Hello Muddah, Hello Faddah, Get me Ouddah Here: The Role of Attachment in Developmental Outcomes at Summer Camp

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

From a psychosocial perspective this work examines the role of attachment (Bowlby, 1973; 1988) in the nature of developmental outcomes related to participation in residential summer camp in Canada. Attachment theory posits that early experience with primary caregivers leads to internal working models (i.e.: generalized beliefs and expectations) about the self, the world, and relationships, that come to shape psychosocial development later in life (Bowlby, 1973; 1988). As such, attachment has emerged as a fundamental topic in child and youth development (Bohlin et al., 2000). Summer camp is a unique social learning environment that is purposefully designed to foster positive youth development (Henderson et al., 2007; American Camp Association, 2011). Despite the importance of attachment for psychological development and the prevalence of summer camp as a youth service organization designed to foster youth development, no literature examining the role of attachment in the summer camp experience could be located. Thus, this study sought to explore how the working models that underpin attachment theory impact youth development in a summer camp setting.

Data from Phase III of the Canadian Summer Camp Research Project, which utilized a post camp survey to examine parental perceptions of change in their child as a result of the camp experience was used. Phase III sought to explore if the skills developed during camp are transferable to other areas of the child daily life, and what the longer term consequences might be for the child's overall wellbeing (Glover et al., 2011). Multiple liner regression modeling, bootstrapping based interaction modeling, and serial multiple mediation were used to examine how patterns of attachment (i.e.: attachment styles) based on the constructs of anxiety and avoidance (Bartholomew, 1990; Bartholomew & Horowitz, 1991), are associated with camp outcomes including exploration, self-efficacy, environmental engagement, physical activity, and the development of friendships and peer relations.

It was found that attachment has a significant impact on developmental outcomes related to the summer camp experience. Attachment orientations are associated with the outcomes derived from camp participation, moreover this relationship was found to be

partially meditated by connectedness to camp and levels of exploration. Further, it was found that highly anxious children who have relatively low levels of avoidance (i.e.: preoccupied avoidant attachment) actually derive the most benefit (i.e.: the greatest increases in the various outcomes) from camp participation. Applying attachment theory to the camp experience in this fashion has a number of implications with respect to positive youth development. First, the findings contribute a greater understanding of how positive youth development functions within a camp context. Second, they provide an understanding of some of the potential mechanisms that enable summer camp programs to delivers specific outcomes. Third, as diverse working models of attachment have a differential impact on developmental outcomes for different children they can assist camp programmers and administrators in being more intentional in their implementation of camp programs, to be more effectual and directed towards positive developmental outcomes.

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Finally, to the participants in this study, to all of the kids who pile into bunks, who portage canoes, who find themselves lost in the woods and in doing so find who they are. Camp On! Thank you.

Come away, O human child!
To the waters and the wild
With a faery, hand in hand,
For the worlds more full of weeping than you can understand
—W.B Yeats

Dedication

For my parents Raymond and Stella Walker, and camper # 241…Keep your head up kid!

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Hello Muddah, hello Faddah
Here I am at Camp Grenada
Camp is very entertaining
And they say we'll have some fun if it stops raining
(Allan Sherman)

Chapter 1
Introduction

Each summer millions of children across North America pile into buses, climb into the backseats of cars, and board airplanes, to be ferried off to attend camp programs. In Canada alone, more than half of all children and adolescents have some connection to summer camp (Ipsos-Reid, 2001). Summer camp is a unique social setting that exposes children to novel surroundings and experiences that collectively challenge them socially, spiritually, cognitively, emotionally, and indeed physically (Collins, 2014; Glover et al., 2011). Moreover, camp provides a safe environment for children to push their personal limits, to explore new ideas, try news things, to grow, and to develop. For many children, attending camp is a life altering experience that is often framed as pivotal and transformative, with the potential to impart lasting positive change (American Camp Association, 2006; Bialeschki et al., 2007; Henderson, Whitaker, et al., 2007).

Camp age children are at a key developmental period in their lives where social connections are becoming increasingly important in their overall development (Berndt, 2002; Parker et al., 2015; Rubin et al., 2007). These shifts in social development are likely influenced by relational schemas like attachment. Attachment refers to how individuals structure their various relationships, and how that structure enables them to deal with stressors such as being separated from a loved one, new environments, or

perceived threats (Bowlby, 1988b; Bretherton, 1992; Malekpour, 2007). As such, attachment influences how individuals engage with social activities and in social situations (Berghaus, 2011). Given that summer camp is a social learning environment that can often be perceived as very stressful (i.e.: due to separation from parents, an unfamiliar environment, etc.) and relies on the formation and maintenance of interpersonal relationships (i.e. between campers and camp counselors/staff) to achieve desired outcomes (American Camp Association, 2006; Henderson, 2007, 2018; Wilson, Sibthorp, et al., 2019), it stands to reason that attachment styles can have a significant impact on the outcomes derived from camp.

1.1 Summer Camp

Summer camp takes place in a variety of settings, and with diverse levels of structure, and organization and is often designed with the intent of facilitating a assortment of positive outcomes (i.e., physical, social, cognitive, etc.) that can be broadly conceptualized as youth development (American Camp Association, 2005; Henderson, Whitaker, et al., 2007). The potential of camp to influence the growth and development of youth has resulted in an increased interest and focus on "purposeful" camp programing (American Camp Association, 2006; Henderson, 2007; Henderson, Whitaker, et al., 2007). That is, camp programing specifically designed to foster positive youth development outcomes. This is part of a tacit acknowledgment that it is no longer enough for camp to simply be fun but there is a desire for it to have practical and functional implications beyond the camp setting.

Youth development specialists have long indicated that in addition to traditional academic competencies youth benefit the most from opportunities to cultivate physical, emotional, civic, and social competencies through supportive families, communities, and structured institutions such as summer camp (Bialeschki et al., 2007). There has been increased interest in recent years on youth development within the camp setting as evidenced by a number of research initiatives undertaken by organizations such as the (American Camp Association, 1998, 2005, 2006) and the Canadian Camping Association (Glover et al., 2011, 2013), among others. Indeed, an ever-growing body of research positions summer camp as a unique and immersive environment that promotes a variety of positive developmental outcomes (American Camp Association, 2005, 2006; Garst et al., 2011; Glover et al., 2011), life skills and competencies (American Camp Association, 2006; Sekine, 1994; Thurber et al., 2007).

In examining youth development in a camp context considerable attention has focused on the production of outcomes (i.e.: self efficacy, social skills, leadership skills, etc.), however, "less interest has been paid to the elements that may contribute to those outcomes" (Garst, Gagnon, & Whittington, 2016, p. 181). As such, a growing number of scholars have called for more emphasis on examining the mechanisms of change likely to influence the outcomes derived from camp. Accordingly, in recent years more research has documented how structural and social aspects of camp, such as staff training, camp structure, and connectedness (i.e. sense of belonging) influence outcome development (e.g., American Camp Association, 2006; Bialeschki et al., 2007; Garst, Browne, & Bialeschki, 2011; Henderson, Whitaker, et al., 2007; Sibthorp, Bialeschki, Morgan, &

Browne, 2013; Thurber, Scanlin, Scheuler, & Henderson, 2007). Still, there is an acknowledgement that more works needs to be done. Not just on the input or structural factors that may influence camp outcomes but also personal and individual aspects that can impact the benefits children derive from camp. One such personal factor that may influence camp outcomes is attachment (Bowlby, 1988b).

1.2 Attachment

Attachment theory asserts that a child's experience with a primary caregiver during the early stages of life lead to working models (i.e.: generalized beliefs and expectations) about the self, the world, and relationships (Bowlby, 1969, 1973, 1980, 1988b; Bretherton, 1992). In essence, it relates to the emotional bonds that children form with their caregivers over the course of infancy. This early child parent/caregiver interaction results in patterns of attachment or attachment styles (Ainsworth et al., 1978; Bowlby, 1988b; Bretherton, 1992). These patterns of attachment serve as the basis for all relationship an individual will have over the course of their lives (Bretherton & Munholland, 1999). Attachment theory also suggests that these working models of self and others impact the formation of personal preferences, guide decision making, and direct and influence behaviour within social contexts (Bowlby, 1969, 1973). As such, these patterns of attachment have significant influence on all areas later in life, such as the establishment and maintenance of friendships, overall social functioning, and wellbeing in general (Bowlby, 1969, 1988b; Bretherton, 1992). Indeed attachment affects children's later capacity for empathy, emotional regulation, cognitive

development, and behavioral control (Kestenbaum et al., 1989; Malekpour, 2007; Mikulincer & Shaver, 2007).

Broadly, attachment styles can be divided into two major categories: secure attachment and insecure attachment (Ainsworth et al., 1978; Behrens et al., 2007; Bretherton, 1992; Malekpour, 2007). Moreover, insecure attachment styles can be further subdivided into three subcategories: insecure-avoidant, insecure-ambivalent, and insecure-disorganized (Ainsworth et al., 1978; Bowlby, 1969, 1973; Bretherton, 1992; Malekpour, 2007). While a variety of conceptualizations of attachment exist, a preponderance of literature advocates that these patterns of attachment are predicated on the individuals' view of self based on anxiety, and the individuals' view of others based on avoidance (Bartholomew & Horowitz, 1991; Bowlby, 1973; Brennan et al., 1998). As noted by (Brennan et al., 1998), the concepts of anxiety and avoidance are the two dimensions that seem to best underlie the foundational concepts of attachment theory. Additionally, these concepts exist in an orthogonal relationship that allow for the classification of individuals based on high — low levels of anxiety and high — low levels of avoidance.

1.3 Current Research

Given the influence attachment styles have on child development (Behrens et al., 2007; Malekpour, 2007; Sroufe, 2005; Sroufe et al., 2009) there is potential for attachment theory to inform our understanding of the camp experience. While there is growing acknowledgement that summer camp may not be beneficial for all children (i.e.: that not all experiences at summer camp are positive) (Henderson, 2018b), the vast body

of knowledge related to outcomes derived from camp position it as a positive experience (Henderson, Bialeschki, et al., 2007). However, with increased emphasis being placed on methodologically and theoretically sound camp research, a more comprehensive and contextualized understanding of camp outcomes is needed (Garst, 2010; Garst et al., 2016; Henderson, 2018; Henderson, Bialeschki, et al., 2007). This would include further exploration into both how and why outcomes are achieved but also why they may not be realized.

From a psychosocial perspective this study explores the role of attachment in the production of developmental outcomes shaped as a result of participation in summer camp programing. Specifically this study sought to explore how the working models of self and others that underpin attachment theory relate to the development of outcomes in a residential camp setting, and if those outcomes persist outside of the camp setting (i.e. in the campers day-to-day lives). Moreover, it sought to explore some of the factors that may explain how attachment influences these outcomes. Making use of data from Phase III of the Canadian Summer Camp Research Project (CSCRP) (Glover et al., 2011) this study explored the link between patterns of attachment (i.e.: attachment styles), based on the constructs of anxiety and avoidance (Bartholomew, 1990; Bartholomew & Horowitz, 1991), and camp outcomes including exploration, self-efficacy, environmental engagement, physical activity, and the development of friendships and peer relations.

I have a conviction that a few weeks spent in a well-organized summer camp may be of more value educationally than a whole year of formal schoolwork

(Charles William Eliot)
Former president of Harvard University

Chapter 2

Review of Relevant Literature

2.1 Introduction

The bulk of literature on summer camp positions it as an overwhelmingly positive and beneficial experience for the children who attend. Indeed a substantial body of work shows that camp has the potential to facilitate a host of positive outcomes broadly categorized as positive youth development (Allen et al., 2011; American Camp Association, 2006; Bialeschki et al., 2007; Glover et al., 2011; Henderson, 2007; Macnaughton et al., 2019; Thurber et al., 2007). However, camp is not equally beneficial for all, and in some cases may result in deleterious effects (Baker, 2018; Henderson, 2007, 2018; Lynch et al., 2018). A variety of factors have been shown to influence the camp experience (e.g.: Garst et al., 2016; Glover et al., 2011; Henderson, Bialeschki, et al., 2007; Merryman et al., 2012; Sibthorp et al., 2013; Thurber et al., 2007) yet one factor that has been largely overlooked in the camp literature is the role of childhood attachment. Attachment theory presents some challenges to the view that summer camp is a universally positive experience, and thus adds some complexity to out understanding of whom benefits the most from the summer camp experience.

Summer camp is a unique social setting that that allows children to push their personal boundaries, develop new and meaningful relationships, and to be exposed to a variety of positive developmental contexts. Moreover, it is a distinctive environment in which children are separated from their primary caregivers, often for extended periods of time. This social nature of camp and the separation from caregivers opens the possibility for attachment to play a significant role. Attachment influences how children function in in social settings and has been shown to have a significant influence on developmental outcomes (Bartholomew & Horowitz, 1991; Fraley, 2002, 2019; Fraley & Spieker, 2003; Paulssen, 2009; Sroufe, 2005). Further, the social environment and structure of summer camp potentially enables the formation of new attachment relationships and the establishment and maintenance of felt security (Ainsworth, 1979). It is through the establishment of such relationships in conjunction with purposeful (i.e.: outcome driven) programing that camper's can explore new things and actualize the many benefits of camp. As such, attachment may play a significant role in the emergence of outcomes in a camp setting and thus warrants further exploration. The distinctive environment associated with summer camp provides a unique setting in which to explore the role of attachment and its impact on developmental outcomes. The purpose of the research described herein was to explore the role of attachment in relation to various outcomes associated with participation in summer camp programs. As summer camp is a pervasive youth service organization and attachment has a significant influence on both social interaction and developmental outcomes, examining summer camp involvement within

this context can provide valuable insight into the experience children have in a residential summer camp setting.

This literature review will examine the nature of summer camp including its general structure, format, programing, and associated outcomes or benefits. Research related to summer camp participation and developmental outcomes will be presented. Further, attachment theory will be delineated herein, including a discussion of its theoretical and conceptual underpinnings, various attachment orientations (i.e.: attachment styles), and processes for measuring or assessing attachment. Literature will be presented that connects attachment theory to summer camp participation. A rationale for conducting this study will be discussed and this chapter will conclude with a series of research questions and hypotheses related to residential summer camp involvement and attachment.

2.2 What is Summer Camp

In the most general sense the term summer camp refers to programs designed for children and youth that take place during the summer months (i.e.: May – August). Henderson, Bialeschki, and James (2007) succinctly describe summer camp as "organized experiences in group living in the outdoors that use trained leaders to accomplish intentional goals" (p.755). In delineating camp in this fashion (i.e.: as an organized experience) they distinguish summer camp programs from other outdoor based leisure activities (i.e.: wilderness trips, bird watching, hiking, etc.) and family outings, and camping in national parks (American Camp Association, 2005; Henderson, Bialeschki, et al., 2007). Summer camp can include a variety of activities and

programing formats intended to facilitate the development of social, personal, spiritual, and physical outcomes among others (American Camp Association, 1998, 2005, 2006; Bialeschki et al., 2007; Glover et al., 2013; Glover et al., 2011; Henderson, 2007; Henderson, Bialeschki, et al., 2007; Henderson, Whitaker, et al., 2007). Camp programs may be based around a theme (i.e.: theatre camp, science camp), a particular activity (i.e.: sports focused camps), a setting (i.e.: day camp vs. residential), or some combination of the above with a focus on general development in a number of different domains (Allen, Akinyanju, Milliken, Lorek, & Walker, 2011; American Camp Association, 2006; Henderson, 2007; Thurber, Scanlin, Scheuler, & Henderson, 2007).

In North American camp programs are organized and operated by a variety of organizations and groups. "In most communities camp opportunities exist sponsored by parks and recreation programs, church organizations, a myriad of youth service agencies, and numerous private and independent groups" (Henderson, Whitaker, et al., 2007, p.988). Sometimes these camps are operated as a business venture with the intent of turning a profit from the camps operation. However, many camps are run as a form of social enterprise intended to better the community and facilitate positive youth development and thus run on a not-for-profit basis (Collins, 2014; Garst et al., 2011; Henderson, Whitaker, et al., 2007).

In camp, participants (i.e.: campers) are organized into small communal living groups referred to as "cabins," "bunks," "units," or by some colloquial camp name (e.g.: The Pine Barons). Campers live in these units for the duration of the camp program. Each camp unit will have an assigned camp employee referred to as a "camp counsellor"

or “cabin leader” who is responsible for the supervision of campers and delivery of camp programs (Ferrari & McNeely, 2007; Henderson, 2007). Within each camp unit campers will often participate in activities as a group such as hiking, canoeing, building campfires, singing songs, swimming, nature hikes, arts and crafts programs, and various educational pursuits. Camps often also develop a competitive structure wherein various cabins will compete again each other in friendly competition over the course of the camp, this is a strategy intended to build unity and community within the camp unit and ultimately facilitate the growth and development of meaningful and potentially influential relationships over the course of the camp (Collins, 2014).

2.2.1 Organization of Camp

At this point it is worth outlining the difference between residential and day camps. Day camps refer to camp programs that only offer programing during the day or regular working hours (i.e.: 9 to 5). In these camps, participants take part in programs or activities during the day but return home to their primary residence at night. Day camps typically take place in urban settings (i.e.: in community centers, at universities, etc.) and function as a form of extended childcare during the summer months when children are not enrolled in school. Conversely, residential camps (frequently referred to as “sleep away” camps) offer programing on a 24-hour basis. Participants are required to remain on the camp premises for the duration of the camp and do not return home in the evenings. Campers spend 24 hours a day together living, eating, and sleeping in relatively close quarters. Residential camps typically take place in more isolated or rural (i.e.: nature settings). Traditionally, most camp programing refers to residential camp.

For the purpose of this paper from this point onward the term camp will refer to residential camp programs.

2.2.2 Prevalence of Camp

Each year in North America more than 12 million youth attend summer camp programs, making camp the single largest youth service organizations outside of schools and churches (Bialeschki et al., 2007). In Canada alone, it is estimated that at approximately 6.5 million children between the ages of 4 and 18 attended some form of summer camp (Ipsos-Reid, 2001). This represents more than half of all Canadian children in this age range (Ipsos-Reid, 2001), and further demonstrates the prevalence of summer camp as a youth service organization. Additionally, camp represents a significant industry in this country (Glover et al., 2011). A report by the Canadian Camping Association (2011), that examined the camping industry in Canada found that summer camp is annually a 428 million dollar industry. The cost of a weeklong session at camps costs on average $379 CAN per camper per camper (Canadian Camping Association, 2011b), which represents approximately 12% of the average Canadian families annual recreational budget (Ipsos-Reid, 2001).

2.3 Outcomes of Summer Camp

As has been previously noted summer camp is a unique social learning environment that encourages, and in many ways facilitates the emergence of a variety of developmental and social outcomes. Moreover, exploring outcomes associated with summer camp participation has been a significant area of research for some time as demonstrated by the volume of research initiatives undertaken (American Camp

Association, 1998, 2005, 2005; Garst et al., 2016; Glover et al., 2013; Glover et al., 2011; Henderson, 2007; Henderson et al., 2006; Thurber et al., 2007; Wilson, Akiva, et al., 2019). The majority of this research has utilized Positive Youth Development (PYD) as a guiding framework. Generally, PYD can be conceptualized as the systems and process designed to provide youth the supports and opportunities necessary to successfully transition into adulthood (Caldwell, 2000; Damon, 2004). It embodies a process wherein young people are prepared to meet the challenges of adolescence and adulthood by fostering positive growth, through supports and opportunities (Catalano et al., 2004; Garst et al., 2016; Ryan & Deci, 2000) and is grounded in self-determination theory (Ryan and Deci, 2000). Thus, many theories connected to self-determination such as self-efficacy, cognitive development, and social developments are evident in camp research. This shift towards PYD in outcomes research corresponds with a move away from deficits based models and an implicit acknowledgement that avoidance of negative behaviour does not ensure a successful transition to adulthood (Caldwell, 2000; Garst et al., 2016).

PYD as a guiding framework for understanding the camp experience has also led to the development of a number of outcome measurement tools (Garst et al., 2011; Henderson et al., 2006). Guided by contemporary developmental systems theories (Bialeschki et al., 2007) PYD moves beyond short-term outcomes to examine the characteristics of a program or activity that may contribute to healthy development (Witt, 2002). As noted by Garst et al. (2016), many camp outcomes have been based on PYD, as such we see significant overlap between outcomes, antecedents of change, and PYD.

Principles of PYD have also underpinned several large-scale research enterprises carried out by the American Camping Association (ACA) (American Camp Association, 2005, 2006), and the Canadian Camping Association (CCA) (Glover et al., 2011).

In addition to PYD the *Community Action Framework* (Gambone & Connell, 2004) has also served as the basis for several noteworthy research projects related to camp (e.g., American Camp Association, 2005, 2005; Henderson, Whitaker, Bialeschki, Scanlin, & Thurber, 2007; Thurber et al., 2007). The *Community Action Framework* integrates the supportive elements of PYD and the larger community conditions that influence it, to foster supportive environments that are conducive to positive change (Gambone & Connell, 2004). In assimilating existing youth development frameworks, research and practical experience, it seeks to facilitate a systematic approach to planning, implementing, and evaluating youth programs (Gambone & Connell, 2004). As noted by Henderson et al. (2006), the *Community Action Framework* is appropriate for studying camp because it describes "how strategies such as relationships, activities, and program structure become the tools for reaching intended outcomes" (p. 7). As such, it has the potential to inform understandings of both outcomes and factors that may contribute to those outcomes.

2.4 Camp Research

The Youth Development Outcomes of the Camp Experience (YDOCE) was a landmark longitudinal nation-wide research initiative carried out by the ACA. In an attempt to better understand the outcomes associated with camp participation the YDOCE explored perceptions of change among campers, parents, and camp staff

(Henderson, Whitaker, et al., 2007). Between 2001 and 2004 more than 5000 families with children who attended some 80 ACA-Accredited camps from across the United States participated in the study (American Camp Association, 2005; Thurber et al., 2007). It was found that children who attended summer camp programs experienced significant growth in the areas of self-esteem, peer relations, independence, adventure and exploration, leadership, environmental awareness, friendship skills, values and decision making skills, social comfort, and spirituality (American Camp Association, 2005, 2006; Bialeschki et al., 2007; Henderson et al., 2006; Henderson, Whitaker, et al., 2007; Thurber et al., 2007). The findings of the YDOCE show that summer camp is a unique social and educational institution and a significant factor in the emergence of positive youth development (Henderson, Whitaker, et al., 2007). Furthermore, it has served as the basis for several noteworthy research projects related to camp (e.g., American Camp Association, 2005, 2005; Henderson, Whitaker, Bialeschki, Scanlin, & Thurber, 2007; Thurber et al., 2007).

In a similar fashion the Canadian Camp Association (CCA) embarked on a research initiative called the Canadian Summer Camp Research Project (CSCRP) (Glover et al., 2011). A joint venture between the CCA and the University of Waterloo, the CSCRP assessed outcomes of camp across five broad developmental areas (1) social integration and citizenship; (2) environmental awareness; (3) self-confidence and personal development; (4) emotional intelligence; and (5) attitudes towards physical activity . The CSCRP found significant positive development in all five of the above-mentioned categories (i.e. outcomes) with some variability with respect to age, sex, and

previous or past camp participation (Glover et al., 2013). Moreover, the CSCRP confirmed that outcomes attributable to camp pervade beyond the camp environment noting that campers seemed to retain most of the associated benefits accrued during camp participation. This is to suggest that these outcomes were transferable beyond just the camp environment. The CSCRP demonstrates the effectiveness of camp as a vehicle for positive youth development. However, the findings also indicate that there is a level of variability in the outcomes produced and that this variability may be at least to some degree associated with individual differences within each camper.

2.5 Specific Camp Outcomes

A significant and ever growing body of research demonstrates that involvement in summer camp is associated with the development of a plethora of positive outcomes (e.g.: American Camp Association, 2005, 2006; Glover et al., 2011; Glover et al., 2013; Henderson, 2007; Henderson, Whitaker, et al., 2007; Thurber et al., 2007; Ungar, 2012a). The outcomes derived from youth development initiatives such as summer camp, are varied and often dependent on the organization and setting in which the program takes place. Further, within a PYD context the circular nature of development makes it problematic to separate process (i.e.: inputs) from product (i.e.: outcomes) (Hamilton, Hamilton, & Pittman, 2004). As noted above the *Community Action Framework* (Gambone & Connell, 2004) acknowledges this interconnection in which development is viewed as contingent on the interactions of the individual and the systems and contexts surrounding them (Lerner, 2006). The *Community Action Framework* broadly groups youth developmental outcomes into three general categories; learning to be productive,

learning to be connected, and learning to navigate (Connell, Gambone, & Smith, 2000). These categories encompass actions and behaviours that predict success in adulthood and recognize that internal traits, along with complex skills and abilities are important in youth development (Connell & Gambone, 2002). As such, the *Community Action Framework* served to inform the selection of outcomes to be measured in this study.

Table 1. Lerner's five C's of positive youth development and corresponding camp outcomes

Five (6) C's	**Corresponding Camp Outcome**
Competence	Exploration, Physical Activity
Confidence	Self Efficacy
Connection	Friendship and Peer Relations
Character	Environmental Engagement
Caring	Environmental Engagement, Friendship and Peer Relations
Contribution	Environmental Engagement

Specifically, camp participation has been associated with outcomes including: exploration, self-efficacy, physical activity, environmental engagement, and friendship and peer relations. These specific outcomes have been selected for inclusion as they are relevant to how attachment can inform the summer camp experience. Moreover, they align well with the "five C" model of positive youth development as outlined by Lerner et al., (2005), which served as a guiding framework for this research (see Table 1). The five C model of positive youth development is a framework that outlines five psychological, behavioral, and social characteristics (competence, confidence,

connection, character, and caring)[1] that indicate that youth are thriving (Lerner et al., 2005; Phelps et al., 2009). Its primary focus is to encourage youth to lead healthy productive lives and contribute to society as a whole (Jackson-McLain, 2010; Lerner et al., 2005). This model is one of the most widely accepted and commonly used theories in positive youth development contexts (Benson et al., 2007; Phelps et al., 2009).

Further, each of the outcomes assessed in this study can be placed into three general categories, personal competencies, physical competencies, and social competencies. This categorization is based on the Search Institutes *Developmental Assets Framework* , a series of environmental and intrapersonal variables, drawn from resiliency research, that are seen to contribute to healthy child development (Benson, 2003; Benson et al., 2007; Scales et al., 2000). This categorization is also informed by the 2002 report from The National Research Council and Institute for Medicine (2002), on community programs that promote positive youth development. Each of these frameworks outline

Table 2. Categorization of developmental outcomes of summer camp

Personal Outcomes	Physical Outcomes	Social Outcomes
Exploration	Physical Activity	Friendship & Peer Relations
Self Efficacy	Environmental Engagement	

[1] When all five C's are present they result in a sixth C, Contribution which is related to giving back to the community and society

developmental resources that are necessary for the successful and healthy development of youth and adolescents (Benson et al., 2007), and as such, acted as a guiding framework for this study.

Personal outcomes relate to factors that encourage psychological and emotional development including the emergence of self efficacy and personal exploration. Physical outcomes are assets that relate to physical health and wellbeing both on a personal and a community/environmental level, and include participation in physical activity and environmental engagement. Finally, social outcomes relate to those factors that promote healthy social development including the establishment and maintenance of new friendships and peer relations. Note a more thorough description of how each of these developmental outcomes is measured in this study will be provided in the next chapter.

2.5.1 Personal Outcomes

2.5.1.1 Exploration

The encouragement of exploration is a commonly associated outcome of involvement in a camp (American Camp Association, 2005; Bialeschki et al., 2007; Henderson, Whitaker, et al., 2007). Here exploration refers to a sense of wonderment and inquisitiveness that engenders a desire to try new things and investigate ones social and physical surroundings. Many camp programs are designed, intentionally or otherwise to cultivate this sense of exploration through various activities and programs, and indeed by the very camp setting itself (i.e.: wilderness, communal living, etc.) (Devine & Dawson, 2010; Duerden et al., 2012; Henderson, 2007, 2007). As noted by Brannan, Arick, Fullerton, and Harris (2000), summer camp often serves as a source of adventure and

exploration for participants. Moreover, Brannan et al. (2000), go on to suggest that a sense of exploration fostered in the summer camp setting has the potential to persist in other environments (i.e.: home , school, work, etc.) outside of the camp setting. Similar findings have been documented by Dworken (2001), and Fine (2005), who highlight how involvement in camp programs facilitates exploration, as campers are encouraged to try new and often challenging activities. In the YDOCE significant increases in exploration associated with camp participation were reported, however, after six months increases in this construct were found to have returned to pre-camp levels (American Camp Association, 2005). Parental assessment of this construct also saw a regression at six months though it remained slightly higher than the pre-camp measurement (American Camp Association, 2005).

In general, it is acknowledged that camp can facilitate a sense of exploration that is associated with both programmatic features (i.e., activities) and interpersonal interaction that takes place during camp. The presence of supportive friendships and connection with other campers and camp staff has been noted as contributing significantly to campers' desire and initiative to explore (American Camp Association, 2005; Bialeschki et al., 2007; Brannan et al., 2000). These relationships provided campers' with the supports and resources necessary to allow them to push their personal boundaries, try new things and engage with new activities and environments.

2.5.1.2 Self Efficacy

In addition to exploration another personal outcome associated with camp participation is self-efficacy. Self-efficacy refers to an individual's perception of their

ability to carry out certain tasks or to achieve certain goals (Bandura, 1997). Though in many cases it may not be a stated outcome of camp, participation in summer camps programs have been associated with the development of self-efficacy (Bialeschki et al., 2007; Michalski et al., 2003; Sekine, 1994; Thurber et al., 2007). In reviewing outdoor camp programs designed to facilitate positive psychological outcomes Kelk (1994), notes that involvement in camp resulted in increased levels of self-efficacy as evidenced by participants' self confidence and willingness to explore and engage with new and novel activities. Furthermore Kelk (1994), ascribes these outcomes to specific programmatic features of camp designed to optimally challenge participants. Sekine (1994), examined changes in self-efficacy among school-aged children that attended a weeklong camp program, and reported similar increases in self-efficacy. Participants in the program showed significant gains in their locus of control and general self-efficacy. Moreover, once self-efficacy was established it permeated into other areas of life (Sekine, 1994). Similar findings have been reported by (Van Belois & Mitchell, 2009) who found participation in residential summer camp programing was positively associated with the development of social self-efficacy.

Snider and Farmer (2017) used retrospective interviews to explore camp outcomes, and noted that the camp experience was linked with increases in personal confidence, independence, and self-efficacy. Moreover, these increases were influential in shaping participants developmental trajectories over a number of domains (i.e.: education, job choices) (Snider & Farmer, 2017). In a similar context Fine (2005) found that camp encouraged the development of self-efficacy, through internal motivation, a

developing sense of control, and increased feelings of mastery. Comparable findings have been noted by Winsett, Stender, Gower, and Burghen (2010) who found that participation in a medical camp (i.e.: a camp specifically for children with chronic illnesses) resulted in higher levels of general self-efficacy. Analogous findings with respect to self-efficacy and medical camps has been identified by Buckner et al., (2007), and McAuliffe-Fogarty, Ramsing, and Hill, (2007).

Social components related to camp involvement have been noted as acutely influential in the development of self-efficacy (Garst et al., 2011; Garst & Bruce, 2003; Henderson, 2007). Sekine, (1994) found that self-efficacy was promoted through positive relationships with camp staff and between campers. In a similar fashion Readdick and Schaller (2005), noted the role of friendships in establishing self-esteem and self-efficacy. The emergence of self-efficacy at camp may also be linked with social connections via social capital and how it can be used to leverage connections at camp (Yuen et al., 2005). Camp provides children an opportunity to establish or re-establish positive perceptions of self and others through interaction and thus enables positive identity and indeed self-efficacy (Duerden et al., 2012).

2.5.2 Physical Outcomes

2.5.2.1 Physical Activity

Within the *Community Action Framework* both self-efficacy and physical activity can be conceptualized as a "learning to be productive" outcomes (Connell, Gambone, & Smith, 2000). Moreover, self-efficacy and physical activity have a reciprocal relationship in which they can each influence one another. Increased levels of physical

activity in youth have been associated with a myriad of positive health outcomes (Janssen & LeBlanc, 2010), greater social integration (Ashford et al., 2010; Beets et al., 2013; Hickerson & Henderson, 2014), and higher levels of emotional wellbeing (Janssen & LeBlanc, 2010) that can perpetuate across the lifespan. While it is acknowledged that camp is an ideal setting for promoting physical activity, there is only limited research that has explored physical activity as an outcome of camp involvement (Hickerson & Henderson, 2014). Seal and Seal (2011) examined the effects of a health-oriented camp on at-risk youth and found that participation was associated with increased levels of physical activity. In a similar fashion phase II of the CSCRP found that camp participation was associated with improved attitudes toward physical activity. Analogues findings have been noted by (Macnaughton et al., 2019), who found that the increased levels of social capital fostered in the summer camp setting encouraged more positive attitudes towards physical activity. What is not known however, it whether increased positive attitudes towards physical activity actually result in increased participation.

Phase III of the CSCRP, which looked at parental perceptions of change associated with camp reported increased levels of physical activity among campers after returning home from camp . In this research differences in physical activity levels were noted based on age, length of stay at camp, gender (i.e.: Male vs. Female), and if they had attended summer camp previously. Older campers generally reported higher levels of physical activity; children who stayed longer at camp typically participated in more physical activity. While both male and female participants reported engaging in more physical activity, girls typically reported less participation than males. Those campers

who had attended camp previously reported greater gains in physical activity levels compared to first time campers.

Hickerson and Henderson (2014) used pedometers to measure the level of physical activity in a summer camp setting. They found that campers met or exceeded the daily-recommended levels for youth physical activity. However, differences did exist, female campers were considerably less active than their male counterparts, minority campers and campers with higher than average BMI were also found to be less active (Hickerson & Henderson, 2014). Beets and colleagues (2013) examined the rates of physical activity in youth attending four large day camp programs. They found that while a substantial portion of time at each camp was allotted for physical activity (approximately 38%) the vast majority of children who attended these camps were not physically active (Beets et al., 2013). Zwicker et al. (2015), also found that participation in camp did not result in any noticeable increase in physical activity levels or an increased desire to participation in physical activity outside of the camp setting.

Physical activity at camp is clearly associated with programing, as the games and sports children play at camp encourage greater levels of physical activity (Hickerson & Henderson, 2014). Camp setting also has an influence on activity, with some suggestion that wilderness camps encourage campers to be physically active (Brannan et al., 2000; Ewert et al., 2010; Hickerson & Henderson, 2014). Still evidence connecting camp participation with physical activity is somewhat inconsistent. This suggests that physical activity is related to more than just a programming or environmental features, but is also influenced by interpersonal factors (i.e., relationships). This association is supported by

Sallis, Prochaska, and Taylor (2000) who note the role of relationships as an antecedent of youth physical activity. Supportive environments free of judgment that function as a safe space supports young people to be physically active. The establishment of friendship circles and supportive relationships with both camp staff and other campers allow campers to leverage emotional support and encourages physical activity.

2.5.2.2 Environmental Engagement

According to the *Community Action Framework* one of the fundamental skills youth need to acquire in order to successfully transition into adulthood is taking responsibility for their role/place in the world (Connell, Gambone, & Smith, 2000). Broadly, environmental engagement, is a skill that will assist youth in learning to navigate the transition to adulthood by helping them understand their relationship to the natural environment.. Environmental engagement can be thought of as an appreciation for and engagement with nature (i.e.: the environment). It encompasses awareness of environmental concerns (i.e.: climate change), and good environmental stewardship which seeks to protect the natural environment through the promotion of conservation and sustainable practices (i.e.: recycling, leave no trace, etc.) (Turner, 2002). For the purpose of this research environmental engagement also encompasses participation in outdoor (i.e.: nature based) activities such as camping, hiking, bird watching, or just general appreciation for nature. Many summer camp programs have environmental engagement entrenched within their programmatic offerings (Brannan et al., 2000; Ewert et al., 2010; Henderson, Bialeschki, et al., 2007; Henderson et al., 2006; Kelk, 1994). As

a significant number of summers camp programs take place in wilderness settings some level of engagement with the environment (i.e.: nature) is inevitable.

Glover et al. (2011, 2013), found that involvement in summer camp (particularly those taking place in wilderness settings) helped to increase environmental awareness and pro-environmental behaviours. Browne, Garst, and Bialeschki (2011) reported that time spent in nature based camps fostered environmental stewardship and an overall affinity for nature. Similarly, in two separate studies Cheeseman and Wright (2019; 2020) found that children who attended summer camp programs with a focus on environmental education accrued a deep understanding of environmental issues and actions, and enhanced interest and adoption of environmentally responsible behaviors. Moreover, Cheeseman and Wright (2020), found that these changes persisted even after the camp experience had come to an end. Comparable findings are presented by Fine (2005), Johnson, Johnson-Pynn, Sweeney, and Williams (2009), Snider and Farmer (2017), and Henderson et al. (2005) who note campers developed an environmental ecological ethic (i.e., pro-environmental attitudes and a general appreciation of nature) as a result of summer camp involvement. Findings of the YDOCE are less convincing with respect to environmental awareness and pro-environmental behaviours. Parents of campers reported a small yet significant increase in environmental awareness, while campers themselves report no difference, these changes remained consistent at the six month mark

As evidence by the above literature camp setting has a meaningful influence on the development of environmental engagement (e.g., American Camp Association, 2005; Browne et al., 2011; Glover et al., 2013; Henderson, Bialeschki, et al., 2007). This is as a

result of exposure to the natural environment (i.e.: nature) and participation in novel activities and programs that encourage connection with nature (Ewert et al., 2010; Henderson et al., 2005; Johnson et al., 2009; Thurber et al., 2007). Still, evidence suggests that other factors are at play. While programing and setting contribute, interpersonal connection and support are also significant factors. As noted by (Hickerson & Henderson, 2014) among others the presence of supportive relationships that allow people to feel comfortable and achieve a higher level of self-actualization supports the growth of a positive environmental ethic.

2.5.3 Social Outcomes

2.5.3.1 Friendship and Peer Relations

Another important skill for youth transitioning into adulthood is learning to navigate social relations/interactions in a healthy and productive manner (Connell, Gambone, & Smith, 2000). The formation of new friendships and the cultivation of social skills are one of the key outcomes associated with summer camp involvement (Bialeschki et al., 2007; Henderson, 2007; Thurber et al., 2007). Camp is an excellent environment for the formation of meaningful relationships and social connections (Ungar, 2012a). Garst and Bruce, (2003) looked at over 8000 4-H campers in Virginia and found that making new friends was the number one outcome of camp participation. They also found that camp involvement resulted in improved communication skills that facilitated the development of relationships outside of camp (Garst & Bruce, 2003). This is supported by findings from Arnold, Bourdeau, and Nagele (2005), and Brannan et al.,

(2000), and Glover et al. (2013) who found significant growth related to communication and social interaction both within the camp setting and at home.

Campers in the YDOCE exhibited increases in friendship skills as a result of camp participation (American Camp Association, 2005). However, increases in pro-social behaviour appeared to fade somewhat six months after the end of camp (American Camp Association, 2005). The diminishing impact of camp on friendship skills has also been presented by Henderson, Whitaker, et al., (2007), Merryman et al. (2012), and Thurber et al. (2007) among others. This might suggest that the pro-social outcomes attributed to camp may be context specific and not transferable outside of the camp setting.

Closely linked with the establishment and maintenance of friendships are positive peer relations. Peer relations focus on developing the means for making and keeping friends along with furthering a overall sense of belonging (Bialeschki et al., 2007). Evidence for peer relations as an outcome in the camp setting is somewhat mixed. In a review of camp outcomes Henderson (2012) has stated that peer relations are a common consequence of summer camp. To this end, Snider and Farmer (2017) found that camp significantly influenced the development of social skills and in turn peer relations. Nevertheless, contradictory evidence for the formation of positive peer relations exists. Michalski et al., (2003) found that adolescents self-reported peer relations was slightly higher following camp participation, though these findings were not statistically significant. The YDOCE found a small but statistically significant negative effect in regards to peer relations (Thurber et al., 2007). On average, campers actually reported a

slight decrease in their ability to get along with others from pre-camp to post-camp (American Camp Association, 2005; Henderson, Whitaker, et al., 2007). However, campers reported an increase in peer relations six months after the end of camp. Parents reported an increase in peer relations pre-camp to post-camp and these changes persisted at the six month mark (American Camp Association, 2005).

Camp is a setting in which friendship and peer relations can develop and flourish (American Camp Association, 2005; Garst et al., 2011; Henderson, 2012; Thurber et al., 2007). The camp environment influences friendship by encouraging social interaction (e.g., Buckner et al., 2007; Dworken, 2001; Fine, 2005; Garst & Bruce, 2003). Camp features that promote social interaction and the formation of supportive relationships (i.e. communal living/eating, team building, etc.) seem to be vital for the development of social skills (Garst et al., 2011). Providing children an opportunity to interact in a safe and supportive setting can produce growth in social skills (American Camp Association, 2005). The more time youth spend together the more likely they are to interact. Being placed in moderately stressful situations (i.e., camp) with others creates a unique bond that facilitates connection. The setting creates the opportunity but it is interaction (with staff and other campers) that produces the outcomes. The presence of supportive relationship with either camp staff or other campers (or both) was identified as being a key factor in the acquisition of social outcomes (Garst & Bruce, 2003; Henderson, 2007; Seal & Seal, 2011; Thurber et al., 2007).

2.6 Antecedents of Change and Camp

Though camp administrators and programmers have worked hard to deliver programs that support developmental outcomes, they have done so with largely circumstantial evidence of how these outcomes are achieved (Bialeschki et al., 2007). Indeed as noted by Yohalem and Wilson-Ahlstrom (2010) "research that links specific program features to youth outcomes is rare" (p. 352). As such, a growing number of camp researchers and scholars are calling for more evidence not only for the end products of the camp experience but also for conditions and actions likely to influence camp outcomes (Garst, 2010; Garst et al., 2011, 2016; Henderson, 2018; Thurber et al., 2007). As noted by Garst et al. (2016), “empirical evidence of the antecedents or mechanisms of change to support practice is still needed (p. 181). A better understanding of the factors that influence outcomes in a camp setting could have far reaching benefits for camp by allowing us to understand what makes camp programs successful and target initiatives to support those factors.

Literature related to the antecedents (i.e., components of camp programing) that contribute to outcomes at camp is mixed, and at times outright contradictory. Different studies utilizing the same general population will find factors are both implicated and not implicated in producing outcomes. For example, findings from the ACA (2005; 2006), the CCA (2011; 2013), and Michalski et al., (2003) indicate that camper age is a significant factor in the production of outcomes (i.e. typically the older the camper the more positive outcomes they accrue), yet others have suggested that age has little or no impact on outcomes achieved (Henderson et al., 2005; Henderson, Whitaker, et al., 2007;

Thurber et al., 2007). Mixed findings have also been noted in relation to camp structure, gender, camp intensity, staff training, if the camper has attended camp previously, and the amount of time spent at camp (i.e., dosage) (Garst et al., 2016). The inconsistent nature of these findings demonstrates the need to continually examine camp programs in an attempt to determine factors that contribute to change, and in doing so help to inform camp programing.

Despite inconsistencies in the literature, some camp features have been repeatedly linked with the development of outcomes. The novelty of the camp environment, and wilderness settings are linked with positive outcomes (American Camp Association, 2005; Hickerson & Henderson, 2014; Snider & Farmer, 2017; Thurber et al., 2007). Some organizational components of how a camp operates are also significant. Group size has also been found to be an important feature, with smaller groups (i.e. cabins, units) seeming to be most beneficial (Garst et al., 2016). Having trained and experienced camp staff is also positively associated with outcomes (Garst et al., 2009; Roark et al., 2010). Programing features such as the amount of structured versus unstructured time (Schmalz et al., 2011), and the use of a specific developmental frameworks also contribute to outcome development (Garst & Ozier, 2015; Hickerson & Henderson, 2014). Leadership opportunities, involving campers in decision-making and planning processes, and the use of purposeful programing, are also generally associated with positive outcomes (American Camp Association, 2006; Garst et al., 2016; Henderson, Whitaker, et al., 2007; Hickerson & Henderson, 2014). Other factors of note include; age, with older campers seemingly attaining more benefits (American Camp Association, 2006). Higher

family income, camp fees, and overall camp budgets have also been linked with outcomes (American Camp Association, 2005, 2006; Henderson, 2007).

The theme that connects all of the features of camp that influence outcome development is interpersonal interaction. Supportive relationships (both with staff and between campers) is a major contributing factor in the development of almost every camp outcome (Duerden et al., 2014; Garst et al., 2011, 2016; Garst & Ozier, 2015; Henderson, Bialeschki, et al., 2007; Henderson et al., 2005; Henderson & Bialeschki, 2008; Hickerson & Henderson, 2014). The relationships that emerge at camp serve as a type of scaffolding that supports the development of outcomes. Garst, Gagnon, and Whittington (2016) in noting a significant overlap in constructs of PYD and antecedents of change found relationships to be a key factor in the development of camp outcomes. Specifically, the presence of supportive adult relationships, feelings of safety (physical and emotional), and developing close relationships with peers all influenced the outcomes campers experienced (Garst et al., 2016). Without supportive relationships in place other outcomes cannot be achieved. Additionally, supportive relationships encourage the establishment of a camp community (Bialeschki et al., 2007; Garst et al., 2011) which in turn facilitates feelings of physical and emotional safety (Browne et al., 2011; Garst et al., 2016; Henderson, Whitaker, et al., 2007) and a sense of belonging (Garst et al., 2011) all of which precipitate outcomes. While other factors contribute to the emergence of outcomes in a camp setting, supportive relationships seem to be key in actualizing the benefits of summer camp.

2.7 Attachment Theory

Attachment is a foundational topic in child and youth development (Fraley, 2002; Mikulincer & Shaver, 2007; Sroufe, 2005). Further, summer camp is a major youth service organization (Hickerson & Henderson, 2014; Readdick & Schaller, 2005; Snider & Farmer, 2017) with a specific focus on youth development, yet despite this, there is little to no work that looks at the role of attachment in summer camp. As noted above, camp is a setting that relies heavily on social features such as communal living, and interaction to achieve its desired goals (Bialeschki et al., 2007; Macnaughton et al., 2019). Attachment has significant implications for social functioning, and as such is likely to have a major influence on how children and adolescents function within the camp setting, and the potential benefits they derive from participation.

The foundational underpinnings of for attachment theory have their basis in the early works of John Bowlby and Mary Ainsworth (Fraley, 2002). Bowlby (1969, 1973, 1980) developed attachment theory in an attempt to explain the significant distress experienced by young children who had become separated from their primary caregiver. He noticed that infants would go to exceptional lengths in order maintain or re-establish proximity to a parent in the event they became separated. At the time, the prevailing explanations for these behaviours related to theories associated with inadequate care provided by surrogates or other childcare providers (i.e.: nannies, etc.), and the removal of a primary food source (i.e.: a nursing mother) (Fraley, 2019). However, over time these explanations began to seem inadequate as a growing body of knowledge suggested the presence of more complex systems (Fraley, 2019).

As such, Bowlby "drew on emerging ideas in ethology, cognitive science, and control system theory" (Fraley, 2019, p.403) to explain the significant emotional responses children had to separation from their parents. In doing so Bowlby distinguished between the notions of dependency and attachment, suggesting that the parent child relationship is more complex than simple satiation of basic physical needs (Bretherton, 1992). Attachment refers to the deep and enduring affectionate bonds that develop between a child and their primary caregiver commonly referred to as an Attachment Figure (AF) and the consequences these bonds have for the child's later psychosocial development, emerging self-concept, and world views (Ainsworth, 1979; Bowlby, 1969, 1980; Collins & Read, 1990; Fraley, 2002; Fraley & Spieker, 2003).

Historically attachment theory has been positioned within an evolutionary ethological approach (Bowlby, 1969, 1973, 1980; Fraley, 2002; Hazan & Shaver, 1994). From this perspective attachment is seen as a biological imperative—a type of protective factor that enables normal growth and development over the course of a lifespan (Ainsworth, 1979; Ainsworth et al., 1978). A basic assumption of attachment theory is that because of their inability to survive independent of caregivers young children seek out contact (i.e.: proximity) with a caregiving figure (Hazan & Shaver, 1994). That is, human infants can only survive if an adult is present and willing to provide support, protection, and physical care (i.e.: feeding, bathing, etc.). As such, human infants have evolved behaviours that function to maintain proximity to a caregiver or AF (i.e.: an infant will cry when it is hungry) (Hazan & Shaver, 1994).

Behaviours or actions carried out with the specific function of maintaining or re-establishing proximity to an AF are referred to as *attachment behaviours* (i.e.: a child may cry in order to get attention from a parent). Attachment behaviour is controlled by an innate motivational system—the *attachment behavioural system*—that is a consequence of natural selection and emerged to promote the safety and survival of the child (Bowlby, 1969, 1973). Whenever faced with stressful or anxiety inducing circumstances individuals will seek out proximity (i.e.: closeness) to an AF, what Bowlby (1969, 1973, 1980) termed *proximity maintenance.* Individuals will seek to establish proximity maintenance as a form of coping mechanism with the intent of reliving or eliminating distress. This in turn has a biological function of promoting the child's safety and security, as well as overall survival (Bowlby, 1973, 1980). Ainsworth (1978) further extended this conceptualization by viewing attachment as working continuously to provided the infant with a secure base from which to engage in exploration (Bartholomew, 1990). Thus, in more recent years scholars have asserted that this drive is not just for proximity but also for felt-security (i.e., psychological/emotional proximity) (Ainsworth et al., 1978; Bartholomew & Horowitz, 1991; Fraley & Spieker, 2003; Hazan & Shaver, 1994). Moreover, scholars now assert that Bowlbys' theory of attachment has evolved into a model of social and personality development. Attachment has a significant impact on the developing child's personality and that the nature and quality of early relationships is to a large extent determined by a primary caregivers emotional availability and responsiveness (Bowlby, 1969, 1973, 1980).

2.7.1 Internal Working Models of Self and Others

Bowlby (1969, 1973, 1980), went on to suggest that early interactions between a child and an AF result in the formation of *internal working models* (IWM), basically, a broad organizational schema that allows a child to arrange how they view the world. These schemas are relationship representations based on the interaction experiences and patterns, which guide the attachment behavioural system (Collins & Read, 1990; Paulssen, 2009). Infants develop IWM's of self and others, predicated on their formative interactions with an AF. In general, "these psychological qualities are reflections of the way in which an individuals attachment system has become organized over the course of a life time, beginning with the earliest attachment relationships" (Fraley, 2002, p.123). IWM's of others comprises beliefs about whether others (i.e.: parents, friends, relationship partners) are trustworthy and meet interpersonal needs (Paulssen 2009). IWM's of self relate to the belief "whether one is classified as lovable and worthy of being supported" (Paulssen, 2009). Bowlby (1973, 1988a, 1988b), recognized that the experiences of self and others is inherently intertwined. For example, a child may cry out in order to receive attention (i.e.: support) from a caregiver, however, if the child's needs are not attended to the child may then associate others as being unsupportive and themselves as having low value. IWM's are the mechanism that explains how attachment impacts more than just the AF–child relationship and how it might persist or be relevant to other areas of life. IWM, operate top-down outside awareness and shape different cognitive and activating processes from perception and emotions to behaviour (Paulssen, 2009). They serve to organize an individuals thoughts, act as a lens to filter new

information, direct attention, and determine the applicability of past experience in relation to new and stimuli (Bartholomew & Horowitz, 1991; Blain et al., 1993).

2.7.2 Attachment Beyond Primary Caregivers

Traditionally attachment has been defined by the interpersonal bond between a child and their primary caregiver (i.e.: an AF), usually the mother (Bowlby, 1969, 1973, 1980). However this traditional conceptualization of the AF relationship is being expanded with more literature extending attachment beyond the mother (parent)-child dyad to include all other significant relationships (i.e.: *attachment relationships*) across the life span (Blain et al., 1993; Cassidy & Shaver, 2008; Fraley, 2002; Fraley & Spieker, 2003; Hazan & Shaver, 1994; McConnell, 2011; Mickelson et al., 1997; Mikulincer & Shaver, 2007). Indeed, "attachment has been variously operationalized in terms of coherent patterns of behaviour which indicate the quality of the attachment bond within a various relationships" (Bartholomew, 1990, p.150). To this end attachment relationships over a lifetime may include a variety of individuals in various setting and situations that influence or serve different attachment needs. Attachment theory argues that these relationships are durable and persistent even in the absence of the AF (Blain et al., 1993). The succession of attachment relationships over the course of an individual's life is referred to as their *attachment history* (Ainsworth et al., 1978; Hazan & Shaver, 1994). The conceptual ordering or arranging of various attachment relationships based on the attachment functions they serve is referred to as the *attachment hierarchy* (Fraley, 2019).

Attachment relationships make use of *attachment systems* to enable goal-orientated action through alleviating stress. Attachment systems are "an organism-level

system that is organized and regulated by social input, specifically by primary caregiver responsiveness to distress signals. Based on repeated interactions with an AF the infant learns what to expect, and they adjust their behaviour accordingly" (Hazan & Shaver, 1994, p.5). More broadly, attachment systems refer to an individual seeking out another (i.e., an AF) in times or distress as a coping mechanism (Bowlby, 1969, 1973). The attachment system is similar in some ways to biological systems that regulate temperature or hunger. Any perceived threat to proximity results in anxiety which in turn triggers attachments behaviours that are designed to re-establish proximity maintenance (Hazan & Shaver, 1994). In general, the attachment system can be viewed as a control system for felt security (Fraley, 2002).

2.7.3 Stability of Attachment Over Time

One of the more contentious aspects of attachment theory is the stability of the IMW's and attachment over time. There are two general perspectives on stability of attachment over the life course. The *revisionist perspective* espouses that early attachment representations (i.e.: IWM's) are "revised and updated in light of ongoing experiences and consequently may or may not correspond to attachment representations later in life" (Fraley, 2002, p. 124). It views attachment as being fluid, constantly changing or being altered as people enter or exit relationships that are incompatible with their previous IWM's. This view is supported by the organizational perspective of attachment, which espouses that early experiences should not be interpreted as determinants of development but rather as setting the stage for optimal psychological functioning (Sroufe, 2005). It focuses on the contextual and situational influences that

might result in changes to an individual's pattern of attachment. Thus it allows for variability in the formation and maintenance of attachment patterns based on life events.

Conversely, the *prototype perspective* assumes that attachment styles and IWM's are updated or altered as individuals encounter circumstances and relationships that challenge pre-existing conceptions, but suggests that the representations developed early on in life (i.e.: during infancy) remain relativity unchanged and continue to directly and indirectly shape interpersonal dynamics (Fraley, 2002). From the prototype perspective early representations persist throughout the lifespan and influence IWM's in the context of new interaction. As such, the attachment style developed in early childhood serves as the foundation for all other attachment relationships throughout life (Fraley, 2002). This is supported by evidence that would suggest that "attachment styles are not singular; they are differentiated and hierarchical" (Fraley, 2019). In general, when people are faced with circumstances and experiences that challenge their existing IWM's they do not revise or alter those models so much as integrate their schemas to create a new representation that accommodates the distinctive experience (Fraley, 2019; Fraley & Spieker, 2003).

A third perspective suggests a combination of both may be accurate. A third theme emerging from the literature is that there are asymmetries in the plasticity of IWM's over time (Fraley, 2002, 2019; Fraley & Waller, 1998). This would suggest that attachment styles and IWM's tend to be more malleable in adolescents and children and more stable among older populations. Thus inferring that "as people mature, person-driven processes begin to play a more dominate role in interpersonal interactions, such

that people seek out contexts that are congruent with their existing working models" (Fraley, 2019, p.9). Still a multitude of evidence suggests that working models of attachment tend to remain fairly stable over time (Hazan & Shaver, 1994) lending support to the prototype perspective, and demonstrating how early attachment orientations have implications over the life course.

2.7.4 Attachment and Age

A growing body of evidence also suggests that attachment changes with age, as noted by Hazan & Shaver, (1994) the attachment behavioral system doesn't become dormant as the child develops rather it evolves to facilitate other relationships across the lifespan. As children age physical maturation, cognitive growth, and continued social experiences advance the complexity of their IWM's as they become integrative of the various life experiences the amass (Hazan et al., 1991; Hazan & Shaver, 1994). Childhood attachment it typically complementary (AF provides care to child) in contrast, adolescent and adult attachment relationships tend to be reciprocal with each individual being both a provider and recipient of care (emotional, physical, or other) (Hazan & Shaver, 1994). As children mature they develop more complex cognitive abilities and social skills, as such attachment relationships tend to move from behavioural to be integrative of beliefs and expectations (Main & Cassidy, 1988). As such, Hazen and Shaver (1994) have offered that attachment relationships change over time, and that an individual's primary AF and how they are utilized (i.e.: as a Safe Haven) will also change. As children move into adolescences they begin to shift an increasing number of attachment-related functions from parents or caregivers to peers (Moretti & Peled, 2004).

Although adolescents continue to relay on their parents as a secure base they begin to seek proximity to their peers and friends, and make use of them as a "safe haven" during time of distress (Hazan et al., 1991; Hazan & Shaver, 1994; Hazan & Zeifman, 1994; Nickerson & Nagle, 2005). This would then suggest that peers play a significant role in the development of adolescence by serving as a secure based and thus enabling exploration (Cassidy & Shaver, 2008; Main & Cassidy, 1988; Nickerson & Nagle, 2005). This represents a significant move towards the concept of felt security as outlined by (Ainsworth et al., 1978) as a principal outcome of the attachment relationship. Herein attachment systems are concerned less with proximity and more with availability. In so they become a safety regulating system with the primary function of promoting physical and psychological safety (Ainsworth et al., 1978; Hazan et al., 1991; Nickerson & Nagle, 2005). As such, as individuals age they will integrate various attachment relationships and AF's into their life.

2.8 Attachment Typologies

Mary Ainsworths' most significant contribution to attachment theory came via the "strange situation" experiment—a laboratory model for studying attachment in a consistent fashion (Fraley, 2002, 2019). Ainsworth and her counterparts discovered that there are differences in the way that children organize their attachment behaviour and that these differences can be traced to a very large degree to the variations in the child's caregiving experiences (i.e.: the responsiveness of their parents and or caregivers) (Ainsworth et al., 1978). Her seminal work resulted in the identification of distinct patterns of attachment or attachment styles that were based on behavioural trends (i.e.:

actions and behaviours of an infant) observed during the strange situation experiment. These patterns of attachment in shape—though do not determine—the individuals expectancies in later relationships (Bretherton & Munholland, 1999). Since Ainsworth et al.'s (1978), conceptualization of attachment styles a number of other classifications have emerged (Allen et al., 1998; Fraley, 2002; Stevenson-Hinde & Verschueren, 2002). A discussion of several of these typologies will be undertaken below.

Of note, one of the prevalent debates that has emerged around the various attachment typologies is the "types versus dimensions question—the issue of weather individual differences in attachment are continually or categorically distributed" (Fraley & Spieker, 2003, p 387). This is a relevant, as how the construct of attachment is conceptualized and reported will have significant implications for measurement and the validity of conceptual inferences and statistical power (Fraley & Waller, 1998). Some scholars use a categorical assessment (secure vs. insecure) (Ainsworth et al., 1978; Main, 1990; Main et al., 1985), some have used a dimensional perspective (Bartholomew & Horowitz, 1991; Brennan et al., 1991; Fraley & Spieker, 2003), while still others view attachments as a continuum (Cummings, 1990, 2003). Some of the more prevalent attachment typologies will now be briefly reviewed.

2.8.1 Traditional Model

In examining attachment behaviours Ainsworth et al. (1978), identified three distinct patterns of attachment; secure, insecure-avoidant, and insecure-anxious/ambivalent. A forth pattern of attachment (i.e.: disorganized) was later added to this conceptualization recognizing the increasing complexity of attachment and our ever

evolving understanding of how it functions (Main & Cassidy, 1988). Within this typology attachment styles can be divided into two primary categories: secure attachment and insecure attachment. Moreover, insecure attachment styles can be further subdivided into three subcategories: insecure-avoidant, insecure-anxious/ambivalent, and insecure-disorganized (Bowlby, 1969, 1973; Malekpour, 2007).

This typology is based on behavioural patterns observed in infants separated from their primary caregivers during the strange situation experiment. Secure attachment occurs when a child feels the can rely on their caregivers to meet their need for proximity and security during times of distress. Insecure-avoidant attachment ensues when infants actively avoid contact and interaction with their caregiver. Insecure-anxious/ambivalent attachment is associated with the child experiencing excessive levels of anxiety when separated from their caregiver and a lack of comfort/reassurance when proximity is re-established (Feeney, 2000). Finally, insecure-disorganized attachment is seen in children who have a lack of attachment security at all (Ainsworth, 1979; Ainsworth et al., 1978; Bretherton, 1992; Malekpour, 2007). Within this classification AF's serve as a secure base that fosters psychosocially safe and supportive relationships (i.e.: attachment security). Additionally, the secure base serves as a platform enabling the individual to engage in exploration, by providing them with reassurance that their needs will be met in times of distress or discomfort (Ainsworth, 1979). Thus, this supportive relationship serves as the basis for psychosocial development in a multitude of domains during the lifespan (Ainsworth, 1979; Behrens et al., 2007; Main et al., 1985; Main & Cassidy, 1988).

2.8.2 Dimensional Model

Within the attachment literature there is some disagreement as to how adequately Ainsworth et al.'s (1978) conceptualization addresses variation in attachment relationships (Brennan, Clark, & Shaver, 1998). Bartholomew and Horowitz (1991) viewed this conceptualization of attachment as somewhat lacking, espousing that is does not adequately represent how attachment functions once an individual reaches adulthood. Moreover, Bowlby (1988) suggested that IWM's differ based on images of self and images of others and that these are two theoretically distinct categories that should be addressed within any attachment classification. As noted by Fraley and Spieker (2003), one of the strengths of Ainsworths et al.'s (1978) original classification is that it recognizes that children may have similar goals (i.e.: proximity maintenance) but achieve these goals via different behavioural means. As such, if differences in attachment organization are continuously rather than categorically distributed then it is necessary to identify dimensional models that retain the original intent of Ainsworth et al. (1978), while still accounting for variations and individual differences present therein (Fraley & Spieker, 2003).

In response, Bartholomew and Horowitz (1991) developed an attachment matrix that incorporated and individuals views of self (positive and negative) and of others (positive and negative) (Bartholomew, 1990; Blain et al., 1993). It can be thought of as a mixture of avoidance and dependency running on intersecting axis. They argue that this conceptualization along two dimensions is a better fit with the underlying theory of the working models of self and others as it allows of different combinations of working

model associations. This resulted in a four-group classification of attachment that in many ways parallel those outlined by Ainsworth et al (1978) and later Main et al (1985), but with a more integrative holistic focus. These categories include; secure, preoccupied, dismissing/avoidant, and finally fearful/avoidant (Bartholomew & Horowitz, 1991).

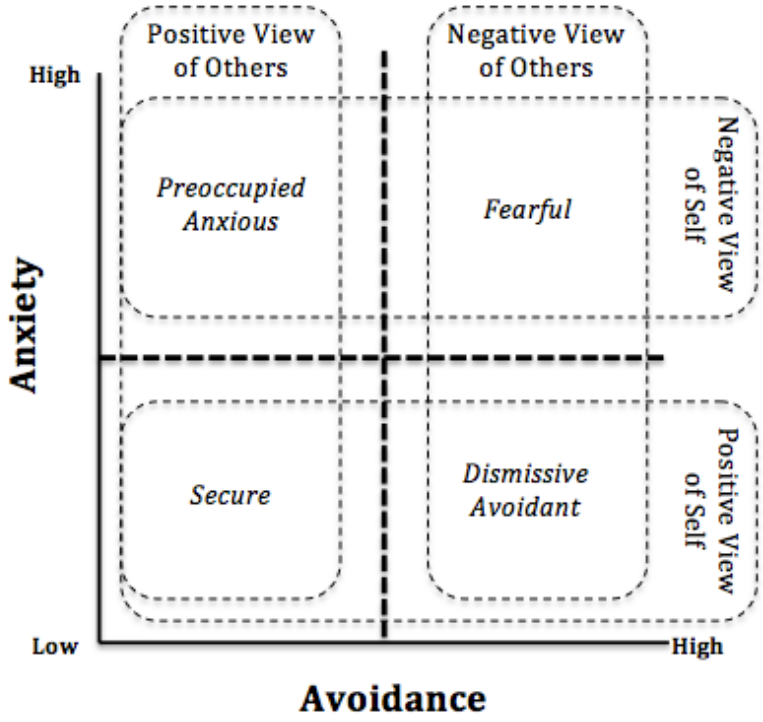

Figure 1. Attachment typologies as outlined by (Bartholomew & Horowitz, 1991) with the anxiety and avoidance constructs as delineated by (Brennan et al., 1998)

2.8.2.1 Secure

Secure attachment as delineated by Bartholomew and Horowitz (1991) is associated with the presence of a responsive AF who functions as a secure base. In this conceptualization securely attached individuals have a positive model of themselves and

a positive model of others. They have low levels of dependency and thus a high sense of worthiness (i.e.: a positive self internally that does not require external validation). Secure individuals have low levels of avoidance that manifest in a general expectation that other people are largely accepting and responsive (Bartholomew & Horowitz, 1991). They often take a novel interest in their surroundings and have an open and willing aptitude towards exploration. While they have a preference for an AF over other people in most situations they are easily able to establish and utilize other relationships as a result of the presence of a secure base (Ainsworth et al., 1978). When distressed they will seek out an AF and are swiftly calmed/soothed (Bretherton, 1985). Children with a secure attachment history, develop a better interpersonal competence, are more likely to adhere to group norms, and are more widely accepted by peer groups later in life (Sroufe et al., 1999). As adolescences secure children tend have a positive, open, engaged style of interaction with the AF (Stevenson-Hinde & Verschueren, 2002). They will still look to the AF to help cope with stressful events or situations but similarly to when they were children they will return to exploration when they again feel safe (Main & Cassidy, 1988; Stevenson-Hinde & Verschueren, 2002). As teenagers they engage in productive problem solving and seek to maintain productive relations with the AF while at the same time asserting autonomy, control and expressions of self identity (Allen et al., 1998). Individuals in this grouping rate high on coherence, intimacy and control in friendships, and involvement in romantic relationships. They also demonstrate high levels of self-confidence and personal warmth (Bartholomew & Horowitz, 1991). This parallels the

securely attached individuals as outlined by Ainsworth et al (1978), as it results many of the same behavioural and cognitive outcomes.

2.8.2.2 Preoccupied

Preoccupied attachment styles entail a negative view of self but a positive view of others (Bartholomew & Horowitz, 1991). These are individuals with a high level of dependency that results in a sense of unworthiness (i.e.: positive self regard can only be maintained by others ongoing acceptance) combined with a positive evaluation of others. This combination of characteristics results in a strong drive to gain others acceptance (Hazan & Shaver, 1994). This type of attachment style stems from a child's exposure to inconsistent parenting wherein the child can not reliably predict whether their experiences of anxiety or distress will be adequately attended to (Malekpour, 2007). Individuals with this attachment orientation fail to derive any sense of security from the AF (Bergin & Bergin, 2009). As young children they will have difficulty moving away from the AF to explore novel settings, they show exaggerated emotions, and are often difficult to sooth (Bergin & Bergin, 2009). They may seek out contact with the AF but are not soothed or comforted by it. They may be passive, whiney, fussy, helpless, or immature, or they may be angry, petulant and resistant towards AF's (Bergin & Bergin, 2009). In adolescences these individuals tend to be demanding and often preoccupied with the AF (Bergin & Bergin, 2009). Moreover, they may appear hyperactivity as they drift from object to object with no or little sense of direction or purpose. In their teenage years they express a deep need for their AF in stressful situations (Finnegan et al., 1996). They often display coercive behaviour as they try to manipulate and otherwise

inconsistent AF to be more present and attentive (Bergin & Bergin, 2009). It is noted that people in this grouping score high on elaboration, self disclosure (i.e.: the tendency to disclose inappropriate information), emotional expressiveness, frequency of crying, relying on others, using others as a secure base, and caregiving (Bartholomew & Horowitz, 1991). Conceptually this grouping parallels the anxious/ambivalent as outlined by Ainsworth et al. (1978).

2.8.2.3 Dismissive-Avoidant

The dismissive-avoidant attachment category encompasses individuals who have a positive model of self, and a negative model of others (Bartholomew & Horowitz, 1991). As such, they have sense of worthiness but this is combined with a negative disposition toward others. The parents of avoidant children tend to be insensitive, intrusive, angry, and rejecting of their children (Ainsworth, 1979). They are frequently unavailable when the child is in emotional distress and as such the child does not feel as if they can relay on them during times of discomfort or trouble (Bergin & Bergin, 2009). This results in avoidant individuals developing high levels of counter dependence (Bartholomew, 1990; Finnegan et al., 1996; Kotler et al., 1994). Avoidant children appear to be very independent of the AF and will not seek comfort or contact with the AF when distressed. They do not easily or readily communicate distress or vulnerability, and will often actively work to physically and emotionally avoid the AF (Behrens et al., 2007). This emotional disconnect continues into the adolescent and teen years (Allen, Moore, Kuperminc & Bell, 1998; Main & Cassidy, 1988).

Bartholomew and Horowitz (1991) found that people in this grouping typically have high levels of self-confidence, but low levels of emotional expressiveness. Additionally, they score lower than the secure or preoccupied groupings on factors such as self-disclosure, intimacy, capacity to rely on others, and the use of others as a secure base, all scales related to levels of closeness (Bartholomew & Horowitz, 1991). The avoidant attachment style reflects the degree, to which an individual has an unwarranted need for self-reliance, fears being dependent on external relationships, is more or less distrusting of others, and has a desire for emotional and cognitive distance (Bergin & Bergin, 2009; Mende et al., 2013). Main, Kaplan, and Cassidy (1985), proposed that this form of attachment serves two primary functions; one, avoidant behaviour allows the individuals to maintain conditional proximity to a caregiver (i.e.: close but not so close as to open themselves to being hurt). Two, the cognitive process of organizing avoidance behaviours helps to detract attention from unfulfilled desires for closeness (Behrens et al., 2007; Main et al., 1985; Main & Cassidy, 1988). These are people who protect themselves against disappointment by avoiding close relationships and actively working to maintain a sense of independence and control. Conceptually this attachment style parallels avoidant attachment noted above (e.g.: Ainsworth et al, 1978).

2.8.2.4 Fearful-Avoidant

The final attachment grouping outlined by Bartholomew and Horowitz (1991) is fearful-avoidant. Individuals in this category were noted to have lower levels of self-disclosure, intimacy, romantic involvement, reliance on others, and use of others as a secure base. Additionally, they generally score low on self-confidence and balance of

control scales. Fearful avoidant individuals have a negative view of themselves and a negative view of others (Bartholomew & Horowitz, 1991). These are individuals who indicate a sense of unworthiness (i.e.: I am not lovable) combined with negative expectations of others (i.e.: that others are ultimately untrustworthy and rejecting). Fearful-avoidant attachment occurs when the AF becomes as source of fear for the child (Malekpour, 2007). It is often a response to the AF's frightening or incomprehensible behaviours such as looming in the child's face, being overly aggressive, having fearful or negative facial expressions, and handling the child as if they were an inanimate object often with little or no regard for the child's health and well being (Bergin & Bergin, 2009). AF's of disorganized children often have a history of abuse, drug use, depression or mental defect, or loss such as a death or divorce (Carlson et al., 1989). They tend more often to be single parents and to be psychologically unavailable, neglectful, and in some cases physically abusive (Carlson et al., 1989).

Fearfully attached individuals lack an organized or structured response to the AF, and in some cases the AF may actually serve as a source of distress (Bergin & Bergin, 2009). As older children they may seek to take control to an unnatural degree in order to reduce uncertainty and thus stress, they may appear confident yet anxious (Stevenson-Hinde & Verschueren, 2002). In some cases they assume the role of the parent by behaving in a solicitous way toward the AF or by trying to punish or embarrass them (Behrens et al., 2007). They avoid close contact with others as a result of their expectations of adverse consequences. Much like the dismissing attachment style they avoid intimacy but yet have a desire or need to be accepted or validated by others to

maintain a positive self-regard (Hazan & Shaver, 1994). In many ways this conceptually aligns with the insecure-disorganized/ disorientated attachment (e.g.: Main et al, 1985).

2.8.3 **Anxiety/Avoidance Model**

This conceptualization of attachment (i.e.: as a matrix of avoidance and dependency) began a move away from distinct categories to a more dimensional perspective. Brennan, Clark, and Shaver (1998) further precipitated this shift in seeking to identify the primary dimensions underlying attachment classifications. Based on their analysis of self reported scales of attachment and other means of inquiry (i.e.: the strange situation, adult attachment survey, etc.) they concluded that anxiety and avoidance were the two primary dimensions underpinning attachment (Brennan et al., 1998). For them anxiety is a function of a deep all-pervading fear of abandonment. It is related to the anxious/ambivalent reactions as outlined in strange situation experiment (e.g.: Ainsworth et al., 1978), and the model of self related to dependency as outlined by Bartholomew and Horowitz (1991). Avoidance, is seen as a function of discomfort with closeness and a low trust in others (Brennan et al., 1998). This can also be related to an avoidance of the primary caregiver as seen in the strange situation experiment (e.g.: Ainsworth et al., 1978), and the concept of avoidance as outlined by Bartholomew and Horowitz (1991). Thus, Brennan, Clark, and Shavers (1998) conceptualization of attachment seems to be integrative of earlier models and addresses both behavioural trends and IMW's of self and others.

2.9 Measuring Attachment

As evidenced by the typologies outlined above various classification systems for attachment have emerged over the years with little convergence on presenting a common measure or easily interchangeable set of constructs (Brennan et al., 1998). It has been argued by some, that because many of these classifications are based on behavioural trends within a parent/caregiver child relationship they are not representative of attachment across the lifespan (Fraley & Spieker, 2003). To this end, there has been a move to integrate various social and functional elements of interaction as a child matures into attachment classifications.

One of the more successful attempts of doing this can be seen in the classification system outlined by Bartholomew and Horowitz (1991) above. They assert that any taxonomy of attachment needs to incorporate both positive and negative views of self and others. In doing so they espouse that this model better fits the underlying theory of the internal working models because it allows for all possible combinations of working model associations (Bartholomew & Horowitz, 1991). Within this classification system there are four primary categories of attachment; secure, dismissing/avoidant, preoccupied/anxious, and fearful (Bartholomew & Horowitz, 1991).

In seeking to present a more universal method of reporting attachment Brennan et al. (1998), proposed that the constructs of anxiety and avoidance underlie all attachment classifications. Attachment can be viewed as a function of anxiety (high vs. low) and avoidance (high vs. low) (Brennan et al., 1998; Gander & Buchheim, 2015). This method of reporting attachment has become widely used, because of its alignment with

attachment theory and the practicality of the measures (Fraley & Spieker, 2003; Fraley & Waller, 1998; Stevenson-Hinde & Verschueren, 2002). Additionally, the concepts of anxiety and avoidance as outlined by Brennan et al. (1998) map well with constructs delineated by Bartholomew and Horowitz (1991). Anxiety relates to a fear of abandonment and is associated with models of self that are based on dependency. Avoidance is a function of discomfort with closeness and a low trust in others, and is associated with a model of others based on avoidance. The Bartholomew and Horowitz (1991) method for classifying attachment with the concepts of anxiety and avoidance as outlined by Brennan et al. (1998) will be used in this study. Because this classification system allows for grouping of attachment at all developmental stages (Bartholomew & Horowitz, 1991), it is a preferred model for addressing a study population that spans childhood to adolescence, and thus was used herein.

2.10 Attachment and Summer Camp

Attachment orientations have a significant influence on the social emotional development of children (Bowlby, 1969, 1973, 1980, 1988a; Bretherton, 1992, 1992; Fraley, 2002; Mallinckrodt & Wei, 2005). This is realized through the utilization of AF's as a secure base enabling exploration and emotional regulation during times of distress or discomfort (Ainsworth, 1979; Ainsworth et al., 1978; Bretherton, 1992). As such, attachment can impact the experiences individuals have at camp. Attachment influences the camp experience in two primary ways. First, specific attachment styles may affect individuals' experiences at camp and thus be associated with developmental outcomes. Second, the distinctive social setting of camp may provide individuals with different

attachment experiences (i.e., providing an opportunity to develop new attachment relationships), and as such alter the campers' developmental path by shifting their IWM's of self and others.

In examining positive youth development within the camp context Henderson (2007) found that campers who had high pre-camp test scores (i.e., children with higher skill levels or levels of social functioning) experienced negative change during camp. Campers who arrived at camp with high scores in outcome areas generally saw only marginal (if any) increases in their associated scores, and sometimes their scores regressed. Conversely, individuals who had low pre-camp test scores showed more positive changes during camp. Some of this observed difference might be attributable to a ceiling affect, when children arrive at camp with high levels of functioning there is little room for change (Henderson, 2007). However, because Henderson (2007) found no structural elements of camp (i.e., budget, staff training, structure, etc.) contributed to outcome development she went on to postulate that this variation in outcomes achieved might be attributable to internal qualities such as attachment orientations (Sroufe, 2005).

Moreover, within this context it can be inferred that high pre-camp test scores are associated with secure attachment orientations. A substantial body of literature demonstrates that securely attached individuals (low anxiety, low avoidance) accrue more positive developmental outcomes and thus, are more likely to score higher on pre-camp assessment tests (Ainsworth, 1979; Ainsworth, Blehar, Wall, & Waters, 1978; Hazan & Shaver, 1994; Malekpour, 2007; Sroufe, 2005). Likewise, lower pre-camp test scores may be associated with insecure attachment orientations (i.e., preoccupied,

dismissive/avoidant, fearful). Varying levels of anxiety and avoidance impact coping strategies and subsequent outcome development (Bartholomew & Horowitz, 1991; Bialeschki et al., 2007). In the camp context the most significant positive change in outcomes was associated with lower pre-camp test scores (American Camp Association, 2005; Henderson, 2007; Henderson, Whitaker, et al., 2007; Thurber et al., 2007). This might suggest that insecurely attached individuals actually benefit the most from camp.

2.11 Attachment and Camp Outcomes

No literature could be located that directly connects attachment profiles to summer camp. To understand how attachment relates to outcomes associated with camp, the attachment literature will be reviewed. Attachment histories can serve as a structure for classifying individual differences that may influence or impact the camp experience. Attachment provides a psychosocial perspective for the development of individual differences and how these differences manifest in thought and behaviours that can impact outcomes associated with summer camp. This is broadly related to the fact the IWM's that develop as a result of attachment histories serve as a basis for social perceptions and overt behavioral tendencies (Ainsworth et al., 1978; Bowlby, 1988a). How attachment influences each of the outcomes explored in this study will now be examined. In general, secure attachment is associated with positive outcomes while insecure attachment orientations are associated with negative impacts on each of the outcomes explored.

2.11.1 Personal Outcomes

2.11.1.1 Exploration

A meaningful body of literature demonstrates the association of attachment orientations to exploration (e.g., Ainsworth, 1979; Bartholomew & Horowitz, 1991; Bowlby, 1988a; Hazan & Shaver, 1994). Secure attachment is concomitant with higher levels of independence and a greater proclivity to explore (Ainsworth et al., 1978; Feeney, 2000; Main et al., 1985). This is a result of IMW's that result in low levels of avoidance and high levels of trust (Bartholomew & Horowitz, 1991). The desire and ability of an individual to explore is directly linked to the utilization of the attachment system (Ainsworth et al., 1978; Bartholomew & Horowitz, 1991; Bowlby, 1973, 1988a; Hazan & Shaver, 1994). Secure attachment orientations are linked with increased levels of social support and the ability of an individual to access and utilize this support as a secure base thus facilitating the emergence of felt security (Ainsworth, 1979; Ainsworth et al., 1978; Sroufe, 2005).

Securely attached individuals utilize AF's as a secure based from which to explore (Ainsworth et al., 1978; Benoit, 2004; Bretherton, 1992). The presence of felt security, and the positive psychological state associated with it encourages securely attached children to engage in exploration (Bergin & Bergin, 2009; Sroufe, 2005; Sroufe et al., 1999; Thurber et al., 2007). Research shows that insecure attachment histories are typically not conducive to exploration (Ainsworth et al., 1978; Bartholomew & Horowitz, 1991; Bretherton, 1992; Hazan & Shaver, 1994; Sroufe, 2005). Bartholomew and Horowitz (1991) found that avoidance (i.e.: lack of trust) is associated with dismissing

and fearful attachment orientations. This lack of trust in turn can limit an individuals ability to fully utilize resources (i.e., social connections, social competencies) to support exploration (Bowlby, 1969, 1973). Ainsworth (1978) noted that anxious ambivalent attachment is associated with separation distress that ultimately reduces independent exploration. Ainsworth (1979), went on to note that avoidant attachment orientations have a tendency to avoid curiosity, inquisitiveness, and exploration (Ainsworth et al., 1978). A body of research that has demonstrated insecure attachment styles are negatively associated with exploration supports these findings (e.g: Ainsworth et al., 1978; Cassidy & Berlin, 1994; Cassidy, Jones, & Shaver, 2013; Fraley & Spieker, 2003; Sroufe et al., 1999; Sroufe & Waters, 1977).

2.11.1.2 Self Efficacy

A sizeable body of research demonstrates that attachment styles are related to positive self-concepts such as self-efficacy (e.g.: Ainsworth, 1979; Bartholomew & Horowitz, 1991; Bowlby, 1988; Breatherton, 1992; Hazen & Shaver, 1994). Attachment is conceptually linked with self-efficacy through IWM's of self and others. IWM's that are structured around a positive view of self (i.e.: Secure, Avoidant) are generally associated with greater levels of independence and a more positive evaluation of ones aptitude to complete tasks (Feeney & Collins, 2015; Feeney, 2000; Wright & Perrone, 2008). As such, securely attached individuals generally have elevated feelings of control over life events and an orientation that would suggest that they are capable of coping with problems as they emerge (Bartholomew & Horowitz, 1991; Bartholomew & Moretti, 2002; Bowlby, 1988a; Cassidy & Berlin, 1994). Conversely, IMW's associated with a

negative view of self (i.e.: Preoccupied, Fearful) are linked with elevated rates of dependency and increased levels of helplessness (Bergin & Bergin, 2009; Finnegan et al., 1996). These individuals typically show less belief in their ability to complete tasks and are in general more apprehensive about the future (Stevenson-Hinde & Verschueren, 2002).

Thus, secure attachment orientations are linked with enhanced efficacy, and insecure attachment styles are inversely connected to efficacy (Wright & Masten, 2005; Wright & Perrone, 2008). To this end, Hazan and Shaver (1994) note that securely attached individuals report higher levels of self-efficacy across various domains, when compared to insecurely attached individuals. This is supported by findings presented by Wei, Russell, and Zakalik (2005), who conducted a longitude study looking at self-efficacy as a mediator between feelings of loneliness and depression. Similar findings have also been presented by Mallinckrodt and Wei (2005), who examined the role of attachment and social support in relation to psychological distress.

Amiri, Banijamali, Ahadi, and Ahadi (2013) looked at the link between attachment styles and the development of self-efficacy in a university age population (i.e.: between the ages of 18 and 21). They found significant differences in the level of self-efficacy of people with safe (i.e.: secure) attachment orientations and those with insecure orientations. People with secure attachment profiles reported significantly higher levels of self-efficacy than other attachment profiles. They also displayed an increased ability to cope with life issues and correspondingly had higher levels of overall

mental health (Amiri et al., 2013). No significant difference with respect to gender and self-efficacy were found in this study (Amiri et al., 2013).

Mallinckrodt (1992) found attachment conceptualized as perceptions of maternal and paternal emotional responsiveness was positively associated with the development of social self-efficacy. A study carried out by Corcoran and Mallinckrodt (2000) found that self-efficacy played a significant role in mediating the relationship between adult attachment styles and various conflict resolution strategies. Furthermore, they noted a connection between attachment and self-efficacy, suggesting that adults with secure attachment orientations have higher levels of self-efficacy and their associated competencies. Conversely individuals with insecure attachment styles have less ability to access and utilize competencies and strategies associated with self-efficacy (Corcoran & Mallinckrodt, 2000). Similar findings have been presented by Tavakoli, Jomehri, and Farrokhi (2014) who examined the role of attachment and self-efficacy in relation to internet addiction. They found that both secure and insecure attachment styles were significantly correlated with social self-efficacy, however, only secure and avoidant attachment styles predicted increased levels of self-efficacy (Tavakoli et al., 2014).

2.11.2 Physical Outcomes

2.11.2.1 Physical Activity

The link between attachment orientations and physical activity is somewhat limited as few studies exist that examine the connection between attachment styles and physical activity outcomes (Ranson & Urichuk, 2008). However, some literature does demonstrate a connection between secure attachment and positive health behaviours

including increased levels of physical activity (Feeney, 2000; Fraley & Shaver, 1997; Maunder & Hunter, 2008). Huntsinger and Luecken (2004) found that young people with secure attachment histories made more positive lifestyle choices, including more exercise, and greater participation in organized recreational activity, when compared with their insecure counterparts.

Secure attachment orientations are affiliated with better social integration and larger social circles (Ainsworth, 1979; Bartholomew & Horowitz, 1991; Bergin & Bergin, 2009). Moreover, the link between social connections and participation in physical activity is well established (e.g., Anderson, Wojcik, Winett, & Williams, 2006; Ayotte, Margrett, & Hicks-Patrick, 2010; Beets, 2006; Rovniak, 1999; Rovniak, Anderson, Winett, & Stephens, 2002; Smith, 2003). The more social connections an individual has the more likely they are to participate in physical activity. This is related to increased amounts of both bridging and bonding social capital that in turn facilitate participation (Button et al., 2013; McNeill et al., 2006). Larger social circles serve as a means of support, and a safe base (Ainsworth et al., 1978; Bretherton, 1992) from which individuals explore and engage. In a similar vein, Weiss and Smith (2002) found social elements (i.e., supportive friendships) are a major determinant of youth participation in sport. Social connections, companionship, intimacy, and emotional support were all factors that impact youth involvement (Weiss & Smith, 2002). Similar findings related to physical activity and social circles have been presented by Smith, Ullrich-French, Walker, and Hurley (2006). Much physical activity is inherently social and therefore having a generally social orientation will aid in this involvement.

Contrariwise, individuals with insecure attachments and who are correspondingly less social will be less likely to participate in physical activity. A body of evidence now exists that indicates that insecure attachment orientations in adolescence is related to negative health behaviours, including more sedentary behaviour (Cassidy et al., 2013). Weiss and Smith (2002) found that insecurely attached children are less likely to develop friendships within a sporting context and that this lack of friendship in turn deters continued participation. Attachment influences exploration and independence, both of which have been linked with willingness and interest to participate in physical activity (Trost et al., 2002). Accordingly, persons with insecure attachment orientations who have correspondingly low levels of exploration and independence are less likely to engage in physical activity.

2.11.2.2 Environmental Engagement

As noted above the concept of environmental engagement encompasses pro-environmental behaviours (i.e.: stewardship and conservation), and participation in outdoor activities. While no literature could be located that draws specific links between attachment styles and appreciation for or engagement with nature some indirect evidence does suggest a link between attachment and environmental engagement. Hill (2003) found that unconstrained childhood exploration of nature (i.e.: the ability to explore nature freely) was associated with pro-environmental attitudes and behaviours (i.e.: a greater appreciation of nature). It can thus be inferred that children with secure attachments who are correspondingly more likely to explore and engage with their environment will be more likely to engage with nature. Engagement with nature (i.e.,

exposure) has in turn been associated with an expanded sense of self and greater valuing of non-human species, and pro-environment conduct (i.e., recycling, conservation) (Gosling & Williams, 2010; Hinds & Sparks, 2008).

2.11.3 Social Outcomes

2.11.3.1 Friendship and Peer Relations

Attachment orientations are the foundations of social-emotional competence. Secure attachment is associated with higher level of social-emotional competence and adaptability when compared to insecure forms of attachment (Suess et al., 1992; Zimmermann, 2004). This in turn has been found to influence the development and maintenance of friendships and peer relations over the life course. Indeed a number of studies using both self reported and parent reported measures show an association between attachment styles and measures of friendship and peer relations in camp age children (Lieberman et al., 1999; Suess et al., 1992; Zimmermann, 2004).

Utilizing a mixed methods approach Zimmermann (2004) examined the association of attachment styles and representations of friendship and peer relations with a sample of adolescents. Zimmermann (2004) found that adolescents with a secure attachment style reported more emotionally close friendships, and more fully developed and elaborate friendship concepts in comparison to adolescents with insecure attachment orientations. Thus, secure individuals were found to have, a greater number, and more meaningful friendships. For securely attached adolescents friends often served as a source of social support (i.e.: a secure base), for felt security.

Contrariwise, adolescents with insecure attachment styles were found to have difficulty with emotional regulation, which in turn had a negative impact on friendships (Suess et al., 1992). Moreover, avoidant children, who inherently do not value close relationships and apprise themselves as being emotionally independent had poorly defined friendship concepts (Zimmermann, 2004). This was associated with difficulty in establishing and maintaining lasting friendships. Because of an inherent predilection to view others as untrustworthy (based on IWM's based on rejection and lack of emotional support) avoidant individuals will often shy away from social contact and making fiends as a defense mechanism in order to avoid being emotionally vulnerable and potentially getting hurt (Fraley, 2002; Ranson & Urichuk, 2008; Sroufe, 2005; Sroufe et al., 1999).

In addition to the establishment of friendships attachment profiles also have an impact on peer relations. This is a product of differing levels of emotional regulation and interpersonal skills associated with different attachment orientations (Brennan et al., 1991; Hazan & Shaver, 1994; Zimmermann, 2004). Distinctive attachment styles will have differing effects on friendships and the maintenance of relationships. In general, securely attached individuals have a positive orientation towards people. They have an openness and willingness in new relationships that allows for the development of meaningful bonds (Stevenson-Hinde & Verschueren, 2002). This open orientation allows for the transition to peers (i.e.: friends) as AF's and thus allows for the emergence of felt security and in turn increased peer relations and belonging. Avoidant individuals will isolate themselves from others as a defense mechanism against getting hurt (Main & Cassidy, 1988). They do not value close relationships and are often emotionally distant

having poorly defined friendship concepts, and are frequently distrusting of others, and as such typically have poor peer relations (Bergin & Bergin, 2009; Zimmermann, 2004). Anxious ambivalent individuals tend to have a difficult time with emotional regulation (Hazan & Shaver, 1994) and become over dependent (i.e.: too clingy) on friends which in many situations may drive them away (Zimmermann, 2004). Individuals with a fearful disorganized attachment style tend to have intense feelings of unworthiness and negative expectations of others, leading them to actively avoid contact and often isolate themselves (Hazan & Shaver, 1994; Main et al., 1985; Main & Cassidy, 1988).

A longitudinal study by Bohlin, Hagekull, and Rydell (2000), showed that securely attached infants were overall more socially active, where more popular, and in general had a more positive outlook on life. The children in this study were noted to display less social anxiety, and maladaptive behaviour than insecure children (Bohlin et al., 2000). A positive correlation was also found between children with secure attachment styles and higher levels of self esteem which has also been found to be positively related to peer relations (Jacobsen & Hofmann, 1997; Verschueren & Marcoen, 1999). Zimmermann (2004), found that securely attached adolescents were generally integrated into larger peer group (i.e.: have a larger number of friends), and display increased ability for emotional regulation and lower level of anxiety during conflict, when compared to insecurely attached individuals, all of which are factors contribute to more effective peer relations. A number of studies have demonstrated that secure infant-parent relationships was linked with increased levels of social competence, lower levels of aggressiveness, and more cooperative friendships (Shulman et al., 1994).

Conversely, insecure attachment styles (i.e.: avoidant, resistant, disorganized) have been related to significant social withdrawal and isolation in childhood and adolescences (Gerhold et al., 2002). Evidence implies that children with insecure attachment styles show higher levels of dependence, non-compliance with authority and social norms, increased levels of hostility, impulsivity and more frequent displays of aggression (Cohn, 1990; Erickson et al., 1985; Schmidt et al., 2002; Wartner et al., 1994). Suess et al. (1992) found that insecure attachment was associated with more hostile interpretations of conflict situations in young children. Moreover this was found to impede friendship concepts and peer relations during adolescents (Wartner et al., 1994; Zimmermann, 2004).

2.12 Attachment and the Summer Camp Experience

The literature presented above demonstrates the connection between attachment orientations and various developmental outcomes associated with summer camp. Attachment styles influence how we engage in social activity (Ainsworth, 1979; Ainsworth et al., 1978; Bretherton, 1992). When secure children arrive at camp they will be more likely to leverage social connections and accumulate associated benefits. Contrariwise, insecure attachment may impede an individual's ability to utilize social supports and limit the strength and utility of connections at camp. Insecure attachment may hinder their ability to develop supportive relationships, thus negatively impacting camp outcomes. Or perhaps camp can provide a setting in which insecure individuals can develop secure attachment relationships which in turn may support social development. It should be noted that some traits associated with insecure attachment,

particularly avoidant attachment styles, might actually be beneficial. Some insecure attachment styles precipitate increased levels of independence, which in turn may aid the development of camp outcomes such as exploration and leadership (Feeney, 2000; Fraley, 2002; Fraley & Spieker, 2003).

Attachment can also be conceptually linked with a sense of connectedness to camp. Connectedness to camp can be broadly conceptualized as belonging and is associated with strong social bonds, peer relations, and interpersonal relationships (both on an individual and collective level) (Sibthorp et al., 2010). Attachment is a relational concept and as such has an impact on effective social functioning. "Childhood security (i.e., attachment) predicts later social competence, internalizing and externalizing behaviours, and emotional regulation" (Thompson, 2008, p. 292). Secure attachment enables psychological adaptation in the context of environmental adversity, whereas insecure attachment functions inversely (Friedman & Boyle, 2008). Securely attached individuals are more socially competent, and more easily acclimatize to varied social environments. Thus, they have higher levels of social comfort, more easily make and maintain friendships, and generally have better functioning within peer groups (Brennan et al., 1991; Hazan & Shaver, 1994; Sroufe, 2005). Social bonding theory suggest that individual bonds/connections (i.e.: friendships, social connections) may also serve to attach an individual to the setting in which those connections are made, and in doing so encourage that person to adopt the norms and values of the setting as a whole (Hirschi, 1969). When people feel a sense of connectedness the presence of effective attachment

relationships can be inferred. That is the individuals will have AF's on which they can rely for proximate security allowing them to develop a sense of connection.

Attachment is linked with exploration in a number of ways. Exploration is associated with effective utilization of attachment systems (Bowlby, 1969, 1973, 1988a; Bretherton, 1992; Hazan et al., 1991). Wherein, individuals will use attachment relationships as a source of felt security allowing them to build and exploit social supports that enable exploration (Bowlby, 1988a). Conversely insecure individuals who do not use attachment systems in the same fashion will not be as likely to engage in exploration. IWM's or self and others influence how individuals engage in social activity and influence attachment systems that enable exploration in social contexts. The presence of felt security engenders a desire for exploration and that can be viewed as the operational component of attachment.

Developing a sense of connectedness to camp has long been a focus of organized camp programs. Camp experiences are generally longer than other youth development contexts. These sustained experiences have a direction (i.e., are purposely planned), intensity, and breath that may be particularly influential in the development of outcomes (Garst et al., 2011). Garst et al. (2011), notes that group living (common in many camp settings) fosters development as campers experience "just about all aspects of their lives—eating, sleeping, playing, and working—in social groups" (p.77). This enables integration into the larger camp community and fosters connectedness to camp. In exploring measures that asses outcomes of camp Sibthorp et al. (2010), found that connectedness was related to a broad assortment of developmental outcomes. Moreover,

Sibthorp et al. (2010) go on to state that connectedness "may be a key mechanism driving development and personal growth among campers" (p.8). Camp is a social environment and is directly associated with developmental outcomes (Glover et al., 2013; Glover et al., 2011; Henderson, 2007; Macnaughton et al., 2019). As such, many camp outcomes can be directly linked to effective social interaction (i.e., group building, connectedness, etc.) (Allen et al., 2011; American Camp Association, 2005; Briery & Rabian, 1999; Henderson, 2007; Sibthorp et al., 2010). This social interaction serves to engender a sense of belonging and connectedness both within the camp setting and to camp itself. In fact, many of the benefits derived from camp rely heavily on supportive relationships both among campers and between campers and staff (Henderson, 2007; Henderson, Whitaker, et al., 2007; Thurber et al., 2007). The establishment of such relationships is often dependent on effective social emotional functioning (i.e.: attachment).

In addition to serving as a buffer against negative influences, connectedness is also essential to the optimal development of young people (Lerner et al., 2005; Sibthorp et al., 2010). Specifically, connections to camp have been associated with the emergence of exploration. The living arrangements at camp foster a sense of connectedness (Fiske, 2002) wherein campers become increasingly invested and committed to "their" cabin or group. Camp programs frequently work to promote sense of connection by developing a unique ethos. This is exemplified in various camp strategies such as similar clothing (i.e., uniforms, or cabin colors) creative group names, symbols/logos, and language (slogans, songs) (Garst et al., 2011). Connection to camp is further established through the perpetuation of camp norms, traditions, and rituals (Garst et al., 2011; Hough & Browne,

2009). All of which are frequently organized around bringing campers together and providing opportunities for social interaction. The social connections established at camp then serve to act as the basis for exploration. As noted above the friendships established at camp can serve to provide individuals with proximate security and thus the resources to be able to strike out and engage in exploratory behaviours.

Exploration can be seen as an indicator of immersion in the camp experience. Exploration allows individuals to push their personal boundaries, and grow and develop in a variety of domains (cognitive, physical, social, etc.). Camp programs are frequently structured around encouraging exploration through the use of novel and challenging activities (Fine, 2005; Garst & Bruce, 2003; Henderson, Whitaker, et al., 2007; Seal & Seal, 2011; Thurber et al., 2007). Moreover, engaging in exploration in a safe and secure environment (such as summer camp) is associated with facilitating developmental outcomes (e.g.: American Camp Association, 2005, 2006; Briery & Rabian, 1999; Collins, 1996; Glover et al., 2011; Glover et al., 2013; Thurber et al., 2007).

As evidence by the literature presented above attachment styles have been linked with developmental outcomes associated with summer camp participation. A sense of exploration that emerges as a result of secure relationships is the operational element within attachment that helps to produce outcomes. Within the camp setting social connections and a sense of belonging or connectedness to the camp environment seem to be instrumental in the production of camp outcomes. A sense of connectedness to camp helps to facilitate a sense of exploration. Thus, it can be inferred that the relationship of attachment orientations to developmental outcomes at camp may in some way be

mediated by both connectedness/belonging to camp and exploration. Attachment orientations may have an indirect effect on the development of outcomes at camp through connectedness to camp and exploration.

2.13 Rationale for the Study

With increased interest in positive youth development within camp, more research on outcomes and factors influencing camp outcomes is necessary (Garst et al., 2011, 2016; Henderson, 2018; Thurber et al., 2007). In investigating the role of attachment in the emergence of outcomes at camp, this study addresses a gap in the camp literature, which in turn will help support understandings of both attachment theory and the summer camp experience. Camp can be a transformative experience for youth, separation from a primary AF and the distinctive social setting in which camp takes place provides youth with unique opportunities to grow and develop. As outlined above, the general association is that secure attachment orientations will lead to greater gains in personal, physical and social outcomes as a result of participation in camp. Moreover, there is an acknowledgment that our understanding of how attachment functions in camp age children (i.e., during adolescences) is limited (Hazan & Shaver, 1994; Sroufe, 2005). Thus examining attachment within a camp context provides a unique opportunity for attachment research.

The research delineated herein will contribute to a body of knowledge related to how developmental outcomes are achieved and possibly help explain some of the factors that influence them. As noted by Henderson et al. (2007), "one of the potential contributions that camp researchers can make is in refining the meanings of outcomes as

well as determining how outcomes and camp operations are integrally related" (p. 764). A greater understanding of extraneous factors that influence the camp experience can have practical implications for programmers and camp planners. Positive youth development outcomes do not "just happen" because children are at camp, they require a level of intentionality and planning to be successfully achieved (Bialeschki et al., 2007). Exploring how attachment styles impact outcomes may assist camp programmers and administrators in being more intentional in their implementation of camp programs, and ultimately improve existing camp programs.

2.14 Research Questions

It is clear that attachment orientations play a significant role in the development of outcomes at camp. As such, attachment may be seen as an antecedent of these outcomes. Understanding how attachment influences outcomes can lead to the development of more purposeful and useful camp programing. Camps designed to address different patterns of attachment and facilitate the development of supportive relationships may in turn lead to more positive outcomes. Moreover, outcomes derived in summer camp can have far reaching implications as they may impact physical, social, and cognitive functioning, as well as adaptation later in life.

Based on existing understandings of how attachment functions in relation to development it is expected that the concepts of anxiety and avoidance as delineated by Brennan et al. (1998), will have an undesirable impact on outcomes associated with summer camp participation. The direct effects of anxiety and avoidance on each of the outcomes explored herein are projected to be negative. However, the interaction effects

Table 3. Summary of hypotheses

	Hypothesis	Personal		Physical		Social
		Self Efficacy	Exploration	Physical Activity	Environmental Engagement	Friendship & Peer Relations
Attachment Constructs	1. Avoidance	–	–	–	–	–
	2. Anxiety	–	–	–	–	–
	3. The presence of a significant interaction effect between the attachment constructs of anxiety and avoidance					
Attachment Styles	4. Secure	+	+	+	+	+
	5. Fearful	–	–	–	–	–
	6. Dismissive	+	+	–	–	–
	7. Preoccupied	–	–	–	–	–
	8. The relationship of attachment orientations to camp outcomes will be serially mediated via connectedness to camp through exploration					

Note: – denotes an expected negative association
+ denotes an expected positive association

of anxiety and avoidance which pattern the various attachment orientations may present more complex and interesting findings as it is predicted that various attachment styles will have a differential impact on the outcomes accrued from summer camp (see Table 3 above for a summary of hypotheses). This study made use of secondary data to examine the relationships between attachment orientations (i.e., attachment styles), and outcomes commonly associated with participation in summer camp. To determine the association of attachment styles to outcomes of the summer camp experience the following questions will be answered:

2.14.1 Research Question 1

Are the attachment constructs of anxiety and avoidance related to the emergence of developmental outcomes at camp including: exploration, self-efficacy, environmental engagement, physical activity, and friendship/peer relations?

2.14.1.1 Hypothesis 1

It is hypothesized that there will be a significant and negative association between the attachment construct of avoidance and the developmental outcomes of exploration, self-efficacy, environmental engagement, physical activity, and friendship and peer relations. Individuals with high levels of avoidance will not see increases in personal, physical, or social developmental outcomes.

2.14.1.2 Hypothesis 2

It is hypothesized that there will be a significant and negative association between the attachment construct of anxiety and personal, physical, and social developmental outcomes. Individuals with high levels of anxiety will not develop

an increased sense of exploration, self-efficacy, environmental engagement, physical activity, or friendship and peer relations.

2.14.2 Research Question 2

As noted above various attachment styles will influence how children experience summer camp (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1994). While it is anticipated that all participants would see some increase in the developmental outcomes being explored as a result of attending summer camp, those with secure attachment are anticipated to accrue greater increases in each of the developmental areas than campers with insecure forms (i.e., fearful, dismissive, preoccupied). The exception to this being dismissive attachment which because of elevated levels of counter dependency (Bartholomew, 1990; Finnegan et al., 1996) may see increases in some of the developmental outcomes (i.e., self efficacy and exploration) explored herein. As such, this research will seek to explore the question: do varying levels of the attachment constructs of anxiety and avoidance (i.e.: attachment styles) influence the development of personal, physical, and social outcomes at camp including: exploration, self-efficacy, environmental engagement, physical activity, and friendship and peer relations?

2.14.2.1 Hypothesis 3

It is hypothesized that there will be a significant interaction effect between the anxious and avoidant attachment constructs that predicts developmental outcomes of summer camp.

2.14.2.2 Hypothesis 4

It is hypothesized that securely attached individuals (i.e., those with low levels of avoidance and low levels of anxiety) will experience greater gains in personal, physical, and social outcomes as a result of involvement in a summer camp program when compared individuals in other groups. That is to say, securely attached individuals will garner the most benefits from camp participation.

2.14.2.3 Hypothesis 5

It is hypothesized that fearfully attached individuals (i.e., high levels of avoidance, high levels of anxiety) will experience significantly lower levels of change in the developmental outcome areas (personal, physical, social) when compared to individuals in other groups. They will have a less positive experience at camp and thus experience less developmental gains.

2.14.2.4 Hypothesis 6

It is hypothesized that dismissive avoidant individuals (i.e., those with high levels of avoidance and low levels of anxiety) will see increases in the personal developmental outcomes (i.e.: exploration and self-efficacy), however, these increases will be less than those observed in securely attached individuals. It is hypothesized that the presence of counter dependency will provide these individuals with an independent orientation, which will aid in the emergence of these outcomes.

2.14.2.1 Hypothesis 7

It is hypothesized that preoccupied attachment (i.e., low levels of avoidance and high levels of anxiety) will be associated with lower levels of all developmental outcomes explored when compared to the secure and dismissive avoidant groups. However, it is hypothesized that preoccupied individuals will have higher levels than those in the fearful attached group.

2.14.3 Research Question 3

A body of research on PYD demonstrates the significant role that supportive relationships have in relation to outcomes (Benson, 2003), connections to camp can be broadly though of as a product of positive relationships that emerge during the camp experience (Sibthorp et al., 2010). Exploration is the active component of attachment that enables the development of outcomes (Bretherton, 1992; Hazan et al., 1991). Within this content this research sought to explore the question: what role do connectedness to camp and exploration have in the relationship between attachment orientations and outcomes of summer camp?

2.14.3.1 Hypothesis 8

It is hypothesized that connectedness to camp and exploration will play a mediating role in the relationship between attachment orientations and developmental outcomes at camp. Specifically, it is hypothesized that the relationship of attachment orientations to camp outcomes will be serially mediated via connectedness to camp through exploration.

Perhaps best of all, camps offer kids a chance to feel like they belong. All those goofy chants and teams songs, the sense of common purpose and attachment to the identity that camp promotes go a long way to offering children a sense of being rooted.

(Dr. Michael Ungar)
Scientific director of CYCC network

Chapter 3
Methods

3.1 Data Source

This study made use of data from phase III of the Canadian Summer Camp Research Project (CSCRP III) (Glover et al., 2013), to examine the associations of attachment styles on developmental outcomes achieved at camp. The purpose of the CSCRP was to explore outcomes of summer camp within a Canadian context and was a joint venture between the Canadian Camping Association (CCA) and the University of Waterloo (Glover et al., 2011). It was made possible by support from the CCA, the University of Waterloo/Social Sciences and Humanities Research Council of Canada seed grant program, and the University of Waterloo Robert Harding Humanities and Social Science Endowment Fund (Glover et al., 2013). Utilizing a mixed methods approach the CSCRP examined various outcomes commonly associated with participation in camp over 3 distinct phases. Phase I of the CSCRP involved interviewing 65 camp directors and administrators from across the country to explore potential outcomes of camp and to determine which outcome measures to address in the following phases. Phase II utilized convergent interpretation of camp counselors

observations of some 1288 campers pre and post camp attitudes and behaviours to determine if involvement in summer camp resulted in the development of any outcomes.

Finally, phase III (on which this current research is based) involved a convergent assessment of open ended and close ended questions and survey responses completed by the parents of 1405 campers that attended summer camp programs from across Canada. The purpose of phase III was to determine whether skills developed at camp are transferable to other contexts and environments (i.e.: home, school, other community contexts). The impacts of camp involvement on family life, school, and community life were assessed. Background information related to the campers experiences with camp as well as demographic information and family information was also collected (Glover et al., 2013). This data was gathered to determine factors that may potentially lead to variance in the outcomes noted. All of the information was collected through a mixed open and closed ended survey design that was delivered to parents of campers after the camp had taken place[2]. The CSCRP III received clearance from the Office of Research Ethics at the University of Waterloo (ORE#19961).

3.2 Sample

Parents of campers who participated in summer camp program from across Canada were the target population for the CSCRP III. In total the CSCRP III sample included 1405 parents representing camps from all provinces across the country. The mean income of the households represented in this data set is $110,000 to $119,000. The

[2] While it was suggested that a parent fill out the survey it is unknown which parent or both parents may have completed it.

majority of households surveyed included two parents living in the home (80%). The campers represented in the CSCRP III ranged in age from 4 to 18 years old with more campers in the upper age ranges. The types of camp represented in the data are: residential (49%), day camps (21%), religiously affiliated camps (16%), specialty camps (11%), and special needs (3%) (Glover et al., 2013).

3.2.1 Residential Camps

For the purpose of this study the sample was delimited only residential summer camps. This was done as it was proposed that attachment related distress would be greater in residential camp settings then in day camp settings due to separation from a primary AF. Moreover, it was proposed that in a residential camp setting the use of alternative social supports to alleviate attachment related distress would be more likely to occur because of the length of time separated from an AF and the unique social environment created in residential camps (i.e.: living arrangements, activities, etc.). This is not to suggest that such environment can not be facilitated in day camp setting but for the purpose of this research residential camp remained the primary focus. Within this study residential camp referred to any camp program in which the camper did not return home to their primary residence at the end of each day. In the CSRPR III dataset that included camps identified as residential, religiously affiliated, specialty, and special needs.

3.2.2 Data Cleaning

The CSCRP III dataset contained a significant amount of missing data. For example, a large number of participants did not identify the camp that their child

attended, if the camp could not be determined they were excluded from inclusion in this study. Further, a number of participants did not complete the attachment related questions on the questionnaire, or only completed the secure attachment related sections. As all of the questions in the relationship questionnaire had to be completed in order to derive an attachment profile for the camper, individuals who did not complete all of these sections were screened out of the data analysis. After data cleaning was complete this resulted in a useable sample size of 785 individuals (n=785).

3.3 Measures

3.3.1 Control Measures

Age was coded in the CSCRP III as a numerical value that represents the child's actual age (e.g.: 4 years old = 4, 5 years old = 5, 6 years old =6, and so on). The *sex* of the campers was denoted by female = 1, male = 0. *Returning camper* was coded as yes = 1, n = 0. *Household income* from which the campers came was measured in intervals of $10 000, with higher number corresponding to higher levels of household income (e.g.: Under $10 000 = 1, $10 000 to $19 999 = 3, $20 000 to $30 000 = 3, etc.). Dosage, which relates to the amount of time campers spend at camp or engaged in camp, related was a composite measure of two questions related to amount of time involved in camp programing. Sample questions include: *"how many sessions did your child attended at this camp this past summer?"* and *"how long was the session that your child attended at this camp? (In weeks)"* (Canadian Camping Association, 2011). Items were rated using a 6-point Likert-scale with responses running from 1 = very strongly disagree to 6 = very

strongly agree and recoded when necessary so that higher values indicated greater endorsement of that construct.

3.3.2 Attachment Style Measure

The CSCRP III survey used an adaptation of the *Relationship Questionnaire* developed by Bartholomew and Horowitz (1991) to assess attachment. The *Relationship Questionnaire* presents four short paragraphs, each describing one of the four attachment prototypes (i.e., secure, preoccupied, fearful, and dismissing) and assess agreement with the fit of that attachment style to the individual. For example, "My child is comfortable without close emotional relationships. It is very important to my child to feel independent and self-sufficient, and my child prefers not to depend on others or have others depend on him/her" (Canadian Camping Association, 2011a). Agreement with each of these statements is measured on a six-point likert-scale ranging from 1 = very strongly disagree to 6 = very strongly agree and recoded when necessary so that higher values indicated greater endorsement of that construct. Bartholomew and Horowitz (1991), state that this tool can also be used as both a self assessment and used to evaluate others, thus making its use appropriate for the CSCRP III as it was the parents of campers who rated each individual camper.

Table 4. Variable Construction

Variable	Survey Item
Secure Attachment	It is relatively easy for my child to become emotionally close to others. My child is comfortable depending on others and having others depend on him/her.
Dismissing-Avoidant Attachment	My child is comfortable without close emotional relationships. It is very important to my child to feel independent and self-sufficient, and my child prefers not to depend on others or have others depend on him/her.
Preoccupied Attachment	My child wants to be completely emotionally intimate with others, but he/she often finds that other are reluctant to get as close as he/she would like. My child is uncomfortable being without close relationships, but he/she sometimes worries that others do not value him/her as much as he/she values them.
Fearful Attachment	My child is somewhat uncomfortable getting close to others. He/she wants emotionally close relationships, but finds it difficult to trust others completely, or to depend on them. My child sometimes worries that he/she will be hurt if he/she allows him/herself to become close to others.
Exploration	• My child expresses more interest in trying new things since returning home from camp
Self-efficacy	• My child demonstrates increased self-confidence when facing challenges since returning home from camp • My child is able to do more things on his/her own since returning from camp • My child is better able to deal with challenges on his/her own since returning from camp
Environmental Engagement	• My child has demonstrated more interest in outdoor activities and pursuits since leaving camp • My child has demonstrated more environmentally friendly behaviours since leaving camp
Physical Activity	• My child participates in more physically active activities at home since returning from camp • My child participates in more physically active activities at school since returning from camp • My child participates in more physically active extra curricular activities since returning from camp
Friendship/Peer Relations	• My child has stayed in touch with camp friends • My child has stayed in touch with staff members from camp
Connection to Camp	• When my child talks about camp, it is clear he/she feels a sense of membership or belonging to the camp's broader community

Note: Items for all measures were rated on a continues scale from 1 = very strongly disagree to 6 = very strongly agree

The standard *Relationship Questionnaire* attachment style output can be converted to the models of self and models of others (i.e., anxiety vs. avoidance). The *anxiety* construct relates positively to preoccupied/anxious and fearful attachment and negatively to secure and dismissing/avoidant. The *avoidance* construct relates positively to dismissing/avoidant and fearful attachment and negatively to secure and preoccupied/anxious attachment (Bartholomew, 2002; Bartholomew & Moretti, 2002; Brennan et al., 1998; Griffin & Bartholomew, 1994). To compute scores for the *anxiety* construct, the sum of each individual's ratings on the preoccupied/anxious and fearful items was subtracted from the sum of their ratings on the secure and dismissing/avoidant items (i.e.: (Preoccupied + Fearful) – (Secure + Dismissing)). To calculate scores for the *avoidance* dimension, the sum of each individual's ratings on dismissing/avoidant and fearful items was subtracted from the sum of their scores on the secure and preoccupied/anxious items (i.e.: (Dismissing + Fearful) – (Secure + Preoccupied)). This resulted in the creation of two variables (anxiety and avoidance) that represent attachment as presented in the CSCRP III. Breaking attachment down in this fashion allows for a more in-depth analysis of which of these constructs has the greatest impact on the emergence of outcomes in a camp setting.

3.4 Outcome Variables

The outcome variables used in this study were assessed based on parental perceptions of change in their children from the beginning of camp until the end. The strength of agreement will be used as a continuous measure of each outcome described below. A single measure or an average value of combined measures will be used for

each variable in this study. Outcomes evaluated in this study include: personal outcomes, consisting of exploration, and self-efficacy; physical outcomes including environmental engagement, and physical activity, and social outcomes including friendship and peer relations.

3.4.1 Personal Outcomes

3.4.1.1 Exploration

The *exploration* variable relates to the amount and type of exploration that children engage in while at camp and their proclivity for exploration when they return home. It is associated with a camper's enthusiasm to participate in a variety of novel activities and settings (i.e., trying new things and engaging in new activities). It was be derived form the survey question: *"My child expresses more interest in trying new things since returning home from camp"* (Canadian Camping Association, 2011). Items were rated using a 6-point Likert-scale with responses running from 1 = very strongly disagree to 6 = very strongly agree and recoded when necessary so that higher values indicated greater endorsement of that construct.

3.4.1.2 Self-Efficacy

The *self-efficacy* variable relates higher levels of self-confidence and a belief in ones ability to complete a given task. It was derived from the mean ratings of three questions from the self-confidence and personal development measures in the CSCRP III survey. The questions related to self-efficacy include: *"my child demonstrates increased self-confidence when facing challenges since returning home from camp," my child: "... is able to do more things on his/her own since returning from camp,"* and *"... is better*

able to deal with challenges on his/her own since returning from camp" (Canadian Camping Association, 2011a). Items were rated using a 6-point Likert-scale with responses running from 1 = very strongly disagree to 6 = very strongly agree and recoded when necessary so that higher values indicated greater endorsement of that construct (α = .92).

3.4.2 Physical Outcomes

3.4.2.1 Environmental Engagement

The *environmental engagement* construct relates to a campers engagement with nature and adherence to sound environmental practices and principles. It was measured by assessing the mean scores for two questions contained within the environmental awareness measures of the CSCRP III (Glover et al., 2013) survey. Questions utilized in this measure include: *my child: "... has demonstrated more interest in outdoor activities and pursuits since leaving camp,"* and *"... has demonstrated more environmentally friendly behaviours since leaving camp"* (Canadian Camping Association, 2011a). Items were rated using a 6-point Likert-scale with responses running from 1 = very strongly disagree to 6 = very strongly agree and recoded when necessary so that higher values indicated greater endorsement of that construct (α = .84).

3.4.2.2 Physical Activity

This measure relates to the level of participation in physically active leisure. It is a composite measure of the mean scores for all questions included in the physical activity section of the CSCRP III survey (Glover et al., 2013). Questions used in this variable include: *my child participates in more physically active: "... activities at home since*

returning from camp," "... activities at school since returning from camp," and *"... extra curricular activities since returning from camp"* (Canadian Camping Association, 2011a). Items were rated using a 6-point Likert-scale with responses running from 1 = very strongly disagree to 6 = very strongly agree and recoded when necessary so that higher values indicated greater endorsement of that construct (α = .95).

3.4.3 Social Outcomes

3.4.3.1 Friendship and Peer Relations

This variable relates to the establishment and maintenance of friendships as a direct result of camp participation. It was measured using two distinct variables from the social connections portion of the CSCRP III survey (Glover et al., 2013). Questions used in this variable include: "*my child has stayed in touch with camp friends,"* and *"my child has stayed in touch with staff members from camp*" (Canadian Camping Association, 2011a). Items were rated using a 6-point Likert-scale with responses running from 1 = very strongly disagree to 6 = very strongly agree and recoded when necessary so that higher values indicated greater endorsement of that construct (α = .72).

3.4.4 Connection to Camp

The *connection to camp* construct relates to the significant social relationships or connections that children establish during their time at camp as well as a sense of belonging to the overall camp community. This variable was derived from the survey question: *"when my child talks about camp, it is clear he/she feels a sense of membership or belonging to the camp's broader community"* (Canadian Camping Association, 2011a). Items were rated using a 6-point Likert-scale with responses running from 1 =

very strongly disagree to 6 = very strongly agree and recoded when necessary so that higher values indicated greater endorsement of that construct.

3.5 Analysis Plan

3.5.1 Interaction Analysis

Multiple regression analysis (Stolzenberg, 2004) was used to examine the association of attachment orientations (i.e., attachment styles), to a number of camp outcomes. A series of regression models were constructed to assess the outcomes of: exploration, self-efficacy, environmental engagement, physical activity, and friendship and peer relations. These are common outcomes associated with participation in camp programs (American Camp Association, 2005, 2006; Bialeschki et al., 2007; Henderson, 2007; Henderson, Whitaker, et al., 2007; Thurber et al., 2007) and were measured in the CSCRP III survey (Glover, Chapeskie, Mock, Mannell, & Feldberg, 2011; Glover et al., 2013) and as such were selected for inclusion in this study.

Control variables were entered in the first step of the model and the attachment constructs (i.e., anxiety and avoidance) were included in the second. In the third step a series of interaction terms between the attachments constructs of anxiety and avoidance were included to examine the relationship of these variables to the various outcomes associated with camp. The Hayes' PROCESS macro (Hayes, 2013, 2015) for the Statistical Package for the Social Sciences (SPSS) was used to probe the significant interactions for all models to be tested in this study. The PROCESS macro enables the examination of the simple slopes for the association of each focal variable with each outcome variable at low (M – 1 SD) and high (M + 1 SD) levels of the moderating

variable (Hayes, 2013). As such, it will aid in helping to understand the association of the moderator and focal and outcome variables. Additionally, the simple slopes were calculated and graphed to help interpret the nature of the interaction effect.

3.5.2 Mediation Analysis

In addition to the interaction terms noted above, regression analysis was also used to explore the relationship of attachment orientations and camp outcomes as mediated by connectedness to camp and a sense of exploration. A series of regression models were constructed to examine the relationship of various attachment orientations (i.e.: change in anxiety and avoidance) with camp outcomes including self-efficacy, environmental engagement, physical activity, and friendship and peer relations.

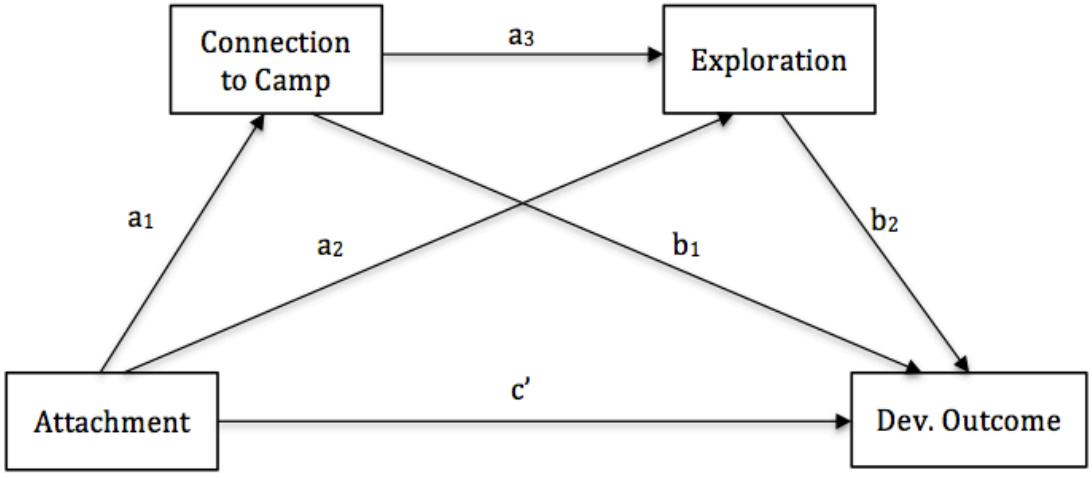

Figure 2. Serial Mediation Model: Association of attachment orientations to developmental outcomes of camp as mediated by connectedness to camp and exploration.

Three models for each dependent variable (i.e.: camp outcome) were constructed. The first model contained the control variables, while the second model contained the attachment constructs . The third model included the control variables, attachment

construct, and the potential mediators. The bootstrapping process as outlined by Preacher and Hayes (2004, 2008), was used to test these multiple mediators. A serial mediation model using the PROCESS macro for SPSS (Hayes, 2013) was calculated. This model is based on a set of three linear regressions (Hayes, 2015). In the first regression analysis the first mediator (i.e.: connectedness to camp) is predicted by the independent variable (i.e.: attachment style). The second regression contains the second mediator as predicted by the independent variable and the first mediator. In the third regression analysis the outcome variable (i.e.: camp outcomes) is predicted by the independent variable, the first mediator, and the second mediator in series (Meule, 2017).

Cause a little bit of summer is what the whole year is all about…
(John Mayer)

Chapter 4
Results

4.1 Descriptive Statistics

The average age of participants in this study was 8.9 years old (SD = 2.56), of which 51.9% were identified as male and 48.1% were identified as female. 86.5% of the research sample was identified as returning campers, that is they had attended some form of summer camp programing previously. The average annual household income for the households from which the sample was derived was $110 000 to $119 000; the average income level was derived from an average household income score of 12.7 (SD = 5.87) which corresponds with this income range. The average amount of time campers spent in camp (i.e.: dosage) was 2.76 (SD = 1.63), indicating that most campers spent an average of 1 week or 7 days at camp.

The average anxiety score for participants in this study was -1.83 (SD = 2.58), this would indicate that campers had a general predilection toward attachment styles associated with low levels of anxiety (i.e.: secure attachment and dismissive avoidant). The anxiety construct was derived from the total sum of associated scores of attachment styles indicative of high levels of anxiety minus the sum of associated scores with attachment styles indicative of low anxiety. The average score for avoidance was -0.93 (SD = 1.88), this would indicate that the participants in this study tended to have attachments styles indicative of low avoidance (i.e.: secure attachment, preoccupied

Table 5. Descriptive Statistic for Sample

Variable	Mean/%	SD
Sex	1.48	0.50
Male	51.9%	—
Female	48.1%	—
Returning Camper	1.14	0.34
Yes	86.5%	—
No	13.5%	—
Age	8.9	2.56
Household Income	12.7	5.87
Dosage	2.76	1.63
Anxiety	-1.83	2.58
Avoidance	-0.93	1.88
Personal Outcomes		
Exploration	3.90	0.91
Self Efficacy	3.85	0.79
Physical Outcomes		
Physical Activity	3.59	0.88
Environmental Engagement	3.75	0.90
Social Outcomes		
Friendship/Peer Relations	3.29	1.21
Connection to Camp	4.77	1.17

anxious). The avoidance construct was resultant from the sum of the associated scores associated with attachment styles indicative of high avoidance minus the sum of associated scores of attachment styles suggestive of low avoidance. Scores for all

dependent, as well as all mediating variables are represented by their respective mean scores (see Table 5). The score for exploration was 3.90 (SD = 0.91); self efficacy 3.85 (SD = 0.79); physical activity 3.59 (SD = 0.88); environmental engagement 3.75 (SD = 0.90); friendship and peer relations 3.29 (SD = 1.21); and connection to camp 4.77 (SD = 1.17).

4.2 Correlational Analysis

Pearson correlation analysis was used in order to determine the relationships between research variables. Table 6 includes the obtained findings and correlational analysis for all variables used within this study. All dependent, independent, and mediating variables (i.e.: anxiety, avoidance, secure child, environmental awareness, physical activity, self efficacy, friendship/peer relations, connections to camp, and exploration) are statistically inter-related with the exception of avoidance and exploration. Values presented in table 6 indicate that a positive significant relationship was found between the constructs of anxiety and avoidance, indicative that higher levels of anxiety tend to be associated with higher levels of avoidance and vice versa.

Both anxiety and avoidance are negatively related to all dependent and mediating variables. Representing that higher levels of avoidance and anxiety are related to lower levels of self efficacy, physical activity, environmental awareness, friendship and peer relations, and connection to camp. With the exception of avoidance and exploration which was not found to be significant in this study. All other dependent and mediating

Table 6. Correlation Matrix

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Anxiety	1											
2. Avoidance	.233**	1										
3. Environmental Engagement	-.099**	-.121**	1									
4. Physical Activity	-.080*	-.090*	.622**	1								
5. Self Efficacy	-.091*	-.113**	.661**	.619**	1							
6. Friendship/Peer Relations	-.121**	-.141*	.294**	.321**	.332**	1						
7. Connections to Camp	-.202**	-.281**	.395**	.346**	.435**	.441**	1					
8. Exploration	-.086*	-.071	.660**	.618**	.788**	.278**	.387**	1				
9. Age of Camper	-.069	.038	.022	.097**	.086*	.328**	.103**	-.004	1			
10. Sex of Camper	.012	-.017	-.028	-.038	-.071	-.136**	-.032	-.041	.048	1		
11. Household Income	-.180**	-.084*	.101**	.074	.102**	.047	.110**	.071	.116**	-.126**	1	
12. Returning Campers	.091*	.021	-.014	-.069	-.096**	-.163**	-.107**	-.055	-.253**	-.027	-.088*	1
13. Dosage	-.143**	-.090*	.164**	.197**	.277**	.239**	.241**	.170**	.164**	-.168**	.391**	-.143**

n = 785; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

variables are positively related to one another.

Age is positively associated with physical activity, self efficacy, friendship and peer relations, and connection to camp. The sex of the camper was found to be negatively related to friendship and peer relations. Household income was significantly associated with all dependent and independent variables with the exception of physical activity, friendship and peer relations, and exploration. Specifically, it was found to have a negative relationship with both anxiety and avoidance and a positive association with the other variables. Returning camper status was positively related to anxiety, and negatively associated with self efficacy, friendship and peer relations, and connection to camp. The amount of time that campers spent in camp (i.e.: dosage) was significantly associated with all dependent and independent variables. In particular it was negatively associated with anxiety and avoidance and positively associated with all other variables.

4.3 Interaction Effects

Table 7 displays the results for the examining the direct effects of the attachment constructs of anxiety and avoidance and an interaction term that is the product of anxiety and avoidance on each of the dependent variables examined within this research.

Table 7. Unstandardized coefficients for linear regression models examining the association of demographics, attachment anxiety and attachment avoidance

Variables	Personal Outcomes				Physical Outcomes				Social Outcomes	
	Exploration		Self Efficacy		Physical Activity		Environmental Engagement		Friendship/ Peer Relations	
	B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Step 1										
Constant	4.03***	.247	3.56***	.211	3.37***	.226	3.55***	.236	1.56***	.299
Age	-.020	.015	.014	.012	.014	.013	-.012	.014	.127***	.018
Sex	-.045	.074	-.041	.063	-.036	.067	-.015	.071	.329***	.090
Household Income	.001	.007	-.002	.006	-.002	.006	.004	.007	-.022*	.008
Returning Camper	-.118	.107	-.099	.090	-.112	.097	.017	.104	-.181	.131
Dosage	.097***	.030	.123***	.021	.096***	.023	.073*	.024	.192***	.031
Adjusted R^2	.028		.073		.040		.019		.173	
Step 2										
Avoidance	-.015	.025	-.034*	.017	-.036*	.018	-.040*	.019	-.078**	.024
Anxiety	-.012	.015	-.007	.013	-.007	.014	-.015	.015	-.028	.018
Adjusted R^2	.027		.077		.043		.027		.186	
Step 3										
Avoidance X Anxiety	-.018*	.008	-.017*	.007	-.009	.007	-.023**	.008	-.006	.009
Adjusted R^2	.034		.093		.048		.046		.193	

Note: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

4.3.1 Personal Outcomes

4.3.1.1 Exploration

In step one of the analysis age, sex, and returning camper status were found to be negatively associated with the development of exploration in a camp setting though not at a statistically significant level. The average household income for the home from which the camper came was also not found to be statistically significant in this model. Dosage was found to be significantly positively associated with exploration in a camp setting. In the second step of the analysis the attachment constructs of avoidance and anxiety were added to the model. Avoidance was found to have a slight negative association with exploration but not at significant levels, similarly anxiety was found to have a negative association with exploration but again not at statistically significant levels. In step three of the model the interaction term between the constructs of avoidance and anxiety was entered and it was found to explain an increase in the variance in self efficacy $\Delta R^2 = .034$, $F\ (8,615) = 3.67$, $p < .001$. However, while the significance of the interaction term shows that the slopes differ from each other upon further examination each slope is not statistically significant. At lower levels of anxiety (approximately 1 SD below the mean) the unstandardized simple slope for participants was $b = .06$ (SE = .02, $p = .791$). At high levels of anxiety (approximately 1 SD above the mean) the unstandardized simple slope for participants was $b = -.03$ (SE = .02, $p = .647$) (see figure 3).

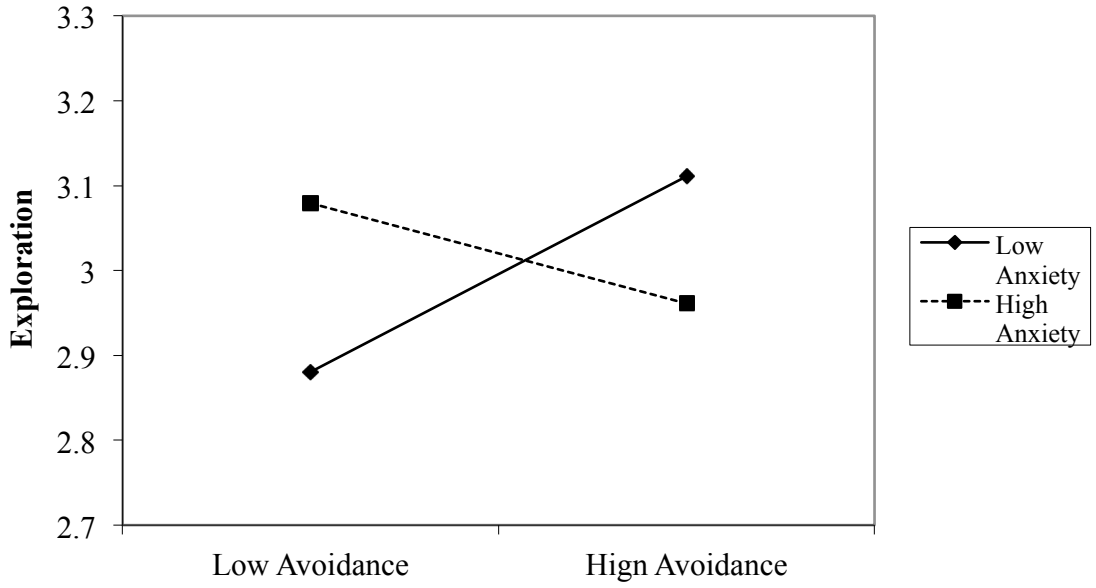

Figure 3. Association of attachment avoidance with exploration as moderated by attachment anxiety. The above figure depicts the interaction effect of avoidance and anxiety when predicating the development of exploration.

Analysis of the nature of the interaction effect suggests that, for predicating the development of exploration in a camp setting, an interaction effect did take place (see table 7). Specifically, the findings are suggestive that avoidance was negatively associated with exploration for individuals with high levels of anxiety (i.e.: had a negative slope). Conversely, avoidance was positively associated with exploration for low anxiety individuals (i.e.: had a positive slope) (see figure 3). This pattern would suggest that for individuals with low levels of anxiety and low levels of avoidance will experience the least development of exploration in a camp setting. Furthermore, it implies that individuals with low levels of anxiety but high levels of avoidance will experience the most potential gain in exploration at camp.

4.3.1.2 Self Efficacy

In step one of the analysis age was positively associated with the development of self efficacy though not at a significant level. The amount of time that a child spent in camp (i.e.: dosage) was found to be significantly positively associated with the development of self efficacy. The identified sex of the child, average household income, and returning camper status were all negatively associated with self efficacy but not at significant levels. The attachment construct of avoidance was added in the second step of the analysis and was found to have a significant negative association with the development of self efficacy in a camp setting. In a similar fashion when added to the model the attachment construct of anxiety was also found to be slightly negatively associated with self efficacy but not at statistically significant levels. In the third step of the analysis the interaction term between the attachment constructs of avoidance and anxiety was entered and it explained a significant increase in the variance in self efficacy $\Delta R^2 = .093$, $F\,(8,616) = 8.92$, $p < .001$. At lower levels of anxiety (approximately 1 SD below the mean) the unstandardized simple slope for participants was $b = .04$ (SE = .02, $p = .683$). At higher levels of anxiety (approximately 1 SD above the mean) the unstandardized simple slope for participants was $b = -.05$ (SE = .02, $p = .406$) (see figure 4).

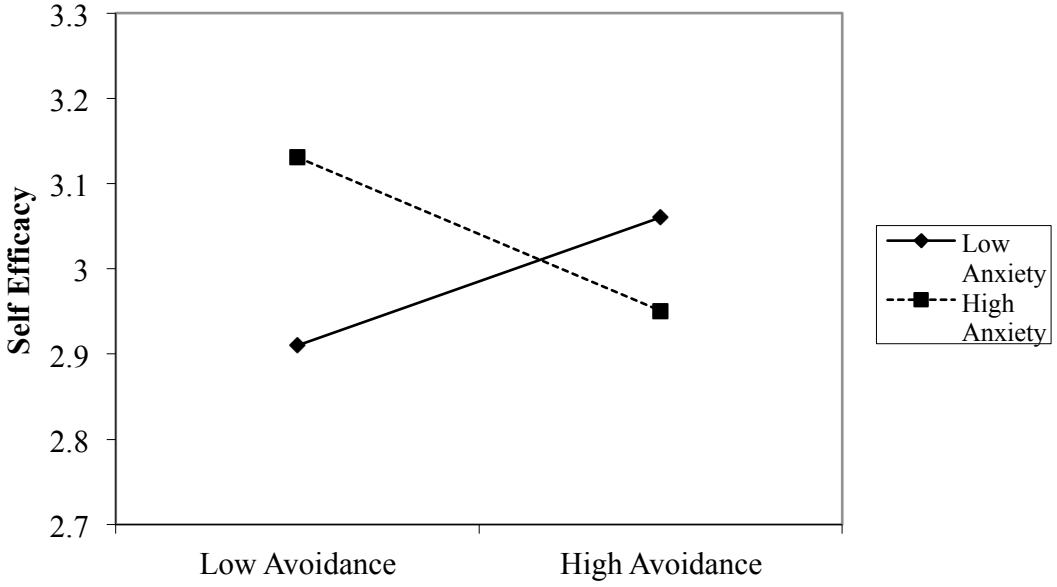

Figure 4. Association of attachment avoidance with self efficacy as moderated by attachment anxiety. The above figure depicts the interaction effect of avoidance and anxiety when predicating the development of self efficacy.

The nature of the interaction effect implies that, for predicating the development of self efficacy in a camp setting, an interaction effect did take place and it was at a statistically significant level (see table 7). However, similar to exploration discussed above, while the interaction term was statistically significant further examination found that the simple slopes for high anxiety and low anxiety were not. Still, the findings here are suggestive that avoidance is negatively associated with the development of self efficacy in a camp setting for individuals with higher levels of anxiety (i.e.: had a negative slope). Conversely, avoidance was found to have a positive association with the development of self efficacy for low anxiety individuals (i.e.: had a positive slope) (see figure 4). This pattern would suggest that for individuals with low levels of anxiety and low levels of avoidance will experience the least development of self efficacy in a camp

setting. Furthermore, it suggests that individuals with high levels of anxiety but lower levels of avoidance would experience the most potential gain in self efficacy at camp.

4.3.2 Physical Outcomes

4.3.2.1 Physical Activity

In step one of the model age was positively associated with the development of physical activity but not at statistically significant levels. The sex of the camper, the average household income for the home from which the camper came, and returning camper status were all found to be negatively associated with the emergence of physical but not at statistically significant levels. However, dosage was found to have a statistically significant positive association with physical activity.

In step two of the model the avoidance and anxiety constructs were added and found to be negatively associated, but only avoidance was at a statistically significant level. In step three the interaction term between avoidance and anxiety was inserted into the model however it was not found to be at significant level as there was little to no variance in physical activity $\Delta R^2 = .048$, $F\,(8,621) = 4.79$, $p < .001$. Thus, for physical activity anxiety was not found to be a significant moderator of this relationship in a summer camp setting. At lower levels of anxiety (approximately 1 SD below the mean) the unstandardized simple slope for participants was $b = .00$ (SE = .02, $p = .991$). At higher levels of anxiety (approximately 1 SD above the mean) the unstandardized simple slope for participants was $b = -.04$ (SE = .02, $p = .641$) (see figure 5).

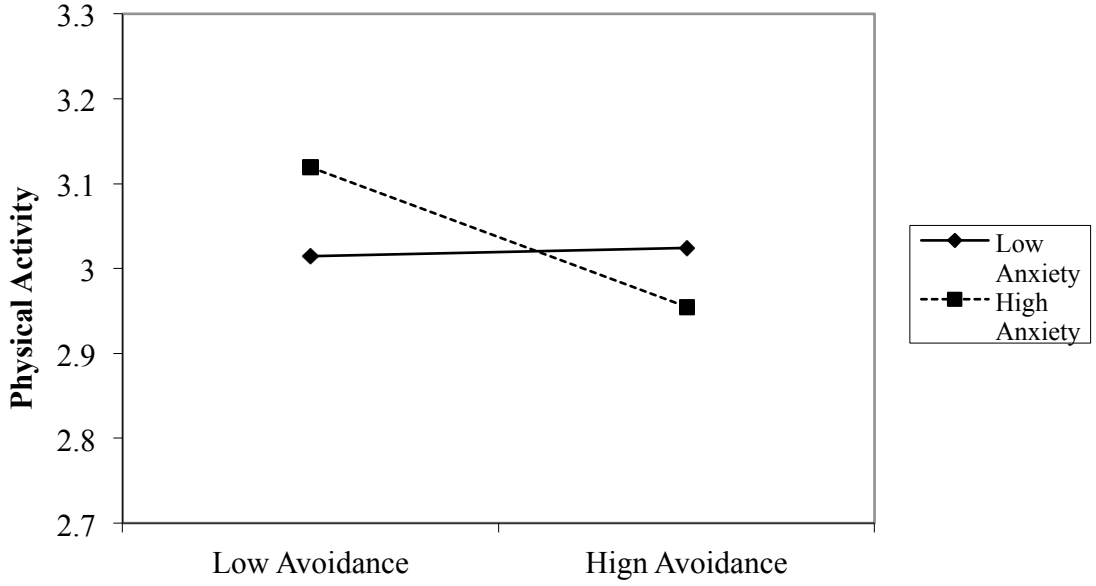

Figure 5. Association of attachment avoidance with physical activity as moderated by attachment anxiety. The above figure depicts the interaction effect of avoidance and anxiety when predicating the development of physical activity.

Despite the lack of a statistically significant interaction effect, the nature of this interaction is none-the-less interesting (see table 7). The simple slope for low anxiety was positive but only very slightly, and the simple slope for high anxiety was negative (see figure 5). This pattern suggests that individuals with high levels of anxiety and high levels of avoidance will experience the smallest gains in physical activity in a camp setting. Moreover, it further suggests that low avoidance and low anxiety individuals experience the greatest gains in this construct.

4.3.2.2 Environmental Engagement

In step one of this model age, the identified sex of the camper, average household income, and returning camper status were not found to be significant. Dosage was found to be positively associated with the development of environmental engagement in a camp setting. In step two of the model the attachment construct of avoidance was found to be negatively associated with the environmental engagement construct at a statistically significant level. Further, the anxiety construct was found to be negatively associated with environmental engagement but not at significant levels. The interaction term was included in step three and found to be significant $\Delta R^2 = .046$, $F\,(8,621) = 4.79$, $p < .001$. At lower levels of anxiety (approximately 1 SD below the mean) the unstandardized simple slope for participants was $b = .05$ (SE = .02, $p = .813$). At higher levels of anxiety (approximately 1 SD above the mean) the unstandardized simple slope for participants was $b = -.06$ (SE = .02, $p = .493$) (see figure 6).

In a similar fashion to self efficacy this would suggest that, an interaction effect did take place and it was at a statistically significant level (see table 7). High anxiety was found to have a negative slope and low anxiety a positive slope, however, upon further examination these simple slopes were not statistically significant (i.e.: they did not appreciably differ from 0). Thus, the findings are suggestive that campers with low levels of anxiety and low levels of avoidance experience lower levels of environmental engagement as a result of participation in camp. Moreover, high anxiety and low avoidance individuals experience the greatest potential gains in environmental engagement from summer camp.

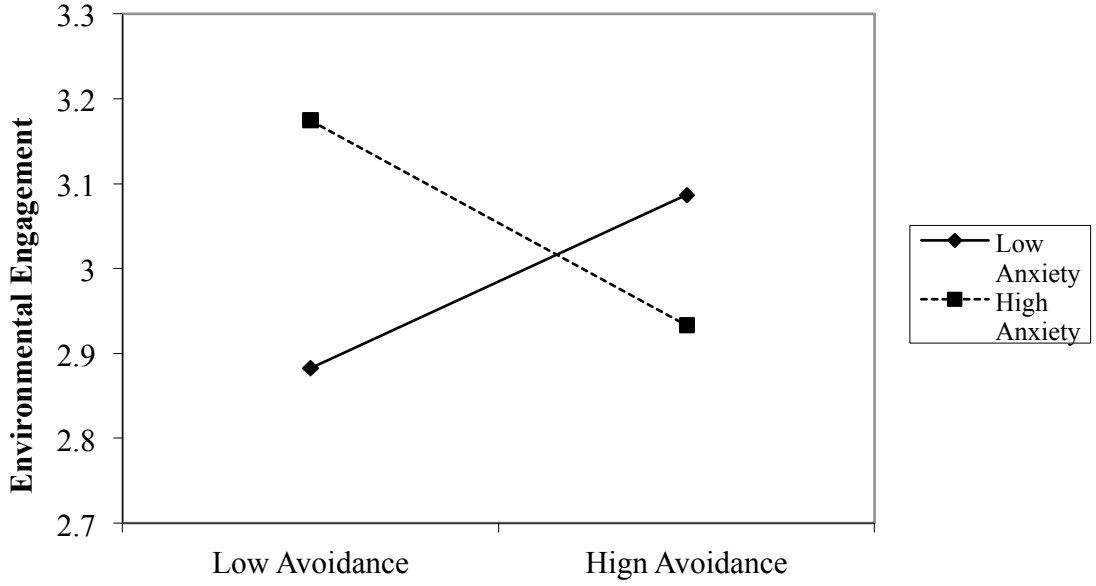

Figure 6. Association of attachment avoidance with environmental engagement as moderated by attachment anxiety. The above figure depicts the interaction effect of avoidance and anxiety when predicating the development of environmental engagement.

4.3.3 Social Outcomes

4.3.3.1 Friendship and Peer Relations

In step one of this model age, the identified sex of the camper, and dosage were all found to be positively associated with the development of friendship and peer relations in a camp setting. Returning camper status was found to be negatively associated with the development of friendship and peer relations but not a statistically significant levels. Average household income was found to be negatively associated with friendship and peer relations at a significant level.

In the second step of this model the attachment construct of avoidance was added and found to be negatively associated with the development of friendships and peer relations at a significant level. Anxiety was also added in this step and found to be

negatively associated with friendship and peer relations but not at statistically significant levels. In step three the interaction term between avoidance and anxiety was entered however, it was not found to be significant as there was only minimal variance in friendship and peer relations $\Delta R^2 = .193$, F (8,626) = 19.66, $p < .001$. Thus, anxiety was not found to be a significant moderator of the relationship between the attachment construct of avoidance and friendship and peer relations in a camp setting. At lower levels of anxiety (approximately 1 SD below the mean) the unstandardized simple slope for participants was $b = -.06$ (SE = .02, $p = .801$). At higher levels of anxiety (approximately 1 SD above the mean) the unstandardized simple slope for participants was $b = -.08$ (SE = .02, $p = .372$) (see figure 7).

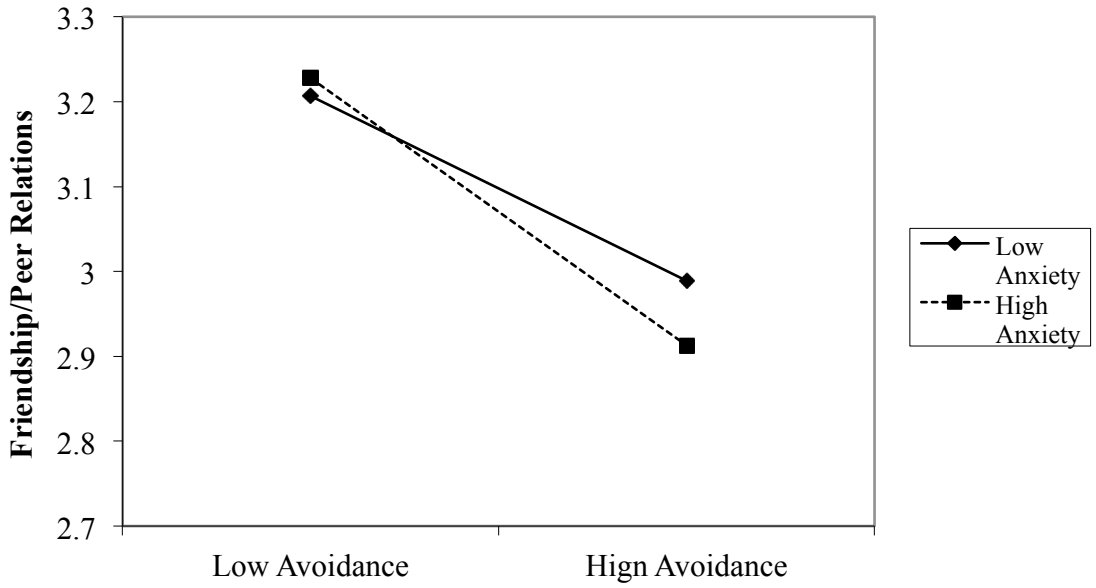

Figure 7. Association of attachment avoidance with friendship and peer relations as moderated by attachment anxiety. The above figure depicts the interaction effect of avoidance and anxiety when predicating the development of friendship and peer relations.

The analysis of the nature of the interaction effect reveals that, for predicating the development of friendship and peer relations in a camp setting, an interaction effect did take place though it was not statistically significant (see table 7). Specifically, the simple slopes for high levels of anxiety and low levels of anxiety intersect but are not appreciably different from one another, both low anxiety and high anxiety have negative slopes. It was found that campers with high level of anxiety and high levels of avoidance will have the least development of friendship and peer relations in a summer camp setting. Campers with low levels of avoidance but higher levels of anxiety were the most likely to see gains in friendship and peer relations in a camp setting

4.4 Mediation Analysis

4.4.1 Direct Effects

Table 8 depicts the models testing the direct effects of avoidance, and anxiety on self efficacy, environmental engagement, physical activity, and friendship and peer relations.

4.4.1.1 Self Efficacy

With respect to self efficacy regression analysis showed that higher levels of avoidance are associated with lower levels of self efficacy. This analysis also revealed that the attachment construct of anxiety was not associated with the development of self efficacy in a camp context (see Table 8, Model 2).

Table 8. Unstandardized coefficients for regression models showing the association of demographics, the attachment constructs of avoidance, and anxiety, connection to camp, and exploration with self efficacy, environmental engagement, physical activity, and friendship/peer relations

Independent Variables	Model 1		Model 2		Model 3	
	B	*SE*	*B*	*SE*	*B*	*SE*
Self Efficacy						
Constant	3.59***	.211	3.56***	.211	.726***	.163
Age	.012	.012	.014	.012	.022**	.008
Sex	-.037	.063	-.041	.063	-.019	.039
Household Income	-.001	.006	-.002	.006	-.002	.004
Returning Camper	-.104	.091	-.099	.091	-.020	.057
Dosage	.127***	.021	.123***	.022	.052***	.014
Avoidance	--	--	-.034*	.017	-.008	.011
Anxiety	--	--	-.007	.013	.008	.008
Connection to Camp	--	--	--	--	.088***	.019
Exploration	--	--	--	--	.623***	.023
Adjusted R^2	.073		.077		.645	
Environmental Engagement						
Constant	3.58***	.236	3.55***	.236	.851***	.277
Age	-.014	.014	-.012	.014	-.006	.011
Sex	-.010	.071	-.015	.071	-.001	.054
Household Income	.006	.006	.004	.007	.005	.005
Returning Camper	.010	.103	.017	.103	.114	.079
Dosage	.079**	.024	.073*	.024	.003	.019
Avoidance	--	--	-.040*	.019	-.013	.015
Anxiety	--	--	-.015	.015	-.002	.011
Connection to Camp	--	--	--	--	.129***	.026
Exploration	--	--	--	--	.544***	.032
Adjusted R^2	.019		.027		.424	
Physical Activity						
Constant	3.40***	.266	3.37***	.266	1.04***	.226
Age	.013	.013	.014	.013	.022*	.011
Sex	-.029	.067	-.036	.067	-.017	.054
Household Income	-.002	.006	-.003	.006	-.002	.005
Returning Camper	-.116	.097	-.112	.098	-.042	.078
Dosage	.099***	.023	.096***	.023	.035	.019
Avoidance	--	--	-.036*	.018	-.014	.015
Anxiety	--	--	-.007	.014	.004	.011
Connection to Camp	--	--	--	--	.078**	.026
Exploration	--	--	--	--	.502***	.031
Adjusted R^2	.040		.043		.387	

Friendship & Peer Relations						
Constant	1.62***	.302	1.56***	.300	-.306*	.349
Age	.124***	.018	.127***	.018	.120***	.017
Sex	.339***	.090	.329***	.090	.321***	.083
Household Income	-.019*	.008	-.022*	.008	-.021**	.008
Returning Camper	-.190	.131	-.181	.131	-.118	.122
Dosage	.201***	.031	.192***	.031	.132***	.029
Avoidance	--	--	-.078**	.024	-.027	.023
Anxiety	--	--	-.028	.018	-.003	.017
Connection to Camp	--	--	--	--	.312***	.040
Exploration	--	--	--	--	.152**	.048
Adjusted R^2	.173		.186		.295	

*Note: *p < 0.05, **p < 0.01, ***p < 0.001*

The amount of time a camper spent in camp (i.e.: Dosage) was also positively associated with self efficacy (see Table 8, Model 1). This association remained significant even after the addition of the attachment constructs of avoidance and anxiety (See Table 8, Model 2) and connections to camp and exploration as potential mediators (see Table 8, Model 3). Age, sex, household income, and returning camper status were not determined to be significant (see Table 8, Model 1). However, age did become significant with the addition of connections to camp and exploration to the model (see Table 8, Model 3) such that increased age was associated with increases in self efficacy. Of the potential mediators, both connections to camp and exploration were significantly associated with the development of self efficacy (see Table 8, Model 3). The association of avoidance to self efficacy was reduced to a non-significant level with the addition of the two mediators to the model (see Table 8, Model 3).

4.4.1.2 Environmental Engagement

For environmental engagement regression analyses showed that higher levels of avoidance is associated with lower levels of environmental engagement. Similar to self efficacy anxiety was again not found to be statistically significant with respect to environmental engagement. Dosage was found to be positively associated with environmental engagement (see Table 8, Model 1), even with the addition of the attachment constructs of avoidance and anxiety (See Table 8, Model 2). However, with the addition of connections to camp and exploration this significance dissipated to non significant levels (see Table 8, Model 3). The age of campers, campers identified sex, the average household income from which the campers came, or returning camper status had no statistically significant impact on the level of environmental engagement (see Table 8, Model 2). Both connections to camp and exploration were significantly associated with environmental engagement (see Table 8 Model 3). The association of avoidance to environmental engagement was reduced to a non-significant level with the addition of the two mediators (see Table 8, Model 3).

4.4.1.3 Physical Activity

Regression analysis with physical activity as the criterion variable showed that higher levels of avoidance was associated with lower levels of participation in physical activity. However, as with previous dependent variables the attachment construct of anxiety was not found to be significantly associated with physical activity (see Table 8, Model 2). The length of time spent in camp was positively associated with participation in physical activity (see Table 8, Model 1). With the exception of dosage none of the

control variables entered into the model were significant except for age which became significant with the addition of connections to camp and exploration to the model (see Table 8, Model 3). The analysis also revealed that connections to camp and exploration were significantly associated with participation in physical activity (see Table 8, Model 3). Moreover, the addition of these mediators to the model reduced avoidance to non-significant levels (see Table 8, Model 3).

4.4.1.4 Friendship & Peer Relations

Regression analysis also showed that avoidance was negatively associated with the development of friendships and peer relations. Anxiety was also found to be negatively associated with friendship and peer relations but at non-significant levels. Camper age, identified sex, and dosage were all positively associated with the development of friendship and peer relations in a camp setting, whereas household income was found to be negatively associated (see Table 8, Model 2). Both connection to camp and exploration have a positive association with friendship and peer relations. With the addition of the mediators to the model avoidance was reduced to non-significant levels (see Table 8, Model 3).

4.4.2 Indirect Effects

Table 9 depicts the mediation model statistics using bootstrapping resampling. Statistical significance of the indirect effects within the tested models in the current research was examined over 10 000 bootstrap samples. Estimates were taken at a 95% confidence interval. The mediation analysis reveals significant mediation of the affect of

the attachment construct of avoidance on the development of self efficacy, environmental engagement, physical activity, and friendship and peer relations.

Table 9. Bootstrap analysis of the total effect for the association of attachment orientations with various developmental outcomes, and indirect effects through connectedness to camp and exploration.

				Confidence Interval	
	Mediation Effects	Estimate	SE	Lower	Upper
Avoidance and Self Efficacy	Total Indirect Effects	-.0286	.0166	-.0623	.0030
	M1: Connection to Camp	-.0130*	.0045	-.0240	-.0059
	M2: Exploration	.0084	.0143	-.0197	.0363
	M1 & M2	-.0240*	.0059	-.0382	-.0144
Avoidance and Environmental Engagement	Total Indirect Effects	-.0307*	.0148	-.0606	-.0029
	M1: Connection to Camp	-.0176*	.0059	-.0319	-.0081
	M2: Exploration	.0073	.0121	-.0174	.0306
	M1 & M2	-.0203*	.0050	-.0320	-.0121
Avoidance and Physical Activity	Total Indirect Effects	-.0228	.0136	-.0515	.0022
	M1: Connection to Camp	-.0106*	.0045	-.0207	-.0030
	M2: Exploration	.0079	.0115	-.0146	.0301
	M1 & M2	-.0202*	.0049	-.0317	-.0120
Avoidance and Friendship/Peer Relations	Total Indirect Effects	-.0464*	.0118	-.0723	-.0252
	M1: Connection to Camp	-.0428*	.0107	-.0670	-.0242
	M2: Exploration	.0024	.0037	-.0038	.0115
	M1 & M2	-.0060*	.0026	-.0125	-.0019
Anxiety and Self Efficacy	Total Indirect Effects	-.0196	.0107	-.0405	.0017
	M1: Connection to Camp	-.0071*	.0025	-.0131	-.0031
	M2: Exploration	.0002	.0099	-.0185	.0205
	M1 & M2	-.0125*	.0036	-.0206	-.0065

Anxiety and Environmental Engagement	Total Indirect Effects	-.0221*	.0098	-.0422	-.0033
	M1: Connection to Camp	-.0103*	.0038	-.0199	-.0044
	M2: Exploration	-.0012	.0086	-.0181	.0158
	M1 & M2	-.0109*	.0031	-.0179	-.0056
Anxiety and Physical Activity	Total Indirect Effects	-.0161	.0088	-.0333	.0009
	M1: Connection to Camp	-.0063*	.0026	-.0128	-.0022
	M2: Exploration	.0007	.0082	-.0144	.0168
	M1 & M2	-.0105*	.0032	-.0175	-.0056
Anxiety and Friendship/Peer Relations	Total Indirect Effects	-.0265*	.0078	-.0434	-.0126
	M1: Connection to Camp	-.0236*	.0071	-.0395	-.0113
	M2: Exploration	.0003	.0026	-.0050	.0062
	M1 & M2	-.0031*	.0015	-.0069	-.0008

Note: Lower limit and upper limit denote the boundaries of a 95% confidence interval (CI)
Note: *p< 0.05

4.4.2.1 Avoidance and Developmental Outcomes

Findings obtained for the serial-multiple mediation of connection to camp and exploration in the relationship between the attachment construct of avoidance and the various outcomes explored in this research are presented below.

4.4.2.1.1 Avoidance and self efficacy

For the mediation analysis with self efficacy as the criterion variable and avoidance as the focal variable (see Figure 8), the total effect (c = -.034, SE = .017, t = -1.96, p < .05) of avoidance on the development of self efficacy in a camp setting was at a significant level. In addition, the direct effects of avoidance on connection to camp (a_1 = -.150, SE = .026, t = -5.71, p < .001) was at a significant level. The direct effect of avoidance on exploration (a_2 = .013, SE = .020, t = .651, p > .05) was not found to be

significant. The direct effect of connection to camp as the first mediating variable on the second mediating variable of exploration (a_3 = .262, *SE* = .033, t = 7.96, p < .001) was at a significant level. A review of the direct effects of the mediating variables on self efficacy showed that the effects of connection to camp (b_1 = .088, *SE* = .019, t = 4.70, p < .01), and exploration (b_2 = .623, *SE* = .023, t = 27.2, p < .001) were at significant levels. When avoidance and all other mediating variables were simultaneously entered into the equation, the relationship between avoidance and self efficacy, in relation to the direct effect, was not at a significant level (c' = -.008, *SE* = .011, t = -1.81, p > .05). Based on this result, the mediating variables of connection to camp and exploration were observed to mediate between the attachment construct of avoidance and the development of self efficacy.

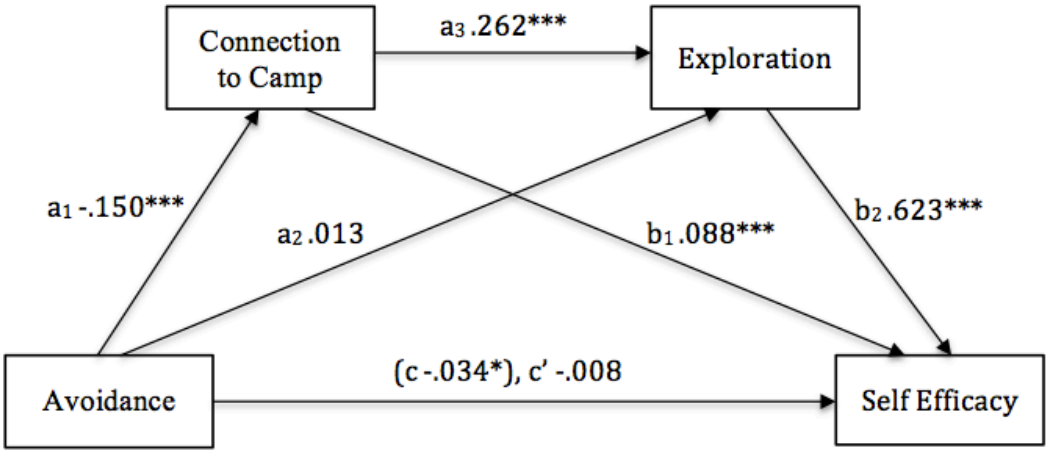

Figure 8. Association of attachment construct of avoidance to self efficacy as serially mediated by connectedness to camp and exploration.
Note: the value in parentheses is the unstandardized regression coefficient for the association between the attachment construct of avoidance and general self efficacy before the addition of connection to camp and exploration to the model
n = 573; *$p<0.05$. **$p<0.01$, ***$p<0.001$

The pathway of avoidance to self efficacy through connection to camp was statistically significant since the bootstrapped confidence interval did not encompass zero (point estimate =-.013; 95%; [-.0240, -.0059]). The pathway of avoidance to self efficacy through exploration was not statistically significant, since the bootstrapped confidence interval encompassed zero (point estimate = .008; 95%; [-.0197, .0363]). An examination of the serial mediation model in which the pathway of level of avoidance predicting self efficacy first through connection to camp and the subsequently through exploration showed that the indirect effect through both mediators was statistically significant (point estimate = -.024; 95%; [-.0382, -.0144]), suggesting that the association of avoidance with self efficacy was partially explained by links through connection to camp leading to increased exploration, and higher self efficacy.

4.4.2.1.2 Avoidance and Environmental Engagement

For the mediation analysis with environmental engagement as the criterion variable and avoidance as the focal variable (see Figure 9), the total effect (c = -.040, SE = .019, t = -5.72, $p < .05$) of avoidance on environmental engagement was at a significant level. The direct effects of avoidance on connection to camp (a_1 = -.149, SE = .026, t = -5.71, $p < .001$) was at a significant level, and exploration (a_2 = .014, SE = .020, t = .651, $p > .05$) was not at a significant level. The direct effect of connection to camp as the first mediating variable on the second mediating variable of exploration (a_3 = .260, SE = .033, t = 7.90, $p < .001$) was at a significant level. The direct effects of both connection to camp (b_1 = .129, SE = .026, t = 7.85, $p < .001$) and exploration (b_2 = .544, SE = .032, t =

16.5, $p < .001$) on environmental engagement were found to be significant. When all other variables are entered into the equation the relationship between avoidance and environmental engagement, in relation to the direct effect, was reduced to non significant levels (c' = -.013, SE = .015, t = -2.57, $p < .05$).

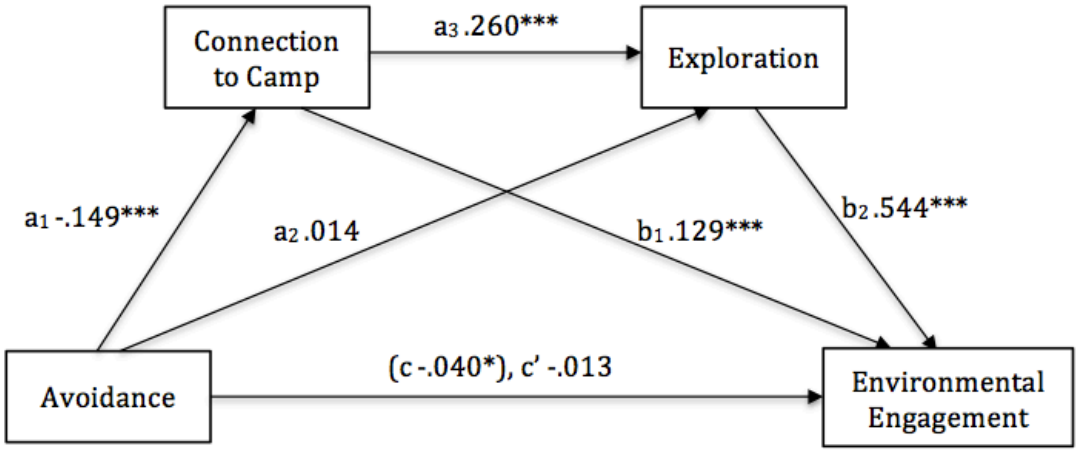

Figure 9. Association of attachment construct of avoidance to environmental engagement as serially mediated by connectedness to camp and exploration.
Note: the value in parentheses is the unstandardized regression coefficient for the association between the attachment construct of avoidance and environmental engagement before the addition of connection to camp and exploration to the model
n = 571; *$p<0.05$. **$p<0.01$, ***$p<0.001$

The pathway of avoidance to environmental engagement through connection to camp was found to be statistically significant since the bootstrapped confidence interval did not encompassed zero (point estimate = -.017; 95%; [-.0319, -.0081]). Additionally, the pathway of avoidance to environmental engagement through exploration was found not to be statistically significant (point estimate = .007; 95%; [-.0174, .0306]). However,

when both mediators are included in the model an examination of the serial mediation in which the pathway of avoidance predicting environmental engagement first through connection to camp and the subsequently through exploration showed that the indirect effect through both mediators was statistically significant (point estimate = -.020; 95%; [-.0320, -.0121]).

4.4.2.1.3 Avoidance and Physical Activity

Similar patterns were found with the analysis of physical activity as the criterion variable and avoidance as the independent variable. First, the total effect (c = -.036, SE = .018, t = -5.91, $p < .05$) of avoidance on physical activity was at a significant level. Second, the direct effects of avoidance on connection to camp (a_1 = -.150, SE = .026, t = -5.88, $p < .001$) was at a significant level, and exploration (a_2 = .015, SE = .021, t = .757, $p > .05$) was not at a significant level. Third, the direct effect of connection to camp as the first mediating variable on the second mediating variable of exploration (a_3 = .265, SE = .033, t = 7.97, $p < .001$) was at a significant level. Fourth, the direct effect of connection to camp on physical activity (b_1 = .078, SE = .026, t = 2.63, $p > .01$) was significant, as was the direct effect of exploration on physical activity (b_2 = .502, SE = .031, t = 15.7, $p < .001$). Finally, when all other variables are entered into the equation the relationship between avoidance and environmental engagement, in relation to the direct effect, was not significant (c' = -.014, SE = .015, t = 2.24, $p > .05$).

The pathway of avoidance to physical activity through connection to camp was found to be statistically significant since the bootstrapped confidence interval did not include zero (point estimate = -.011; 95%; [-.0207, -.0030]). Additionally, the pathway

of avoidance to physical activity through exploration was found not to be statistically significant (point estimate = -.008; 95%; [-.0146, .0301]). However, when both mediators are included in the model an examination of the serial mediation in which the pathway of avoidance predicting physical activity first through connection to camp and the subsequently through exploration showed that the indirect effect through both mediators was statistically significant (point estimate = -.020; 95%; [-.0317, -.0120]).

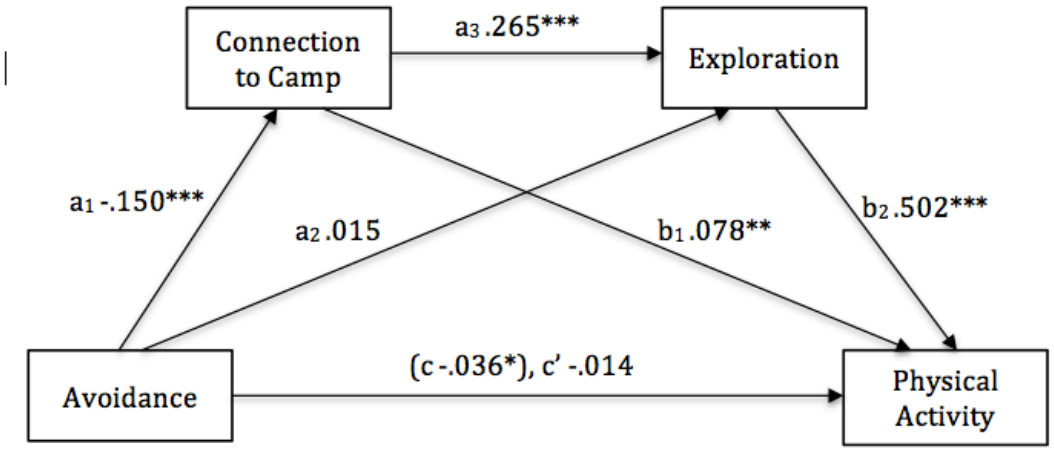

Figure 10. Association of attachment construct of avoidance to physical activity as serially mediated by connectedness to camp and exploration.
Note: the value in parentheses is the unstandardized regression coefficient for the association between the attachment construct of avoidance and physical activity before the addition of connection to camp and exploration to the model
n = 564; *p<0.05. **p<0.01, ***p<0.001

4.4.2.1.4 Avoidance and friendship and peer relations

For the analysis of the attachment construct of avoidance to friendship and peer relations comparable patterns were also found.

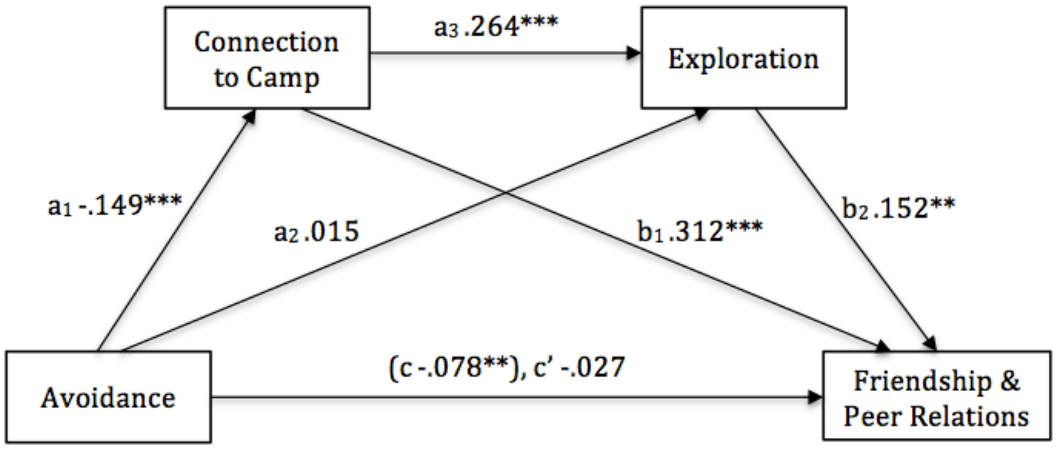

Figure 11. Association of attachment construct of avoidance to friendship and peer relations as serially mediated by connectedness to camp and exploration.
Note: the value in parentheses is the unstandardized regression coefficient for the association between the attachment construct of avoidance and friendship and peer relations before the addition of connection to camp and exploration to the model
n = 573; *p<0.05. **p<0.01, ***p<0.001

The total effect (c = -.078, SE = .024, t = -3.03, p < .01) of avoidance on friendship and peer relations was at a significant level. The direct effects of avoidance on connection to camp (a_1 = -.149, SE = .025, t = -3.03, p < .001) was at a significant level, while exploration (a_2 = .015, SE = .020, t = .732, p > .05) was not found to be at significant levels. The direct effect of connection to camp on the second mediating variable of exploration (a_3 = .264, SE = .033, t = 8.01, p < .001) was at a significant level. The direct effect of connection to camp on friendship and peer relations (b_1 = .312, SE = .040, t = 3.14, p > .001) was significant, moreover, the direct effect of exploration on friendship and peer relations was also significant (b_2 = .152, SE = .048, t = 3.14, p < .01). When all other variables are entered into the equation the relationship between avoidance and

friendship and peer relations relative the direct effect, was reduced to a non-significant level (c' = -.027, SE = .023, t = -1.25, p > .05).

Comparable to environmental engagement and physical activity the pathway for avoidance to friendship and peer relations displayed similar patterns. The pathway of avoidance to friendship and peer relations through connection to camp was statistically significant since the bootstrapped confidence interval did not encompass zero (point estimate = -.043; 95%; [-.0670, -.0242]). The pathway of avoidance to friendship and peer relations through exploration was not found to be statistically significant as the confidence intervals encompassed zero (point estimate = .002; 95%; [-.0038, .0115]). When both mediators are included in the model an examination of the serial mediation in which the pathway of avoidance predicting environmental engagement first through connection to camp and the subsequently through exploration showed that the indirect effect through both mediators did not encompass zero and as such was statistically significant (point estimate = -.006; 95%; [-.0125, -.0019]).

4.4.2.2 Anxiety and Developmental Outcomes

Findings obtained for the serial-multiple mediation of connection to camp and exploration in the relationship between the attachment construct of anxiety and the various outcomes explored in this research are presented below.

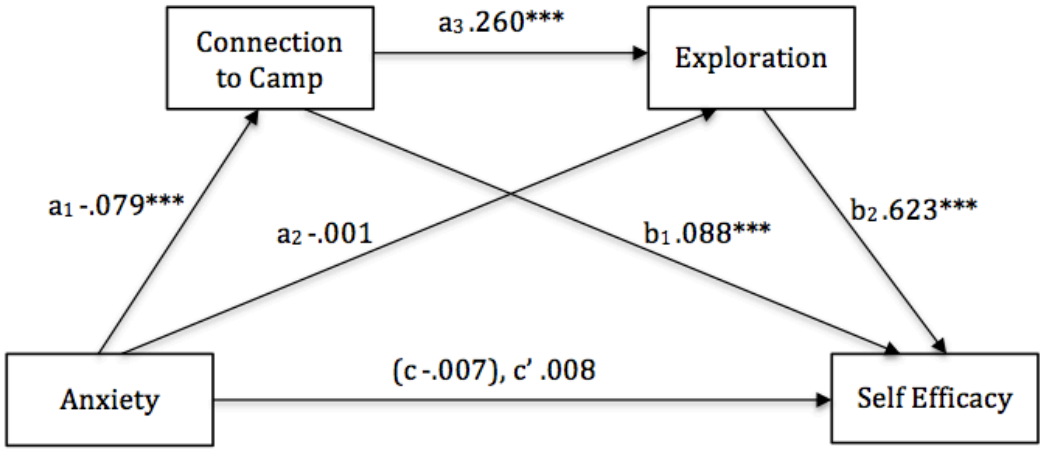

Figure 12. Association of attachment construct of anxiety to self efficacy as serially mediated by connectedness to camp and exploration.
Note: the value in parentheses is the unstandardized regression coefficient for the association between the attachment construct of anxiety and general self efficacy before the addition of connection to camp and exploration to the model
n = 613; *$p<0.05$. **$p<0.01$, ***$p<0.001$

4.4.2.2.1 Anxiety and Self Efficacy

For the mediation analysis with self efficacy as the criterion variable and the attachment construct of anxiety as the focal variable (see Figure 12), the total effect (c = -.007, SE = .013, t = -.998, p > .05) of avoidance on self efficacy was not at a significant level. The direct effect of anxiety on connection to camp (a_1 = -.79, SE = .293, t = 1.26, p < .001), was found to be negative and statistically significant. Additionally, the effect of anxiety to exploration (a_2 = -.001, SE = .014, t = -.001, p > .05) was also found to be negative but not to be statistically significant. The direct effect of the first mediator connection to camp to the second mediator exploration was at a significant level (a_3 = .260, SE = .032, t = 8.01, p < .01). Both of the direct effects of connection to camp (b_1 = .088, SE = .018, t = 4.95, p < .01), and exploration (b_2 = .623, SE = .023, t = 27.2, p <

.001) were found to be statistically significant. When anxiety and all other mediating variables were simultaneously entered into the equation, the relationship between anxiety and self efficacy, in relation to the direct effect, was not at a significant level (c' = .008, SE = .008, t = 1.31, $p > .05$).

The pathway of anxiety to self efficacy through connection to camp was statistically significant since the bootstrapped confidence interval did not encompass zero (point estimate = -.007; 95%; [-.0131, .-0031]). The pathway of anxiety to self efficacy through exploration was not statistically significant, since the bootstrapped confidence interval encompassed zero (point estimate = .000; 95%; [-.0185, .0205]). The serial mediation model in which the pathway of level of anxiety predicting self efficacy first through connection to camp and the successively through exploration showed that the indirect effect through both mediators was statistically significant (point estimate = -.013; 95%; [-.0205, .-0065]).

4.4.2.2.2 Anxiety and Environmental Engagement

The mediation analysis with anxiety as the independent variable and environmental engagement as the dependent variable showed that the total effect was not statistically significant (c = -.015, SE = .015, t = -1.54, $p > .05$). The direct effect of anxiety on connection to camp (a_1 = -.079, SE = .019, t = -4.57, $p < .001$) was found to be highly statistically significant. However, the effect of anxiety to exploration (a_2 = -.002, SE = .015, t = -1.28, $p > .05$) was not found to be at statistically significant levels. The direct effect of connection to camp to exploration was at a significant level (a_3 = .259, SE = .032, t = 7.92, $p < .001$). Further, the direct effect of connection to camp to

environmental engagement was also found to be statistically significant (b_1 = .129, *SE* = .026, t = 4.91, p > .001). The direct effect of exploration on environmental engagement was significant (b_2 = .544, *SE* = .032, t = 16.4, p < .001). When anxiety and all other mediating variables were simultaneously entered into the equation, the relationship between anxiety and environmental engagement, in relation to the direct effect, was not at a significant level (c' = -.002, *SE* = .011, t = -.033, p > .05).

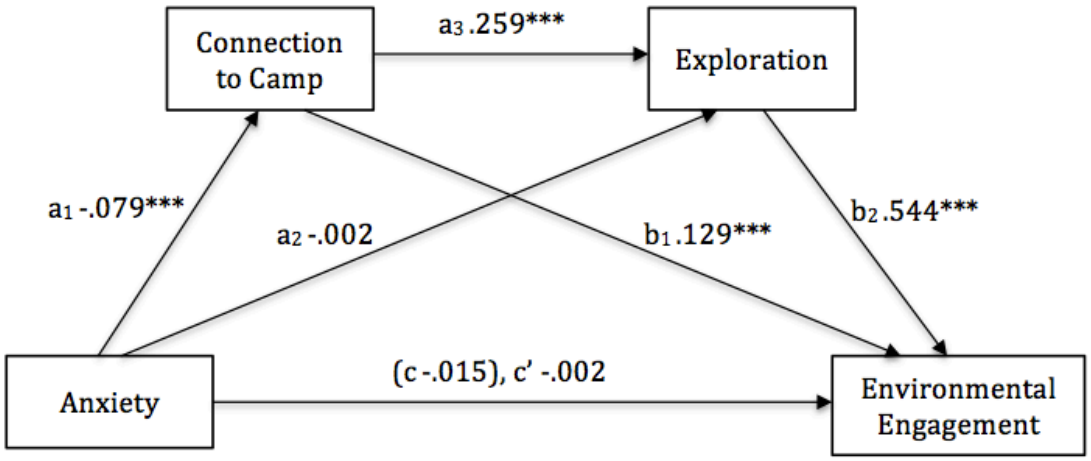

Figure 13. Association of attachment construct of anxiety to environmental engagement as serially mediated by connectedness to camp and exploration.
Note: the value in parentheses is the unstandardized regression coefficient for the association between the attachment construct of anxiety and environmental engagement before the addition of connection to camp and exploration to the model
n = 609; *$p<0.05$. **$p<0.01$, ***$p<0.001$

The bootstrapped confidence intervals for the pathway of anxiety to environmental engagement through connection to camp (point estimate = -.010; 95%; [-.0199, -.0044]) did not encompass zero and as such the pathway was statistically significant. The pathway of anxiety to environmental engagement through exploration was not statistically significant, since the bootstrapped confidence interval encompassed

zero (point estimate = -.001; 95%; [-.0181, .0158]). The serially mediated pathway of anxiety predicting environmental engagement through connection to camp and exploration revealed that the indirect effect through both mediators was statistically significant (point estimate = -.011; 95%; [-.0179, -.0056]).

4.4.2.2.3 Anxiety and Physical Activity

Similarly, the mediation analysis with the attachment construct of anxiety as the focal variable and physical activity as the criterion variable displayed a comparable pattern. The total effect (c = -.007, SE = .014, t = -.939, p > .05) of anxiety on physical activity was not statistically significant. The direct effects of anxiety on connection to camp (a_1 = -.080, SE = .019, t = -4.26, p > .05), was found to be negative and at statistically significant levels. However, the effect of anxiety to exploration (a_2 = -.003, SE = .015, t = .097, p > .05) was not statistically significant. The direct effect of the first mediator (i.e. connection to camp) to the second mediator (i.e.: exploration) was found to be at a significant level (a_3 = .260, SE = .032, t = 8.03, p < .001). The association of connection to camp to physical activity was found to be statistically significant (b_1 = .078, SE = .026, t = 3.02, p < .01), as was the association of exploration to physical activity was (b_2 = .502, SE = .031, t = 15.6, p < .001). With the inclusion of all variables into the equation the relationship between anxiety and physical activity, was not at a significant level (c' = .004, SE = .011, t = .292, p > .05).

The pathway of anxiety to physical activity through connection to camp was found to be statistically significant since the bootstrapped confidence interval did not encompass zero (point estimate = -.006; 95%; [-.0128, -.0022]).

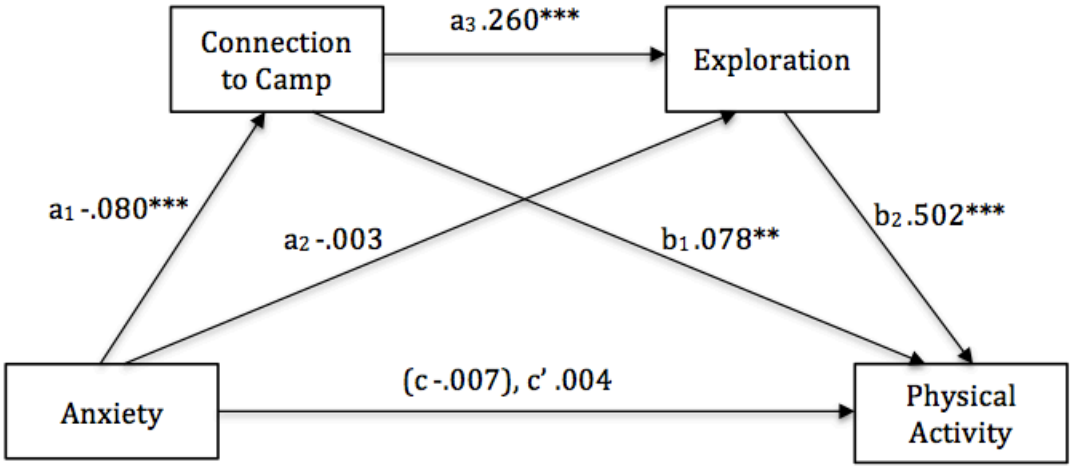

Figure 14. Association of attachment construct of anxiety to physical activity as serially mediated by connectedness to camp and exploration.
Note: the value in parentheses is the unstandardized regression coefficient for the association between the attachment construct of anxiety and physical activity before the addition of connection to camp and exploration to the model
n = 602; *$p<0.05$. **$p<0.01$, ***$p<0.001$

The pathway of anxiety to physical activity through exploration was not statistically significant, since the bootstrapped confidence interval also encompassed zero (point estimate = .007; 95%; [-.0144, .0168]). When both mediators are included in the model an examination of the serial mediation shows that the indirect effect through both mediators does not encompasses zero and as such is statistically significant (point estimate = -.011; 95%; [-.0175, -.0056]).

4.4.2.2.4 Anxiety and Friendship & Peer Relations

As can be seen in Figure 15 the total effect (c = -.028, SE = .018, t = -1.62, p > .05) of anxiety on friendship and peer relations was not at a significant level. In addition, the direct effect of anxiety to connection to camp (a_1 = -.079, SE = .292, t = -4.03, p < .001), was found to be at a significant level. The association of attachment anxiety to

exploration (a_2 = -.002, *SE* = .015, *t* = .056, *p* > .05) was not found to be at a statistically significant level. The direct effect of connection to camp as the first mediating variable on the second mediating variable of exploration (a_3 = .259, *SE* = .032, *t* = 8.07, *p* < .001) is on a significant level. A review of the direct effect of the mediating variables on friendship and peer relations, showed that the effects of connection to camp (b_1 = .312, *SE* = .040, *t* = 7.68, *p* < .001), and exploration (b_2 = .152, *SE* = .048, *t* = 3.10, *p* < .01) were both at significant levels. When anxiety and all other mediating variables were entered into the equation the relationship between anxiety and friendship and peer relations remained non-significant (*c'* = -.003, *SE* = .017, *t* = -2.40, *p* > .05).

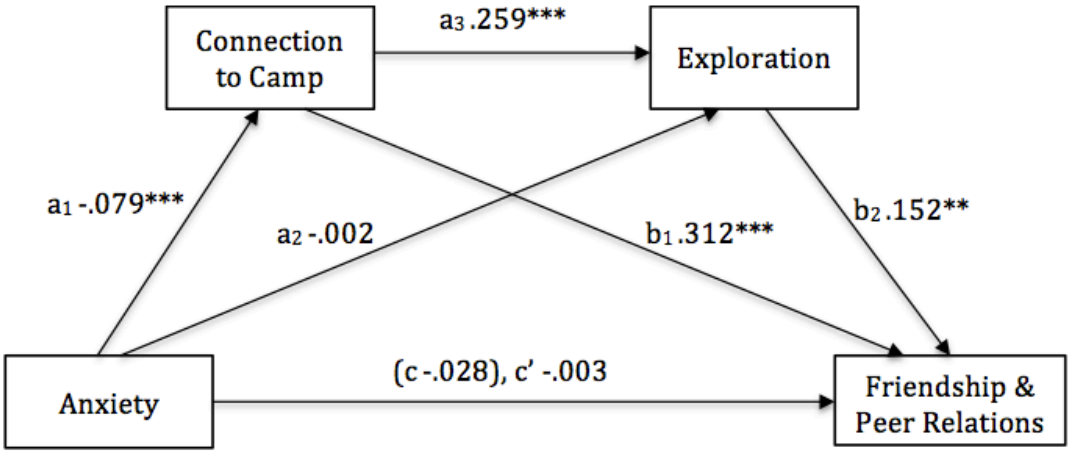

Figure 15. Association of attachment construct of anxiety to friendship and peer relations as serially mediated by connectedness to camp and exploration.
Note: the value in parentheses is the unstandardized regression coefficient for the association between the attachment construct of anxiety and friendship and peer relations before the addition of connection to camp and exploration to the model
n = 613; **p<0.05. **p<0.01, ***p<0.001*

The pathway of anxiety to friendship and peer relations through connection to camp (point estimate = -.024; 95%; [-.0395, -.0113]) was found to be significant as the bootstrapped confidence interval did not encompass zero. The pathway through exploration (point estimate = .003; 95%; [-.0050, .0062]) was found to be at non-significant levels as the bootstrapped confidence interval encompassed zero. When both mediators are included in the model an examination of the serial mediation shows that the indirect pathway through both mediators does not encompass zero and as such was statistically significant (point estimate = -.003; 95%; [-.0069, -.0008]).

A lot of parents pack up their troubles and send them off to summer camp

Raymond Duncan
(American artist)

Chapter 5
Discussion

The main purpose of this study was to explore the influence of attachment on the summer camp experience among youth that attended residential summer camp programs in Canada. Specifically, to explore how the working models of self and others that underpin attachment influence the development of personal, physical, and social outcomes. Moreover, this study wanted to explore some of the potential mechanisms that may impact the development of outcomes in a camp setting. By identifying particular factors that influence outcomes in a camp setting, it could be useful for the future development and planning of camp programing and services as it could help camp programmers and leaders design interventions to target specific outcomes.

Summer camp is a unique milieu in which to explore the impact of attachment on developmental outcomes among youth. Residential summer camp is a distinctive setting in which youth are separated from their primary caregivers for extended periods of time at a key developmental and transitional period of their lives. Moreover, summer camp is a social learning environment, that is purposefully structured around social interaction and principles of positive youth development. It is a highly social environment that provides many opportunities for socialization and growth and development in a variety of contexts. The working models of self and others that underpin attachment theory can influence how people engage in social settings and in turn, the potential developmental benefits that they may accrue from a setting such as summer camp.

5.1 Research Question 1: Attachment and Developmental Outcomes

A number of research endeavours have examined the role of attachment in the emergence of developmental outcomes (e.g.: Bergin & Bergin, 2009; Bohlin et al., 2000; Feeney, 2000; Malekpour, 2007; Mikulincer & Shaver, 2007; Ranson & Urichuk, 2008; Sroufe, 2005; Sroufe et al.,1999). In general, secure attachment orientations are associated with the emergence of more positive developmental outcomes. While insecure attachment orientations have generally been linked with lower levels of developmental outcomes. Indeed, a notable body of work has found links between attachment anxiety and avoidance and personal outcomes (Ainsworth, 1979; Bartholomew & Horowitz, 1991; Bergin & Bergin, 2009; Feeney & Collins, 2015; Hazan & Shaver, 1994; Mikulincer & Shaver, 2007; Stevenson-Hinde & Verschueren, 2002), physical outcomes (Collado et al., 2013; Cousineau et al., 2018; Feeney, 2000; Fraley & Shaver, 1997; Gosling & Williams, 2010; Hill, 2003; Ventura & Garst, 2013) and social outcomes (Lieberman et al., 1999; Suess et al., 1992; Zimmermann, 2004) commonly associated with summer camp participation.

The findings of this study suggest that the attachment construct of avoidance did have a significant negative effect on developmental outcomes associated with summer camp involvement (i.e.: self efficacy, environmental engagement, physical activity, exploration, and friendship and peer relations). Suggesting that higher levels of avoidance is associated with lower levels of each of these constructs. Interestingly the anxiety construct was not found to have a statistically significant effect on any of the outcomes examined in this study. Each of these constructs and their influence on developmental outcomes associated with residential summer camp will be examined in greater detail next.

5.1.1 Hypothesis 1

It was hypothesized that there would be a significant negative association between attachment avoidance and the developmental outcomes that emerge as a result of participation in residential summer camp programs. The data indicates that there is indeed a significant negative association between avoidance and self-efficacy, environmental engagement, physical activity, and friendship and peer relations. However, avoidance was not found to have a significant impact on the development of exploration in a camp setting.

5.1.1.1 Self Efficacy

Research has shown that attachment security is consistently associated with greater levels self-efficacy in a variety of domains (e.g.: Brennan & Morris, 1997; Bringle & Bagby, 1992; Carnelley & Ruscher, 2000; Collins & Read, 1990; Engels et al., 2001; Granot & Mayseless, 2001; Mallinckrodt & Wei, 2005; Strodl & Noller, 2003). Moreover, both anxiety and avoidance associated with attachment have been found to be negatively associated with self efficacy (Lopez & Gormley, 2002; Mikulincer & Shaver, 2007). The finding of this study follow suit with previous research that demonstrates that avoidance is negatively associated with the emergence of general self efficacy. Davidovitz et al. (2006), examined how attachment styles influenced perceptions of self efficacy in performing a variety of tasks. They found that avoidance is associated with significantly lower levels of perceived self-efficacy. This is a finding that was echoed by the works of Strodl and Noller (2003), who noted a significant inverse correlation between measure of general self-efficacy and attachment avoidance, similar findings have also been presented by (Innes & Thomas, 1989), and Meyers (1998).

Avoidant individuals often have difficulty constructing an authentic, cohesive, and stable sense of self worth (Mikulincer & Shaver, 2007). This may be related to an inability or unwillingness to effectively make use of systems as a result of negative interactions with an unavailable or unresponsive attachment figure (Mikulincer & Shaver, 2007). As such, avoidant individuals often rely on secondary attachment strategies, primarily deactivating strategies to cope (Main, 1990). Avoidant, deactivating strategies are the persons attempt to suppress internal doubts and fears while simultaneously working to convince the self and others that they are self-reliant (Cassidy & Kobak, 1988; Mikulincer, 1997; Mikulincer & Shaver, 2007).

Deactivating strategies involve a diversion of attention away from situations or circumstances that may be appraised as threats, and thus activate the attachment system (Main, 1990; Mikulincer & Shaver, 2007). The goal of deactivating strategies is to keep the attachment system turned off or down-regulated, in an attempt to avoid distress or frustration (Cassidy & Kobak, 1988; Mikulincer & Shaver, 2007). As such, avoidant individuals often distance themselves physically, socially, and psychologically in an effort to insulate themselves from such threats. This is what (Bowlby, 1980, 1988a, 1988b) referred to as compulsive self-reliance—a desire to do things and accomplish things on their own (Mikulincer & Shaver, 2007). This compulsive self-reliance is an element of counter dependency often displayed by highly avoidant individuals (Bartholomew, 1990; Finnegan et al., 1996) wherein avoidant individuals deny vulnerability and negative aspects of self, while endeavoring to display traits that are compatible with self sufficiency and independence (Mikulincer & Shaver, 2007).

This defensive self-enhancement (Mikulincer & Shaver, 2007; Raskin et al., 1991) may appear as self efficacious behaviour, thus highly avoidant individuals may appear to have higher levels of self efficacy. However, this can also lead avoidant individuals to downplay negative self-representations, and defensively inflate their self-image and models of self (Mikulincer, 1997; Mikulincer & Florian, 1995; Mikulincer & Shaver, 2007). As such, these models of self tend to be less stable, healthy, and authentic than those of secure individuals and can lead to unrealistically high self-standards, a reliance on external sources of validation, excessive self-criticism and self-doubts (Mikulincer & Shaver, 2007).

5.1.1.2 Environmental Engagement

The findings of this research also align with previous work on avoidant individuals and environmental engagement. As stated previously, there is limited literature linking childhood attachment with environmental engagement, however, there is some work that examines this concept tangentially. Hill (2003), in examining the role of parental figures on a variety of pro-environmental concepts (i.e.: nature engagement, attitudes towards nature, attitudes towards the environment, etc.) found that parental attachment has a distinct influence on a child's later environmental attitudes.

Hill (2003) found that the principal consequence of parental care (i.e.: attachment) appears to be on the degree of closeness to nature. With high levels of attention and care, and low levels of over protection (which can conceptually be associated with secure attachment) seems to diminish the child's closeness to nature—reduce their environmental ethic and in turn their environmental engagement. Remember as previously stated environmental engagement is a compost variable that included attitudes

and beliefs toward the natural environment and pro-environmental behaviours. Moreover, (Hill, 2003) found that high levels of care which is linked with low levels of avoidance is associated with lower levels of eco-centrism, less sympathy for the environment, and in some cases more nature dismissiveness. Within this context ecocentrism denotes a nature centered as opposed to human centered system of values, and a general orientation towards environmental issues. Environmental sympathy can be thought of as pro-environmental behaviours and attitudes. This would seem contradictory to the findings presented in this research wherein low levels of avoidance are associated with higher levels of environmental engagement as a negative association exists. Hill (2003) did find a negative association between attachment avoidance related behaviours and environmental sensitivity though not at statistically significant levels.

5.1.1.3 Physical Activity

The findings herein also align with research that demonstrates a negative association between avoidant attachment orientations and participation in physical activity. As previously noted, a small but growing body of work has demonstrated that that there is a positive association between secure attachment orientations and participation in physical activity among youth and adolescent populations (Feeney & Collins, 2015; Feeney, 2000; Fraley & Shaver, 1997; Maunder & Hunter, 2008; Ranson & Urichuk, 2008; Smith, 2003; Smith et al., 2006; Ullrich-French et al., 2011). Moreover, insecure attachment is linked with lower levels of involvement in physical activity (Cassidy et al., 2013; Ranson & Urichuk, 2008; Weiss & Smith, 2002). A consistent theme in these studies is the role that social connection and social interaction play in encouraging participation (Anderson et al., 2006; Beets, 2006; Beets et al., 2013;

Rovniak, 1999; Smith, 2003; Ullrich-French et al., 2011). It is well documented the social connections are an important factor that contributes to an individuals willingness and likelihood of participating in physical activity (Button et al., 2013; Li et al., 2016; McNeill et al., 2006; Page et al., 2007; Ullrich-French et al., 2012). Friendship has been identified as a significant source of social support in leisure activities (Iwasaki, 2003a, 2003b) and as such plays a significant role in the perceptions, motivation, and indeed behaviour related to physical activity (Smith & McDonough, 2008). Individuals with low levels of avoidance are thus more liable to engage in physical activity.

Individuals with avoidant attachment often experience significant challenges with interpersonal relationships (Ainsworth et al., 1978; Berghaus, 2011; Bergin & Bergin, 2009; Bretherton, 1992). Avoidant attachment is associated with higher levels of conflict and lower levels of companionship (Grabill & Kerns, 2000; Saferstein et al., 2005). As such, they are more likely to withdraw from social situations and to not want to participate in activities that are social in nature (Bartholomew, 1990; Berghaus, 2011) as much physical activity has a social component (particularly in summer camps settings) this may limit their desire to participate. This is in line with research that demonstrates that avoidant individuals are less likely to participate in physical activity. (Ciechanowski et al., 2001) found that avoidant individuals were less likely to achieve the daily recommended levels of physical activity. In general, avoidant individuals reluctance to explore novel situations, as well as their tendency to suppress distressing thoughts and emotions in social settings make them less apt to explore and thus less likely to engage in physical activity (Green & Campbell, 2000; Hazan & Shaver, 1994; Mikulincer & Shaver, 2007).

5.1.1.4 Friendship & Peer Relations

The findings of this study aligns with previous research that demonstrates a negative association between avoidance and the formation and maintenance of friendships and peer relations. Conceptually, this is in line with the attachment profiles outlined earlier. During childhood and adolescences attachment security enables children to engage effectively in affiliative play, which provides an increasing range of social opportunities for increasing their sense of self worth and enabling the establishment of friendships (Brennan et al., 1991; Hazan & Shaver, 1994; Main & Cassidy, 1988; Stevenson-Hinde & Verschueren, 2002). Individuals with avoidant attachment generally have a negative view of others and, as such, frequently desire to be left alone, and have difficulty developing and maintaining healthy and stable relationships. Avoidant individuals are distrusting of others and have a desire for emotional and cognitive distance from other people (Bergin & Bergin, 2009; Mende et al., 2013). As noted previously they are more likely to engage deactivating strategies and to separate or isolate themselves from others people. Its not that avoidant individuals do not develop or seek out relationships and friendships it is that these relationship serve a different function and will take on a different form as a result of their attachment orientation and various coping mechanisms (Davidovitz et al., 2006; Mikulincer & Shaver, 2007).

5.1.2 **Hypothesis 2**

It was also hypothesized that there will be a significant and negative association between the attachment construct of anxiety and personal, physical and social outcomes. However, no statistically significant direct association was found between anxiety and any of the developmental outcomes explored herein. This finding is surprising given the

significant role that attachment anxiety has on individuals (Ainsworth et al., 1978; Bowlby, 1969, 1973, 1980, 1988a; Bretherton, 1992). Moreover, given the unique milieu in which summer camp takes place (i.e.: a highly social setting in which children separated from their primary caregivers for extended periods of time) it is theorized that this would be a distressing event for many individuals making activation of the attachment system more likely (Sroufe, 2005). The data presented herein may suggest that there is some validity to this assumption given that attachment anxiety was found to be negatively correlated with self efficacy ($r= -.091$, $p<.05$), environmental engagement ($r= -.090$, $p<.01$) , physical activity ($r= -.080$, $p<.05$), friendship and peer relations ($r= -.121$, $p<.01$), and exploration ($r= -.085$, $p<.05$) respectively. Moreover, subsequent interaction analysis explored later in this paper demonstrates anxiety does have an impact on the outcomes of camp at varying levels of avoidance.

A lack of unique direct effects for anxiety is perplexing given that a body of literature demonstrates that attachment anxiety has an influence on the development of outcomes associated with summer camp. Mikulincer and Shaver (2007), note that an overdependence on attachment figures characteristic of anxiously attached individuals interferes with the development of self efficacy. In general, anxiously attached children and adolescents have consistently been found to have lower levels of self efficacy (Mikulincer & Shaver, 2007). The negative association of anxiety and self efficacy is echoed in the works of (Collins & Read, 1990; Corcoran & Mallinckrodt, 2000; Kobak & Sceery, 1988) among others. With respect to environmental engagement, Hill (2003) found that overprotective parenting which is conceptually aligned with anxious attachment is associated with higher levels of nature fearfulness, and lower levels of

stoicism in regards to nature and the outdoors. Additionally, Hill (2003) notes that anxiety correlates negatively with both a desire to wander and for explorative play both of which have been linked with outdoors activities and engagement with nature. In general, Hill (2003) noted a general negative association between levels of anxiety and an predilection towards nature based activities. Anxiety has also been negatively associated with participation in physical activity (Feeney & Collins, 2015; Feeney, 2000; Fraley & Shaver, 1997). In carrying out a comprehensive study of attachment orientations and health behaviour Feeney and Ryan (1994) noted that anxiously attached individuals were more likely to be overweight and reported lower rates of physical exercise. Highly anxious individuals may utilize deactivating strategies to avoid situations that are highly social or that require social engagement, as much physical activity does especially within a summer camp setting (Mikulincer & Shaver, 2007). Friendship and peer relations is also negatively related to anxious attachment (Grabill & Kerns, 2000; Grossmann et al., 2006; Sroufe, 2005). Anxious individuals may experience high levels of social anxiety which in turn may impact their ability to make and maintain healthy friendships. Indeed Grabill and Kerns (2000), found that individuals with anxious attachment orientations would attempt to modulate social anxieties by utilizing hyperactivating strategies such as complying with social demands and high levels of self-disclosure which in turn may have a negative impact on the development and maintenance of relationships as the individual may appear overly needy or clingy (Mikulincer & Shaver, 2007). Anxious attachment has also been shown to have an impact on exploration (Ainsworth, 1979; Bowlby, 1988b; Bretherton, 1992; Fraley & Shaver, 1997; Granot & Mayseless, 2001). In the strange situation experience Ainsworth et al. (1978), noted that anxious children clung to their

mothers and did not actively engage in exploration. Anxiously attached individuals tendency for distress and worry can interfere with their ability and indeed desire for open and curious exploration (Mikulincer & Shaver, 2007).

It is clear that anxiety has a meaningful impact on the development of the outcomes noted above. There are a number of possibilities for why anxiety was not found to be significant on its own in this study. The first possibility is that the effect of anxiety is being explained by other variables within the dataset. Bivariate analysis revealed that anxiety was associated with each of the outcome variables examined (see Table 6). Thus, it is plausible that an associated variable contained within the dataset may explain some of the variance attributable to attachment anxiety, thus masking its effects within the models. Potential variables that may be masking the effect of anxiety include connection to camp ($r= -.202$, $p<.01$), household income ($r= -.180$, $p<.01$), returning camper status ($r= .091$, $p<.05$), and dosage ($r= -.143$, $p<.01$).

As previously noted the connectedness to camp variable relates to an individual campers sense of belonging to the camp environment. The negative association reported herein suggests that as a camper's level of anxiety decreases their connection to camp increases. Campers who have a deep connection to camp may consequently experience less anxiety. Further Sibthorp et al. (2010), note that camp connectedness is related to a broad range of developmental outcomes. Moreover, the sample in this study had a high connection to camp rating ($M= 4.77$, $SD= 1.17$), indicating that individuals herein would have low levels of anxiety thus potentially accounting for the non-significance of the findings.

Household income is not likely to have a significant effect within a residential camp setting as the living experience (i.e.: food, shelter, etc.) are standardized, and opportunities for participation within camp are supposed to be equally distributed among all campers. However, there is research to suggest that children from households with higher socioeconomic status (SES), and thus higher household income, are generally more securely attached (i.e.: have low levels of anxiety) (Aber et al., 2000; Raikes & Thompson, 2005; Van Ijzendoorn et al., 1999). Low SES individuals are theorized to have less access to supports and services that would ameliorate some of the stressors associated with low income and as such have higher levels of anxiety. Participants in this study reported a relatively high household income which would suggest that the majority of participants are securely attached. Perhaps higher household income served as a buffer and limited the impact of anxiety on the various outcomes.

Returning camper status may also have masked some of the potential effects of anxiety on the various developmental outcomes. Highly anxious individuals are more susceptible to experiencing distress and homesickness in a summer camp setting (Fichman et al., 1997; Thurber, 1995, 1999, 2005). This distress may manifest in the camper not returning to camp in subsequent years. The participants in this study had a generally low mean anxiety rating (M= -1.83, SD= 2.58) which would indicate that relatively few high anxiety individuals are actually attending summer camp. This suggests the campers who previously attend camp and have high levels of anxiety chose not to return to camp the following year. If only low anxiety or high functioning anxious people are attending camp it would reduce the impact or affect that anxiety was having on the various outcomes. Bivariate analysis indicates a small but significant association

between returning camper status and attachment anxiety. It may be that anxiously attached individuals who previously attended summer camp and accrued benefits (i.e.: new friends, social interaction, increased physical fitness, etc.) return to camp in an effort to amass the associated benefits again. However, the benefits achieved may be so minimal as to not be measurable in this context. It may also be that the sample skews towards highly functioning anxious individuals there by reducing the impact of attachment anxiety on the development of outcomes.

Finally, the dosage variable may also have some coinciding explanatory variance with anxiety. Individuals with an anxious attachment orientation experience distress when separated from an attachment figure (Bartholomew, 1990; Bretherton, 1992; Fichman et al., 1997; Fraley, 2002). As such, it would be conceptually in line that the longer an anxiously attached individual is displaced from a caregiver or primary attachment figure the greater their level of distress and higher their levels of anxiety. However, in this study the longer an individual spends at camp (i.e.: dosage) their level of anxiety goes down. It might be that the longer a camper spends at camp the more comfortable that they become with the camp environment (i.e.: the camp setting, other campers, counsellors, etc.). It is possible that the longer these individuals spend at camp they start to develop secondary attachment relationships with other campers or camp counsellors which in turn helps to satiate attachment needs (i.e.: for proximity or felt security). Thus, allowing them to access other resource (internal or otherwise) that reduce the need for other attachment figures (i.e. caregivers) and subsequently reduce the impact of anxiety.

The second possibility as to why attachment anxiety was not found to be significant is the presence of bias within the sample reducing the measurability of the anxiety variable. In this context, sample bias refers to the systematic failure of the sample to represent a population as a whole. One of the challenges experienced with this data set is that it is based on parental assessment of their children when they returned home from camp. It is possible that the only parents that completed the survey were low anxiety individuals or had children that were low anxiety. Thus, it is very possible that this sample does not represent the entire population of summer camp going adolescences.

A third potential possibility is that the summer camp setting is in itself a protective factor. As previously noted when anxious individuals are separated from their primary attachment figures they experience negative consequences such as distress and anxiety (Fichman et al., 1997; Thurber, 2005). The summer camp environment is intentionally structured in such a way as to limit such distress. Summer camp is supposed to be a place that is socially, physically, and psychologically safe for the campers (Henderson & Bialeschki, 2008; Thurber, 2005; Thurber et al., 2007). Camp may provide some protective element that allows highly anxious children to function like low anxiety individuals. This includes expanded social networks (i.e.: friends and counsellors) that may serve to provide a sense of felt security in the absence of a primary AF (Ainsworth, 1979; Hazan & Shaver, 1994). In doing so the camp environment may encourage the establishment of new attachment relationships which in turn may minimize the effect of anxious attachment.

5.2 Research Question 2: Interaction Terms

In addition to exploring the direct effects of attachment avoidance and anxiety on developmental outcomes associated with residential summer camp programs this research also sought to explore how varying levels of avoidance and anxiety (i.e.: attachment styles) influence these outcomes. As previously noted significant body of research has drawn links between attachment orientations and developmental outcomes associated with summer camp participation (e.g.: Ainsworth, 1979; Bartholomew & Horowitz, 1991; Bretherton, 1985, 1992; Feeney & Collins, 2015; Feeney & Ryan, 1994; Hazan & Shaver, 1994; Hill, 2003; Mallinckrodt, 1992; Mikulincer & Shaver, 2007; Stevenson-Hinde & Verschueren, 2002; Wei et al., 2005). Varying levels of anxiety and avoidance, and different orientations towards self and others will have an impact on the outcomes derived from summer camp participation. The various attachment styles will have different impacts on developmental outcomes achieved as a result of involvement in summer camp. The social nature of camp will impact the benefits that an individual receives from participation as these benefits frequently rely on effective social interaction to be achieved.

5.2.1 Hypothesis 3

It was hypothesized that there would be a significant interaction effect between the anxious and avoidant attachment constructs that predicts various developmental outcomes. The interaction term for attachment avoidance and anxiety was found to be statistically significant for predicting the development of personal outcomes (i.e.: self efficacy and exploration) and for environmental engagement, but not for the development of physical activity, or friendship and peer relations. It is not surprising that a significant

interaction term was found as the intersection of the avoidance and anxiety constructs represent the conceptual framework of attachment as delineated by Brennan et al. (1998).

High levels of anxiety coupled with high levels of avoidance represents the fearful attachment style. These individuals process a negative view of self and a negative view of others (Bartholomew & Horowitz, 1991). In general, they have difficultly adjusting to social situations and setting (Brennan et al., 1991, 1998), and display a myriad of behavioural and social issues that interfere with their ability to effectively function (Behrens et al., 2007; Stevenson-Hinde & Verschueren, 2002). Fearful individuals experience great degrees of distress and anxiety when placed in social setting such as summer camp. Consequently, they are not likely to experience significant gains from summer camp. Fearfully attached individuals have the most to potentially gain from summer camp programming but due to internal working models that dissuade engagement in social setting and exploration they are not likely to experience such benefits.

High levels of anxiety and low levels of avoidance correspond with preoccupied attachment. Recall, preoccupied individuals have a positive view of others but a negative view of self (Bartholomew & Horowitz, 1991). This results in preoccupied individuals having a strong drive to gain the acceptance of others. Often seeking out social connections, though may have difficulty maintaining these connections due to maladaptive internal working models (Bartholomew & Horowitz, 1991; Bergin & Bergin, 2009; Malekpour, 2007). Their innate need for an attachment figure during time of distress may make camp difficult. Conversely, if they are able to form stable and

meaningful attachment relationships within the camp setting they have the potential to benefit form the camp environment.

Low levels of anxiety and high levels of avoidance is linked with dismissive avoidant attachment. Avoidant attached individuals have a positive view of self combined with a negative view of others (Bartholomew & Horowitz, 1991). This results in them seeking to avoid social contact and actively working to avoid situations that would require social interaction (Main et al., 1985). They have difficulty depending on others and are typically very self reliant. They can seem to be rejecting of other people and do not easily make friends or establish new relationships (Bergin & Bergin, 2009; Mende et al., 2013). Given the inherent social context in which summer camp takes place this would mean that they would have difficult leveraging the associated benefits of camp participation. However, this attachment style may also give them an advantage in some situations. As noted above they have a tendency to develop high levels of counter dependence, wherein they work to be independent in many aspects of their lives. This in turn may benefit certain outcomes such as self efficacy and exploration. This will be examined in greater detail in subsequent sections.

Low levels of anxiety coupled with low levels of avoidance correspond with secure attachment. Securely attached individuals have internal working models that present a positive view of self and others (Bartholomew & Horowitz, 1991). This is considered to be the prototypic attachment style and what is most wanted. These individuals are generally well adjusted and socially competent (Sroufe et al., 1999). Their internal working model are such that they have general expectation that other people are largely accepting and responsive and as such are easily able to make friends

and function effectively in social situations. They are able to actively explore and to utilize their attachment systems so that they can leverage the potential benefits of camp involvement. Each of these attachment styles are known to have significant social and personal implications and will be examined in greater detail next.

5.2.2 Hypothesis 4

It was hypothesized that securely attached individuals (i.e.: individuals with low levels of avoidance and low levels of anxiety) would garner the most benefit from camp participation. That is to say, securely attached individuals would experience the greatest gains in the developmental outcomes when compared individuals in other groups. Three interaction terms were found to statistically significant in this study, the interactions related to personal outcomes (i.e.; self efficacy and exploration), and environmental engagement. Interactions related to physical activity, and friendship and peer relations were not noted to be at statistically significant levels. While the data does suggest that securely attached individuals did derive benefit from summer camp participation (i.e.: did see gains in relation to each of the developmental outcomes explored) they did not garner the gains expected. In fact, in all three significant interactions securely attached individuals had the lowest associated scores in each group. This is contrary to research that would suggest that securely attached individuals should derive the most benefit from camp programing as they would potentially have the ability to leverage the most from the camp experience due to their predilection towards exploration and social competence (Ainsworth, 1979; Bretherton, 1992; Green & Campbell, 2000; Schnitker et al., 2012). It is possible that securely attached individuals were experiencing a ceiling effect. These

children arrived at camp with higher scores in each of the developmental areas and as such did not have much room for improvement or change.

5.2.3 **Hypothesis 5**

It was hypothesized that highly avoidant, highly anxious individuals (i.e.: fearful attachment) would experience low levels of change in developmental outcomes as a result of participation in summer camp programs. Indeed a body of literature demonstrates that the disorganized nature of fearful attachment makes it very difficult for individuals to adapt to social environments (Behrens et al., 2007; Bergin & Bergin, 2009; Carlson et al., 1989; Stevenson-Hinde & Verschueren, 2002). Because camp is a social learning environment and fearfully attached individuals struggle in such settings it was believed that they would be unable to leverage the resources at camp to achieve outcomes. To a degree the findings presented herein support this hypotheses in that fearfully attached campers did experience relatively low developmental gains in comparison to other attachment orientations, with the notable exception of secure attachment discussed above.

Conceptually, low scores in relation to self efficacy, environmental engagement and exploration fall in line with previous literature on fearful attachment (Allen et al., 1998; Brennan et al., 1998; Hill, 2003; Mikulincer & Shaver, 2007; Wei et al., 2005). The negative view of self and others possessed by fearfully attached individuals result in them withdrawing and disengaging as a means of coping, while experiencing high levels of anxiety that may result in maladaptive or antisocial behaviour (Mikulincer & Shaver, 2007). It would seem logical that fearfully attached individuals would have the most to gain from summer camp participation. However, their underlying schemas do not allow

them to fully integrate within the camp environment thus limiting the potential benefits that can acquire from the experience. Within the camp setting fearfully attached individuals would feel very isolated and alone. They would have difficulty developing new friendships (and in turn attachment relationships) and the ones that they may have would be strained. An inability of the part of fearfully attached individuals to adapt effectively to varied social environments would mean that they would find elements of the camp experience such as communal living environments and team activities to be very distressing and uncomfortable. This may result in them withdrawing and thus not being able to leverage potential benefits associated with camp involvement.

While it is true that fearfully attached individuals may have difficulty accruing benefits associated with camp participation it is worth noting that for all developmental outcomes examined in this study fearfully attached individuals did display gains. Fearful attachment was associated with some gain in each area but less than preoccupied and avoidant but still more than secure attachment, with the exception of friendship and peer relations which was not found at a statistically significant level. This suggests that even for fearfully attached individuals summer camp can provide some benefits.

5.2.4 Hypothesis 6

It was hypothesized that dismissive avoidant individuals (i.e.: individuals with high levels of avoidance and low levels of anxiety) would see greater increases in personal outcomes when compared to other attachment orientations. Avoidant individuals did indeed see the greatest increase in exploration when compared to other attachment profiles. With respect to self efficacy, they also seen an increase that was greater than both securely attached individuals and fearfully attached individuals, though

less than preoccupied individuals. For the other statistically significant interaction it was found that dismissive avoidant individuals also displayed increases in environmental engagement at greater levels that either fearfully attached or securely attached. It was hypothesized that increases in these variables could potentially be explained by the elevated levels of counter dependence that avoidant individuals often display (Bretherton, 1992).

Dismissive avoidant individuals have a discomfort with closeness, viewing relationships as secondary and in many cases actively working to disengage in social settings (Mikulincer & Florian, 1995; Mikulincer & Shaver, 2007). They employ deactivating strategies in an attempt to inhibit or exclude from awareness thoughts or feelings the imply vulnerability, neediness, or dependence on others (Mikulincer & Shaver, 2007). This again is associated with what Bowlby (1973) termed compulsive self reliance. These strategies and their accompanying mental processes have a distorting effect on self-perception, and self-reliance, and adverse effects on social interaction (Mikulincer, 1997; Mikulincer & Shaver, 2007). Thus, it follows that they would have difficulty adjusting to a camp environment that relies so heavily on social interaction and relationships (Feeney & Ryan, 1994; Glover et al., 2011; Henderson, 2007, 2012; Henderson & Bialeschki, 2008).

However, the findings of this research would suggest that dismissive avoidant individuals derived benefit from camp. Perhaps the counter dependency that people with dismissive attachment experience acts as a protective factor that allows them to thrive in a camp setting. As previously noted counter dependency often results in an independent orientation. Self efficacy, exploration, and nature engagement are all outcomes that can

benefit from increased levels of independence. That is to suggest that elevated levels of independence may benefit these particular outcomes. Potentially, something about the camp environment facilitates this independent orientation. Perhaps it is the isolation (i.e.: in nature), specific camp programing, or separation form attachment figures that enables avoidant individuals to reap the benefits of camp participation.

5.2.5 **Hypothesis 7**

Preoccupied attachment (i.e.: low levels of avoidance and high levels of anxiety) was hypothesized to be associated with low levels of each of the developmental outcomes explored. This was based on the high level of anxiety and its deleterious effects on preoccupied individuals often experience (Bergin & Bergin, 2009; Finnegan et al., 1996; Hazan & Shaver, 1994; Malekpour, 2007). Only, fearful attachment was hypothesized to be associated with poorer outcomes (i.e. lower levels of change).

It was found that preoccupied individuals seem to gain the greatest benefit from participation in summer camp programs. Preoccupied attachment had the highest scores in each of the outcomes with the exception of exploration for which it was second. This may in part be due to the fact that the summer camp setting provided preoccupied individuals an opportunity to develop new relationships that provided them with a sense of felt security (Ainsworth et al., 1978; Bretherton, 1992). This is in line with previous research that demonstrates that preoccupied individuals orientation towards others (Bartholomew, 1990; Bartholomew & Horowitz, 1991; Lopez & Gormley, 2002). Remember preoccupied individuals have a positive view of others and a negative view of self, as such, they often seek out external validation as a coping mechanism (i.e.: deactivating strategies) (Mikulincer & Florian, 1995; Mikulincer & Shaver, 2007).

Camp might provide preoccupied children with the close contact and meaningful attachment relationships (i.e.: with other campers, or camp counsellors) that they are otherwise unable to obtain in other areas of their lives (school, home, etc.). Preoccupied children often seek out and desire close relationships with others (i.e.: attachment relationships) but are unable to develop or maintain them (Ainsworth, 1979; Ainsworth et al., 1978; Bartholomew, 1990; Bergin & Bergin, 2009; Bretherton, 1992; Malekpour, 2007). The supportive and collaborative nature of summer camp may help preoccupied campers feel comfortable and allow them to establish vital connections, thus leveraging the potential benefits associated with camp participation.

5.3 Research Question 3: Mediation Analysis

In addition to examining how individual attachment orientations impact the emergence of developmental outcomes within a camp setting this research also sought to explore some of the potential mechanisms that influence the development of these outcomes. In particular, connectedness to camp and exploration were examined as possible mediating factors. Connections to camp and exploration were selcted as potential mediating variables in this study for a number of reasons. Firstly, they were selcted for inclusion in this study because it is proposed that among the variables available in the data set these are most directly related to camp programing and protocols. Secondly, literature demonstrates that exploration is the operationalized component of attachment (Ainsworth et al., 1978; Allen et al., 1998; Bretherton, 1992). Further, a body of knowledge has come to show that connectedness to camp (i.e.: the social connections established at camp at camp with camp counsellors and other campers, a sense of belonging) is the operational component that enables the emergence of specific outcomes

in a camp setting (Briery & Rabian, 1999; Devine & Dawson, 2010; Glover et al., 2011; Henderson, 2012; McNeely & Falci, 2004; Sibthorp et al., 2010; D. Wilson, 2004; Yuen et al., 2005).

5.3.1 Hypothesis 8

It was hypothesized that connectedness to camp and exploration would play a significant mediating role in the relationship between the attachment constructs of anxiety and avoidance, and developmental outcomes at camp. As noted above after accounting for the control variables there was no significant direct effect of attachment anxiety on any of the developmental outcomes examined herein, though small negative associations were noted. Similarly, no statistically significant indirect effects were found from anxiety to the developmental outcomes assessed. While not at significant levels the findings of this study are in line with other research on attachment anxiety and developmental outcomes, suggesting that increased levels of anxiety are associated with lower levels of outcomes (Hazan & Shaver, 1994; Mikulincer & Shaver, 2007).

As noted above a significant negative association between the attachment construct of anxiety and connection to camp was noted. Connectedness to camp can be broadly thought of as a belief that one is cared for, a sense of belonging, and is related to the social bonds that emerge within the camp setting (Sibthorp et al., 2010). It is well established within the attachment literature that anxiously attached individuals often experience difficulty forming and maintaining relationships (Bergin & Bergin, 2009; Zimmermann, 2004). As such, it was not unexpected that anxiety would be negatively associated with the development of connection to camp.

No significant association was found between the attachment construct of anxiety and exploration. This is somewhat surprising given the connection between attachment styles and exploration (Ainsworth, 1979; Behrens et al., 2007; Main & Cassidy, 1988). From an attachment perspective it would be assumed that a significant negative association would exist between anxiety and exploration. That is to say higher levels of anxiety would result in lower levels of exploration, conversely lower levels of anxiety would facilitate exploration (Brennan, Clark, & shaver, 1998). This finding is also perplexing given the nature of the camp environment which is frequently structured with the specific intent of facilitating exploration on the part of the campers.

For the avoidance construct the direct effects were found to be significant for self efficacy, environmental awareness, physical activity, and friendship and peer relations. No indirect effects were found to be statistically significant for the avoidance construct and any of the developmental outcomes explored herein. Decreased levels of avoidance was associated with increased levels in each of the developmental outcomes explored. Conceptually, this is in line with attachment theory as higher levels of avoidance are generally associated with lower levels of outcomes (Hazan & Shaver, 1994; Mallinckrodt, 1992; Mikulincer & Shaver, 2007). Moreover, a significant serial meditation effect via connectedness to camp and exploration was noted for each of these associations.

From an attachment perspective a negative association between avoidance and connectedness to camp would seem logical. As previously noted individuals with avoidant attachment styles frequently utilize deactivating strategies to close themselves off and avoid potential hurt or discomfort in social settings (Ainsworth et al., 1978;

Bretherton, 1992; Mikulincer & Shaver, 2007). Thus, it would seem to make sense that increased avoidance would be associated with decreases in connectedness to camp. As avoidant individuals actively work to avoid people and to isolate themselves from social interaction. This is in line with the findings presented herein, which suggest that an increase in avoidance is associated with a decrease in connectedness to camp. Thus the greater the avoidance an individual experiences the less their overall sense of connection or belonging to camp.

Similar to the anxiety construct discussed above no significant association between avoidance and exploration was found in the mediation analysis. However, while not at statistically significant levels a small positive association was present. This would suggest that as avoidance increases so does the level of exploration. This aligns conceptually with Bowlbys (1980; 1988a; 1988b) notion of compulsive self-reliance wherein highly avoidant individuals utilize deactivating strategies to mask vulnerability. In doing so these individuals may appear more independent and display characteristics associated with increased exploration (Mikulincer & Shaver, 2007).

For both anxious and avoidant individuals, as connection to camp went up levels of exploration also increased. This positive association aligns well with previous research that demonstrates that a connectedness to camp and a sense of belonging to the camp environment facilitates exploration (i.e.: Henderson, 2007; Macnaughton et al., 2019; Sibthorp et al., 2010). From an attachment perspective while it is acknowledged that social supports are not necessary for exploration to take place, it is also understood that the presence of social supports can encourage exploration (Bretherton, 1992). Increased levels of connectedness which would imply the presence of supports that can

function as a secure base (i.e.: friends, camp counsellors) should increase the likelihood that an individual will engage in exploration (Ainsworth et al., 1978; Bretherton, 1992; Cassidy & Shaver, 2008; Main & Cassidy, 1988; Nickerson & Nagle, 2005).

In addition to being positively associated with exploration, connectedness to camp was also found to have a significant positive relationship with each of the developmental outcomes explored herein. Developing a sense of connection or belonging to camp has long been the focus of organized camping programs (Garst et al., 2011). Indeed a meaningful body of work has come to show how the social connections and interaction that takes place within the summer camp setting help to facilitate the emergence of positive developmental outcomes (Glover et al., 2013; Glover et al., 2011; Henderson, 2007; Macnaughton et al., 2019; Sibthorp et al., 2010). From an attachment perspective connectedness to camp can be linked to the reshaping of internal working models. As a sense of connection or belonging increases it would be theorized that the individual would accumulate more benefit as a result of an effectively functioning attachment system that enables felt security. Consequently, it would be assumed that as connectedness to camp increases so would the outcomes examine herein.

Exploration was also found to be highly positively associated with each of the developmental outcomes explored in this study. From an attachment perspective exploration relates to an openness or willingness to try new things (Ainsworth et al., 1978; Bretherton, 1992; Green & Campbell, 2000). It can also be viewed as the operationalized component of attachment, as attachment orientations influence an individuals willingness to explore and in turn engage with the social world (Ainsworth et al., 1978; Green & Campbell, 2000). Further, exploration is also an important component

of the summer camp experience. As noted by (Gillard et al., 2009) children often attend camp with the intention or trying new things and new experiences and that this nurtures greater buy-in in the camp experience as a whole. Within camp, exploration impacts campers internal working models of self and others and as such allows for reshaping and refinement of these models to account for the new relationships and experiences that children gain while at camp. As previously noted summer camp can be an opportunity for youth to develop new attachment relationships that extend beyond their immediate caregivers (i.e.: parents, guardians, etc.). Consequently, these new relationships and schemas can serve as a source of growth and development. Increased levels of exploration allow campers to more fully utilize the assets present in camp. This results in an orientation that is more open to trying new things and as such more like to accrue benefits. This is in line with research that demonstrates the role of self competence in the development of outcomes related to camp participation (Devine & Dawson, 2010; Gillard, 2013; Gillard et al., 2009; Ramsing & Sibthorp, 2008).

As noted above a significant serial meditation effect for the relationship of avoidance to camp outcomes via connectedness to camp and exploration was noted. The findings suggest that avoidant children are hampered by a lower connection to camp, which in turn usually fosters exploration. This might suggest that it's not necessarily a connection to a specific camp that facilitates exploration. That is to say connectedness to camp is not tied to a particular physical location but rather the camp environment in general. Being separated from an AF and faced with unique challenges and stressors (i.e.: camp activities, living arrangements, new friendships, etc.) helps to facilitate positive developmental outcomes. Again this aligns with previous research on connectedness to

camp suggesting that a general sense of connectedness is associated with setting-level characteristics. It also suggests that the more comfortable an individual is in the camp environment the more they will be inclined to explore.

Moreover, it is noted that the lower connection to camp works on it's own as an explanatory mechanism between avoidance and the various developmental outcomes. This also suggests that the camp environment facilitates individuals with avoidant attachment to achieve positive outcomes. Perhaps it is the presence of the camp counsellors or other campers that come to serve as attachment figures providing them a sense of felt security which allows them to thrive. This aligns with previous research that shows avoidant individuals utilize deactivating strategies as a buffer, but still relay significantly on interpersonal relationships (Finnegan et al., 1996; Mikulincer & Florian, 1995; Mikulincer & Shaver, 2007). Other factors may also have influenced this relationship. As noted by (Sibthorp et al., 2010), setting level characteristics within camp may also contribute to a sense of connectedness. This includes structural features such as the communal living arrangements, and sustained interaction between camp staff and the campers (Roth & Brooks-gunn, 2003), specific activities (i.e.: games and programs) (Caldwell, 2000; Witt & Caldwell, 2010), and isolation from negative societal influences (Thurber et al., 2007). These all potentially contributed to avoidant individuals accruing benefits from participation in summer camp.

Wait a minute, it's stopped hailing
Guys are swimming, guys are sailing
Playing baseball, gee that's bettah
Muddah, Faddah kindly disregard this letter

(Allan Sherman)

Chapter 6
Conclusion

6.1 Conclusion

The findings of this study provide valuable insight into the role of attachment in relation to developmental outcomes associated with summer camp participation. Summer camp is a distinctive social environment that is purposefully designed to foster positive youth development (American Camp Association, 2005; Henderson, 2007, 2012). Yet the specific etiology of the camp experience is not well understood, as much of the research on the impact of camp has been anecdotal in nature (Bialeschki et al., 2007). Within this context, this study sought to explore the link between patterns of attachment (i.e.: attachment styles), based on the constructs of anxiety and avoidance (Bartholomew, 1990; Bartholomew & Horowitz, 1991), and personal, physical, and social outcomes associated with camp.

This research adds credence to the long held belief that participation in summer camp programs are beneficial for youth (e.g.: American Camp Association, 1998; Bialeschki et al., 2007; Canadian Camping Association, 2011; Glover et al., 2011; Henderson, 2007). Indeed the results indicate that involvement in residential summer camp programs do in fact contribute to positive developmental outcomes. It was found that attachment has a significant influence on developmental outcomes for youth within the summer camp context. The attachment construct of avoidance but not anxiety was

found to be directly related to the emergence of positive outcomes in a summer camp setting. Further, it was noted that attachment orientations influenced the outcomes derived from camp participation. The findings herein also suggest that the development of a sense of belonging to the camp environment (i.e.: connectedness to camp) and the ability of campers to engage in novel experiences (exploration) may contribute to the development of outcomes, though more exploration of this is warranted.

Perhaps the most significant finding emerging from this study was the impact of summer camp participation on children with preoccupied anxious attachment. It was found that highly anxious children who have relatively low levels of avoidance actually derived the most benefit (i.e.: the greatest increases in the various outcomes) from camp. These are children that have a negative view of self but a positive view of others. As noted in the attachment literature this results in them often seeking out relationships and contact with others but they struggle to establish or maintain these connections (Bartholomew, 1990; Bartholomew & Horowitz, 1991; Bretherton, 1992). As a consequence of a negative view of self they often have an increased frequency and intensity of destructive emotions. They frequently employ hyper-activating strategies to buffer and isolated themselves in social situations and alleviate distress. Thus, they are prone to be jealous, distrustful, easily angered, and sometimes violent towards other people (Mikulincer & Shaver, 2007). This hypersensitivity to attachment experiences may confound social interaction thus making it a source of stress.

Within a camp context this would suggest that campers with preoccupied attachment may isolate themselves and would have difficulty establishing relationships

and thus accruing benefits. Yet, it would seem that there is something about the camp environment that allows them to flourish. Conceivably the distinct milieu of summer camp allows for the development of deep meaningful connections (i.e.: attachment relationships) with other campers or camp staff (i.e.: counsellors). Which, in turn, facilitates their willingness and desire to explore and in turn allows them to leverage all of the potential benefits associated with camp participation. Perhaps the camp environment itself (irrespective of people) is supportive and thus enables campers with preoccupied attachment to achieve these outcomes. This would suggest that a number of structural elements within summer camp itself influence these outcomes including communal living arrangements and specific camp programs/activities (Caldwell, 2000; Roth & Brooks-gunn, 2003; Thurber, 1995).

These findings have a number of implications with respect to positive youth development and summer camp research. First, they contribute a greater understanding on how positive youth development functions within a camp context, and in doing so it extends our understanding of the summer camp experience. Second, they provide an understanding of some of the potential mechanisms that enable summer camp programs to delivers specific outcomes. Thus, addressing a gap in the literature by examining potential antecedents of change within a camp setting. Third, they can assist camp programmers and administrators in being more intentional in their implementation of camp programs, to be more effectual and directed towards positive developmental outcomes.

The findings of this study also have implications for attachment theory. The population examined within this research is relatively underrepresented in the attachment literature. There is a significant body of knowledge on how attachment functions in infant populations and a steadily growing amount of research that examines adult attachments (Bartholomew, 2002; Bartholomew & Horowitz, 1991; Carnelley & Ruscher, 2000; Collins & Read, 1990; Fraley & Waller, 1998; Mikulincer & Shaver, 2007). However, an understanding of how attachment functions during late childhood and adolescences is comparatively limited (Hazan & Shaver, 1994; Sroufe, 2005). Late childhood and adolescence is a key transitional period during which people are shifting their primary attachment figures from parents to peer or other people in their social circles (Hazan et al., 1991; Hazan & Zeifman, 1994). As the sample used within this study was primarily in this age range it provides insight into how attachment functions for these individuals and the role that it can potentially play, thus extending our understanding of attachment.

6.2 Limitations

Limitations of the present study include the cross sectional nature of the data precluding clausal claims. While it is true the data utilized in this study was cross sectional it nonetheless did provided some useful insight into the impact of attachment orientations on the outcomes of summer camp participation. Further, it shed some light into potential mechanisms of change associated with the camp environment (i.e.: connectedness to camp and exploration) that contribute to the development of outcomes.

Another limitation associated with this study was the dataset used. Data from the CSCRP III was not initially intended for developmental research. The CSCRP III was part of a larger multiphase study that sought to examine outcomes of summer camp participation. The framing of the questions within the Phase III survey were thus predicated on the findings of Phase II. As the questions wanted to measure the strength of association with positive development of outcomes the questions did not allow for a negative outcome in any of the domains examined. This potentially limited the response range that individuals could give. It is conceivable that some of the outcomes evaluated herein may have had negative outcomes but these are not represented in this data.

Other associated limitations include some of the measures present within the dataset. The attachment variable assessed in the CSCRP III employed the Relationship Questionnaire (Bartholomew, 2002) to determine attachment orientations of participants. The Relationship Questionnaire assesses attachment based on which of the four attachment styles participants most associate with. It then determines the degree to which that participant conforms with each of the individual attachment styles, which includes a forced choice element. The CSCRP III only included an agreement scale and did not include the recommended forced choice top rank as outlined by (Bartholomew, 1990, 2002). The omission of this element of the Relationship Questionnaire may thus have increased the probability of an order effect occurring when participants assessed agreement with each attachment orientation. Further, the measurement of the attachment variable may also be subject to a certain amount of recall bias. As the CSCRP III was administered post camp there is no way to know if camp involvement shaped or changed

the campers attachment orientations. Though this impact may have been somewhat limited as noted by (Kerns et al., 2008), assessment of attachment during or post camp involvement is actually a more accurate appraisal of its impact as opposed to solely a measure of attachment history.

The outcomes measures used within the CSCRP III also present some limitations. Each of the outcomes measures relate to behaviours or actions observable after the child has returned home from summer camp. As the wording of these variables is directly related to camp participation (see Table 1), they are intended to represent change that takes place as a result of participation in camp. It can be assumed that this change during the campers time at camp. However, the CSCRP III does not report at what level they may have been present during camp. Further, extraneous variables that happened after camp can not be ruled out as potential factors influencing this change.

Because the CSCRP III employed parents perceptions of change among children there is the potential for a response bias. It is very possible that only predominantly parents of securely attached children responded to the survey. In the process of data cleaning a significant number of participants were screened out because of incomplete data (i.e.: they did not fill in vital parts of the post camp survey). Parents may have chosen not to answer certain sections of the survey because of the sensitive nature of the questions. Perhaps they did not want to admit to their child's discomfort with social setting and situations, or their lack of social ability. Response bias may be present as a result of dissonance between sending their children to a summer camp experience that they intended to be positive and the actual experiences their children had (i.e.: they

wanted the camp to be a positive experience for them). Despite this there is a body of research that suggest parents assessing children in this fashion is effective and appropriate (Parsons et al., 1999; Sherifali & Pinelli, 2007). Within a camp context, (Henderson, Whitaker, et al., 2007), found a similar pattern, noting that parental and camper assessment of outcomes were generally aligned. While the correlations between camper and parental assessment were moderate they were positive and do generally indicate that parents are an effective proxy for their children's outcomes at camp.

The use of a 6-point Likert scale may have also contributed to a certain level of potential response bias. The scale used in the CSCRP III survey did not contain a neutral or unknown category. This forced nature of the questions may have led to a skewed distribution of the survey responses as participants did not feel any one response adequately measured their perceptions (Chyung et al., 2017). Moreover, the nature of the CSCRP III survey may have inadvertently led to recall bias as well. As parental perceptions of change (i.e.: the outcome variables) were only measured post camp, and were based on recollections of previous behaviour in comparison to observed current behaviour.

6.3 Future Directions

This research is but a first step into exploring the role of attachment in summer camp setting. Moving forward this research presents a number of possibilities for both future research on summer camp participation and developmental outcomes, and for programmatic implications of summer camp programs and organizations. Given the influence of attachment on youth development and a social interaction, and given the

prevalence of summer camp as a youth service organization a greater exploration of the role of attachment and its impacts on summer camp in general is warranted. This will benefit not only summer camp organizations but youth service organizations in general.

6.3.1 Research Directions

The data indicated that attachment orientations (i.e.: attachment styles) do indeed have an influence on the developmental outcomes that youth obtain as a result of participation is residential summer camp programs. However, the attachment construct of anxiety was not found to have a significant effect on outcomes in a summer camp setting. This is surprising given the nature of anxiety and its influence on attachment. Consequently, more exploration of anxiety within a camp context would be warranted. In particular, perhaps a more representative sample with respect to attachment anxiety would provide greater insight into how it functions within a camp setting.

In a similar vein, given the influence of socioeconomic status (SES) on developmental outcomes (Hoff, 2003), and link between income levels and attachment orientations (Fish, 2001; Van Ijzendoorn et al., 1999) examining the influence of summer camp specifically on lower income individuals may be worthwhile. Purposively seeking out a sample of campers from lower income families could theoretically provide insight into the role of attachment as a buffer or coping mechanism for lower income individuals. Moreover, it would further contextualize the role of summer camp as a youth service organization.

Another interesting area for future research could focus on the impact of age in relation to attachment. Age influences attachment orientations as children gradually shift

from caregivers to peers as AF's (Bartholomew & Horowitz, 1991; Hazan & Shaver, 1994; Hazan & Zeifman, 1994; Moretti & Peled, 2004; Nickerson & Nagle, 2005). Age has also been shown to be a significant factor in the development of outcomes in a camp setting . Thus, examining age as a potential moderator between attachment and various developmental outcomes would be worth exploring.

The findings presented in this study illustrate the role that connectedness to camp and exploration can play in mediating the relationship between various attachment constructs (i.e.: anxiety and avoidance) and developmental outcomes. While these mediating variables did present some significant findings a more detailed investigation into how they function and what they actually do within a developmental context would be useful. This would further help to explicate their role in contributing to developmental outcomes in a camp setting.

Other potential areas for future research include the impact of dosage in relation to camp outcomes and attachment orientations. A significant body of camp literature has come to show the length of time spent in camp influences outcomes (e.g.: American Camp Association, 1998, 2005; Bialeschki et al., 2007; Garst et al., 2011, 2016; Glover et al., 2011; Henderson, 2007) and the length of time spent at camp could also potentially impact on attachment as a consequence of separation from an AF (Ainsworth et al., 1978; Bretherton, 1992; Schnitker et al., 2012). While dosage was used as a control variable in this research more exploration of its impacts in relation to attachment is merited. Along similar lines this research only focused on residential camps expanding to include day camps may also prove to be a valuable stream of research.

6.3.2 Program Directions

From a camp programing perspective the findings of this research provide some potential directions for camp administrators and programmers. Summer camp has historically been framed as a panacea for youth. However, a growing body of literature now recognizes that summer camp may not be entirely or equally beneficial for all (Baker, 2018; Henderson, 2018a; Lynch et al., 2018). In fact, some children struggle mightily in summer camp settings. From a camp administrator or programmers perspective understanding potential reasons for why some children struggle at camp is very important. It potentially would enable them to proactively address issues or problems that these children are having and in doing so would allow the camp programs to be more directed and effective.

As demonstrated by this study one area that influences the outcomes associated with camp participation is attachment. Avoidant and anxious individuals are likely to experience unique challenges when it comes to leveraging the benefits of camp. Understanding a campers attachment style may help camp staff to tailor programing and activities to meet their needs. One potential solution might be to make attachment assessment part of the pre-camp entrance questionnaire, for example administering a scaled down version of the relationship questionnaire. Being able to identify the attachment profiles of campers attending a camp program would enable staff to proactively adjust camp programing and ensure more campers derive benefit from the camp environment.

Related to this is the issue of staff (i.e.: camp counselor) training. The influence of attachment on camp outcomes might also be addressed via staffing protocols and training. Providing staff with training in attachment orientations and behaviours may allow them to more effectively and actively address issues as they arise at camp. Implementing intervention protocols such as the *Circle of Security* which provides strategies for developing secure relationships based on various attachment profiles thus allowing the child to thrive (Cooper et al., 2011; Hoffman et al., 2006; Marvin et al., 2002) could be employed within the camp setting. This would ensure more stable functional attachment relationships are established in the camp setting and thus would empower and enable campers to leverage the benefits of the camp environment and thus derive the most benefit from participation.

In addition to attachment specific recommendations the findings of this study also suggest that general programmatic initiatives targeted at facilitating a connection to camp and exploration within the camp setting can contribute to outcomes. While no one thing can be credited with establishing a connection to the camp environment (Bialeschki et al., 2007; Caldwell, 2000; Sibthorp et al., 2010) certain activities already carried out in camp can contribute. Things such as the communal living arrangements (i.e.: the cabins/bunks), camp sing-alongs, the naming of cabins, having one counsellor assigned to a cabin/group, and team building exercises (Caldwell, 2000; Fine, 2005; Roth & Brooks-gunn, 2003; Thurber et al., 2007; Witt & Caldwell, 2010). Continuing such activities with attachment in mind would have benefit. This might be accomplished by ensuring a low camper to counsellor ratio, and reducing the size of activity groups/cabins. In theory,

these actions should improve the potential for social interaction while keeping groups sizes large enough to support the needs of individual campers. While small group sizes may encourage social interaction they may also cause or exacerbate interpersonal conflicts (i.e.: attachment distress). Ensuring staff are trained to identify and ameliorate such conflicts quickly can ensure the camp continues to function in an effective manner.

Exploration can be facilitated by encouraging choice within the camp setting. Allowing campers to select the activities they want to take part in can increase their level of autonomy and self confidence., which in turn can increase their inclination to explore (i.e.: try new things) (Ryan & Deci, 2000; Whipple et al., 2009). The use of scalable activities wherein campers can participate at a level that is tailored to their individual skills and comfort level may also facilitate exploration. In general, programs and activities need to be structured to encourage participation but not require or force it. The camp environment should be structured so as to allow fro exploration to occur naturally. The staff and environment should work to support this facilitation, much the same way secure attachment is formed allowing for growth exploration and expression by providing campers with a sense of felt security and a safe base or safe haven to return to in times of trouble or distress.

This is by no means an exhaustive list of programing considerations that may help to foster a sense of connectedness to camp and exploration. Rather, this presents some potential avenues that camp administrators and programmers may explore. Moreover, what this research does suggest is that camp is doing a lot right. It demonstrates that summer camp programs should continue to do what they have been doing all along.

Providing programing that encourages exploration in a safe and comfortable environment that can in and of itself serve as a safe heaven for children and thus a form of secure attachment. Creating situations that encourage social contact and the formation of meaningful relationships. Fostering a secure and supportive environment that encourages children to push their boundaries and challenge themselves. Camp sets the stage for kids to be kids, and to grow and development in healthy functional ways, still there is no doubt room for improvement, but in the meantime Camp On!

References

Aber, J. L., Jones, S., & Cohen, J. (2000). The impact of poverty on the mental health and development of very young children. In C. Zeanah (Ed.), *Handbook of infant mental health* (pp. 113–128). Guilford Press.

Ainsworth, M. D. S. (1979). Infant–mother attachment. *American Psychologist*, *34*(10), 932–937. https://doi.org/10.1037/0003-066X.34.10.932

Ainsworth, M. D. S., Blehar, M. C., Wall, S., & Waters, E. (1978). *Patterns of attachment: A psychological study of the strange situation*. Lawrence Erlbaum Associates.

Allen, J. P., Moore, C., Kuperminc, G., & Bell, K. (1998). Attachment and adolescent psychosocial functioning. *Child Development*, *69*(5), 1406–1409. https://doi.org/10.2307/1132274

Allen, K., Akinyanju, K., Milliken, T., Lorek, E., & Walker, T. T. (2011). Improving the pro-social skills of transitioning urban youth: A summer camp approach. *Middle School Journal*, *42*(4), 14–22. https://doi.org/10.1080/00940771.2011.11461770

American Camp Association. (1998). 1997 summer camp survey results. *Camping Magazine*, *71*(2), 38.

American Camp Association. (2005). *Directions: Youth development outcomes of the camp experience* (p. 24).

American Camp Association. (2006). *Inspirations: Developmental supports and opportunities of youths' experiences at camp*.

Amiri, F., Banijamali, S., Ahadi, H., & Ahadi, Y. (2013). The relationship between attachment style and self-efficacy beliefs with regard to sex. *European Journal of Experimental Biology*, *3*(1), 699–704.

Anderson, E. S., Wojcik, J. R., Winett, R. A., & Williams, D. M. (2006). Social-cognitive determinants of physical activity: The influence of social support, self-efficacy, outcome expectations, and self-regulation among participants in a church-based health promotion study. *Health Psychology*, *25*(4), 510–520. https://doi.org/10.1037/0278-6133.25.4.510

Arnold, M. E., Bourdeau, V. D., & Nagele, J. (2005). Fun and friendship in the natural world: The impact of Oregon 4-H residential camping programs on girl and boy campers. *Journal of Extension*, *43*(6). https://joe.org/joe/2005december/rb1.php

Ashford, S., Edmunds, J., & French, D. P. (2010). What is the best way to change self-efficacy to promote lifestyle and recreational physical activity? A systematic review with meta-analysis. *British Journal of Health Psychology*, *15*(2), 265–288. https://doi.org/10.1348/135910709X461752

Ayotte, B. J., Margrett, J. A., & Hicks-Patrick, J. (2010). Physical activity in middle-aged and young-old adults the roles of self-efficacy, barriers, outcome expectancies, self-regulatory behaviors and social support. *Journal of Health Psychology*, *15*(2), 173–185.

Baker, M. (2018). Welcome to the bubble: Experiences of liminality and communitas among summer camp counsellors. *Journal of Youth Development*, *13*(1–2), 24–43. https://doi.org/10.5195/JYD.2018.565

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.

Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships*, *7*(2), 147–178. https://doi.org/10.1177/0265407590072001

Bartholomew, K. (2002). *Self report measures of adult attachment.* http://www. sfu. ca/psychology/groups/faculty/bartholomew/research.

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, *61*(2), 226–244.

Bartholomew, K., & Moretti, M. (2002). The dynamics of measuring attachment. *Attachment & Human Development*, *4*(2), 162–165. https://doi.org/10.1080/14616730210157493

Beets, M. W. (2006). Social support and youth physical activity: The role of provider and type. *American Journal of Health Behavior*, *30*(3). https://doi.org/10.5993/AJHB.30.3.6

Beets, M. W., Weaver, R. G., Beighle, A., Webster, C., & Pate, R. R. (2013). How physically active are children attending summer day camps? *Journal of Physical Activity and Health*, *10*(6), 850–855. https://doi.org/10.1123/jpah.10.6.850

Behrens, K. Y., Hesse, E., & Main, M. (2007). Mothers' attachment status as determined by the adult attachment interview predicts their 6-year-olds' reunion responses: A study conducted in Japan. *Developmental Psychology*, *43*(6), 1553–1567. https://doi.org/10.1037/0012-1649.43.6.1553

Benoit, D. (2004). Infant-parent attachment: Definition, types, antecedents, measurement and outcome. *Pediatrics & Child Health*, *9*(8), 541–545. https://doi.org/10.1093/pch/9.8.541

Benson, P. L. (2003). Developmental assets and asset-building community: Conceptual and empirical foundations. In R. M. Lerner & P. L. Benson (Eds.), *Developmental Assets and Asset-Building Communities: Implications for Research, Policy, and Practice* (pp. 19–43). Springer US. https://doi.org/10.1007/978-1-4615-0091-9_2

Benson, P. L., Scales, P. C., Hamilton, S. F., & Sesma, A. (2007). Positive youth development: theory, research, and applications. In W. Damon & R. M. Lerner (Eds.), *Handbook of Child Psychology*. John Wiley & Sons, Inc. https://doi.org/10.1002/9780470147658.chpsy0116

Berghaus, B. J. (2011). A new look at attachment theory & adult "attachment" behavior. *Behaviorology Today*, *14*(2), 3–11.

Bergin, C., & Bergin, D. (2009). Attachment in the classroom. *Educational Psychology Review*, *21*(2), 141–170. https://doi.org/10.1007/s10648-009-9104-0

Berndt, T. J. (2002). Friendship quality and social development. *Current Directions in Psychological Science*, *11*(1), 7–10. https://doi.org/10.1111/1467-8721.00157

Bialeschki, M. D., Henderson, K. A., & James, P. A. (2007). Camp experiences and developmental outcomes for youth. *Child and Adolescent Psychiatric Clinics of North America*, *16*(4), 769–788. https://doi.org/10.1016/j.chc.2007.05.011

Blain, M. D., Thompson, J. M., & Whiffen, V. E. (1993). Attachment and perceived social support in late adolescence: The interaction between working models of self and others. *Journal of Adolescent Research*, *8*(2), 226–241. https://doi.org/10.1177/074355489382006

Bohlin, G., Hagekull, B., & Rydell, A.-M. (2000). Attachment and social functioning: A longitudinal study from infancy to middle childhood. *Social Development*, *9*(1), 24–39. https://doi.org/10.1111/1467-9507.00109

Bowlby, J. (1969). *Attachment and loss. 1. Attachment*. Basic Books.

Bowlby, J. (1973). *Attachment and Loss: Separation: anxiety and anger*. Basic Books.

Bowlby, J. (1980). *Attachment and Loss*. Basic Books.

Bowlby, J. (1988a). *A Secure Base: Clinical Applications of Attachment Theory*. Psychology Press.

Bowlby, J. (1988b). *A secure base: Parent-child attachment and healthy human development*. Basic Books.

Brannan, S., Arick, J., Fullerton, A., & Harris, J. (2000). Inclusive outdoor programs benefit youth: Recent research on practices and effects. *Camping Magazine*, *73*(4), 26–29.

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measures of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment Theory and Close Relationships* (pp. 46–76). Guilford Press.

Brennan, K. A., & Morris, K. A. (1997). Attachment styles, self-esteem, and patterns or seeking feedback from romantic partners. *Personality and Social Psychology Bulletin*, *23*, 23–31.

Brennan, K. A., Shaver, P. R., & Tobey, A. E. (1991). Attachment styles, gender and parental problem drinking. *Journal of Social and Personal Relationships*, *8*(4), 451–466. https://doi.org/10.1177/026540759184001

Bretherton, I. (1985). Attachment theory: Retrospect and prospect. *Monographs of the Society for Research in Child Development*, *50*(1/2), 3. https://doi.org/10.2307/3333824

Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology*, *28*, 759–775.

Bretherton, I., & Munholland, K. A. (1999). Internal working models in attachment relationships: A construct revisited. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of Attachment: Theory, Research, and Clinical Applications* (pp. 89–111). Guilford Press.

Briery, B. G., & Rabian, B. (1999). Psychosocial changes associated with participation in a pediatric summer camp. *Journal of Pediatric Psychology*, *24*(2), 183–190. https://doi.org/10.1093/jpepsy/24.2.183

Bringle, R. G., & Bagby, G. J. (1992). Self-esteem and perceived quality of romantic and family relationships in young adults. *Journal of Research in Personality*, *26*(4), 340–356. https://doi.org/10.1016/0092-6566(92)90064-B

Browne, L. P., Garst, B. A., & Bialeschki, M. D. (2011). Engaging youth in environmental sustainability: Impact of the camp 2 grow program. *Journal of Park and Recreation Administration*, *29*(3), 70–85.

Buckner, E. B., Simmons, S., Brakefield, J. A., Hawkins, A. K., Feeley, C., Kilgore, L. A. F., Holmes, S., Bibb, M., & Gibson, L. (2007). Maturing responsibility in young teens participating in an asthma camp: Adaptive mechanisms and outcomes. *Journal for Specialists in Pediatric Nursing*, *12*(1), 24–36. https://doi.org/10.1111/j.1744-6155.2007.00086.x

Button, B., Trites, S., & Janssen, I. (2013). Relations between the school physical environment and school social capital with student physical activity levels. *BMC Public Health*, *13*(1). https://doi.org/10.1186/1471-2458-13-1191

Caldwell, L. L. (2000). Beyond fun and games? Challenges to adopting a prevention and youth development approach to youth recreation. *Journal of Park and Recreation Administration*, *18*(3), 1–18.

Canadian Camping Association. (2011a). *Canadian Summer Camp Research Project: Parent Survey* [Data Set].

Canadian Camping Association. (2011b). *CCA/ACC national business survey: 2010 to 2011* [Business Report]. http://ccamping.org/wp-content/uploads/2012/10/National-Business-Survey-2010-to-2011.pdf

Carlson, V., Cicchetti, D., Barnett, D., & Braunwald, K. (1989). Disorganized/disoriented attachment relationships in maltreated infants. *Developmental Psychology*, *25*(4), 525–531. https://doi.org/10.1037/0012-1649.25.4.525

Carnelley, K. B., & Ruscher, J. B. (2000). Adult attachment and exploratory behavior in leisure. *Journal of Social Behavior and Personality.* Corte Madera*, CA*, *15*(2), 153–165.

Cassidy, J., & Berlin, L. J. (1994). The insecure/ambivalent pattern of attachment: Theory and research. *Child Development*, *65*(4), 971–991.

Cassidy, J., Jones, J. D., & Shaver, P. R. (2013). Contributions of attachment theory and research: A framework for future research, translation, and policy. *Development and Psychopathology*, *25*(4pt2), 1415–1434. https://doi.org/10.1017/S0954579413000692

Cassidy, J., & Kobak, R. R. (1988). Avoidance and its relation to the defensive processes. In J. Belsky & T. Nezworski (Eds.), *Clinical Implications of Attachment* (pp. 300–328). Lawrence Erlbaum Associates.

Cassidy, J., & Shaver, P. R. (Eds.). (2008). *Handbook of attachment: Theory, research, and clinical applications* (2nd ed.). Guilford Press.

Catalano, R. F., Berglund, M. L., Ryan, J. A. M., Lonczak, H. S., & Hawkins, J. D. (2004). Positive youth development in the United States: Research findings on evaluations of positive youth development programs. *The ANNALS of the American Academy of Political and Social Science*, *591*(1), 98–124. https://doi.org/10.1177/0002716203260102

Cheeseman, A., & Wright, T. (2019). Examining environmental learning experiences at an earth education summer camp. *Environmental Education Research*, *25*(3), 375 387.

Cheeseman, A., & Wright, T. (2020). Perspectives from parents: An investigation of the longer-term benefits of an earth education summer camp program. *Applied Environmental Education & Communication*, *19*(2), 117-128.

Chyung, S. Y. Y., Roberts, K., Swanson, I., & Hankinson, A. (2017). Evidence-based survey design: The use of a midpoint on the likert scale. *Performance Improvement*, *56*(10), 15–23. https://doi.org/10.1002/pfi.21727

Ciechanowski, P. S., Katon, W. J., Russo, J. E., & Walker, E. A. (2001). The patient-provider relationship: Attachment theory and adherence to treatment in Diabetes. *American Journal of Psychiatry*, *158*(1), 29–35. https://doi.org/10.1176/appi.ajp.158.1.29

Cohn, D. A. (1990). Child-mother attachment of six-year-olds and social competence at school. *Child Development*, *61*(1), 152–162. https://doi.org/10.2307/1131055

Collado, S., Staats, H., & Corraliza, J. A. (2013). Experiencing nature in children's summer camps: Affective, cognitive and behavioural consequences. *Journal of Environmental Psychology*, *33*, 37–44. https://doi.org/10.1016/j.jenvp.2012.08.002

Collins, N. L. (1996). Working models of attachment: Implications for explanation, emotion, and behavior. *Journal of Personality and Social Psychology*, *71*(4), 810–831.

Collins, N. L. (2014). The meaning of camp and social group work principles. In *Making joyful noise: The art, science, and soul of group work* (pp. 163–178). Routledge.

Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology*, *58*(4), 644–663.

Connell, J. P., & Gambone, M. A. (2002). Youth development in community settings: A community action framework. *Philadelphia, PA: Youth Development Strategies Inc*.

Connell, J.P., Gambone, M.A., and Smith, T.J. (2000). Youth development in community settings: Challenges to our field and our approach. In *Youth Development: Issues, Challenges and Directions* (pp. 281-300). Philadelphia, PA: Private/Public Ventures.

Cooper, G., Hoffman, K. T., Powell, B., & Marvin, R. S. (2011). The circle of security intervention: Using the therapeutic relationship to ameliorate attachment security in disorganized dyads. In J. Solomon & C. George (Eds.), *Disorganized Attachment and Caregiving* (pp. 318–342). Guilford Press.

Corcoran, K. O., & Mallinckrodt, B. (2000). Adult attachment, self-efficacy, perspective taking, and conflict resolution. *Journal of Counseling & Development*, *78*(4), 473–483. https://doi.org/10.1002/j.1556-6676.2000.tb01931.x

Cousineau, L. S., Mock, S. E., & Glover, T. D. (2018). Camper self-concept promotes environmental awareness: A relationship mediated by social inclusion. *Journal of Youth Development*, *13*(1–2), 144–160. https://doi.org/10.5195/JYD.2018.526

Cummings, E. M. (1990). Classification of attachment on a continuum of felt security: Illustrations from the study of children of depressed parents. In *The John D. and Catherine T. MacArthur Foundation series on mental health and development. Attachment in the preschool years: Theory, research, and intervention* (pp. 311–338). University of Chicago Press.

Cummings, E. M. (2003). Towards assessing attachment on an emotional security continuum: Comment on Fraley and Spieker (2003). *Developmental Psychology*, *39*(3), 405–408.

Damon, W. (2004). What is positive youth development? *The ANNALS of the American Academy of Political and Social Science*, *591*(1), 13–24. https://doi.org/10.1177/0002716203260092

Davidovitz, R., Mikulincer, M., Shaver, P. R., Ijzak, R., & Popper, M. (2006). *An attachment perspective on leadership and the leader-follower relationship*.

Devine, M. A., & Dawson, S. (2010). The effect of a residential camp experience on self esteem and social acceptance of youth with craniofacial differences. *Therapeutic Recreation Journal*, *44*(2), 105–120.

Duerden, M. D., Taniguchi, S., & Widmer, M. (2012). Antecedents of identity development in a structured recreation setting: A qualitative inquiry. *Journal of Adolescent Research*, *27*(2), 183–202. https://doi.org/10.1177/0743558411417869

Duerden, M. D., Witt, P., Garst, B., Bialeschki, D., Schwarzlose, T., & Norton, K. (2014). The impact of camp employment on the workforce development of emerging adults. *Journal of Park and Recreation Administration*, *32*(1), 26–44.

Duncan, R. (n.d.). Jar of Quotes. Retrieved 2021-01-25, from JarofQuotes.com Web site: https://www.jarofquotes.com/view.php?id=a-lot-of-parents-pack-up-their troubles-and-send-them-off-to-summer-camp

Dworken, B. S. (2001). Research reveals the assets of camp: Parents and campers give their opinions. *Camping Magazine*, *74*(1), 40–43.

Eliot, C. W. (1922). Treatise on Education.

Engels, R. C. M. E., Finkenauer, C., Meeus, W., & Deković, M. (2001). Parental attachment and adolescents' emotional adjustment: The associations with social skills and relational competence. *Journal of Counseling Psychology*, *48*(4), 428. https://doi.org/10.1037/0022-0167.48.4.428

Erickson, M. F., Sroufe, L. A., & Egeland, B. (1985). The relationship between quality of attachment and behavior problems in preschool in a high-risk sample. *Monographs of the Society for Research in Child Development*, *50*(1/2), 147. https://doi.org/10.2307/3333831

Ewert, A., Overholt, J., & Kim, K. (2010). *Fostering leadership through a three-week experience: Does outdoor education make a difference?* 9–11. http://www2.cortland.edu/dotAsset/12f4edef-17dd-4966-be77-3606fefc69f0.pdf

Feeney, B. C., & Collins, N. L. (2015). Thriving through relationships. *Current Opinion in Psychology*, *1*, 22–28. https://doi.org/10.1016/j.copsyc.2014.11.001

Feeney, J. A. (2000). Implications of attachment style for patterns of health and illness. *Child: Care, Health and Development*, *26*(4), 277–288. https://doi.org/10.1046/j.1365-2214.2000.00146.x

Feeney, J. A., & Ryan, S. M. (1994). Attachment style and affect regulation: Relationships with health behavior and family experiences of illness in a student sample. *Health Psychology*, *13*(4), 334. https://doi.org/10.1037/0278-6133.13.4.334

Ferrari, T. M., & McNeely, N. N. (2007). Positive youth development: What's camp counseling got to do with it? findings from a study of Ohio 4-H camp counselors. *Journal of Extension*, *45*(2). https://www.joe.org/joe/2007april/rb7.php

Fichman, L., Koestner, R., & Zuroff, D. C. (1997). Dependency and distress at summer camp. *Journal of Youth and Adolescence*, *26*(2), 217–232.

Fine, S. (2005). *Contextual learning within the residential outdoor experience: A case study of a summer camp community in Ontario*. University of Toronto.

Finnegan, R. A., Hodges, E. V. E., & Perry, D. G. (1996). Preoccupied and avoidant coping during middle childhood. *Child Development*, *67*(4), 1318. https://doi.org/10.2307/1131702

Fish, M. (2001). Attachment in low-SES rural Appalachian infants: Contextual, infant, and maternal interaction risk and protective factors. *Infant Mental Health Journal*, *22*(6), 641–664. https://doi.org/10.1002/imhj.1024

Fiske, A. P. (2002). Using individualism and collectivism to compare cultures--A critique of the validity and measurement of the constructs: Comment on Oyserman et al. (2002). *Psychological Bulletin*, *128*(1), 78–88. https://doi.org/10.1037//0033-2909.128.1.78

Fraley, R. C. (2002). Attachment stability from infancy to adulthood: meta-analysis and dynamic modeling of developmental mechanisms. *Personality and Social Psychology Review*, *6*(2), 123–151. https://doi.org/10.1207/S15327957PSPR0602_03

Fraley, R. C. (2019). Attachment in adulthood: Recent developments, emerging debates, and future directions. *Annual Review of Psychology*, *70*(1), 401–422. https://doi.org/10.1146/annurev-psych-010418-102813

Fraley, R. C., & Shaver, P. R. (1997). Adult attachment and the suppression of unwanted thoughts. *Journal of Personality and Social Psychology*, *73*(5), 1080–1091.

Fraley, R. C., & Spieker, S. J. (2003). Are infant attachment patterns continuously or categorically distributed? A taxometric analysis of strange situation behavior. *Developmental Psychology*, *39*(3), 387–404. https://doi.org/10.1037/0012-1649.39.3.387

Fraley, R. C., & Waller, N. G. (1998). Adult attachment patterns: A test of the typological model. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment Theory and Close Relationships* (pp. 77–114). Guilford Press.

Friedman, S. L., & Boyle, D. E. (2008). Attachment in US children experiencing nonmaternal care in the early 1990's. *Attachment & Human Development*, *10*(2), 225–261.

Gambone, M. A., & Connell, J. P. (2004). The community action framework for youth development. *The Prevention Researcher*, *11*(2), 17–20.

Gander, M., & Buchheim, A. (2015). Attachment classification, psychophysiology and frontal EEG asymmetry across the lifespan: A review. *Frontiers in Human Neuroscience*, *9*. https://doi.org/10.3389/fnhum.2015.00079

Garst, B. A. (2010). From what to how: Targeting specific factors that influence outcomes. *Journal of Extension*, *48*(6), 6.

Garst, B. A., Browne, L. P., & Bialeschki, M. D. (2011). Youth development and the camp experience. *New Directions for Youth Development*, *2011*(130), 73–87. https://doi.org/10.1002/yd.398

Garst, B. A., & Bruce, F. A. (2003). Identifying 4-H camping outcomes using a standardized evaluation process across multiple 4-H educational centers. *Journal of Extension*, *41*(3). https://www.joe.org/joe/2003june/rb2.php

Garst, B. A., Franz, N. K., Baughman, S., Smith, C., & Peters, B. (2009). Growing without limitations: Transformation among young adult camp staff. *Journal of Youth Development*, *4*(1), 21–34. https://doi.org/10.5195/JYD.2009.272

Garst, B. A., Gagnon, R. J., & Whittington, A. (2016). A closer look at the camp experience: examining relationships between life skills, elements of positive youth development, and antecedents of change among camp alumni. *Journal of Outdoor Recreation, Education, and Leadership*, *8*(2), 180–199. https://doi.org/10.18666/JOREL-2016-V8-I2-7694

Garst, B. A., & Ozier, L. W. (2015). Enhancing youth outcomes and organizational practices through a camp-based reading program. *Journal of Experiential Education*, *38*(4), 324–338. https://doi.org/10.1177/1053825915578914

Gerhold, M., Laucht, M., Texdorf, C., & Schmidt, M. H. (2002). Early mother–infant interaction as a precursor to childhood social withdrawal. *Child Psychiatry and Human Development*, *32*(4), 277–293.

Gillard, A. (2013). *Self-Determination Theory and Camp* (pp. 1–3). American Camping Association.

Gillard, A., Watts, C. E., & Witt, P. A. (2009). Camp supports for motivation and interest: A mixed-methods study. *Journal of Park and Recreation Administration*, *27*(2), 74–96.

Glover, T. D., Chapeskie, A., Mock, S. E., Mannell, R. C., & Feldberg, H. (2011). *The Canadian Summer Camp Research Project*. University of Waterloo: Waterloo, ON, Canada.

Glover, T. D., Graham, T., Mock, S. E., Mannell, R. C., Carruthers, A., & Chapeskie, A. (2013). *Canadian summer camp research project: Parent perceptions of change in children after returning home from camp*. University of Waterloo: Waterloo, ON, Canada.

Glover, T.D., Graham, T., Mock, S. E., Mannell, R. C., Carruthers, A., & Chapeskie, A. (2013). *Parent perception of changes in children after returning home from camp* (Canadian Summer Camp Project: Phase 3). University of Waterloo: Waterloo, ON, Canada.

Gosling, E., & Williams, K. J. H. (2010). Connectedness to nature, place attachment and conservation behaviour: Testing connectedness theory among farmers. *Journal of Environmental Psychology*, *30*(3), 298–304. https://doi.org/10.1016/j.jenvp.2010.01.005

Grabill, C. M., & Kerns, K. A. (2000). Attachment style and intimacy in friendship. *Personal Relationships*, *7*(4), 363–378. https://doi.org/10.1111/j.1475-6811.2000.tb00022.x

Granot, D., & Mayseless, O. (2001). Attachment security and adjustment to school in middle childhood. *International Journal of Behavioral Development*, *25*(6), 530–541. https://doi.org/10.1080/01650250042000366

Green, J. D., & Campbell, W. K. (2000). Attachment and Exploration in Adults: Chronic and Contextual Accessibility. *Personality and Social Psychology Bulletin*, *26*(4), 452–461. https://doi.org/10.1177/0146167200266004

Griffin, D. W., & Bartholomew, K. (1994). The metaphysics of measurement: The case of adult attachment. In K. Bartholomew & D. Perlman (Eds.), *Advances in Personal Relationships: Vol. 5, Attachment processes in adulthood*. Jessica Kingsley Publishers.

Grossmann, K. E., Grossmann, K., & Waters, E. (2006). *Attachment from infancy to adulthood: The major longitudinal studies*. Guilford Press.

Hamilton, S. F., Hamilton, M. A., & Pittman, K. (2004). Principles for youth development. *The youth development handbook: Coming of age in American communities*, *2*, 3-22.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. Guilford Press.

Hayes, A. F. (2015). An index and test of linear moderated mediation. *Multivariate Behavioral Research*, *50*(1), 1–22. https://doi.org/10.1080/00273171.2014.962683

Hazan, C., & Shaver, P. R. (1994). Attachment as an organizational framework for research on close relationships. *Psychological Inquiry*, *5*(1), 1–22. https://doi.org/10.1207/s15327965pli0501_1

Hazan, C., Sturgeon, J., & Bricker, T. (1991). *The process of relinquishing parents as attachment figures*. Biennial meeting of the Society for Research in Child Development, Seattle, WA.

Hazan, C., & Zeifman, D. (1994). Sex and the psychological tether. In K. Bartholomew & D. Perlman (Eds.), *Advances in Personal Relationships* (Vol. 5, pp. 151–178). Jessica Kingsley Publishers.

Henderson, K. A. (2007). Components of camp experiences for positive youth development. *Journal of Youth Development*, *1*(3), 15–26. https://doi.org/10.5195/JYD.2007.371

Henderson, K. A. (2012). Peer relationships and camps. *Accredited Camp Association*.

Henderson, K. A. (2018). Camp research: What? So what? what's Next? *Journal of Youth Development*, *13*(1–2), 316–326. https://doi.org/10.5195/JYD.2018.607

Henderson, K. A., & Bialeschki, M. D. (2008). Spiritual development and camp experiences. *New Directions for Youth Development*, *2008*(118), 107–110. https://doi.org/10.1002/yd.263

Henderson, K. A., Bialeschki, M. D., & James, P. A. (2007). Overview of camp research. *Child and Adolescent Psychiatric Clinics of North America*, *16*(4), 755–767. https://doi.org/10.1016/j.chc.2007.05.010

Henderson, K. A., Powell, G. M., & Scanlin, M. M. (2005). Observing outcomes in youth development: An analysis of mixed methods. *Journal of Park and Recreation Administration*, *23*(4), 58–77.

Henderson, K. A., Thurber, C. A., Whitaker, L. S., Bialeschki, M. D., & Scanlin, M. M. (2006). Development and application of a camper growth index for youth. *Journal of Experiential Education*, *29*(1), 1–17. https://doi.org/10.1177/105382590602900103

Henderson, K. A., Whitaker, L. S., Bialeschki, M. D., Scanlin, M. M., & Thurber, C. (2007). Summer camp experiences: Parental perceptions of youth development outcomes. *Journal of Family Issues*, *28*(8), 987–1007. https://doi.org/10.1177/0192513X07301428

Hickerson, B. D., & Henderson, K. A. (2014). Opportunities for promoting youth physical activity: An examination of youth summer camps. *Journal of Physical Activity and Health*, *11*(1), 199–205. https://doi.org/10.1123/jpah.2011-0263

Hill, B. (2003). *Attachment to Nature: The Roots of Environmentalism*. University of Edinburgh.

Hinds, J., & Sparks, P. (2008). Engaging with the natural environment: The role of affective connection and identity. *Journal of Environmental Psychology*, *28*(2), 109–120. https://doi.org/10.1016/j.jenvp.2007.11.001

Hirschi, T. (1969). *Causes of delinquency*. University of California Press.

Hoff, E. (2003). The specificity of environmental influence: Socioeconomic status affects early vocabulary development via maternal speech. *Child Development*, *75*(5), 1368–1378.

Hoffman, K. T., Marvin, R. S., Cooper, G., & Powell, B. (2006). Changing toddler and preschoolers attachment classifications: The Circle of Security intervention. *Journal of Consulting and Clinical Psychology*, *74*(6), 1017–1026.

Hough, M., & Browne, L. (2009, February). *Connecting camp mechanisms to camper outcomes: A case for program theory*. Symposium conducted at the National American Camping Association Conference, Orlando, Florida.

Huntsinger, E. T., & Luecken, L. J. (2004). Attachment relationships and health behavior: The meditational role of self-esteem. *Psychology & Health*, *19*(4), 515–526. https://doi.org/10.1080/0887044042000196728

Innes, J. M., & Thomas, C. (1989). Attributional style, self-efficacy and social avoidance and inhibition among secondary school students. *Personality and Individual Differences*, *10*(7), 757–762. https://doi.org/10.1016/0191-8869(89)90122-0

Ipsos-Reid. (2001). *Canadian camping association and provincial camping associations: Attitude and market research program* (pp. 1–80). Canadian Camping Association.

Iwasaki, Y. (2003a). The impact of leisure coping beliefs and strategies on adaptive outcomes. *Leisure Studies*, *22*(2), 93–108. https://doi.org/10.1080/026143603200058777

Iwasaki, Y. (2003b). Roles of leisure in coping with stress among university students: A repeated-assessment field study. *Anxiety, Stress & Coping*, *16*(1), 31–57. https://doi.org/10.1080/1061580021000057022

Jackson-McLain, J. S. (2010). Richard Lerner: The good teen: Rescuing adolescence from the myths of the storm and stress years: The Crown Publishing Group, New York, NY, 2007, pp. 257, ISBN 978-0-307-34757-2. *Journal of Youth and Adolescence*, *39*(7), 843–846. https://doi.org/10.1007/s10964-010-9504-y

Jacobsen, T., & Hofmann, V. (1997). Children's attachment representations: Longitudinal relations to school behavior and academic competency in middle childhood and adolescence. *Developmental Psychology*, *33*(4), 703–710.

Janssen, I., & LeBlanc, A. G. (2010). Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. *International Journal of Behavioral Nutrition and Physical Activity*, *7*(40), 16.

Johnson, L. R., Johnson-Pynn, J. S., Sweeney, S. S., & Williams, C. T. (2009). Youth civic action: Going green, going global. *Ecopsychology*, *1*(2), 75–84.

Kelk, N. (1994). Camping and outdoor activities as psychosocial interventions. *Australian Social Work*, *47*(2), 37–42. https://doi.org/10.1080/03124079408411136

Kerns, K. A., Brumarlu, L. E., & Abraham, M. M. (2008). Homesickness at summer camp: Associations with the mother-child relationship, social self-concept, and peer relationships in middle childhood. *Merrill-Palmer Quarterly*, *54*(4), 473–498. https://doi.org/10.1353/mpq.0.0010

Kestenbaum, R., Farber, E. A., & Sroufe, A. L. (1989). Individual differences in empathy among preschoolers: Relation to attachment history. *New Directions for Child Development*, *44*, 51–64.

Kobak, R. R., & Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation, and representations of self and others. *Child Development*, *59*, 135–146.

Kotler, T., Buzwell, S., Romeo, Y., & Bowland, J. (1994). Avoidant attachment as a risk factor for health. *British Journal of Medical Psychology*, *67*(3), 237–245. https://doi.org/10.1111/j.2044-8341.1994.tb01793.x

Lerner, R. M. (2006). Developmental science, developmental systems, and contemporary theories of human development. In R. M. Lerner (Vol. Ed.) & W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (6th ed., pp. 1–17). Hoboken, NJ: Wiley. doi:10.1002/9780470147658.chpsy0101

Lerner, R. M., Almerigi, J. B., Theokas, C., & Lerner, J. V. (2005). Positive youth development a view of the issues. *The Journal of Early Adolescence*, *25*(1), 10–16. https://doi.org/10.1177/0272431604273211

Li, R., Bunke, S., & Psouni, E. (2016). Attachment relationships and physical activity in adolescents: The mediation role of physical self-concept. *Psychology of Sport and Exercise*, *22*, 160–169. https://doi.org/10.1016/j.psychsport.2015.07.003

Lieberman, M., Doyle, A.-B., & Markiewicz, D. (1999). Developmental patterns in security of attachment to mother and father in late childhood and early adolescence: Associations with peer relations. *Child Development*, *70*(1), 202–213. https://doi.org/10.1111/1467-8624.00015

Lopez, F. G., & Gormley, B. (2002). Stability and change in adult attachment style over the first-year college transition: Relations to self-confidence, coping, and distress patterns. *Journal of Counseling Psychology*, *49*(3), 355–364. https://doi.org/10.1037/0022-0167.49.3.355

Lynch, M. L., Hegarty, C. B., Trauntvein, N., & Plucker, J. A. (2018). Summer camp as a force for 21st century learning: Exploring divergent thinking and activity selection in a residential camp setting. *Journal of Youth Development*, *13*(1–2), 286–305. https://doi.org/10.5195/JYD.2018.544

Macnaughton, J. F. P., Walker, E. P., Mock, S. E., & Glover, T. D. (2019). Social capital and attitudes towards physical activity among youth at summer camps: A longitudinal analysis of personal development and environmental awareness as mediators. *World Leisure Journal*, *61*(1), 3–16. https://doi.org/10.1080/16078055.2018.1522369

Main, M. (1990). Cross-cultural studies of attachment organization: Recent studies, changing methodologies, and the concept of conditional strategies. *Human Development*, *33*, 48–61.

Main, M., & Cassidy, J. (1988). Categories of response to reunion with the parent at age 6: Predictable from infant attachment classifications and stable over a 1-month period. *Developmental Psychology*, *24*(3), 415–426. https://doi.org/10.1037/0012-1649.24.3.415

Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. *Monographs of the Society for Research in Child Development*, *50*(1/2), 66–104. https://doi.org/10.2307/3333827

Malekpour, M. (2007). Effects of attachment on early and later development. *The British Journal of Development Disabilities*, *53*(105), 81–95. https://doi.org/10.1179/096979507799103360

Mallinckrodt, B. (1992). Childhood emotional bonds with parents, development of adult social competencies, and availability of social support. *Journal of Counseling Psychology*, *39*(4), 453–461. https://doi.org/10.1037/0022-0167.39.4.453

Mallinckrodt, B., & Wei, M. (2005). Attachment, social competencies, social support, and psychological distress. *Journal of Counseling Psychology*, *52*(3), 358–367.https://doi.org/10.1037/0022-0167.52.3.358

Marvin, R. S., Cooper, G., Hoffman, K. T., & Powell, B. (2002). The circle of security project: Attachment based intervention with caregiver-preschool child dyads. *Attachment & Human Development*, *4*(1), 107–124.

Maunder, R. G., & Hunter, J. J. (2008). Attachment relationships as determinants of physical health. *The Journal of the American Academy of Psychoanalysis and Dynamic Psychiatry*, *36*(1), 11–32. https://doi.org/10.1521/jaap.2008.36.1.11

Mayer, J. (2013). Wildfire. [Song]. On *Paradise Valley*. New York: Columbia.

McAuliffe-Fogarty, A. H., Ramsing, R., & Hill, E. (2007). Medical specialty camps for youth with Diabetes. *Child and Adolescent Psychiatric Clinics of North America*, *16*(4), 887–908. https://doi.org/10.1016/j.chc.2007.05.006

McConnell, M. (2011). Attachment across the life span: Factors that contribute to stability and change. *Australian Journal of Educational and Developmental Psychology*, *11*, 60–77.

McNeely, C., & Falci, C. (2004). School connectedness and the transition into and out of health-risk behavior among adolescents: A comparison of social belonging and teacher support. *Journal of School Health*, *74*(7), 284–292. https://doi.org/10.1111/j.1746-1561.2004.tb08285.x

McNeill, L. H., Kreuter, M. W., & Subramanian, S. V. (2006). Social environment and physical activity: A review of concepts and evidence. *Social Science & Medicine*, *63*(4), 1011–1022. https://doi.org/10.1016/j.socscimed.2006.03.012

Mende, M., Bolton, R. N., & Bitner, M. J. (2013). Decoding customer–firm relationships: How attachment styles help explain customers' preferences for closeness, repurchase intentions, and changes in relationship breadth. *Journal of Marketing Research*, *50*(1), 125–142.

Merryman, M., Mezei, A., Bush, J. A., & Weinstein, M. (2012). The effects of a summer camp experience on factors of resilience in at-risk youth. *The Open Journal of Occupational Therapy*, *1*(1). https://doi.org/10.15453/2168-6408.1016

Meule, A. (2017). Interactive effects between flexible and rigid control of eating behavior on body weight: A moderated serial multiple mediation model. *Health Psychology Report*, *4*, 314–322. https://doi.org/10.5114/hpr.2017.70206

Meyers, S. A. (1998). Personality correlates of adult attachment style. *The Journal of Social Psychology*, *138*(3), 407–409. https://doi.org/10.1080/00224549809600394

Michalski, J. H., Mishna, F., Worthington, C., & Cummings, R. (2003). A multi-method impact evaluation of a therapeutic summer camp program. *Child and Adolescent Social Work Journal*, *20*(1), 53–73.

Mickelson, K. D., Kessler, R. C., & Shaver, P. R. (1997). Adult attachment in a nationally representative sample. *Journal of Personality and Social Psychology*, *73*(5), 1092–1106.

Mikulincer, M. (1997). Adult attachment style and information processing: Individual differences in curiosity and cognitive closure. *Journal of Personality and Social Psychology*, *72*(5), 1217. https://doi.org/10.1037/0022-3514.72.5.1217

Mikulincer, M., & Florian, V. (1995). Appraisal of an coping with a real-life stressful situation: The contribution of attachment styles. *Personality and Social Psychology Bulletin*, *21*(2), 406–414.

Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. Guilford Press.

Moretti, M. M., & Peled, M. (2004). Adolescent-parent attachment: Bonds that support healthy development. *Pediatrics & Child Health*, *9*(8), 551–555. https://doi.org/10.1093/pch/9.8.551

National Research Council and Institute for Medicine. (2002). *Community programs to promote youth development: Committee on community-level programs for youth* (J. Eccles & J. A. Gootman, Eds.). National Academy Press.

Nickerson, A. B., & Nagle, R. J. (2005). Parent and peer attachment in late childhood and early adolescence. *Journal of Early Adolescence*, *25*, 223–249.

Page, R. M., Ihasz, F., Simonek, J., Klarova, R., & Hantiu, I. (2007). Friendships and physical activity: Investigating the connection in Central-Eastern European adolescents. *International Journal of Adolescent Medicine and Health*, *19*(2). https://doi.org/10.1515/IJAMH.2007.19.2.187

Parker, J. G., Rubin, K. H., Erath, S. A., Wojslawowicz, J. C., & Buskirk, A. A. (2015). Peer relationships, child development, and adjustment: A developmental psychopathology perspective. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental Psychopathology* (pp. 419–493). John Wiley & Sons, Inc. https://doi.org/10.1002/9780470939383.ch12

Parsons, S. K., Barlow, S. E., Levy, S. L., Supran, S. E., & Kaplan, S. H. (1999). Health-related quality of life in pediatric bone marrow transplant survivors: According to whom? *Internal Journal of Cancer: Supplement*, *12*, 46–51.

Paulssen, M. (2009). Attachment orientations in business-to-business relationships. *Psychology and Marketing*, *26*(6), 507–533. https://doi.org/10.1002/mar.20285

Phelps, E., Zimmerman, S., Warren, A. E. A., Jeličić, H., von Eye, A., & Lerner, R. M. (2009). The structure and developmental course of positive youth development (PYD) in early adolescence: Implications for theory and practice. *Journal of Applied Developmental Psychology*, *30*(5), 571–584. https://doi.org/10.1016/j.appdev.2009.06.003

Ponchielli, A., Sherman, A., & Busch, L. (1963). Hello muddah, hello fadduh (A letter from camp). [Song recorded by Allan Sherman]. New York; Warner Bros Records.

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, *36*(4), 717–731. https://doi.org/10.3758/BF03206553

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879–891. https://doi.org/10.3758/BRM.40.3.879

Raikes, H. A., & Thompson, R. A. (2005). Links between risk and attachment security: Models of influence. *Journal of Applied Developmental Psychology*, *26*(4), 440–455. https://doi.org/10.1016/j.appdev.2005.04.003

Ramsing, R., & Sibthorp, J. (2008). The role of autonomy support in summer camp programs: Preparing youth for productive behaviours. *Journal of Park and Recreation Administration*, *26*(2), 61–77.

Ranson, K. E., & Urichuk, L. J. (2008). The effect of parent–child attachment relationships on child biopsychosocial outcomes: A review. *Early Child Development and Care*, *178*(2), 129–152. https://doi.org/10.1080/03004430600685282

Raskin, R., Novacek, J., & Hogan, R. (1991). Narcissism, self-esteem, and defensive self-enhancement. *Journal of Personality*, *59*(1), 19–38.

Readdick, C. A., & Schaller, G. R. (2005). Summer camp and self-esteem of school-age inner-city children. *Perceptual and Motor Skills*, *101*(1), 121–130. https://doi.org/10.2466/pms.101.1.121-130

Roark, M. F., Ellis, G. D., Wells, M. S., & Gillard, A. (2010). Measuring relationships between camp staff and camper developmental outcomes: An application of self-determination theory. *Journal of Park and Recreation Administration*, *28*(3), 79–94.

Roth, J. L., & Brooks-gunn, J. (2003). Youth development programs: Risk, prevention and policy. *Journal of Adolescent Health*, *32*(3), 170–182. https://doi.org/10.1016/S1054-139X(02)00421-4

Rovniak, L. S. (1999). *A prospective investigation of social-cognitive predictors of physical activity: Development of a causal model*. Virginia Polytechnic Institute.

Rovniak, L. S., Anderson, E. S., Winett, R. A., & Stephens, R. S. (2002). Social cognitive determinants of physical activity in young adults: A prospective structural equation analysis. *Annals of Behavioral Medicine*, *24*(2), 149–156. https://doi.org/10.1207/S15324796ABM2402_12

Rubin, K. H., Bukowski, W. M., & Parker, J. G. (2007). Peer interactions, relationships, and groups. In W. Damon & R. M. Lerner (Eds.), *Handbook of Child Psychology*. John Wiley & Sons, Inc. https://doi.org/10.1002/9780470147658.chpsy0310

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68–78.

Saferstein, J. A., Neimeyer, G. J., & Hagans, C. L. (2005). Attachment as a predictor of friendship qualities in college youth. *Social Behavior and Personality: An International Journal*, *33*(8), 767–776. https://doi.org/10.2224/sbp.2005.33.8.767

Sallis, J. F., Prochaska, J. J., & Taylor, W. C. (2000). A review of correlates of physical activity of children and adolescents: *Medicine & Science in Sports & Exercise*, 963–975. https://doi.org/10.1097/00005768-200005000-00014

Scales, P. C., Benson, P. L., Leffert, N., & Blyth, D. A. (2000). Contribution of developmental assets to the prediction of thriving among adolescents. *Applied Developmental Science*, *4*(1), 27–46. https://doi.org/10.1207/S1532480XADS0401_3

Schmalz, D. L., Kerstetter, D. L., & Kleiber, D. A. (2011). An evaluation of developmental outcomes at a free-choice oriented girls summer camp. *Journal of Outdoor Recreation, Education, and Leadership*, *3*(1), 53–69.

Schmidt, M., Demulder, E., & Denham, S. (2002). Kindergarten social-emotional competence: Developmental predictors and psychosocial implications. *Early Child Development and Care*, *172*(5), 451–462. https://doi.org/10.1080/03004430214550

Schnitker, S. A., Porter, T. J., Emmons, R. A., & Barrett, J. L. (2012). Attachment predicts adolescent conversions at young life religious summer camps. *International Journal for the Psychology of Religion*, *22*(3), 198–215. https://doi.org/10.1080/10508619.2012.670024

Seal, N., & Seal, J. (2011). Developing healthy childhood behavior: Outcomes of a summer camp experience. *International Journal of Nursing Practice*, *17*, 428–434.

Sekine, A. (1994). The effect of the camp experience upon the locus of control and general self-efficacy of school children. *Bulletin of Institute of Health and Sports Sciences*, *15*(2), 177–183.

Sherifali, D., & Pinelli, J. (2007). Parent as proxy reporting: Implications and recommendations for quality of life research. *Journal of Family Nursing*, *13*(1), 83–98. https://doi.org/10.1177/1074840706297789

Shulman, S., Elicker, J., & Sroufe, A. L. (1994). Stages of friendship growth in preadolescence as related to attachment history. *Journal of Social and Personal Relationships*, *11*, 341–361.

Sibthorp, J., Bialeschki, M. D., Morgan, C., & Browne, L. (2013). Validating, norming, and utility of a youth outcomes battery for recreation programs and camps. *Journal of Leisure Research*, *45*(4), 514–536. https://doi.org/10.18666/jlr-2013-v45-i4-3897

Sibthorp, J., Browne, L., & Bialeschki, M. D. (2010). Measuring positive youth development at summer camp: Problem solving and camp connectedness. *Research in Outdoor Education*, *10*(1), 1–12. https://doi.org/10.1353/roe.2010.0002

Smith, A. L. (2003). Peer relationships in physical activity contexts: A road less traveled in youth sport and exercise psychology research. *Psychology of Sport and Exercise*, *4*(1), 25–39. https://doi.org/10.1016/S1469-0292(02)00015-8

Smith, A. L., & McDonough, M. H. (2008). Peers. In A. L. Smith & S. Biddle (Eds.), *Youth Physical Activity and Sedentary Behavior: Challenges and Solutions* (pp. 295–320). Human Kinetics.

Smith, A. L., Ullrich-French, S., Walker, E., & Hurley, K. S. (2006). Peer relationship profiles and motivation in youth sport. *Journal of Sport and Exercise Psychology*, *28*(3), 362–382. https://doi.org/10.1123/jsep.28.3.362

Snider, C. L., & Farmer, J. R. (2017). Impacts of a southern Indiana summer camp: Adult Reflections on childhood experiences. *Journal of Youth Development*, *11*(3), 175–187. https://doi.org/10.5195/JYD.2016.470

Sroufe, L. A. (2005). Attachment and development: A prospective, longitudinal study from birth to adulthood. *Attachment & Human Development*, *7*(4), 349–367. https://doi.org/10.1080/14616730500365928

Sroufe, L. A., Carlson, E. A., Levy, A. K., & Egeland, B. (1999). Implications of attachment theory for developmental psychopathology. *Development and Psychopathology*, *11*(1), 1–13. https://doi.org/10.1017/S0954579499001923

Sroufe, L. A., Egeland, B., Carlson, E. A., & Collins, W. A. (2009). *The Development of the Person: The Minnesota Study of Risk and Adaptation from Birth to Adulthood*. Guilford Press.

Sroufe, L. A., & Waters, E. (1977). Attachment as an organizational construct. *Child Development*, *48*, 1184–1199.

Stevenson-Hinde, J., & Verschueren, K. (2002). Attachment in childhood. In *Blackwell handbook of childhood social development* (pp. 182–204). Blackwell.

Stolzenberg, R. M. (2004). Multiple regression analysis. In M. A. Hardy & A. Bryman (Eds.), *Handbook of Data Analysis* (pp. 165–209). SAGE.

Strodl, E., & Noller, P. (2003). The relationship of adult attachment dimensions to depression and agoraphobia. *Personal Relationships*, *10*(2), 171–186. https://doi.org/10.1111/1475-6811.00044

Suess, G. J., Grossmann, K. E., & Sroufe, A. L. (1992). Effects of infant attachment to mother and father on quality of adaptation in preschool: From dyadic to individual organization of self. *Internal Journal of Behavioral Development*, *15*, 43–65.

Tavakoli, N., Jomehri, F., & Farrokhi, N. (2014). The relationship between attachment styles and social self- efficacy with internet addiction in Iranian Students. *Bulletin of Environment, Pharmacology, and Life Sciences*, *3*, 302–307.

Thurber, C. A. (1995). The experience and expression of homesickness in preadolescent and adolescent boys. *Child Development*, *66*(4), 1162–1178.

Thurber, C. A. (1999). The phenomenology of homesickness in boys. *Journal of Abnormal Psychology*, *27*(2), 125–139.

Thurber, C. A. (2005). Multimodal homesickness prevention in boys spending 2 weeks at a residential summer camp. *Journal of Consulting and Clinical Psychology*, *73*(3), 555–560. https://doi.org/10.1037/0022-006X.73.3.555

Thurber, C. A., Scanlin, M. M., Scheuler, L., & Henderson, K. A. (2007). Youth development outcomes of the camp experience: Evidence for multidimensional growth. *Journal of Youth and Adolescence*, *36*(3), 241–254. https://doi.org/10.1007/s10964-006-9142-6

Trost, S. G., Owen, N., Bauman, A. E., Sallis, J. F., & Brown, W. (2002). Correlates of adults participation in physical activity: Review and update. *Medicine & Science in Sports & Exercise*, *34*(12), 1996–2001. https://doi.org/10.1097/00005768-200212000-00020

Turner, J. M. (2002). From woodcraft to “leave no trace”: Wilderness, consumerism, and environmentalism in twentieth-century America. *Environmental History*, *7*(3), 462. https://doi.org/10.2307/3985918

Ullrich-French, S., McDonough, M. H., & Smith, A. L. (2012). Social connection and psychological outcomes in a physical activity-based youth development setting. *Research Quarterly for Exercise and Sport*, *83*(3), 431–441. https://doi.org/10.1080/02701367.2012.10599878

Ullrich-French, S., Smith, A. L., & Cox, A. E. (2011). Attachment relationships and physical activity motivation of college students. *Psychology & Health*, *26*(8), 1063–1080. https://doi.org/10.1080/08870446.2010.530123

Ungar, M. (2012a). Camps help make children resilient. *Camping Magazine*, *85*(5), 22–27.

Ungar, M. (2012b). *Summer Camps Make Kids Resilient*. Psychology Today. Retrieved 28 March 2019, from https://www.psychologytoday.com/ca/blog/nurturing-resilience/201202/summer-camps-make-kids-resilient.

Van Belois, A., & Mitchell, J. B. (2009). Summer residential camps: Promoting social interaction and self-efficacy among young adults with special needs. *Camping Magazine*, *82*(6).

Van Ijzendoorn, M. H., Schuengel, C., & Bakermans–Kranenburg, M. J. (1999). Disorganized attachment in early childhood: Meta-analysis of precursors, concomitants, and sequelae. *Development and Psychopathology*, *11*(2), 225–250. https://doi.org/10.1017/S0954579499002035

Ventura, A. K., & Garst, B. A. (2013). Residential summer camp: A new venue for nutrition education and physical activity promotion. *International Journal of Behavioral Nutrition and Physical Activity*, *10*(64), 9.

Verschueren, K., & Marcoen, A. (1999). Representation of self and socioemotional competence in kindergartners: Differential and combined effects of attachment to mother and to father. *Child Development*, *70*(1), 183–201. https://doi.org/10.1111/1467-8624.00014

Wartner, U. G., Grossmann, K., Fremmer-Bombik, E., & Suess, G. (1994). Attachment patterns at age six in south Germany: Predictability from infancy and implications for preschool behavior. *Child Development*, *65*(4), 1014. https://doi.org/10.2307/1131301

Wei, M., Russell, D. W., & Zakalik, R. A. (2005). Adult attachment, social self-efficacy, self-disclosure, loneliness, and subsequent depression for freshman college students: A longitudinal study. *Journal of Counseling Psychology*, *52*(4), 602–614. https://doi.org/10.1037/0022-0167.52.4.602

Weiss, M. R., & Smith, A. L. (2002). Friendship quality in youth sport: Relationship to age, gender, and motivation variables. *Journal of Sport and Exercise Psychology*, *24*, 420–437.

Whipple, N., Bernier, A., & Mageau, G. A. (2009). Attending to the exploration side of infant attachment: Contributions from self-determination theory. *Canadian Psychology/Psychologie Canadienne*, *50*(4), 219–229. https://doi.org/10.1037/a0016322

Wilson, C., Akiva, T., Sibthorp, J., & Browne, L. P. (2019). Fostering distinct and transferable learning via summer camp. *Children and Youth Services Review*, *98*, 269–277. https://doi.org/10.1016/j.childyouth.2019.01.017

Wilson, C., Sibthorp, J., & Browne, L. (2019). *Youth impact study: Canadian camping association oversample* (p. 44). Canadian Camping Association.

Wilson, D. (2004). The interface of school climate and school connectedness and relationships with aggression and victimization. *Journal of School Health*, *74*(7), 293–299. https://doi.org/10.1111/j.1746-1561.2004.tb08286.x

Winsett, R. P., Stender, S. R., Gower, G., & Burghen, G. A. (2010). Adolescent self-efficacy and resilience in participants attending a diabetes camp. *Pediatric Nursing*, *36*(6), 5.

Witt, P. A. (2002). Youth development: Going to the next level. *Parks and Recreation*, *37*(3), 52–59.

Witt, P. A., & Caldwell, L. L. (2010). *The Rationale for Recreation Services for Youth: An Evidenced Based Approach*. National Parks and Recreation Association.

Wright, M. O., & Masten, A. S. (2005). Resilience processes in development. In S. Goldstein & R. B. Brooks (Eds.), *Handbook of Resilience in Children* (pp. 17–37). Springer US. https://doi.org/10.1007/0-306-48572-9_2

Wright, S. L., & Perrone, K. M. (2008). The impact of attachment on career-related variables: A review of the literature and proposed theoretical framework to guide future research. *Journal of Career Development*, *35*(2), 87–106. https://doi.org/10.1177/0894845308325643

Yohalem, N., & Wilson-Ahlstrom, A. (2010). Inside the black box: Assessing and improving quality in youth programs. *American Journal of Community Psychology*, *45*(3–4), 350–357. https://doi.org/10.1007/s10464-010-9311-3

Yuen, F. C., Pedlar, A., & Mannell, R. C. (2005). Building community and social capital through children's leisure in the context of an international camp. *Journal of Leisure Research*, *37*(4), 494–518. https://doi.org/10.1080/00222216.2005.11950064

Zimmermann, P. (2004). Attachment representations and characteristics of friendship relations during adolescence. *Journal of Experimental Child Psychology*, *88*(1), 83–101. https://doi.org/10.1016/j.jecp.2004.02.002

Zwicker, J. G., Rehal, H., Sodhi, S., Karkling, M., Paul, A., Hilliard, M., & Jarus, T. (2015). Effectiveness of a summer camp intervention for children with developmental coordination disorder. *Physical & Occupational Therapy In Pediatrics*, *35*(2), 163–177. https://doi.org/10.3109/01942638.2014.95743

Appendix A:

CSCRP Survey

Canadian Summer Camp Research Project

CANADIAN SUMMER CAMP RESEARCH PROJECT

Thank you for volunteering to complete our online survey regarding the impact of your child's participation at camp last summer.

With this survey, we are aiming to understand the impact of your child's summer camp experience on his or her behaviour since leaving camp. When reflecting on any change in your child's behaviour, please consider his or her current behaviour and compare it to what he or she was like prior to attending camp this past summer. In other words, have you witnessed a difference in your child's behaviour since he or she attended camp this past summer?

Please read each question carefully and select the answer that best represents the degree to which you agree with each statement. The survey will take approximately 15 minutes to complete.

Participation in the online survey is voluntary. You are welcome to skip any question you do not wish to answer and you are free to withdraw your participation at any time by simply closing your web browser or navigating away from this website. The data collected with this survey will initially be stored on a secure server and, once the study is completed, will be stored on a secure hard drive indefinitely which is accessible only to the research team.

Your login id is in no way linked to your email address, your identity, or that of your child in any way. It is simply our way of inviting you into the survey site and ensuring that someone randomly finding this site while surfing the internet cannot complete the survey erroneously.

The findings of this and the other phases of our study can be found at http://healthycommunities.uwaterloo.ca/camp/ so please visit this address for the latest updates.

If you have any questions or comments regarding this study, you are welcome to contact the research team at any time through email alcarrut@uwaterloo.ca or by phone (519)-888-4567 ext. 33097. This project has been reviewed by, and received clearance through, the Office of Research Ethics at the University of Waterloo. If you have any questions or concerns resulting from your participation in this online survey, please contact this office at (519)-888-4567 ext. 36005.

Canadian Summer Camp Research Project

Information about you and your child:

Before getting into the survey we would like to ask you for some basic information regarding your child and his/her attendance at camp last summer.

1. My child is ____ years old.

2. In what province does your child live?

- a. PEI
- b. Nova Scotia
- c. New Brunswick
- d. Newfoundland
- e. Quebec
- f. Ontario
- g. Manitoba
- h. Saskatchewan
- i. Alberta
- j. British Columbia
- k. The Territories

3. In what province did your child attend camp last summer?

- a. PEI
- b. Nova Scotia
- c. New Brunswick
- d. Newfoundland
- e. Quebec
- f. Ontario
- g. Manitoba
- h. Saskatchewan
- i. Alberta
- j. British Columbia
- k. The Territories

4. What sex is your child?

- a. Male
- b. Female

5. What is your approximate household yearly income?

- a. Under $10,000
- b. $10,000 to $19,999
- c. $20,000 to $29, 999
- d. $30,000 to $39, 999
- e. $40,000 to $49, 999
- f. $50,000 to $59, 999
- g. $60,000 to $69, 999
- h. $70,000 to $79, 999
- i. $80,000 to $89, 999
- j. $90,000 to $99, 999
- k. $100,000 to $109,999
- l. $110,000 to $119,999
- m. $120,000 to $129,999
- n. $130,000 to $139,999
- o. $140,000 to $149,999
- p. $150,000 to $159,999
- q. $160,000 to $169,999
- r. $170,000 to $179,999
- s. $180,000 to $189,999
- t. $190,000 to $199,999
- u. $200,000 and over

6. Please describe your household family structure:

- a. Single parent
- b. Two parents
- c. Non-parental caregiver (i.e. other relative, foster-parent)
- d. Blended family (i.e. step parents)
- e. Other (please describe):

7. Had your child attended camp before this past summer?

- a. Yes
- b. No

8. If so, has your child always attended the same camp(s)?

- a. Yes
- b. No

9. My child attended _____ different camps last summer.

10. Which camp did your child attend the longest last summer?

Please answer the next 5 questions (11 a-e) based on your response to the previous question.

11. a. What type of program was offered at this camp?

- ○ Residential camp
- ○ Day camp
- ○ Religiously affiliated camp
- ○ A camp designed primarily for children with special needs
- ○ Specialty camp (i.e. science, language, music, sports)

b. Was this your child's first time attending this type of camp program?

- ○ Yes
- ○ No

If "no", how many times has he/she attended similar programs?

c. Was this your child's first time attending this camp?

- ○ Yes
- ○ No

If "no" how many times has he/she attended these camps?

d. How many sessions did your child attend at this camp this past summer?

e. How long was the session that your child attended at this camp? (In weeks.)

12. Did your child participate in other recreational, cultural or educational programs last summer?

- a. No
- b. Yes

If "yes" please describe:

13. What is your child's first language?

- a. French
- b. English
- c. Other:

14. What is your child's cultural background?

15. Does your child have any special needs that may have impacted his/her participation at camp?

- a. No
- b. Yes

If "yes", please explain:

For Questions 16 through 19, please read the paragraphs and rate the degree to which you agree that each paragraph describes your child.

16. It is relatively easy for my child to become emotionally close to others. My child is comfortable depending on others and having others depend on him/her. My child doesn't worry about being alone or having others not accept him/her.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Disagree
- d. Agree
- e. Strongly Agree
- f. Very Strongly Agree

17. My child is comfortable without close emotional relationships. It is very important to my child to feel independent and self-sufficient, and my child prefers not to depend on others or have others depend on him/her.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Disagree
- d. Agree
- e. Strongly Agree
- f. Very Strongly Agree

18. My child wants to be completely emotionally intimate with others, but he/she often finds that other are reluctant to get as close as he/she would like. My child is uncomfortable being without close relationships, but he/she sometimes worries that others do not value him/her as much as he/she values them.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Disagree
- d. Agree
- e. Strongly Agree
- f. Very Strongly Agree

19. My child is somewhat uncomfortable getting close to others. He/she wants emotionally close relationships, but finds it difficult to trust others completely, or to depend on them. My child sometimes worries that he/she will be hurt if he/she allows him/herself to become too close to others.

- a. Very Strongly Disagree
- b. Strongly Disagree
- c. Disagree
- d. Agree
- e. Strongly Agree
- f. Very Strongly Agree

The Survey:

In each section of the survey we will ask you to rate the degree to which you agree or disagree with several statements as they relate to your child's behaviour after he/she attended camp last summer. After the statements, we will provide you with a space in which you can describe any other observations you may have about any changes you have witnessed in your child's behaviour since last summer relating to that topic area.

Section A: Social Connections at Camp

In this section of the survey we are asking you about the sustainability of the relationships your child forged at camp during the past summer, as well as other elements of the social connections he or she might have experienced.

Since returning from camp, please indicate the extent to which you agree with the following statements:

	Very Strongly Disagree	Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree
A. My child has stayed in touch with camp friends.	○	○	○	○	○	○
B. My child has stayed in touch with staff members from camp.	○	○	○	○	○	○
C. When my child talks about camp, it is clear he/she feels a sense of membership or belonging to the camp's broader community.	○	○	○	○	○	○

Can you offer us any other description of your child's behaviour that would further our understanding of their development in this area since leaving camp?

Section B: Environmental Awareness

In this section, we are trying to explore your child's awareness of environmental issues and his/her impact on the environment since leaving camp this past summer.

Since returning from camp, please indicate the extent to which you agree with the following statements:

	Very Strongly Disagree	Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree
A. My child has demonstrated more environmentally friendly behaviours since leaving camp.	○	○	○	○	○	○
B. My child has demonstrated more interest in outdoor activities and pursuits since leaving camp.	○	○	○	○	○	○

Can you offer us any other description of your child's behaviour that would further our understanding of their development in this area since leaving camp?

Section C: Self Confidence and Personal Development

In this section we are exploring the degree of personal growth and self confidence your child has displayed since his or her attendance at camp.

Since returning from camp, please indicate the extent to which you agree with the following statements:

	Very Strongly Disagree	Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree
A. My child is able to do more things on his/her own since returning home from camp.	○	○	○	○	○	○
B. My child expresses more interest in trying new things since returning home from camp.	○	○	○	○	○	○
C. My child demonstrates increased self-confidence when facing challenges since returning home from camp.	○	○	○	○	○	○
D. My child is better able to deal with challenges on his/her own since returning home from camp.	○	○	○	○	○	○

Can you offer us any other description of your child's behaviour that would further our understanding of their development in this area since leaving camp?

Section D: Emotional Well-being

In this section, we are interested in the extent to which your child's understanding of his/her own emotions as well as those of others around him/her may have changed after participating in the camp program.

Since returning from camp, please indicate the extent to which you agree with the following statements:

	Very Strongly Disagree	Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree
A. My child displays more awareness of his/her emotions as he/she experiences them.	○	○	○	○	○	○
B. My child is more likely to share his/her emotions with others.	○	○	○	○	○	○
C. My child has better control over his/her emotions.	○	○	○	○	○	○
D. My child is more sensitive to the feelings and emotions of others.	○	○	○	○	○	○

Can you offer us any other description of your child's behaviour that would further our understanding of their development in this area since leaving camp?

Section E: Physical Activity

In this final section we are hoping to gain an understanding of any change you may have seen in your child's level of participation in physically active activities since attending camp this past summer.

Since returning from camp, please indicate the extent to which you agree with the following statements:

	Very Strongly Disagree	Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree
A. My child participates in more physically active activities at home since returning from camp.	○	○	○	○	○	○
B. My child participates in more physically active pursuits at school since returning home from camp.	○	○	○	○	○	○
C. My child participates in more physically active extra curricular activities since returning home from camp.	○	○	○	○	○	○

Can you offer us any other description of your child's behaviour that would further our understanding of their development in this area since leaving camp?

CANADIAN SUMMER CAMP RESEARCH PROJECT

Thank you for volunteering to complete our online survey regarding the impact of your child's participation at camp last summer.

The findings of this and the other phases of our study can be found at http://healthycommunities.uwaterloo.ca/camp/ so please visit this address for the latest updates.

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