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THE EFFECTS OF SUMMER CAMP ON SELF-ESTEEM AND SELF-CONCEPT
IN CHILDREN DIAGNOSED WITH CANCER

By

Meghan E. Connell

THESIS

Submitted to
Northern Michigan University
In partial fulfillment of the requirements
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2012

SIGNATURE APPROVAL FORM

Title of Thesis: The Effects of Summer Camp on Self-Esteem and Self-Concept in Children Diagnosed with Cancer

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ABSTRACT

THE EFFECTS OF SUMMER CAMP ON SELF-ESTEEM AND SELF-CONCEPT IN CHILDREN WITH CANCER

By

Meghan E. Connell

Children diagnosed with cancer are faced with physical and psychological effects almost immediately after being diagnosed. The treatments children undergo cause bodily changes, which may result in children feeling different from others, experiencing negative feelings, and suffering depression all of which affect self-esteem and self-concept. Specialized summer camps provide a place for children to be around peers who have similar experiences and offer an opportunity to increase self-esteem and self-concept. Results of relevant prior studies have been ambiguous and fail to consistently support an increase in self-concept and self-esteem. The present study explored the effects of a summer camp experience on self-esteem and self-concept in children who have or have had cancer. It was hypothesized that a summer camp experience would increase self-esteem and self-concept. It was also hypothesized that first time campers would experience a greater increase in self-esteem than returning campers. Nineteen campers from a summer camp for children with cancer in the Midwest completed pre-camp and post-camp measures of self-concept and self-esteem. No statistically significant differences were found in self-esteem and self-concept for adolescents (14-18yrs.) from the pre-camp to post-camp scores. Although no statistically significant differences in self-esteem were found for children 8 to 13 yrs. old, a statistically significant difference was found for children 8 to 13 yrs. old for self-concept. Further studies with larger sample size, a longer camp experience, and multiple camps may help clarify the effects of camp.

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I dedicate this thesis to my fiancé, Mark Liles, and my mom, Cathleen Connell. Without their support, patience and encouragement, this project would not have been possible.

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I would like to acknowledge my grandfather, John who did not get to see the final product, and my grandmother, Marge Connell. They unknowingly provided me with the motivation to continue my education.

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INTRODUCTION

Childhood Cancer

According to the National Cancer Institute (A Snapshot of Pediatric Cancer, 2010), childhood cancer is the leading cause of death in children 15 years of age and younger. In 2010 alone, 10,700 new childhood cancer cases were diagnosed. Of those 10,700 new diagnoses, over half of them were leukemias (blood cancers) and brain and central nervous system tumors. With the incidence of cancer rising over the past 30 years, it is reassuring to know that mortality rates are declining. Since the 1970s the five year survival rate has improved from less than 50% to over an 80% chance of survival. The increase in survival rate can be attributed to improvements in treatment and a high proportion of patients participating in experimental clinical trials (A Snapshot of Pediatric Cancer, 2010). As the incidence of survival has dramatically increased, a new population has emerged: the pediatric cancer survivor. Although the number of pediatric cancer survivors is increasing, little is known about the psychological effects associated with being a pediatric cancer survivor.

Psychosocial Effects of Cancer

After being diagnosed with childhood cancer, medical treatment is typically the first priority. Psychological effects often receive little attention and, based on the literature, also deserve consideration. Bruneau's (1981) model describes an individual's

psychological reaction to a diagnosis of cancer. The first stage of reaction to the disease is the suspicion of having cancer and leads to a child's identification with medical staff. The second stage is the aggression that comes from a child revolting against the diagnosis but finally realizing that there is no use in revolting. The third stage is when a child falls into depression and the final stage consists of feelings of grief. Throughout these psychological reaction stages a child is being treated biologically for cancer, but often psychological effects are ignored. One reason for this is the debate about how much a child should know about their diagnosis.

Studies have shown that children understand much more about their diagnosis than was originally thought and are usually aware of the seriousness of their disease (Spinetta, 1974). Open communication about cancer is now being encouraged because children actually experience higher levels of anxiety when they are not told the truth about their disease (Winfree, Williams, & Powell, 2002). Van Dongen-Melman, Van Zanen, and Sanders- Woudstra (1986) found that children with increased knowledge about their disease were able to contribute positively to their psychosocial well-being. An increased knowledge of the disease can reduce the uncertainty associated with the disease, allowing children to maintain some control over the situation, as well as maintain and protect self-esteem by knowing what to expect.

Due to children appearing physically different from their peers, childhood cancer poses a threat to self-esteem due to a 'new role' of being ill (Van Dongen-Melman & Sanders-Woudstra, 1986). Children with cancer have to deal with their disease as well as the side effects from treatment. Some of the most common side effects are: hair loss, muscle spasms, dramatic weight gain or loss, skin discolorations, skin rashes, scars,

organ loss, and amputation (Ahmed, 1981). As for any child, knowing you are ‘different’ from the norm will affect self-esteem. Children with cancer who were perceived by their peers as being less physically different had lower depressive and anxiety symptoms, and higher general self-esteem (Varni, Katz, Colegrove, & Dolgin, 1995).

A loss of self-esteem may lead to withdrawal from peers or even fear of attending school (Van Dongen-Melman & Sanders-Woudstra, 1986). Although medical advances are making it easier for children to spend more time at home and in school rather than in a hospital, school attendance is not comparable to that of a healthy child. While in school, children have the opportunity to grow academically and socially, and to prepare for their future. Children with poor school attendance miss opportunities to develop and maintain healthy peer relationships (Deasy-Spinetta, 1981). A study by Stein and Jessop (1984) found a correlation between the number of days a child is absent from school and poor psychological adjustment. Ross and Ross (1984) concluded that children who returned to school and were teased by peers because of their physical appearance reported being teased as more painful than the actual pain associated with the disease.

Depression, anxiety, loss of self-esteem, and distortion of body image are just some of the psychological consequences that may result from treatment. Body image is crucial to self-concept development. In adolescents, body image is already an issue because of the physical changes associated with puberty. Additional bodily changes that may occur as a result of the disease and treatment may contribute to a more negative body image, which may impact self-concept (Kyngas et al., 2001).

Another issue that affects self-concept is children’s sense of control over their life. Treatments, hospitalizations, and relapses often leave children feeling they have

little control over what is happening to them. When children are unable to accomplish usual tasks and activities they used to be able to, it has a negative effect on competence development. Children can maintain a sense of control over their lives by completing little tasks. For example, even finishing a small amount of homework can help children maintain a sense of competence and self-worth (Brunquell & Hall, 1982).

Children who have cancer have more negative self-perceptions than healthy children or even those with chronic illnesses. One study researched self concept in children with cancer in comparison to healthy children and children with thalassemia (sickle cell disease). One hundred sixty- five children with cancer, 212 children with thalassemia, and 417 healthy children participated in this study. Children in all groups were interviewed and the Piers-Harris Scale was administered. Five factors of self-concept (physical appearance, behavior, anxiety, intellectual and academic level, and happiness and satisfaction) were studied. When comparing children with cancer to the other two groups (healthy children and children with thalassemia), it was found that children with cancer evaluated themselves more negatively than the other two groups on four of the five factors. Children rated themselves less positively in the areas of: appearance, behavior, intellectual and academics, and happiness and satisfaction with their lives. Healthy children and those with thalassemia expressed more anxiety than children with cancer. Children with cancer had a negative image of themselves, whereas healthy children and children with thalassaemia did not report a negative self-image. Children with cancer also reported lower intellectual and academic levels compared to the other two groups. Children with cancer reported more negative behavior at home and

in school, and felt less happy and satisfied with their lives compared to healthy children and children with thalassemia (Kyritsi et al., 2007).

Summer Camp Effects on Self-Concept and Self-Esteem

Summer camp has been a fairly common part of life for many children raised in the United States. The summer camp experience itself can have great benefits such as increases in self-esteem and self-concept. Cowin (1989) found that self-concept is enhanced in camp environments due to the new opportunities provided by camp programs. Camp programs often provide new experiences such as horseback riding, tent camping, and rock climbing. Participation in such activities may increase children's sense of independence and affect their self perceptions because these experiences provide opportunities for them to develop new skills and experience success. Self-acceptance is an important asset in life. A summer camp experience can provide children with the opportunity to enhance self- acceptance in a caring and supportive environment. Self-acceptance may lead to a positive self-concept because of being able to master new tasks and skills.

Hazelworth and Wilson (1990) looked at the effects of camp on self-concept. The purpose of the study was to measure the effect of a particular outdoor adventure program on the self-concept of participants. The study took place at a camp for teenagers in Raleigh, North Carolina. Thirty-nine participants between the ages of 12 and 15 years old participated. The Tennessee Self-Concept Scale (TSC) was administered on the first day of camp and one week later. The results showed a statistically significant increase in pre-camp to post-camp scores for the identity supplementary scale of the TSC. The

author suggests this may have resulted from children challenging themselves and learning new skills while at summer camp. A statistically significant increase was also found for the supplementary score of self-satisfaction from pre-camp to post-camp. This suggests that campers may have felt more satisfied with themselves because of successfully meeting new challenges.

Summer Camp Effects for Children Diagnosed with Chronic Diseases

To date there are over 109 camps exclusively for children with cancer (Cancer Kid Camps, 2012). Summer camp goals often vary but the most common goals are to: feel normal, alleviate (short term) anxiety and depression, provide opportunities for a sense of mastery and efficacy in peer relationships, and elevate self esteem (Swensen, 1988). These specialized camps offer a place for children to feel normal and provide opportunities for interactions with other children and adolescents who are experiencing similar physical changes and emotional issues. Although the number of camps is increasing, very little research has been done regarding the benefits of such camps.

Based on the studies summarized above, children and adolescents with cancer suffer a loss of self-esteem and self-confidence as their bodies change and their lives change with continuous disruptions such as treatments and hospitalizations. These continuous life disruptions affect peer relationships, a particularly important part of life for adolescents. The goal of summer camp is to promote a feeling of being normal back into these children's lives, while also offering the opportunity for friendships to develop.

Although it does not appear that studies have specifically addressed the development of friendships at summer camp, it appears that camp offers the opportunity

for friendships to develop. Conrad and Altmaier (2009) conducted a camp study comparing self-reported social support from children with cancer at camp to healthy children not in a camp setting. It was concluded that children with cancer reported receiving more social support at camp than children in the general population.

Bluebond-Langner, Perkel, and Goertzel (1991) completed a two year study, which took place in the summers of 1986 and 1987 at Camp Can-Do. It was found that camp provided children with cancer a source of empathy, understanding, acceptance, hope, and identification with other children at camp.

Another study by Hvizdala, Miale, and Barnard (1978) studied the effects of a discussion session facilitated by a pediatric oncologist as part of the summer camp experience. The session offered children with cancer a chance to discuss issues with their disease, therapy, and procedures. Twenty-six children ranging in age from 7 to 17 years old participated. An oncologist spoke with the children in informal sessions during afternoon rest periods at camp. Children were encouraged to talk about their fears, hopes, and side effects of the disease and treatment. Upon leaving camp children, completed a post-camp evaluation and the findings were positive. For example, an 11-year old boy stated, "It was nice having a camp like this. If you wanted to talk about leukemia and the bone marrow, and things like this, you could just go to somebody and talk about it." The most important factor found was the positive attitude of the children toward an open discussion of their disease with the pediatric oncologist and their peers. In addition to the discussion sessions facilitated by the oncologist, informal discussions occurred because of similarities among peers. Bluebond-Langner, Perkel, Goertzel, Nelson, and McGearry (1990) reported that children spoke to other campers not only of

treatments and their side effects, but also about the outcomes of treatment thus increasing their knowledge of cancer and its treatment. This knowledge of outcomes of treatment can help to reduce anxiety related to the disease (Bluebond-Langner, Perkel, Goertzel, Nelson, & McGeary, 1990).

Torok, Kokonyei, Karolyi, Ittzes, and Tomcsanyi (2006) studied self-esteem and self-efficacy at a summer camp for children diagnosed with cancer and children diagnosed with diabetes. Questionnaires were administered upon children's arrival to camp (Time 1), the last day of camp (Time 2), and two months after camp (Time 3). The Rosenberg Self Esteem Scale and General Perceived Self-Efficacy scale were used. Since illness did not appear to significantly influence the child's response to camp, groups were combined. From the combined group of children with cancer and children with diabetes, a subgroup with lower initial self-esteem was identified. A paired *t*-test was performed and the results showed an increase in self-esteem ($p < .01$) from Time 1 to Time 2, but no difference in self-esteem from Time 2 to Time 3. From the combined group of children with cancer and children with diabetes, a subgroup with lower initial self-efficacy was identified. A paired *t*-test was performed and the results showed an increase in self-efficacy ($p < .01$) from Time 1 to Time 2, but no difference in self-efficacy from Time 2 to Time 3. From the combined group of children with cancer and children with diabetes, a subgroup with higher self-esteem was also identified. The results showed no significant differences in self-esteem from Time 1 to Time 2 and a slight decrease in self-esteem from Time 2 to Time 3. From the combined group of children with cancer and children with diabetes, a subgroup with higher initial self-efficacy was also identified. The results showed no significant differences in self-

efficacy from Time 1 to Time 2 and a slight decrease in self-efficacy from Time 2 to Time 3. In this study there was also a significant gender difference, with females in both groups reporting lower self-efficacy than boys.

Limited research looked specifically at the effects of summer camp on self-concept in children with cancer. Research by Benson (1987) attempted to determine the relationship between a summer camping program and self-concept of children who have cancer. The population consisted of children from 7 to 18 years old who were attending camp for the first time. The Piers-Harris Self-Concept Scale was administered before camp and after camp. There were no statistically significant differences for pre-camp and post-camp scores on the Piers-Harris Self-Concept Scale. Children also were asked to draw a picture with the instruction, "Draw a picture of you and your friends doing something." Drawings were scored according to a modified Kinetic Family Drawings Scale. Comparisons of the pre-camp and post-camp drawings found a statistically significant difference on the self-image and emotional tone subscales. The scores suggested that participants had a more positive self-concept after the summer camp experience.

The most recent study by Brown (2007) investigated the effects of summer camp on children with cancer's self-concept and self-esteem. Her hypotheses were: (1) Summer camp will improve camper's self-concept, and (2) Pediatric Oncology summer campers will experience an increase in self-esteem. There were 18 participants from the camp which is operated by the organization The Kids Cancer Care Foundation of Alberta. Brown used the Tennessee Self-Concept Scale (TSCS) and the Self-Esteem Inventory (SEI), and a self-designed survey consisting of self-concept information such as "How do

you think Camp will help you?” The TSCS consists of five response categories from ‘always false’ to ‘always true’. The six self-concept domains are: physical, moral, personal, family, social, and academic/work. The SEI consists of 80 self-report items that measure self-esteem for school-age children and uses a modified Likert-type scale to rate items as ‘always true’ to ‘always false’. The SEI contains four scales: familial acceptance, perception of academic competence scale, perception of peer popularity scale, and perception of personal security scale. Participants completed pre-camp and post-camp questionnaires for each of the three measures. A statistically significant difference between pre-camp and post-camp SEI scores was found, suggesting that summer camp had a positive effect on self-esteem. However, no statistically significant differences between the pre-camp and post-camp scores on the TSCS were found.

Present Study

Based on the review of the limited published research, summer camp programs seem to have positive effects on self concept, self esteem, social relationships, social comparisons, and self-efficacy. Nevertheless, there is a lack of quantitative research involving the effects of camp on self-concept and self-esteem in children diagnosed with cancer. This study used standardized measures to investigate the effects of summer camp on self-esteem and self-concept in children diagnosed with cancer. The following hypotheses were tested.

The first hypothesis was that children diagnosed with cancer would experience an increase in self-esteem after one week of summer camp. Furthermore, it was hypothesized that after attending one week of summer camp, children diagnosed with

cancer would experience an increase in self-esteem. Finally, it was hypothesized that first-time campers would show a greater increase in self-esteem than those returning to camp. A supplemental questionnaire was completed at the end of camp. This measure included open-ended questions to capture the camper's self-perceptions of their summer camp experience.

METHODS

Participants

The sample consisted of 19 participants between the ages of nine and eighteen years old ($M = 14.15$, $SD = 2.65$). The youngest participants were in 3rd grade and the oldest participants were in 12th grade. The sample comprised four males (21%) and fifteen females (79%). Participants had various forms of cancer including leukemias (37%), brain or other tumors (37%), and other types of cancer (26%). Eighteen (95%) participants were in remission and not receiving treatment at the time of camp. Eighteen participants previously attended this summer camp.

Participants were recruited from a summer camp for children with cancer located in the Midwest. This summer camp provides children who have or have had cancer the opportunity to attend a one-week summer camp. The camp gave consent for research to be conducted at the camp and a letter to that effect was provided to the principal researcher. To participate in this study, children had to be English speaking, between the ages of 8 and 18 years old, attending the camp for one week, and have or have had a diagnosis of cancer.

Procedure

Upon approval from Northern Michigan University Institutional Review Board (Appendix A), an informational letter (Appendix B) explaining the study was sent to

campers who had previously attended camp and those interested in attending camp. This letter was sent out by the summer camp. Upon arrival at the camp, a flier (Appendix C) was distributed to the families to remind them of the study and to recruit participants. These fliers advertised the study and informed participants of where to go if they were interested in participating. If parents of campers and campers agreed to participate, parents signed an informed consent and children signed a child assent form.

Parents were sent to a separate room to complete a demographic questionnaire (Appendix D). Children were then instructed on how to complete the Harter's Self Perception Profile and the Coopersmith Self Esteem Inventory. Once completed, campers were returned to their parents to complete the camp check-in process.

Throughout the week at camp, children participated in many activities such as horseback riding, a high adventure course, crafts, ceramics, swimming, etc. Volunteer doctors and/or nurses were available at camp 24 hours a day in case of emergency. On the last day of camp campers filled out a second Self Perception Profile and Coopersmith Self-Esteem Inventory. In addition, campers also completed several open-ended questions regarding their camp experience (Appendix E). After completing the measures, campers continued the check out process with their parents.

Measures

The instruments used in this study include Harter's Self-Perception Profile and the Coopersmith Self-Esteem Inventory.

Harter's Self-Perception Profile

Harter's Self-Perception Profile (SPP) has two different forms, one for adolescents (SPPA) and one for children (SPPC). The SPP measures overall self-worth for both children and adolescents. The SPPC and SPPA have the following six subscales in common: scholastic competence, athletic competence, social acceptance, physical appearance, behavioral conduct and global self-worth. The SPPA has three additional subscales: close friendship, romantic appeal, and job competence.

The SPPC is appropriate for individuals between the ages of 8 and 13 years old. The Scholastic Competence scale describes children's perception of their scholastic competence or ability. The Social Acceptance scale refers to the degree to which the child feels popular or accepted by peers. The Athletic Competence Scale refers to items involving sports or outdoor games. The Physical Appearance scale describes the degree to which children are happy with the way they look. The Behavioral Conduct scale refers to way children feel about the way they behave, do the right thing, act the way they are supposed to, avoid getting into trouble, and do the things they are supposed to do. The Global Self-Worth scale refers to the extent to which children like themselves as a person and are happy with the way they are leading their life.

The SPPA is appropriate for individuals 14 years old to 18 years old. The Scholastic Competence scale refers to adolescents' perception of their performance and ability within academics. The Social Acceptance scale describes the degree to which adolescents feel accepted by peers, feel popular, have a lot of friends, and feel they are easy to like. The Athletic Competence scale refers to adolescents' perception of their athletic ability at sports. The Physical Appearance scale describes the degree to which

adolescents are happy with the way they look, like their bodies, and feel they are good looking. The Job Competence scale describes how adolescents feel about their job skills and job performance. The Romantic Appeal scale refers to the adolescents' perception that they are romantically attractive to those in whom they are interested, able to date those they would like to date, and feel they are fun and interesting to date. The Behavioral Conduct scale describes the extent to which adolescents like the way they behave, do the right thing, act the way they are supposed to, and avoid getting into trouble. The Close Friendship scale refers to adolescents' ability to make close friends with whom they can share personal thoughts and secrets. The Global Self-Worth scale describes the extent to which adolescents like themselves, are happy with the way they are leading their life, and are generally happy with the way they are.

Both forms are scored on a four - point scale with some items scored inversely. A total score for each subscale is calculated. A higher score on subscales indicates a higher degree of perceived competence in a particular area. The items consist of bipolar statements, for example "Some kids often forget what they learn" but "Other kids can remember things easily." Children choose the statement more like them and then indicate if that item is 'sort of true' or 'really true' of themselves.

The SPPC has an internal consistency ranging from $\alpha = .71$ to $.86$ (Harter, 1985). The test-retest reliability is $r = .69$ to $.87$ (Harter, 1982). The SPPA has an internal consistency ranging from $\alpha = .74$ to $.93$. (Harter, 1988). Evidence for convergent validity was found for all subscales (Wichstrom, 1995). The SPPA and SPPC are measures that are widely used for research purposes and have adequate psychometric properties for research purposes.

Coopersmith Self-Esteem Inventory

The Coopersmith Self Esteem Inventory (C-SEI) consists of two forms: the Adult Form appropriate for ages 16 and older and the School Form appropriate for ages 8 to 15 years old. Statements such as “Things don’t usually bother me” are answered with a ‘like me’ or ‘unlike me’. In the School Form there are 25 items and in the adult form there are 25 items. Higher scores indicate higher self esteem. The internal consistency for the Coopersmith Self Esteem Inventory Adult Form is $\alpha = .80$ to $.92$. The internal consistency for the Coopersmith Self Esteem Inventory School Form is $\alpha = .71$ to $.74$. The test-retest reliability for the Coopersmith ranges from $r = .70$ to $.88$ (Coopersmith, 2002). Coopersmith scores were correlated with scores on the SRA Achievement Series, $r = .33$ ($p < .01$) (Simon & Simon, 1975). These data provide evidence of divergent validity for the Coopersmith. The Coopersmith Self-Esteem Inventory is widely used in research and has adequate psychometric properties for research purposes.

An additional questionnaire (Appendix E) was completed at the end of camp. This questionnaire consisted of open-ended questions to better understand children’s perceptions of the camp experience. Some questions asked included, “What did you like about camp?” and “How did camp help you?”

RESULTS

Statistical analyses included only data for participants who completed both the pre-camp and post-camp measures. Paired *t*-tests were used to compare differences between the pre-camp and post-camp scores on the Coopersmith Self Esteem Inventory and the Self-Perception Profile. Pre-camp and post-camp means, standard deviations, and *t*-test scores are summarized in Table 1.

Table 1
Differences in Pre- Camp and Post-Camp Scores on Measures of Self-Concept and Self-Esteem

Measure and Subscale	Pre-Camp Scores		Post-Camp Scores		<i>n</i>	<i>df</i>	<i>t</i> -test
	Mean	<i>SD</i>	Mean	<i>SD</i>			
Child Self-Perception Profile Scholastic Competence	17.25	5.87	17.50	3.96	8	7	<i>t</i> = .48, <i>ns</i>
Child Self-Perception Profile Social Acceptance	19.00	3.87	20.29	3.25	7	6	<i>t</i> = 1.3, <i>ns</i>
Child Self-Perception Profile Athletic Competence	14.86	3.98	15.14	3.39	7	6	<i>t</i> = .420, <i>ns</i>
Child Self-Perception Profile Physical Appearance	16.71	3.35	20.14	3.38	7	6	<i>t</i> = 2.55, <i>p</i> <.05
Child Self-Perception Profile Behavioral Conduct	20.13	3.80	18.88	3.72	8	7	<i>t</i> = 1.5, <i>ns</i>
Child Self-Perception Profile Global Self Worth	20.71	2.14	22.29	1.50	7	6	<i>t</i> = 5.3, <i>p</i> <.01
Child Coopersmith (School Form)	16.40	2.88	17.40	4.27	10	9	<i>t</i> = .78, <i>ns</i>
Adolescent Self-Perception Profile Scholastic Competence	16.71	3.45	16.57	3.74	7	6	<i>t</i> = -1.0, <i>ns</i>
Adolescent Self-Perception Profile Social Acceptance	13.86	4.30	14.00	4.28	7	6	<i>t</i> = .28, <i>ns</i>
Adolescent Self-Perception Profile Athletic Competence	9.00	3.56	10.29	3.82	7	6	<i>t</i> = 1.65, <i>ns</i>
Adolescent Self-Perception Profile Physical Appearance	12.14	4.10	13.14	3.29	7	6	<i>t</i> = 1.62, <i>ns</i>
Adolescent Self-Perception Profile Job Competence	15.86	2.86	16.57	3.60	7	6	<i>t</i> = .96, <i>ns</i>
Adolescent Self-Perception Profile Romantic Appeal	14.00	4.69	14.00	4.97	7	6	<i>t</i> = .00, <i>ns</i>
Adolescent Self-Perception Profile Behavioral Conduct	13.57	4.12	14.29	3.25	7	6	<i>t</i> = .80, <i>ns</i>
Adolescent Self-Perception Profile Close Friendships	16.86	1.95	17.71	3.30	7	6	<i>t</i> = .75, <i>ns</i>
Adolescent Self-Perception Profile Global Self-Worth	14.14	3.18	15.00	2.52	7	6	<i>t</i> = 2.12, <i>ns</i>
Adult Coopersmith Self-Esteem Inventory	16.50	6.35	15.83	6.49	6	5	<i>t</i> = .791, <i>ns</i>

The first research hypothesis was that after one week of camp, children diagnosed with cancer would experience an increase in self-concept. Paired *t*-tests were performed to determine differences between pre-camp and post-camp subscale scores. For the SPPA, no statistically significant differences were found on any of the subscales. For the SPPC, statistically significant differences were found in the pre-camp and post-camp scores on the subscales of physical appearance ($t=2.55, p <.05$) and global self-worth ($t=5.3, p <.01$). Post-hoc analyses were performed on the self-concept measures. Since self-concept is a multi-faceted variable, a composite measure of self-concept was formed to provide a more sufficient measure of self-concept. Pre-camp subscale scores and post-camp subscale scores were correlated separately to determine what scores would be included in the composite measure. The SPPC pre-camp subscale correlations are summarized in Table 2. Significant correlations were found between ‘Child Behavioral Conduct’ and ‘Child Global Self-Worth’ ($r=.876, p <.01$).

Table 2
Correlations between Pre-Camp Subscale Scores for the SPPC (8-13 yrs.)

Subscale	Behavioral Conduct	Physical Appearance	Scholastic Competence	Athletic Competence	Social Acceptance	Global Self-Worth
Behavioral Conduct	--					
Physical Appearance	.396	--				
Scholastic Competence	.394	-.282	--			
Athletic Competence	.517	.205	.105	--		
Social Acceptance	.327	.160	-.649	.028	--	
Global Self-Worth	.876*	.468	-.241	.516	.449	--

* $p <.05$, two-tailed

The post-camp SPPC subscale correlations are summarized in Table 3. A significant correlation between ‘Child Behavioral Conduct’ and ‘Child Global Self-Worth’ ($r = .875, p < .05$) was found. Another significant correlation was found between ‘Child Physical Appearance’ and ‘Child Global Self-Worth’ ($r = .960, p < .01$). The statistically significant correlations were used to select the subscales to be included in the composite measures of self-concept, i.e. Child Physical Appearance, Child Behavioral Conduct, and Child Global Self-Worth. A paired t -test was performed using the composite measure of self-concept to determine the differences in self-concept between pre-camp and post-camp scores. A statistically significant difference was found in self-concept, $t(7) = 2.83, p < .05$.

Table 3
Correlations between Post-Camp Subscale Scores for the SPPC(8-13 yrs.)

Subscale	Behavioral Conduct	Physical Appearance	Scholastic Competence	Athletic Competence	Social Acceptance	Global Self-Worth
Behavioral Conduct	--					
Physical Appearance	.805*	--				
Scholastic Competence	-.061	.423	--			
Athletic Competence	.036	.389	.583	--		
Social Acceptance	.159	.472	.116	.274	--	
Global Self-Worth	.875**	.960**	.185	.242	.505	--

* $p < .05$, two- tailed

** $p < .01$, two- tailed

The pre-camp SPPA subscale correlations are summarized in Table 4. For the pre-camp SPPA subscale scores, a significant correlation was found between the ‘Adolescent Behavioral Conduct’ and ‘Adolescent Global Self-Worth’ ($r = .699, p < .05$).

The correlation between ‘Adolescent Physical Appearance’ and ‘Adolescent Global Self-Worth’ ($r = .684, p < .05$) was also significant.

Table 4
Correlations between Pre-Camp Subscale Scores for the SPPA(14-18 yrs.)

Subscale	Behavioral Conduct	Physical Appearance	Scholastic Comp.	Athletic Comp.	Social Accept.	Job Comp	Romantic Appeal	Close Friends	Global Self-Worth
Behavioral Conduct	--								
Physical Appearance	.373	--							
Scholastic Competence	.023	.511	--						
Athletic Competence	.402	-.064	-.120	--					
Social Acceptance	.667	.303	.408	.755*	--				
Job Comp.	.754*	.256	.449	.247	.751*	--			
Romantic Appeal	.485	.469	.509	.629	.720*	.390	--		
Close Friends	.287	.233	.544	.422	.692*	.669*	.637	--	
Global Self-Worth	.699*	.684*	-.136	.201	.295	.302	.461	.062	--

* $p < .05$, two-tailed

The post-camp SPPA subscale correlations are summarized in Table 5. For the post-camp SPPA subscale scores, a significant correlation was found between ‘Adolescent Physical Appearance’ and ‘Adolescent Global Self-Worth’ ($r = .851, p < .01$). A significant correlation was also found between ‘Adolescent Behavioral Conduct’ and ‘Adolescent Global Self-Worth’ ($r = .814, p < .05$). Therefore, Adolescent Physical Appearance, Adolescent Behavioral Conduct, and Adolescent Global Self-Worth were selected for the composite measure of self-concept. A paired t -test was performed using

the composite measure of self-concept to determine the difference for pre-camp and post-camp. No significance was found with the paired *t*-test, $t(7) = 1.97, ns$.

Table 5
Correlations between Post-Camp Subscale Scores for the SPPA(14-18 yrs.)

Subscale	Behavioral Conduct	Physical Appearance	Scholastic Comp.	Athletic Comp.	Social Accept.	Job Comp	Romantic Appeal	Close Friends	Global Self-Worth
Behavioral Conduct	--								
Physical Appearance	.666	--							
Scholastic Competence	.068	.407	--						
Athletic Competence	.525	.144	.164	--					
Social Acceptance	.596	.230	.486	.836**	--				
Job Comp.	.375	-.037	.279	.289	.591	--			
Romantic Appeal	.413	.431	.691	.654	.796*	.528	--		
Close Friends	.050	.168	.807*	.413	.625	.574	.897**	--	
Global Self-Worth	.814*	.851**	.142	.486	.409	.069	.409	.060	--

* $p < .05$, two-tailed

** $p < .01$, two-tailed

The second research hypothesis stated that after one week of camp, children will experience an increase in self-esteem. A paired *t*-test was completed to examine the differences between the pre-camp and post-camp scores on the Coopersmith Self-Esteem Inventories (C-SEI). For the School Form, no significant statistical difference was found between pre and post C-SEI scores $t(10) = .780, p > .05$. For the Adult Form, no statistically significant difference was found between pre and post C-SEI scores $t(5) = .465, p > .05$. The second hypothesis was not supported.

The final hypothesis was that first-time campers would show a greater increase in self-esteem than those returning to camp. Because there was only one first time camper, this hypothesis could not be tested.

Supplemental data was collected in addition to the standardized measures. Sixteen campers completed the qualitative camp experience questions. These responses provided anecdotal support that camp is a helpful place for children who have or have had cancer. In general, children reported that camp provides them with peer support, a feeling of being normal, and a place to be themselves.

The first question asked of campers was ‘What did you like about camp?’ The results are summarized in Table 6. The most frequent responses included activities and seeing friends. One 17- year old female said, “I like all of the activities that they have here at camp but I come for the relationships and to see my [camp name] family again.” Another 14- year old male said, “I liked the whole camp experience. I liked the activities, the events, the food, the people, and everything else.

Table 6
Self-reported Positive Features of Camp

Positive Feature	Occurrence
Friends	6 (38%)
Activities	6 (38%)
Friends and Activities	2 (12%)
Everything	2 (12%)

The second qualitative question asked of campers was ‘What was your favorite thing about camp?’ A summary of these results can be seen in Table 7. The most frequent responses were friends and activities. In response to the question one 14- year old male responded simply, “The wonderful people.” Another 14-year old female said, “My favorite thing about camp was being able to interact with all of the campers and have a great time here at camp.

Table 7
Self-reported Favorite Features of Camp

<u>Favorite Feature</u>	<u>Occurrence</u>
Friends	9 (56%)
Activities	5 (32%)
Food	1 (6%)
Everything	1 (6%)

The third qualitative question asked of campers was ‘What didn’t you like about camp?’ The results are summarized in Table 8. The most frequent responses included disliking nothing about camp and the rodeo.

Table 8
Self-reported Negative Features of Camp

Negative Feature	Occurrence
Nothing	7 (44%)
Rodeo	3 (19%)
Dress Code	2 (12%)
Other	3 (19%)
No Answer	1 (6%)

The final question asked the campers ‘How did camp help you?’ These results are summarized in Table 9. The most frequent responses were an increase in confidence and the peer support provided at camp. One 12-year old female answered, “[Camp name] helped me become a more confident person.” Another 13-year old female responded, “I feel it [camp] helps because it lets kids with cancer be kids again.”

Table 9
Self- Reported Helpful Features of Camp

Helpful Feature	Occurrence
Increase in Confidence	4 (25%)
Peer Support	3 (19%)
Allows Me to be Myself	3 (19%)
Makes me feel Normal	2 (12%)
Other	4 (25%)

DISCUSSION

The present study investigated the effects of a summer camp experience on self-esteem and self-concept in children who have or have had cancer. The first hypothesis was that attending a summer camp would result in an increase in campers' self-concept. For the SPPC, initial paired *t*-test results showed a statistically significant difference in pre-camp and post-camp subscale scores for 'Child Physical Appearance' and 'Child Global Self-Worth'. Post-hoc analyses were performed on the self-concept measures. Since self-concept is a multi-faceted variable, a composite measure of self-concept was formed to provide a more sufficient measure of self-concept. Pre-camp subscale scores and post-camp subscale scores were correlated separately to determine what scores would be included in the composite measure. For the SPPC, the composite measure included 'Child Physical Appearance', 'Child Behavioral Conduct', and 'Child Global Self-Worth'. The difference between the pre-camp composite measure and the post-camp composite measure was statistically significant. This suggests that a summer camp experience fostered an increase in self-concept in children between the ages of 8 to 13 years old. For the SPPA, paired *t*-tests were performed to determine differences between pre-camp and post-camp subscale scores and no statistically significant differences were found. For the SPPA, the composite measure included 'Adolescent Physical Appearance', 'Adolescent Behavioral Conduct', and 'Adolescent Global Self-Worth'. The difference between the

pre-camp composite measure and the post-camp composite measure was not statistically significant.

Based on the limited previous studies, the findings were not expected. Previous studies did not report differences based on age. Theorists generally agree that as age increases, self-concept stability increases. Young children's self-concept is global, undifferentiated, and situation specific. As age increases, more experiences arise and therefore self-concept becomes increasingly established (Engel, 1959; Long, Ziller, & Henderson, 1968; Shavelson, Hubner, & Stanton, 1976). As self-concept becomes more concrete, individuals view themselves as more stable individuals. This could offer an explanation for the present study's findings of statistically significant differences in the self-concept of children, but not adolescents.

Like the split results in the present study, previous research on the effects of summer camp on self-concept has yielded inconsistent results. Benson (1987) reported a statistically significant difference in self-concept after a one week summer camp. Drawings were scored according to a modified Kinetic Family Drawings Scale. Comparisons of the pre-camp and post-camp drawings found a statistically significant difference on the self-image and emotional tone subscales. However, Benson also administered the Piers-Harris Self-Concept measure and no significant differences were found between the pre-camp and post-camp scores. Brown (2007) did not find statistically significant differences in self-concept in children with cancer after a four week summer camp experience. Some of the inconsistent findings could result from using different instruments that measure different aspects of self-concept. The measures that have been used within the relevant literature have been normalized on healthy

children. Depending on the research question, it might be necessary to use a measure that has been normalized on children with chronic illness; however, a lack of these measures is also an issue.

The second hypothesis was that attending a summer camp would result in an increase in camper's self-esteem. The present study found no statistically significant differences between pre-camp and post-camp self-esteem scores, suggesting that self-esteem did not increase after a one week summer camp experience. A pre-camp and post-camp study done by Brown (2007) found a statistically significant difference in self-esteem for campers between the ages of eight to eighteen. In addition to an overall statistically significant difference, a statistically significant difference was also found on all four subscales (familial acceptance, academic competence, peer popularity, and personal security). Torok et al. (2005) also found statistically significant differences in self-esteem after an eight day summer camp experience. One of the differences with these studies compared to the present study is the measures used. Each study used different instruments measuring different constructs producing different results. Another difference is the length of time attending camp. The camp used in Brown's study lasted for four weeks and the camp used in the present study lasted one week. A longer camp provided additional opportunities to enhance self-concept and self-esteem. Although the camp used in the Torok et al. study lasted only eight days, the larger sample size of 44 participants could explain the statistically significant differences found in self esteem.

The third hypothesis was that campers attending camp for the first time would experience a greater increase in self-esteem than those who had previously attended

camp. Due to the limitation of only having one new camper, this hypothesis could not be addressed.

The post-camp questionnaire provided insight into children's perceptions of the benefits of the camp experience. In three out of the four qualitative camp experience questions, a category was created for friends as a favorite thing about camp, what campers liked about camp, and how camp helped campers. It was also noted that children felt normal and enjoyed the ability to be around other campers with similar experiences. These self-perceptions of belonging and feeling normal provide insight on the benefits of camp for self-esteem. In the qualitative questions, campers also emphasized the positive experiences of new activities. The mastery of these new activities and experiences could also contribute to significant findings in child self-concept.

This study was limited by small sample size and study design. Due to the small sample size of 19 participants, findings from this study should be interpreted with caution. The statistical analyses had limited power. The small sample size may have masked small, but significant differences. Use of a larger sample size would provide the power needed to detect small but significant differences in pre-camp and post-camp scores.

A second limitation of this study is the study design. As with any repeated measures design, carry-over effect can occur (i.e. practice effects). Participants completed each measure twice, which could result in boredom from answering the same

questions. Participants may not thoroughly read questions and hurry through the measures.

Future research should address the limitations noted in prior research and the present study. A larger sample size could pick up small but significant differences. Another suggestion for future research would be to have multiple camps involved as a way of increasing sample size, but this would introduce other confounds that would be difficult to control for such as: age distribution, gender distribution, camp activities, and camp location.

Another recommendation for future research would be a camp longer than one week; however, camps that have lasted longer than one week have still produced inconsistent results. Torok et al. (2005) found statistically significant differences for self-esteem for an identified group of campers with initial lower self-esteem after an eight day summer camp experience. Brown (2007) found no statistically significant differences for self-esteem after a four-week summer camp experience. A final suggestion for future research would be to use different measures that may be more sensitive to this population. The measures used in the present study were designed for healthy children and a measure specifically designed for children with chronic illness might be more appropriate. A measure that is for children with chronic illness might be more sensitive in capturing changes in self-esteem and self-concept. Further research should also consider using multiple standardized measures of self-concept and self-esteem. One standardized measure might capture a different aspect of self-concept than another standardized measure. The results could offer insight into what aspects are most affected by a summer camp experience.

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APPENDIX A



Continuing Education
1401 Presque Isle Avenue
Marquette, MI 49855-5301

Memorandum

May 2, 2011

TO: Meghan Connell
Psychology Department

FROM: Terrance Seethoff, Ph.D. *T.S.*
Dean of Graduate Studies & Research

SUBJECT: IRB Proposal HS11-412
"The Effects of Summer Camp on Self-Esteem and Self-Concept in Children Diagnosed with Cancer"

The Internal Review Board (IRB) has reviewed your proposal and has given it final approval. To maintain permission from the Federal government to use human subjects in research, certain reporting processes are required.

- A. You must include the statement "Approved by IRB: Project # (listed above) on all research materials you distribute, as well as on any correspondence concerning this project.
- B. If a subject suffers an injury during research, or if there is an incident of non-compliance with IRB policies and procedures, you must take immediate action to assist the subject and notify the IRB chair (dereande@nmu.edu) and NMU's IRB administrator (tseethoff@nmu.edu) within 48 hours. Additionally, you must complete a Unanticipated Problem or Adverse Event Form for Research Involving Human Subjects
- C. If you find that modifications of methods or procedures are necessary, you must submit a Project Modification Form for Research Involving Human Subjects before collecting data.
- D. If you complete your project within 12 months from the date of your approval notification, you must submit a Project Completion Form for Research Involving Human Subjects.
- E. If you do not complete your project within 12 months from the date of your approval notification, you must submit a Project Renewal Form for Research Involving Human Subjects. You may apply for a one-year project renewal up to four times.

All forms can be found at the NMU Grants and Research website: <http://webb.nmu.edu/GrantsAndResearch/SiteSections/Compliance/HumanSubjects.shtml>

kjm

APPENDIX B

Invitation to Participate in Research Study

Dear Parent,

My name is Meghan Connell and I am a graduate student at Northern Michigan University in Marquette, MI. As a graduate student, I am expected to do a research-based Master's thesis. I have worked as a counselor at a camp for children with cancer, similar to [camp name], for 3 years and have seen the positive effects that the summer camp experience has on children. It has inspired me and led me to conduct the research for my thesis on the effects of summer camp on children with cancer. I contacted [camp name] and was given permission to conduct my research there. [Camp name] agreed to send this letter for you to review prior to camp, so you will be familiar with the study when you arrive at camp. The study is not a requirement of camp.

Summer camp is often a positive experience for children diagnosed with cancer although little research has been done to support this observation. The purpose of my study is to look at whether attending summer camp affects how campers feel about themselves and how campers view themselves. These findings will contribute to the literature about how children with cancer benefit from attending such camps, in particular the effects on self-esteem and self-concept.

If you choose to participate in the study, you will be asked to provide demographic information and your child will be asked to complete a questionnaire, which will provide information about self-esteem and self-concept. This questionnaire will be completed once on the first day of camp and again on the last day of camp. Additional information about the study will be available at registration on the first day of camp.

I invite you to participate in this study. Your participation will further the understanding of the benefits of camp on children's self-esteem and self-concept.

Thank you,
Meghan Connell, NMU Graduate Student

APPENDIX C

Flier for Invitation to Participate in Research Study

RESEARCH PARTICIPATION OPPORTUNITY

Dear Parent and Camper,

My name is Meghan Connell and I am a graduate student at Northern Michigan University in Marquette, MI. Prior to camp, you were sent a letter inviting you and your child to participate in my study on the effects of attending summer camp on children's self-concept and self-esteem. [Camp name] has agreed to allow me to conduct this research at summer camp. However, the study is not a requirement of the camp.

Summer camp is often a positive experience for children diagnosed with cancer although little research has been done to support this observation. The purpose of my study is to look at whether attending summer camp affects how campers feel about themselves and how campers view themselves. These findings will contribute to the literature about how children with cancer benefit from attending such camps, in particular the effects on self-esteem and self-concept.

If you choose to participate in the study, you will be asked to provide demographic information and your child will be asked to complete a questionnaire, which will provide information about self-esteem and self-concept. This questionnaire will be completed once today at camp and again on the last day of camp. This questionnaire should take approximately 15 to 20 minutes. If you are interested in participating in this study or have additional questions, please proceed to (location) where additional information will be available to you.

I invite you to participate in this study. Your participation will further the understanding of the benefits of camp on self-esteem and self-concept in children who have or have had cancer.

Thank you,
Meghan Connell, NMU Graduate Student

APPENDIX D

Demographic Questionnaire

Please provide the following information about your child.

Age (in yrs.): _____

Sex (Circle One) Female Male

Last grade completed:_____

Does your child receive special education services?

Yes

No

If yes, what is the nature of the disability (e.g., reading disability, cognitive impairment, orthopedic impairment)

Has your child attended [camp name] before? (circle one)

Yes

No

If yes, how many times has your child been to [camp name]?

Has your child previously attended a camp for children with cancer similar to [camp name]?

Yes

No

When was your child's diagnosis made? (MM/YYYY)

What kind of cancer does or did your child have?

Is your child currently receiving treatment?

If yes, how long has your child been receiving treatment? (Please answer in months)

If no, how long has it been since your child's last treatment? (Please answer in months)

Have you been told your child is in remission?

Yes

No

If yes, how long has your child been in remission? (Please answer in months)

APPENDIX E

Camp Experience Questions

What did you like about camp?

What was your favorite thing about camp?

What didn't you like about camp?

How did camp help you?
