.46</td>
<td>2.22</td>
<td>24.34</td>
<td>2.59</td>
<td>24.79</td>
</tr>
<tr>
<td></td>
<td>341.74</td>
<td>29.32</td>
<td>356.36</td>
<td>29.11</td>
<td>368.71</td>
</tr>
</tbody>
</table>

Rosenberg Self-esteem Scale

Tennessee Self-concept Scale

Figure 2. Mean Self-esteem scores as a function of Time and Gender. (N = 31, 18 females and 13 males).
difference overall, $E (1, 29) = .59, ns$. The sample size was large enough to detect a medium or a large effect size between female and male participants, though the sample size was not large enough to detect a small effect size (Kraemer & Thiemann, 1987). The main effect of Time was significant, $E (4, 116) = 3.89, p < .01$. (partial $\eta^2 = .118$). Cohen (1977, as cited in Steven, 1992) considered $\eta^2 = .14$ a large effect size.

The respondents' mean self-esteem scores increased between each of the first three Times as seen in Figure 1. Post-hoc analyses of the significant Time effect, based on Tukey's test at $p < .05$, demonstrated that the respondents' mean self-esteem scores increased significantly between Time 1 and Time 3, as seen in Table 6. The respondents' mean self-esteem scores decreased slightly between Time 3 and Time 5, but the decrease was not significant.

**Self-concept**

Hypotheses 1, 2, and 3, with regard to the TSCS, were examined utilizing a 2 (Gender) by 5 (Time) mixed-model analysis of variance (ANOVA) with Time as the repeated measure. The TSCS data met the assumption of homogeneity of variance (see Table 7). However, the TSCS data did not meet the assumption of sphericity, though it was unnecessary to use a correction because the results were the same with or without correction (see Table 7).

The TSCS mean scores across Time are displayed in Table 5, plotted in Figure 3, plotted by Gender and Time in Figure 4, and Table 7 presents the TSCS Gender by Time
Table 6

Differences Between the Respondents Self-esteem Scores

<table>
<thead>
<tr>
<th>Time</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>23.46</td>
<td>24.34</td>
<td>24.79</td>
<td>24.47</td>
<td>23.61</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>0.88</td>
<td>1.33*</td>
<td>1.00</td>
<td>0.15</td>
</tr>
<tr>
<td>2</td>
<td>0.45</td>
<td>0.13</td>
<td></td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>0.33</td>
<td></td>
<td>1.18</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>0.85</td>
<td></td>
</tr>
</tbody>
</table>

Note: Significant using Tukey’s post-hoc comparison.

*p < .05
Table 7

Source Table for the 2 (Gender) by 5 (Time) Mixed-model ANOVA of the Tennessee Self-concept Mean Scores

<table>
<thead>
<tr>
<th>Source E</th>
<th>df</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between subjects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (G)</td>
<td>1</td>
<td>4.53</td>
</tr>
<tr>
<td>S within-group error</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td><strong>Within subjects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time (T)</td>
<td>4</td>
<td>10.17**</td>
</tr>
<tr>
<td>G by T</td>
<td>4</td>
<td>0.41</td>
</tr>
<tr>
<td>T by S within-group error</td>
<td>116</td>
<td></td>
</tr>
</tbody>
</table>

Notes. Values in parentheses represent mean square errors. S = subjects.

A significant violation of the sphericity assumption indicates that df for F-tests should be corrected, however, the results are the same with or without the correction so uncorrected df are reported. **p < .001
Figure 3. Mean self-concept scores as a function of Times. N = 31.
Figure 4. Mean Self-concept scores as a function of Time and Gender. (N = 31, 18 females and 13 males)
ANOVA source table. The Gender by Time interaction was not significant, $F(4, 116) = 0.41, \text{ns}$, and the females’ and males’ mean TSCS scores demonstrated no significant difference overall, $F(1, 29) = 4.53, \text{ns}$. The main effect of Time was significant, $F(4, 116) = 10.17, p < .001$ (partial $\eta^2 = .260$), with or without correction for violation of the sphericity assumption (see Figure 3). Cohen (1977, as cited in Steven, 1992) considered $\eta^2 = .14$ a large effect for psychological variables.

The respondents’ mean self-concept scores increased between each of the first three Times as seen in Figure 3. Post-hoc analyses of the significant Time effect, using Tukey’s test at $p < .05$, demonstrated that the respondents’ mean self-concept scores increased significantly between Time 1 and Time 2, and between Time 1 and Time 3 as seen in Table 8. As seen in Figure 3 the respondents’ mean self-concept scores decreased at Time 4. However, the slight decrease between Time 3 and Time 5 was not significant and the Time 4 and Time 5 scores remained significantly higher than Time 1 (see Table 8).

Summary of Results

Hypothesis 1. The respondents’ self-esteem and self-concept mean scores will increase between Time 1, Time 2, and Time 3.

The respondents’ self-esteem mean scores increased from Time 1 to Time 3 as the hypotheses stated. Hypotheses 1 was accepted for the respondents’ self-esteem levels. The respondents’ TSCS scores increased significantly between Time 1 and Time 2 and between Time 1 and Time 3. Hypotheses 1 was accepted for the respondents’
Table 8

Differences Between the Respondents Self-concept Scores

<table>
<thead>
<tr>
<th>Time</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>341.74</td>
<td>356.36</td>
<td>368.71</td>
<td>367.74</td>
<td>364.48</td>
</tr>
<tr>
<td>1</td>
<td>-----</td>
<td>14.61*</td>
<td>26.97*</td>
<td>26.0*</td>
<td>11.39</td>
</tr>
<tr>
<td>2</td>
<td>12.36</td>
<td>11.39</td>
<td>8.13</td>
<td>4.23</td>
<td>3.26</td>
</tr>
<tr>
<td>3</td>
<td>0.97</td>
<td>4.23</td>
<td>3.26</td>
<td>22.74*</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Significant using Tukey’s post-hoc comparison.

*p < .05
self-concept levels.

Hypothesis 2. The respondents' self-esteem and self-concept mean scores will decrease between Time 3, Time 4, and Time 5.

Hypothesis 2 was not supported for either, the RSES or the TSCS. Though the respondents' scores decreased slightly once they left the camp setting the decreases were not significant.

3. There will be no gender differences in the levels of change of the respondents' self-esteem and self-concept.

Hypothesis 3 was supported but because it was a null hypothesis the power of the test is an issue. The sample size was large enough to detect a medium or a large effect size between the female and male respondents (Kraimer & Thiemann, 1987). No significant differences between the self-esteem and self-concept levels of the female and male respondents was detected, and power was sufficient to detect all but a very small effect. Therefore if a difference between females and males exists, it is small, resulting in an acceptance of hypothesis 3.
CHAPTER V

Discussion

The purpose of this study was to determine the impacts of the Ontario Ranger Programme (ORP) on the self-esteem and self-concept levels of the participants. The following chapter summarises and discusses the findings, and presents recommendations for future research.

Summary and Discussion of Findings

The results of both the RSES and the TSCS demonstrated no significant difference as a result of gender. The sample size was large enough to detect a medium or a large effect size between the female and male respondents, though a small effect size may not have been detected (Kraemer & Thiemann, 1987). The self-esteem scores established that there were minimal differences between the female and male respondents', gender differences demonstrated a borderline significance. Had the sample size been larger, a significant difference may have been found between the female and male participants' self-esteem levels.

The combination of the Gender variable and the five time repeated measure design allowed self-esteem and self-concept development patterns of females and males to be presented and examined. Previous research states that females’ and males’ self-systems developed differently (Monaco & Gaier, 1992; Nelson & Keith, 1990) which could explain the slightly different development patterns the respondents demonstrated in Figure 2. It is interesting to note that the males initially possess a minimally lower self-esteem level than the female respondents, which contradicted the previous literature
(Harper & Marshall, 1991). The female respondents’ self-esteem level changed very little over the course of the study. An explanation for this lack of change is not possible from the information collected in this study, the information would indicate that the female respondents had stable self-esteem scores that were minimally affected by the programme. This phenomenon could be explained by the earlier maturation of females’, as adults usually have stable self-esteem levels.

The self-concept development patterns for the female and male respondents were very similar to each other (see Figure 4). Figure 4 illustrates that there were no gender-time interactions with the TSCS mean scores, though it is interesting to note that the female participants demonstrated consistently higher self-concept scores than the male participants. The previous literature did not indicate that females would have a higher self-concept than males. Contradictory to this study, some of the previous literature suggested that males would have a higher self-concept than females (Newell, et al., 1990).

The results of this study differ with regard to the gender differences stated by other research. Previous research had indicated that the female respondents’ would possesses lower or similar self-esteem and self-concept levels as the male respondents, prior to participation in outdoor recreation programmes (Block & Robins, 1993; Greene & Wheatley, 1992; Jackson & Henderson, 1995). One of the explanations for this deviation from the previous literature could be the masculinization of recreation. The ORP participants were aware of both the adventure and challenge type activities that would be expected of them. The female participants who choose to participate in the ORP may have considered themselves to be more masculine or androgynous, which previous research has indicated that female athletes and recreationalists do (Henderson, 1996;
Females who consider themselves to be more masculine or androgynous demonstrated higher self-esteem levels. In addition, females who participated in physical/athletic activities demonstrated higher self-esteem levels than females who did not participate in physical/athletic activities (Henderson, 1995). The previous literature provides no direct explanation of this phenomenon. This phenomenon could be a possible explanation for the higher than expected self-esteem and self-concept levels of the female respondents.

The results of this study support the idea that participation in the ORP would increase the participants' self-esteem and self-concept levels during the programme and may have continued to affect the participants' levels once the programme was completed. The mean scores for both the Rosenberg Self-esteem Scale (RSES) and the Tennessee Self-concept Scale (TSCS) demonstrated a continuous increase from beginning to end of the camp programme. The differences between Time 1 and Time 3 were significant for the respondents' self-esteem levels. The respondents demonstrated significant differences between Time 1 and Time 2, and Time 1 and Time 3 of the TSCS scores. These findings supported previous literature, indicating that participation in outdoor recreation programmes increase participants' self-esteem and self-concept levels (Hazelworth & Wilson, 1990; Latess, 1992; McDonald & Howe, 1989).

The ORP contained many different components that may have influenced the participants' self-esteem and self-concept levels. By learning and using new skills or the improvement of other skills, participants self-esteem and self-concept levels increase (Hazelworth & Wilson, 1990; Iso-Ahola et al., 1988). The ORP participants were taught new skills such as canoeing, first aid, the use of tools, fire starting, and general camping.
skills. These new skills were utilized throughout the programme, enabling participants to practise and improve their skills. As stated above, the acquisition of new skills and the use of these skills increase participants’ self-esteem and self-concept levels.

Participants feel better toward themselves after participating in physical activities (Vealey, 1992). In addition, physical activities increase physical fitness, strength, coordination and flexibility (Ewert, 1989; Wankel & Berger, 1990). The physically demanding activities that ORP participants experienced such as tree planting, canoe trips, hand releasing tree plantations, and brushing, may have positively impacted the participants’ self-systems and the physical abilities of the participants.

It is important to note that the results of Time 4 and Time 5 could have been influenced by other factors in the participants’ lives. Time 4 and Time 5 were completed at the very end of September and October, when the participants could have returned to school, peers, family and possibly other activities which may have influenced their self-esteem and self-concept levels. As a result of these other possible influences it is impossible to state that the ORP was the only contributing factor to the continued elevated self-esteem and self-concept levels of the participants.

Participants’ self-esteem and self-concept scores began to slightly decrease once the camp programme was completed. The mean self-esteem scores for Time 4 and Time 5 remained higher than the mean scores demonstrated by Time 1, indicating that eight weeks after the respondents had completed the ORP they were still experiencing higher self-esteem levels. The RSES scores demonstrated no significant decrease in the respondents’ scores between the completion of the programme and the second follow-up test.
The TSCS results of Time 4 and Time 5 were significantly higher than the results of Time 1, demonstrating that the self-concept scores remained higher. The results of this study contradicted those of previous literature by demonstrating that the ORP experience continued to have a significant effect on the participants' self-concept levels. Much of the previous literature had stated that the beneficial effects of outdoor recreation were short term (Kimball, 1990; McDonald & Howe, 1989). The ORP had a longer effect on the participants' self-concept levels than other programmes.

**Implications of this Study**

The results of this study supports the previous literature's suggestion that involvement in Outdoor Recreation programmes such as ORP positively influence participants' self-esteem and self-concept levels during the programme. This is one of the few studies to research both self-esteem and self-concept. The majority of the previous research has focused on only one component of the self-system (Hazelworth & Wilson, 1990; Gillett et al., 1991). By researching of both self-esteem and self-concept it was possible to run correlations between the two variables, thus ensuring that the variables were not strongly correlated and the results truly represent different components of the self-system. The ability to distinguish between the dependent variables is especially important when researching the self-system; many of the components of the self-system are often used or referred to interchangeably by researchers and non-researchers. The demonstration that self-esteem and self-concept scores are not strongly correlated and have very different development patterns is an essential point for future self-system research. The results have demonstrated that self-esteem and self-concept are different components and should not be used interchangeably or used to represent each other.
The Gender results of this study contradicted the previous research, females demonstrated a different self-esteem and self-concept initially than the previous research had indicated. The cause of these higher than anticipated self-esteem and self-concept levels of the female respondents should be thoroughly studied. It would be interesting to note if females who participate in recreation activities generally have higher than expected self-esteem and self-concept levels.

The two follow-up tests indicate that the ORP participants were still experiencing higher self-esteem and self-concept levels once the programme had been completed than they were at the beginning of the programme. The results indicate that the ORP may have demonstrated a two month effect on the participants' self-esteem and self-concept levels. Previous literature had indicated that the participants' scores would decrease once the programme had been completed; however the results of this study indicated no significant decrease in the participants' self-esteem and self-concept scores. A possible explanation for this lack of decrease could be the timeline of the programme, the ORP is eight weeks long, which is much longer than the majority of outdoor recreation programmes. The length of the programme could have resulted in longer effects.

Adolescents experience a great deal of change that often has a negative effect on their self-esteem and self-concept levels (Keltikangas-Jarvinen, 1990). Once adolescents reach adulthood their self-esteem and self-concept levels remain fairly consistent for the remainder of their lives (Dusek, 1990). By increasing adolescents' self-esteem and self-concept levels at a crucial time of development, the positive implication could last a lifetime. Individuals who possess high levels of self-esteem have more creativity, are more explorative, participate in activities more and experience a higher degree of
Recommendations

Studies conducted on similar outdoor programmes or on the ORP should consider the following recommendations.

1. A longer follow-up study should be conducted to evaluate the long term effects of the programme on the participants' self-esteem and self-concept levels. The time line of the ORP, longer follow-up tests would clearly demonstrate the influence the programme may have on the participants' self-esteem and self-concept levels. Follow-up periods of possibly 6 months, 12 months and 18 months could be made, to more thoroughly examine long-term effects of the ORP.

2. The study should be replicated with a larger sample size because of the time series design of this study it is important to begin all time series designs with a large sample size, to ensure that there are sufficient complete data sets to analysis.

3. A baseline instrument should be completed prior to the participants receiving notice of their placement in the ORP. The respondents' self-esteem and self-concept levels may have been influenced by notification of acceptance into the ORP. A baseline score would allow for a more accurate view of the respondents' self-esteem and self-concept levels without the possibility of artificial inflation.

4. A combination of instruments and research techniques should be utilized to ensure greater clarity of results. By utilizing the self-reporting method and interviews, the researcher can allow the respondents to describe the benefits of their experience. The respondents may or may not consider the ORP a beneficial experience for many different reasons. It would be interesting to note if the respondents agreed with the results of the
RSES and TSCS, and thought of the ORP as a positive experience that increased their self-esteem and self-concept.

5. A more thorough examination of the eight sub-scales of the TSCS including the family-self, personal-self, physical-self, moral and ethical-self, social-self, identity, self-satisfaction, and behaviour should be performed. A more thorough examination would indicate which of the self-concept components would be most affected by the ORP experience, providing programme planners the knowledge to emphasise different aspects of the programme and to influence different components of the participants’ self-concept.

Conclusions

The results of this study have supported those of previous research: participation in outdoor recreation programmes increases participants’ self-esteem and self-concept levels. However, there is still the question as to why and how these changes occur. The ORP increased the participants’ self-esteem and self-concept as predicted, though the long term effects beyond the two month follow-up test cannot be determined from this study. In addition, the follow-up tests may have been influenced by other variables such as family, friends, sports, school, and romantic relationships.

A study with a longer follow-up procedure should be conducted to achieve a more comprehensive understanding of the effect that the ORP has on the participants. This study has demonstrated the need for further research regarding the ORP. There were a number of questions that remained unanswered regarding the effect the ORP had on other aspects of the participants’ lives. For example, does the ORP affect long term career goals, future participation in recreation programmes or more involvement with the natural environment and personal development of participants?
At the two month follow-up test, responses demonstrated that the programme may have continued to affect their self-esteem and self-concept levels. Further questions have developed from this research. They include: Do these positive feelings continue? How often do the participants think of their summer experience, and what effect does this reflection have on future personal development? As the significant effect of the programme wanes, do the participants retain a non-significant effect due to their participation in the programme? What do participants consider the effect of the programme to be on their self-esteem and self-concept?

Since outdoor recreation has been traditionally dominated by males, does the participation of females in the ORP alter the societal view the participants have of recreation and individual’s abilities? Does participation in non-gendered recreation help to change the way in which the participants view women, the abilities of women and their attitudes toward women?

The results of this study indicate that the ORP may have long term effects on the participants’ self-esteem and self-concept levels, though future research is necessary to determine the size of the effect and how long it lasts. In addition, a number of other questions have been generated by this study and should be examined.


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Company.


Appendix A
Staff Training at Mink Lake - starting Monday June 24, 1996

Monday
9:00 10:00 - Introductions
10:00 10:15 - Break
10:15 12:00 - Transportation of Dangerous Goods Course
12:00 1:00 - Lunch
1:00 3:00 - Harassment Policy
3:00 3:15 - Break
3:15 4:30 - Worker’s Compensation Board - Forms

Tuesday
9:00 10:00 - WHIMS
10:00 10:15 - Break
10:15 12:00 - Defensive Driving
12:00 1:00 - Lunch
1:00 4:30 - Fire Prevention and Extinguisher Course

Wednesday
9:00 10:00 -
10:00 10:15 - Break
10:15 12:00 - Consultation with a physician, regarding relevant ailments.
12:00 1:00 - Lunch
1:00 4:30 - Jamboree planning

Thursday
9:00 11:00 - General discussion: discipline, organization, scheduling
11:00 - Departure
Appendix B
Dear: Ontario Ranger

A study is being carried out this summer in co-operation with the Ontario Ranger Programme (ORP). The study has been designed to measure the impact the ORP has on your self-perception. The study will consist of 5 questionnaires to be completed by you over the next 5 months.

Your participation is voluntary, the data that you provide will be anonymous and it will be kept strictly confidential. Once the researcher has entered the data, the questionnaires will be destroyed.

The questionnaire will take approximately 20 minutes to complete. The information will provide a better understanding of the effects of the ORP on participants. By completing the questionnaire, you will assist in further improving our research regarding residential camps.

You will have the opportunity to request a copy of the study when you complete the final questionnaire.

If you have any questions please ask the individual who has administered the questionnaire.

Thank you very much for your time and consideration with this matter. Your assistance is greatly appreciated.

Sincerely Yours,

A. Ewert, Ph.D.
Natural Resource Management and Environmental Studies
UNBC
Summer of 1996

Dear: Ontario Ranger

This is the second of the five questionnaires that you have been asked to complete for a study of the Ontario Ranger Programme.

You will find this questionnaire to be identical to the one you have already completed. Please answer the questions according to how you are feeling presently.

Once again your participation is voluntary, the data that you provide will be anonymous and it will be kept strictly confidential. Once the researcher has entered the data, the questionnaires will be destroyed.

The questionnaire will take approximately 20 minutes to complete. The information will provide a better understanding of the effects of the ORP on participants. By completing the questionnaire, you will assist in further improving our research regarding residential camps.

If you have any questions please ask the individual who has administered the questionnaire.

Thank you very much for your time and consideration with this matter. Your assistance is greatly appreciated.

Sincerely Yours,

A. Ewert, Ph.D.
Natural Resource Management and Environmental Studies
UNBC
Summer of 1996

Dear: Ontario Ranger

This is the third of the five questionnaires that you have been asked to complete for the purpose of this study. The remaining two questionnaires will be mailed to your permanent address.

A study is being carried out this summer in co-operation with the Ontario Ranger Programme (ORP). The study has been designed to measure the impact the ORP has on your self-perception. Please complete the questions to describe how you are feeling at the present time.

Once again your participation is voluntary, the data that you provide will be anonymous and it will be kept strictly confidential. Once the researcher has entered the data, the questionnaires will be destroyed.

The questionnaire will take approximately 20 minutes to complete. The information will provide a better understanding of the effects of the ORP on participants. By completing the questionnaire, you will assist in furthering research regarding residential camps.

If you have any questions please ask the individual who has administered the questionnaire.

Thank you very much for your time and consideration with this matter. Your assistance is greatly appreciated.

Sincerely Yours,

A. Ewert, Ph.D.
Natural Resource Management and Environmental Studies
UNBC
Dear: Ontario Ranger

This is the forth of the five questionnaires that you have been asked to complete regarding your summer as an Ontario Ranger. Once again all the information gathered will be kept strictly confidential.

The questionnaire is very similar to the past 3 and will take approximately 20 minutes to complete. Your answers will assist in providing a better understanding of the Ontario Ranger Programme and the effect the programme has on participants. As with the previous questionnaires your participation in this study is volunteer.

If you would like a copy of the study, please include your address on a blank piece of paper when you return the questionnaire.

Thank you very much for your time and consideration with this matter. Your assistance is greatly appreciated.

Sincerely Yours,

A. Ewert, Ph.D.
Natural Resource Management and Environmental Studies
UNBC
Dear: Ontario Ranger

Just a quick reminder regarding the study that is being conducted this summer in co-operation with the Ontario Ranger Programme and UNBC.

If you could please complete and return the questionnaire you receive two weeks ago, it would be greatly appreciated, thank you. If have already completed and mailed back the questionnaire thank you and sorry to have troubled you.

There will be one more questionnaire to complete which you should receive at the beginning of November. Once again the information that you provide is strictly confidential.

Thank you very much for time and consideration in this matter.

Sincerely Yours,

A. Ewert, Ph.D.
Natural Resource Management and Environmental Studies
UNBC
Dear: Ontario Ranger

Just a quick reminder regarding the study that is being conducted this year in co-operation with the Ontario Ranger Programme and UNBC.

If you could please complete and return the questionnaire you receive two weeks ago, it would be greatly appreciated, thank you. If have already completed and mailed back the questionnaire thank you, and sorry to have troubled you.

This is the last questionnaire you will receive connected with this particular study. Once again the information that you provide is strictly confidential.

Thank you very much for your participation in the study. If you have not done so already, and would like a summary of the study and the findings please include your address, on a separate piece of paper, when you send back the questionnaire.

Once again thank you very much for time and consideration in this matter.

Sincerely Yours,

Alan Ewert, Ph.D.
Natural Resource Management and Environmental Studies
UNBC
Appendix C
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<th>Time</th>
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Note. No significant differences exist between the two data sets at each time of testing.