

# Camper Self-Concept Promotes Environmental Awareness: A Relationship Mediated by Social Inclusion

Or

When campers feel good about themselves, they show better environmental awareness, and this relationship is strengthened by their feelings of social inclusion at camp.

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## Context for the project

The research presented here is meant to demonstrate statistically one of the many ways that campers benefit from participation in summer camping. Often the benefits and gains camp directors and parents see in campers can only be backed up with anecdotes, stories, and impressions: “Jimmy is certainly more confident than when he arrived”, or “Sally is really showing more concern for food waste after this summer.” In a world of ‘Big Data’ and statistics, these stories and anecdotes are sometimes pushed aside as unique, singular, or heart-warming but cherry-picked examples to support the idea that camp is good for campers. But, what if we were able to use the tools provided by large data sets and statistics to demonstrate that these statements are verbal samples of widespread phenomena? And, what if we are able to demonstrate statistically both the positivity and complexity of how our camp programs affect our campers? This paper aims to show that we can do just that.

## The project

The analysis presented here uses data from a large, three phase study of Canadian summer camps: the Canadian Summer Camps Research Project (CSCR) -- a multi-year study supported by the Canadian Camping Association (CCA), the University of Waterloo/Social Sciences and Humanities Research Council of Canada seed grant program, and University of Waterloo Robert Harding Humanities and Social Science Endowment Fund. Over the course of the three-phase project, researchers interviewed over 60 camp directors (phase 1), collected data on camper in-camp experiences (phase 2), and parent perception of camper change after camp (phase 3), at both day and overnight camps in Canada. The CSCR showed that each of these had been positively affected by camper participation in camp, but does not speak to relationships between them. Demonstrating one of those relationships was the purpose of this analysis. Using the phase two data (camper experience), this paper explores the relationships between camper self-concept (camper self-esteem and how they felt about their abilities and achievements), social inclusion (how campers felt part of “the group” at camp, both in cabin/activity groups, and in camp as a whole), and camper environmental awareness (camper attitudes and actions related to the environment and environmental concerns).

## What the analysis shows

This paper calculates and shows a positive relationship between the self-concept of campers and their environmental awareness. It also shows that this positive relationship is enhanced by social inclusion. Using several statistical techniques, analysis demonstrated that as campers feel better about themselves, they demonstrate more environmental awareness – ‘as I feel better about myself, I become more aware and concerned about the environment’. When campers’ apparent social inclusion in peer groups and the camp community was included in the analysis, it showed a significant influence on their self-concept/environmental awareness relationship, making the link even stronger. In other words, when campers felt better about themselves, and felt included in social groups and the camp community, they showed even higher levels of environmental awareness.

## Why it matters

The CSCRP data show that campers make gains across a wide range of positive measures while they are at camp, including self-concept, attitudes towards physical activity, and emotional intelligence. This information is essential for camps in marketing and program development, as it adds statistical power to the messaging camps have been giving for years about the powers of camp experiences. As demonstrated in this paper, more complex analyses of data sets like the CSCRP help us show how camp programming combines learning, growth, and child development in complex ways, creating compounded effects – that camp isn’t all just fun and games; there are tangible and measurable positive effects on children which are exclusive to camp programming. Camp directors and boards can use this research, and other research like it, to help build stronger cases for program development, the educational/developmental potential of enrolling children in camp programs, funding, and lobbying of politicians and government.

It is important to note that the CSCRP study collected data from many types of camps: day and overnight camps; girls, boys and co-ed camps; and camps with diverse programming. This analysis showed that the gains described here occurred throughout the CSCRP sample (in camps with campers age 7 and over), which indicates that campers saw these benefits across program areas, and that positive gains (in this analysis) were not tied to team challenge, nature study, or other specific programming. This information should help and encourage camp directors to spend time and resources developing all of their camp programming, with the understanding that each of the programs and practices they integrate into their camp experience helps campers feel included and part of the camp family in some way. These elements will help bring campers into the social circle of camp, and potentially increase the effects of positive lessons that come as part of the camp’s philosophy, like care for the environment, or building friendships.

In the never-ending search for funding from organizations and individuals, and in recruiting paying campers, being able to demonstrate, with both words and statistics, the direct benefits to children of camp participation is a highly effective way of recruiting new campers. The research in this paper adds the important element of demonstrating the complicated

interactions of programming and child development that take place at camp, and provides information that will allow camp directors and boards to build better self-promotion materials.

In continued discussion with government agencies and departments about camp and camp-related policy, having strong research to back up the educational and developmental aspects of camp programming develops stronger bargaining positions for the camping industry. Using, building upon, and funding research like this will strengthen claims by the camping industry when lobbying for policy change or positive legislation in their role as educational and developmental institutions for children and young adults.

As a former camp director, the first author of this paper often struggled to find good quality statistics to back up his claims about the benefits of camp when talking to parents, friends, or the board of his not-for-profit employer. Although everyone could agree that camp was good for kids, having tangible numbers to use would have been really helpful in discussions about funding the camp program, as well as helping to convince parents who were undecided about sending their children to camp. As a life-long camper, and firm believer in the benefits of that experience (he believes that his camp experience has helped him to be successful in graduate school), Luc hopes that this paper and continued research about the benefits of camp will help other camps and the industry as a whole continue to develop and provide positive experiences for kids in Canada.

## About the Authors

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## Camper Self-Concept Promotes Environmental Awareness: A Relationship Mediated by Social Inclusion

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### Abstract


*Summer camps in Canada provide services to hundreds of thousands of youth each year, giving opportunities for growth and development. However, summer camps in Canada remain understudied. Using one phase of data from the Canadian Summer Camps Research Project (CSCR), analysis was conducted on the effect of camper self-concept on their environmental awareness, mediated by perceived level of social inclusion. A relationship between camper self-concept and environmental awareness existed, and that relationship was enhanced when campers were socially included. These findings show preliminary connections between self-concept and environmental awareness in summer camps, and open opportunities for further research into personal and long-term effects of camp participation on environmental viewpoints, social group integration, and self-concept.*

Key words: camp, environment, personal development, social inclusion, self-concept

### Introduction

Summer camp experiences are significant in the development of many youth across North America, providing them with opportunities to learn and grow outside of school and home (Henderson, Whitaker, Bialeschki, Scanlin, & Thurber, 2007; Paris, 2008). In the province of

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### Self-Concept, Social Inclusion, and Environment

Ontario, Canada, there are over 500 industry accredited camps, serving over 300,000 children annually (Ontario Camps Association, 2014). Although Ontario is the largest camp market in Canada, when compared with the United States, its numbers are dwarfed by the over 12,000 accredited overnight and day camps across the United States, serving over five million children in a \$15 billion dollar industry (American Camp Association, 2015). This market information situates summer camp as a research milieu with great potential, and although a significant body of research exists on summer camps in the United States, camp remains under-researched in the Canadian context.

The development of Canadian summer camps largely mirrors that of American summer camping, with initial development of short-term outdoor adventures throughout the late 1800s supported by various groups (e.g., YMCA, Tuxis Boys), followed by a surge of development in the first half of the 20<sup>th</sup> century (Fine, 2005). Early Canadian camps, like their American counterparts, adopted the anti-modernist approach to development and the racial play-acting of “going Native” in names and traditions (Wall, 2005). Despite their similar developmental trajectories, camping traditions in Canada and the United States have occurred within distinct social and political contexts (Arnold & Tigert, 1974; Baer, Grabb, & Johnson, 1990, 1993). Therefore, although the findings of this study could apply to American summer camps and their programs, it is important to acknowledge this research was conducted with Canadian youth at Canadian camps. Few studies measuring camp outcomes for youth in Canada exist in the academic literature (Eagles & Demare, 1999; Glover, Chapeskie, Mock, Mannel, & Feldberg, 2011; Glover et al., 2013), and fewer still (Carruthers, 2013; Lichti, 2014) have done meaningful analysis of any baseline data collected by the aforementioned authors.

### *Purpose*

The purpose of this paper is to extend the discussion and knowledge on summer camp outcomes for youth in Canada by exploring relationships between camper development measures from the Canadian Summer Camps Research Project, Phase 2 (CSCR-2) (Glover et al., 2011; Glover et al., 2013). The CSCR-2 was a three-phase research project funded by the Canadian Camping Association, Social Sciences and Humanities Research Council Seed Grant Program, and the University of Waterloo, with the following goals: (a) to understand in what areas campers experience positive outcomes based on their camp experiences, and (b) to measure the degree of developmental change in these areas experienced over the course of a camp experience. Phase 2 of the CSCR-2 was a repeated measures survey that examined the perceived changes in camper attitudes and behaviors from the beginning to the end of their

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camping experience during one summer. In this phase of the CSCRP, surveys were completed by the staff directly responsible for the campers in question (staff between 18-25 years of age with direct supervisory roles over camper groups of 5-12 children), and were not self-reported by campers.

This paper hypothesizes that increased perceived camper self-concept will have a positive effect on perceived camper environmental awareness, and that this relationship will be mediated by the perceived social inclusion those same campers demonstrate. In other words, the better a camper feels about themselves, the more likely they are to exhibit positive environmental awareness, and that this relationship is enhanced by how socially included those campers are in their camping peer group.

## Literature Review

A wide range of research has been conducted about the outcomes of summer camp experiences with youth in North America with the vast majority of this research conducted in the United States. Research on summer camp experiences has shown that participants develop positive self-image/self-concept (Hazelworth & Wilson, 1990; Larson, 2007; Quinlan, Kolotkin, Fuemmeler, & Costanzo, 2009; Thurber, Scanlin, Scheuler, & Henderson, 2007), better socialization behaviors (Bialeschki, Henderson, & James, 2007; Garst, Browne, & Bialeschki, 2011; Glover et al., 2011; Henderson, Whitaker, et al., 2007), and personal values, which they continue to hold after their time at camp is over (Henderson, Bialeschki, et al., 2007; Paris, 2008). In addition, the effects of camp experiences on children's emotional well-being, and parent involvement in children's lives have been explored (Garst et al., 2011; Henderson, Bialeschki et al., 2007; Henderson, Whitaker et al., 2007; Thurber & Malinowski, 1999), and environmental awareness and education of campers has also received some attention (Dresner & Gill, 1994; Kruse & Card, 2004).

This wide range of experiential measurements notwithstanding, little work has been conducted on the effects that might exist through compounded or mediated relationships between these outcome variables (see: Carruthers, 2013; Lichti, 2014). Mediation, moderation, and other causal relationship measures help to better understand the larger social and developmental implications and outcomes of settings like summer camp, as they can illuminate some of the complex interactions that take place in these highly varied environments (Wu & Zumbo, 2008). These types of measures give us a better understanding of how our actions, and the varied

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learning outcomes of summer camp programs, help campers develop and change as a result of camp experiences.

Socio-emotional well-being (self-confidence and personal development, or self-concept), appears to have lasting effects on children beyond initial experiences (Holden, Moncher, Schinke, & Barker, 1990). When children feel more self-confident, they are better able to integrate into social groups, make friends, and develop social skills (Brown & Lohr, 1987; Cast & Burke, 2002). The development of self-concept and social skills they experience is a demonstration of Bandura's (1977) self-efficacy theory. This self-efficacy may allow campers to better engage with their peer groups, build stronger relationships at camp, and develop better social ties that result in building a stronger self-concept and feeling more included.

Where individuals feel more socially included with their peers, they are more likely to engage with group social norms, social activity structures, and group philosophies (Ellis & Zarbatany, 2007; Kwon & Lease, 2009; Salmivalli & Voeten, 2004). The rules and expectations they might encounter at camp are a good example. Within the summer camp setting, group philosophies could include pro-environmental behavior developed through outdoor programming, and perceived connectedness to nature and others (Eagles & Demare, 1999; Paris, 2008; Smith, 2006). In addition to camp's environmental values, norms and practices that encourage social inclusion are an important part of almost all camp programs (e.g. Brookman et al., 2003; Michalski, Mishna, Worthington, & Cummings, 2003). Teaching social and environmental values together in summer camp programs is an example of Lehtonen's (2004) environmental-social co-evolutionary framework and is a psychologically valuable learning and development process (see also: Macnaghten & Urry, 1998; Porter, 2006; van Jaarsveld, 1996).

Through the work of authors in outdoor adventure and education research, as well as environmental psychology (see: Bell, Greene, & Fisher, 2001; Ewert, 1987, 1983; Gillett, Thomas, Skok, & McLaughlin, 1991; Propst & Koesler, 1998, among others), we see a link between the self and the environment, forming the theoretical foundation for measured connections between self-concept and levels of environmental awareness. Where both self-concept and environmental awareness can be connected to social inclusion in a peer group, a theoretical link can be established where social inclusion might mediate the relationship between self-concept and environmental awareness.

Most work on Canadian summer camp experiences has focused on peripheral programming conducted at camp, including outdoor education and curriculum links (Eagles & Demare, 1999;



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Henderson & Potter, 2001), as well as camp-linked interventionist programming (e.g. Nicholas, Williams, & MacLusky, 2009). The work of Glover and colleagues (2011; 2013) established baseline information about the experiences of summer camp attendees in a specifically Canadian context. Glover et al.'s CSCRP-2 (2011) showed statistically significant positive gains between arrival and departure from camp in five categories: social integration at camp, environmental awareness, self-confidence and personal development, emotional intelligence, and attitudes toward physical activity. This repeated measures data set can begin to provide insight into specific elements of camp experiences for Canadian youth.

With these theoretical connections established, this paper asks if the CSCRP-2 contains statistical evidence of the existence of a relationship between self-concept and environmental awareness in youth summer camping in Canada, and if so, is that relationship mediated by the level of perceived group social inclusion of campers? Using Glover et al.'s (2011) data, this paper tests links between self-concept at camp and increased environmental awareness, exploring social inclusion as a potential mechanism, in order to demonstrate interlinked outcomes from youth participation in summer camp programs.

### Methods

Data from Glover et al.'s CSCRP-2 (2011) were used. The primary goal of the CSCRP-2 was to understand the outcome areas of participant campers during their time at Canadian day and overnight camps, and to measure the degree of change in these areas. The second phase of the CSCRP's three-phase project focused on the perceived effects, measured by staff with the most direct contact with campers (cabin staff or group leaders), of summer camp on campers. This effect was measured in five categories: social integration at camp, environmental awareness, self-confidence and personal development, emotional intelligence, and attitudes toward physical activity. These categories were identified in Phase 1 of the CSCRP through in-depth interviews with 65 camp directors.

### Measures

The CSCRP investigated change in camper behavior and experience over time. The second phase consisted of a survey instrument based on the five major areas of summer camp focus. The instrument for phase two was a 42-item survey subdivided into five categories: (a) social integration and citizenship, (b) environmental awareness, (c) self-confidence and personal development, (d) emotional intelligence, and (e) attitudes towards physical activity (for a



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complete list of scales and survey items used see Glover et al., 2011). Each item of the survey was measured using a 7-point scale (1 = very strongly disagree; 7 = very strongly agree).

In the analysis presented here, sub category scales were used. These sub-scales are either distinct portions of larger scales used in the research instrument (e.g., social integration sub-scale is one part of the social integration and citizenship scale), or complete scales from the research instrument (e.g., environmental awareness scale).

#### *Self-Confidence and Personal Development*

Assessment of self-confidence and personal development ( $\alpha_{T1} = .87$ ,  $\alpha_{T2} = .88$ ) consisted of an eight-item measure drawing from distinct focal areas identified as development points by camp directors in Phase 1 of the CSCRP (sample item: "The camper appears to be confident in him/herself"). One item in the self-confidence and personal development scale was reverse-coded for analysis. For this paper, the term *self-concept* is used in place of *self-confidence and personal development* for easier reading.

#### *Environmental Awareness*

Environmental Awareness ( $\alpha_{T1} = .89$ ,  $\alpha_{T2} = .90$ ) was assessed using the complete, five item environmental awareness scale from the CSCRP survey (sample item: "This camper shows an awareness of his/her impact on the environment").

#### *Social Integration*

Assessment of social integration ( $\alpha_{T1} = .82$ ,  $\alpha_{T2} = .86$ ) used a four-item sub-scale from the social integration and citizenship measure developed for the CSCRP and were asked together as a sub-section of the survey (sample item: "The camper has friends at camp besides those in his/her counselor group").

#### *Emotional Intelligence and Attitudes towards Physical Activity*

Although the CSCRP measured perceived emotional intelligence and attitudes towards physical activity, those measures were not used in the analysis presented in this paper. Basic information about these measures is included here for reader information.

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Emotional intelligence was assessed using 10 items ( $\alpha = .89$ ) related to a camper's awareness of his/her own emotions, the emotions of others, and the ability to demonstrate considerate interactions with peers (sample item: "This camper is sensitive to the feelings and emotions of others").

Physical activity attitudes were assessed through seven items ( $\alpha = .94$ ), which reflected the degree that the camper had positive attitudes toward physical activity, sports, and games (sample item: "When given a choice this camper always chooses physical activities").

### *Analysis*

Two linear regression models were constructed to examine the association between self-concept and environmental awareness, and the possible mediating role of social integration in this relationship. Linear regression is an approach for modeling the relationship between a dependent variable and one or more explanatory (or independent) variables, allowing for a prediction of the outcomes of that relationship. The first model included demographic characteristics/control variables (e.g., age and sex), as well as the outcome variable (environmental awareness - Time 1 (T1)), and the initial mediating variable value (social inclusion T1). The second model introduced the social inclusion mediating variable at the time of camp departure (social inclusion – Time 2 (T2)).

Tests for mediation allow statistical analysis of the potential effect of a third variable as a mechanism acting on the relationships of existing variables; in this case how the change in social inclusion between T1 and T2 changed the relationship between self-concept and environmental awareness. The Hayes (2009) method of bootstrapping using the PROCESS macro for SPSS was used to test statistical significance between a main predictor variable and an outcome variable. Bootstrapping is a method of resampling and replacing data many times, measuring an indirect effect between variables, and a distribution of this indirect effect (Hayes, 2009). This distribution allows for the creation of a percentile-based confidence interval that avoids the need for the assumption of normal distribution (Hayes, 2009). This approach generates a more reliable outcome with a smaller margin for error in measuring the indirect effect of the mediator on the relationship between the dependent and independent variables. In this model self-concept was the independent variable, environmental awareness was the dependent variable, and social integration was the mediator.

## Results

The CSCRP-2 yielded measures of camper change over the duration of their stay at camp as perceived by the staff who directly supervised them (staff between 18 and 25 years of age with direct supervisory roles over campers). Data were collected on  $n = 1,288$  campers from 16 summer camps across Canada. Of the 16 camps, 13 were co-ed, two camps served exclusively female campers, and one camp served exclusively male campers. Camps were nearly evenly split between overnight camps (nine), and day camps (seven). Campers who were measured in this study attended a minimum 1-week camp session. Campers ranged in age from 3 to 18 years (mean age = 10.44,  $SD = 3.05$ ). The survey was administered as repeated measures, i.e., within the first 48 hours of arrival at camp and within 48 hours of departure from camp. For the purposes of the current analysis, only campers aged seven or older were included, yielding a total number of campers of  $n = 1,095$  (mean age = 11.26, ( $SD = 2.39$ )). This sample modification was done to best reflect the most common age groups accommodated in accredited Canadian summer camp programs (7 to 18 years), and reduce the scope of generalizations made in this paper.

Regression analysis showed that self-concept was significantly associated with environmental awareness (Table 1, Model 1), meaning that environmental awareness increased when participants showed positive gains in self-concept. With the addition of social inclusion and the longitudinal measures, regression demonstrated a significant association between the increase in social inclusion scores, self-concept, and environmental awareness scores (Table 1, Model 2). Table 1 shows the unstandardized regression coefficients for regression models examining associations of environmental awareness with self-concept and social inclusion. A significant indirect effect of self-concept on environmental awareness through social inclusion was found ( $b = .112$  BCa CI [0.073, 0.158]), where  $b$  is the indirect effect, using bias-corrected percentile acceleration (BCa), and CI is the confidence interval. These statistical findings indicate that the perceived social inclusion of campers had a statistically significant effect on the relationship between the self-concept and environmental awareness of campers.

**Table 1. Unstandardized Regression Coefficients for Regression Models Examining Associations of Environmental Awareness with Self-Concept and Social Inclusion.**

Independent variables	Model 1		Model 2	
	Coefficient	SE	Coefficient	SE
Constant	.221	.13	.165	.13
Age	-.01†	.01	-.01†	.01†
Camp sex	.03	.03	.01†	.03
Returning camper	.02	.03	.03	.03
Wilderness setting	.06	.03	.04	.03
Environmental awareness T1	.82**	.03	.81**	.03
Self-concept T1	-.34**	.04	-.28**	.04
Self-concept T2	.44**	.03	.33**	.04
Social inclusion T1	-.03	.02	-.08*	.03
Social inclusion T2	—	—	.18**	.03
Adjusted R <sup>2</sup>	.65		.66	

$n = 1019$  (76 cases excluded due to missing data)

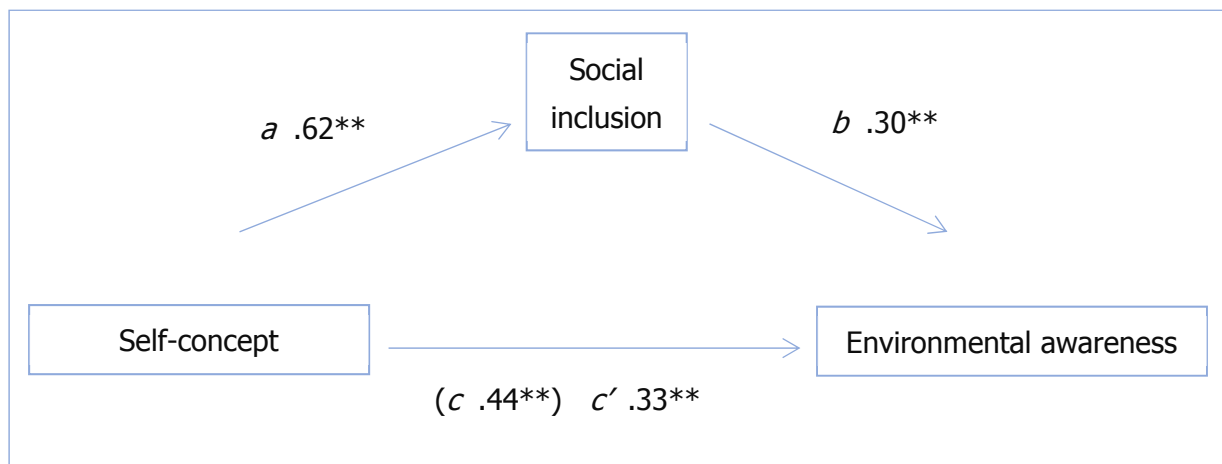
\* $p < .01$ , \*\* $p < .001$

† Value was rounded up to .01, but was below rounding threshold on calculation.

Social inclusion was associated with the link between self-concept and environmental awareness, and analyses were conducted to determine the degree to which the association between these two variables was accounted for by the mediator (Figure 1). The total effect ( $c$ ) of self-concept on environmental awareness was significant ( $\beta = 0.44$ ,  $SE = .03$ ,  $p < .001$ ) and compared to the total effect, the direct effect ( $c'$ ) of self-concept on environmental awareness was somewhat reduced ( $\beta = 0.33$ ,  $SE = .04$ ,  $p < .001$ ). The model of the mediation pathway where the unstandardized regression coefficient  $a$  path ( $\beta = .62$ ,  $SE = .03$ ,  $p < .001$ ) was statistically significant, as was the  $b$  path ( $\beta = .30$ ,  $SE = .02$ ,  $p < .001$ ). Table 2 shows the total, direct, and indirect effects with bootstrapping analysis for the association of environmental awareness with self-concept and social inclusion for summer camp participant youth.

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**Figure 1. Association Between Self-Concept and Environmental Awareness Partially Mediated by Social Inclusion**



Note: Values in parentheses are standardized coefficients before the addition of social inclusion to the models. \*\* $p < .001$ ,  $n = 1019$

**Table 2. Total Effects, Direct Effects, and Bootstrap Analysis of Indirect Effect for the Association of Environmental Awareness with Self-Concept Mediated by Social Inclusion**

	Effect	SE	Bootstrapping	
			95% CI	
			Lower limit	Upper limit
Total effect (c)	.440	.031	—	—
Direct effect (c')	.328	.035	—	—
Indirect effect (ab)	.112	.022	.073	.158

**Discussion**

Campers measured during the CSCR-2 study showed increases in environmental awareness associated with increased levels of self-concept after their stays at camp. Previous studies have shown lasting positive effects from increased positive self-concept in children (Holden et al., 1990), and work on summer camp experiences has shown that summer camps promote this type of development (Garst et al., 2011; Thurber et al., 2007). The work of the CSCR (Glover

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et al., 2011) also demonstrated these gains in Canadian summer camps context, and further supports the assertion that attending summer camp was an asset in young people's development of self-concept and social skills. What is most important about these findings is how they connect with environmental awareness, given the importance of the outdoors, connections with nature, and environmental ethics in historical (Paris, 2008) and contemporary camp programming (Glover et al., 2011, Smith, 2006). Alone, the finding that self-concept is associated with environmental awareness is interesting but not particularly useful, until we can better understand the mechanism(s) linking these two concepts. This study shows that mechanism to be, at least in part, the work of social inclusion that is so important to camp programming.

Many summer camps maintain a mandate of social integration and friendship-making for campers (Mecke & Hutchison, 2005; Thurber et al., 2007). Deliberate policies to develop social relationships at camp are already designed together with building camper self-concept, and the combined value of these approaches can yield additional benefits from the camp program, like better environmental awareness as demonstrated here. The mediated relationship discussed in this paper indicates that campers, through feeling better about themselves and making friends, are internalizing environmental norms and lessons at camp. Furthermore, it provides additional empirical evidence to Lehtonen's (2004) social-environmental model highlighting an important socio-psychological link going forward that can help to better educate children in a time of contentious discussion about climate change, climate science, and approaches to these environmental challenges.

The findings presented here should provide encouragement to camp managers to continue their important work in developing campers' self-concept, and their inclusion in peer and larger camp social groups, as they are likely to see benefits beyond the personal gains of campers and positive social gains for the camp community. As evidenced here, campers who feel more a part of camp are more likely to take on camp norms and philosophies. For environmental awareness in particular, as a foundational element of camp philosophy already important in the community ethics and norms at camp, this study shows promising evidence that gains can be made in multiple ways. When campers feel more a part of the social groups and camp peer community, they are more likely to accept and adopt those ethics and norms. For example, as I feel better about myself, the more likely and willing I am to make friends at camp. The more friends I make, the more I feel truly a part of the camp community. The more I feel a part of the camp community, the more I want to learn, live, and breathe my camp's philosophy—and not just about the environment.

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Individually, each of the measures discussed in this paper are important developmental factors for youth, and important areas where camps focus a great deal of time and energy in program and staff development. Training hours and dollars are spent to ensure that camp staff have sufficient environmental knowledge and ethics to maintain a camp's 'green' commitment. Staff are given extensive theoretical and practical training on how to encourage positive self-concept in campers, and how to help camps build good quality peer relationships. Far less energy is spent on exploring or explaining how these individual elements might work together, or how camp managers might encourage the development of one through the development of another.

The implications of demonstrating this type of relationship between important outcomes of camp programming for campers are significant. First and foremost, the relationship provides additional, complex support for the already robust development mandates that camps have for campers. Demonstrating compound positive effects of camp programming helps to support camping as an industry and a place for robust child development in the eyes of parents. These relationships between outcomes could also allow camp managers to apply a more complex pedagogy to their programs, where layered and stacked program outcomes are able to generate more significant gains for participants than individualized outcomes alone. There are also implications for the way that camp managers engage their direct staff managers, empowering them to understand the larger puzzle created by the individual program and developmental pieces of the camp program. Further, the results of this study indicate that one of the pathways to have campers internalize ethical standards and camp norms is through their peer groups and the social expectations created in those groups; teaching ethics and standards is simply not enough.

The first author notes that in his years directing camp in Ontario, these findings were things that he knew intuitively. The campers who were most invested in the peers they met at camp, and how camp made them feel on a personal level, were always the ones who were most thoroughly devoted to camp's larger goals and ethics. When he brought them on as staff, he knew he did not have to convince them of the value of these lessons; they understood that each way camper development was encouraged formed one piece of the larger puzzle of the benefits of camp for campers. In this paper we have tried to show that empirical links exist, grounded in statistical data, showing the positive gains campers make at camp, and that the complexity of the programming and planning that camp directors and managers do allows those positive gains to compound with one another and generate even stronger positive outcomes.



### ***Limitations and further research***

Work in establishing robust data sets and subjecting those data sets to secondary analysis must continue, as this research (and previous research in this area) is not without limitations. In this study, camper survey responses were completed by the staff members who were directly supervising those campers each day throughout their stay. Although this process likely allowed for increased continuity in responses and increased repeated response rate (due to surveys forming part of work responsibilities), responses analyzed here are not camper voices, but those of camper-supervising staff, and thus are subject to respondent subjective interpretation of the experiences of others. However, those staff persons are also well positioned to observe significant numbers of actions and interactions over the course of camper stays and are likely able to detect patterns or changes that the individual would not immediately recognize, especially in younger campers. Also, the fact that staff are completing these surveys as part of their employment role may introduce a positivity bias into the data, since they likely desire to see positive outcomes for their campers, both as a measure of job performance and personal satisfaction. In addition, the data provided by the CSCRP has a fairly wide age distribution. Although some of this range was mitigated in this study by including only campers seven years of age and over, opportunity exists for more directed sampling in the future to have a better break-down of age-related outcomes in the areas studied here.

The CSCRP data sets provide significant avenues for additional research on summer camp experiences in youth. With relatively few studies having been conducted on this data to-date (see: Carruthers, 2013; Lichti, 2014), analysis within individual data sub-scales using control or filter data for comparisons, or inter-scale analysis like that presented here, present a myriad of opportunities that could be valuable at both the industry and academic levels.

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