

Camp War Buddies: Exploring the Therapeutic Benefits of Social Comparison in a Pediatric Oncology Camp

Shay Dawson
Doug Knapp
James Farmer

Abstract

Cancer survival rates for youth have improved by 20%-30% in the past two decades, resulting in a greater need for therapeutic interventions that address the resulting psychosocial needs of patients post traditional medical treatment (Greenlee, Murray, Bolden, & Windgo, 2000). The purpose of this study was to measure the effect of attendance at a pediatric oncology camp designed to support the psychosocial needs of youth 8-18 years of age. Campers attending the oncology camp from Sunday through Friday were given a 12-item evaluation at the beginning of the week (pretest) and again at the end of the week (posttest) to gather quantitative data on independence, social skills, and self-esteem. A three-month follow-up telephone interview was conducted to generate qualitative emerging themes. Findings suggest that campers had statistically significant improvements in self-esteem while emergent themes included a supportive community, normalizing experience, positive recollection of their camp experience and memories of specific activities. Social comparison theory is the foundation of the study and provides a framework for interpreting the results.

Keywords: *Therapeutic camp, recreation therapy, social comparison, Camp War Buddy*

Shay Dawson is the director of Bradford Woods, Indiana University's Outdoor Center. Bradford Woods is a unit of the Department of Recreation, Park, and Tourism Studies and an auxiliary of the School of Public Health at Indiana University.

Doug Knapp is an associate professor in the Department of Recreation, Park, and Tourism Studies and the School of Public Health at Indiana University.

James Farmer is an assistant professor in the Department of Recreation, Park, and Tourism Studies and the School of Public Health at Indiana University.

Please send correspondence to sldawson@indiana.edu

Literature Review

In the United States, cancer is the second leading cause of death in children 1-14 years of age despite the fact there has been a 20-30% increase in survival rates over the past two decades (Greenlee, Murray, Bolden, & Windgo, 2000). For youth who survive, studies have shown childhood cancer can negatively impact normal development and thus impact their quality of life as they move into adulthood (Langeveld, Stam, Grootenhuys, & Last, 2002). For example, social skills and independence may be neglected due to increased dependence on parents and other adults and less contact with school-aged peers during treatment (Maurice-Stam, Grootenhuys, Caron, & Last, 2007). Moreover, competency in self-care can be low if feelings of mastery and self-esteem are poor (Mosher & Moore, 1998). Childhood cancer has the potential to negatively impact the psychosocial domains of youth including feelings of being less happy, less satisfied, having a negative image of themselves, lower self-esteem, depression, distortion of body image, and increased anxiety due to the fear of how peers will react to a child's illness (Kyrisit, Matziou, Papadatou, Evagellou, Koutelekos, & Polikan-drioti, 2007; Theofanidis, 2007).

Given the potential negative impact on psychosocial functioning and increased survival rates, there is a strong rationale for empirically based studies to examine programming interventions that address the psychosocial needs of patients post traditional medical treatments. This should include programming that fosters the acquisition of social contacts outside of the family, increasing overall independence, and building self-esteem. Medically specific therapeutic camps could be one way to address this need.

Current research suggests that experiences at summer camps positively impact the psychosocial domains of children and adolescents (American Camping Association, 2005; Briery & Rabian, 1999; Henderson, Bialeschki, & James, 2007). The summer camp experience can provide an important opportunity for youth development, particularly among youth with chronic illnesses. Constructs such as self-efficacy, self-esteem, self-awareness, independence, spirituality, social skills, and friendship development have been noted as outcomes from camp participation (Brannan, 1997; Henderson et al., 2007). Specific to cancer, Meltzer and Rourke (2005) examined social comparisons at an oncology camp designed for adolescents. Thirty-four campers participated in filling out the Children's Loneliness and Social Satisfaction Questionnaire (Asher, Hymel, & Renshaw, 1984) as well as the Self-Perception Profile for Adolescents (Harter, 1988). Quantitative findings suggest campers had increased feelings of peer acceptance, felt happier with themselves, and felt happier about their appearance when comparing themselves to camp peers. The authors concluded campers felt more similar to their camp peers than their home peers and those positive psychological gains resulted from attending the camp. Similarly, Roberson (2010) used a phenomenological approach to examine a weekend camp designed for campers who have a sibling with cancer. Roberson's findings suggested the social support and social comparison opportunities at camp were the leading mechanism for positive coping.

Medically specific camp research unrelated to cancer is also present in the literature. Briery and Rabian (1999) administered the Child Attitude Towards Illness Scale (Austin & Huberty, 1993) and the State-Trait Anxiety Inventory (Spielberger, 1973) for 90 campers attending one-week, disability-specific camps for spina bifida, asthma, and diabetes. Their findings suggested an overall positive gain in attitudes toward illness and a decrease in anxiety. Devine and Dawson (2010) implemented a single-group repeated measures design in studying the impact of a one-week residential camp on the self-esteem and social acceptance of youth with cranial facial difference. The Rosenberg Self-Esteem scale (Rosenberg, 1965) and a single-item social acceptance indicator were administered to campers 8-18 years of age at the beginning and end of camp and also during a six-week post camp telephone follow-up. Statistically significant gains in both self-esteem and social acceptance were found during camp. Goodwin, Lieberman, Johnston, and Leo (2011) used a phenomenological approach to elicit the social meaning of a one-week sport camp for 13 youth with visual impairments. Emerging themes related to social support included a sense of *connectedness* and *reaching out*. Similarly, Dawson and Liddicoat (2009) used a phenomenological approach to study the lived experience and personal memories of 27 adults with cerebral palsy who attended a camp beginning as a child through adulthood. Emerging themes included *community, fun, a place to participate in outdoor leisure, independence, and a respite for both parents and campers*.

Limitations of the current literature indicate that follow-up data, camp methodology, and having a better un-

derstanding of therapeutic programs that combat the negative psychosocial impact of childhood cancer are needed (Henderson, et al, 2007; Langeveld, et al, 2002). Follow-up data post the camp experience is desirable to test for carry-over impact into everyday life while camp methodology data is lacking in that several studies have documented the benefits of camp while very little is known about what is causing these positive psychosocial changes to take place. Lastly, social comparison theory, although well-established in the literature, has been applied to the camp setting in only two studies found by the authors (Roberson, 2010; Meltzer & Rourke, 2005). Further empirically based inquiry could begin to illustrate how camp methodologies, such as social comparison opportunities, help in combating the psychosocial ramifications of childhood cancer. Thus, the reason for this study is to address the deficiencies in the camp and youth oncology literature as presented above.

Social Comparison Theory

Social comparison theory provides the framework for this study and acts as a lens for interpreting the results. Festinger's (1954) seminal work on the theory of social comparison hypothesized human beings have an innate drive to compare one's self to others who are similar and this comparison is especially useful for evaluating an individual's ability and opinions. Essentially all human beings seek to compare themselves to others from time to time due to three motives, i.e., self-evaluation, self-improvement, and self-enhancement (Gibbons & Bunk 1999). A person may ask themselves if they are doing as well as they should given their life circumstance. This

question comes from comparing one's self to someone with similar attributes and situations, which provides useful data to evaluate if a person is managing his situation as well as their peer group (Goethals & Darley, 1977).

The theory of social comparison has progressed from the 1950s to include many nuances related to the dynamics of comparing one's self to others who have a similar life situation but are in a better or worse position related to that situation. For instance, downward comparisons (comparing to others who are worse off) can help individuals feel better about their own life situation, while upward comparisons (to those with a superior life situation) can provide hope or inspiration toward improving their own position (Aspinwall, 1998). Recent studies have applied this upward and downward comparison data to individuals working through illness or life challenges. Gibbons and Bunk (1999) found that a desire to compare oneself to others increases during situational uncertainty, while there has also been a call for more research to look at situational inducements such as experience with illness and disease (Leventhal, Hudson, & Robitaille, 1997; Suls, Martin, & Leventhal, 1997).

Specific to cancer, Wood, Taylor, and Lichtman (1985) found patients with breast cancer benefitted from downward comparisons with others who had a less favorable prognosis, i.e., patients had a more optimistic outlook about their own cancer diagnosis after comparing themselves to their less fortunate peers. Wood (1989) suggested that upward comparison can be beneficial as individuals strive for self-evaluation by comparing themselves to supe-

rior role models, resulting in hope and inspiration for future improvement similar to their role model's experience with the illness.

Taylor (1983) proposed a theory of cognitive adaptation as an adjustment to threatening events. Three themes originated as the basis for this theory: (a) a search for the meaning of an experience, (b) an attempt to regain mastery, and (c) an effort to restore self-esteem through self-evaluation. The latter theme is based on social comparison theory with research coming from patients who had cancer. Taylor et al. (2007) went on to connect cancer support groups with social comparison theory.

Methods

In order to explore and comprehend the potential therapeutic benefits of social comparison at a pediatric oncology residential camp, a mixed-methods research design was used. Specifically, a sequential embedded research design was utilized in order to elucidate the outcomes of a summer camp experience for youth with cancer and their siblings (Creswell & Clark, 2007). A sequential embedded mixed-methods design utilizes both qualitative and quantitative data and analyzes the data in a systematic fashion that allows one method to inform the construction and implementation of a subsequent method, while also allowing for the weaknesses of one method might be compensated through the strengths of another. The setting for this study was Bradford Woods, Indiana University's 2,400-acre Outdoor Center. There are currently 15 medically specific residential summer camps as well as eight residential weekend camps throughout

the year. Bradford Woods is located in south-central Indiana, containing a 100-acre lake, four-season cabins, a dining hall, health center, camp offices, staff housing, a year-round equine-assisted therapy center, several high and low challenge courses, a sport pavilion, nature center, art center, and an outdoor amphitheater. The Center is a best practice site for the use of universal design principles in the outdoor setting (Preiser & Ostroff, 2001).

Camp Little Red Door was specifically examined in this study. This camp is designed for 90 youth, 8-18 years old with cancer and their siblings. The medically specific design is purposeful in that it provides opportunities for social support, normalization, and increased independence related to diagnosis. Full-time summer staff members take part in up to 3 weeks of training and are utilized in the cabins at a 1-to-5 staff-to-camper ratio. A three-day camp, designed to develop leadership and mentoring skills in the oldest camper group, precedes the week-long camp. The leadership campers act as role models in the week-long camp setting in terms of being positive influences on the attitude of younger campers and in how they cope with the cancer experience. The process of providing individual assessments, a camper care plan, specific camp interventions, and evaluating camper progress on these identified goals is used throughout this therapeutic camp. Campers are encouraged to meet and exceed their goals as well as to be self-determined in helping to select personal goals.

Specific interventions to provide social support, independence, and self-esteem are numerous. Social support is achieved by acknowledging those who

have passed away and supporting the camper's normal process of grief. Activities include a memory garden as well as a balloon launch to recognize peers that have passed away from the previous summer. A hair-cutting ceremony in which campers and staff have the opportunity to shave their heads in support of youth with cancer, to share encouraging words, and to donate their hair to Locks of Love (Sandlin, 2000) is also a camp tradition. Conventional camp activities such as campfires, family style meals, cabin time, and camp outs provide a normalizing and informal setting for youth to simply be kids and to be self-determined in sharing and comparing their life experiences of having cancer or being a sibling to someone with cancer.

Independence is encouraged through cabin life activities. Examples of these activities of daily living include teeth brushing, showering, dressing, selection of outfits for the day, and opportunities to tie shoelaces for younger campers. Self-esteem is fostered through a positive environment with a philosophy of inclusion and acceptance that is role modeled by staff and the leadership camper group. A program called Challenge Day is also offered, in which a full day of activities is provided for campers to self-select participating in challenges such as swimming across the lake, climbing "cardiac hill," mastering a high ropes course, or other challenges campers have created for themselves such as cooking a meal for others or speaking in front of a group.

Following the study's approval by Indiana University's Internal Review Board, Little Red Door campers and their families were sent consent forms

and an overview of the research project prior to arrival at camp to alert them to the opportunity to participate. At check in, the camper and their parent or guardian met with researchers to review the study, ask questions, and had an opportunity to decide if they would like to participate. Campers agreeing to participate were then given a 12-item psychometric assessment later that evening (pre-test) and at the end of the camp session (post-test). The instrument measured independence, social skills, and self-esteem (see Table 1). The questions were derived from the Rosenberg Self-Esteem Scale (Rosenberg, 1965) and a scale developed by Gillard, Watts, and Witt (2007) for use in the camp setting. Research assistants and cabin counselors were available to support individual campers as needed.

The assessment contained 12 prompts that related to the three constructs being studied. Independence was calculated based on the sum of questions 1-4, where question 2 was reverse coded. Social skill was calculated based on the sum of questions 5-8, where questions 6 and 8 were reverse coded. Self-esteem was calculated based on the sum of questions 9-12, where questions 9 and 12 were reverse coded. In all cases, scores were adjusted to account for missing responses.

The research team had two primary objectives in considering data analyses. The first objective was to confirm the abridged instrument could be used in a pretest/posttest manner to assess participant's self-esteem, independence, and social skills. A Cronbach's Alpha for each of the three dependent variables was used to confirm the instru-

Table 1

Bradford Woods Summer Camp Pre and Post Questionnaire

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1) I don't need adults to help me do most things.	1	2	3	4	5
2) I cannot do things on my own.	1	2	3	4	5
3) I can solve problems on my own without help from my friends.	1	2	3	4	5
4) I can make decisions by myself.	1	2	3	4	5
5) I am great at making friends.	1	2	3	4	5
6) Most of the time I feel lonely.	1	2	3	4	5
7) I am good at talking to friends about things that are important to me.	1	2	3	4	5
8) I feel excluded from things that other kids do.	1	2	3	4	5
9) At times, I think I am no good at all.	1	2	3	4	5
10) I feel that I have a number of good qualities.	1	2	3	4	5
11) I am able to do things as well as most other people.	1	2	3	4	5
12) I certainly feel use less at times.	1	2	3	4	5

ment had the appropriate reliability levels to be useful. The second objective sought to assess changes in self-esteem, independence, and social skills in the camp's participants. A one-way analysis of variance (ANOVA) was used to ascertain comparison results between the pretest and posttest.

The qualitative assessment of this study used a phenomenological approach to investigate participants' recollections of the camp experience. Phenomenology seeks clarification and understanding of people's perceptions and experiences, especially the meanings they give to events, concepts, and issues (Mabry, 2000). This process examines the experience of each participant and recognizes each experience has a relationship with the phenomenon (in this case, the camp experience). There are generally three research processes that compose the phenomenological method: (a) investigation of the phenomenon (in this case, participant recall of the camp program), (b) identification of general themes/essences of the phenomenon, and (c) delineating essential relationships among the themes (Creswell, 2007). The researcher gained responses from the individuals who have experienced the phenomenon through in-depth interviews. The responses from the participants were then coded into statements or units. The units were then transformed into clusters of meanings tied together to make a general description of the experience.

Three months following the camp experience, eight campers ($n = 8$) were selected through a convenience sample and contacted by phone. Initial discussion with each participant included

an explanation for the researcher contacting the camper and then scheduling an interview one week later. This served as a way for the subjects to be prepared to participate in the interview which would include attempted recall of the program. The interview process was initiated with general open-ended questions that did not cue the participant or influence their responses. Subsequent statements or questions represented attempts to obtain clarification or elaboration regarding the participants' experience. Interviews were participant-centered in the sense that participants controlled the direction of the interview, including the subject matter and the range of topics discussed. The interviewers' responses were limited to minimal encouragement, summaries of content, and clarifications. The length of the interviews varied from 20 to 30 minutes. Interviews were discontinued once saturation had been met and no new materials or themes were forthcoming from the participants (Farmer & Knapp, 2008).

The responses were transcribed verbatim for each subject and a phenomenological analysis was conducted (Creswell, 2007). This was accomplished through three steps. First, raw interview data were analyzed through identifying and coding categories of data. Second, emergent topic areas were identified from the clustering of similar coded memories through a constant comparison approach. Finally, these topic areas were reviewed by the author and a research assistant by analyzing the identified categories and their properties and checking them against the original interview transcripts to confirm their interpretations.

Findings

Quantitative Findings

A quasiexperimental design was used for the quantitative portion of this study. In total, 29 campers completed the pretest and the posttest. The Cronbach's Alpha score garnered from the analysis of the pretest results indicate the battery had sufficient reliability estimates given the small number of prompts allocated to each of the three dependent variables and its use in exploratory analysis (Field, 2006). The Cronbach's Alpha score for the four independence prompts was .720, followed by four self-esteem prompts having a score of .642, and the four social skills prompts at .566. The mean differences for each dependent variable were as follows from pre to post: independence (+.57), social skills (+.76), and self-esteem (+.96). The One-way ANOVA was tested at .05 and detected a significant difference in the pretest/posttest scores for the self-esteem variable at the .045 level, with no significance found for the social skills or independence variables.

Qualitative Findings

The three-month phone follow-up interviews ($n = 8$) resulted in various camper responses that were categorized into four major themes. These include having a positive recollection of their camp experience, memories of specific activities, a sense of normalcy, and a strong response to camp being a supportive community. All interviewees offered positive memories of their time at the camp. As summed up by one participant, "I told my mom I wanted to live at camp, but she said I can't." When asked why, the same participant

replied, "Because it's fun and there are cool people, and I get to rock climb." The latter made up a second theme that was often associated with the positive recollection of camp. In particular, core activities offered during the week-long camp were recalled with a sense of joy and nostalgia.

The positive affect toward the camp and the activities the campers experienced were couched in the most prolific recollections of the participants—social support. A strong community presence was communicated through the ability to relate to others in the camp and being surrounded by an empathetic environment. Several campers explained the reason they enjoyed the camp and the activities so much was because of their peers' support and understanding. As this camper described it,

Well, everyone is nice, and no one cares that I have cancer and have no hair; lots of kids have no hair. And, like no one asks about my scars. Plus, there are so many fun activities. And I get to make lots of new friends who understand that having cancer doesn't make you weird.

The camper went on to put the experience into perspective:

I'm just a regular kid. Most of the time, people don't treat me like that but at camp I'm just normal. I guess, cause like, I'm not broken you know. I mean, sure, I had ALL [Acute Lymphoblastic Leukemia], what's the big deal? I just want to forget about it and be normal. But when I get treated like I'm broken, it's hard to forget about my cancer. I just want to be normal, and at

camp I can be. I guess that's really why I love camp."

Another camper offered her view of the experiences that encapsulates all of the primary themes derived from the qualitative data, saying,

We all know what it's like to fight for our lives. And we've done so much together from the time we were little kids. This week has been the best week of my life for as long as I can remember. There are things like climbing the wall or caving or horseback riding that you do here that you just don't get to do anywhere else...we're a family.

This recollection offers the depth of community support that is experienced at the oncology camp. It is a bond like few others except one that is referred to by this camper:

I know it's weird to think but cancer changes everything...unless you have experienced it closely you cannot really get it...being around others who talk about it openly and hearing stories you can relate to...it creates a bond. My mom and dad always call camp friends our war buddies. I guess in a weird way it's true.

This statement encapsulates the notion that the oncology camp produces an ultimate example of social comparison. Having cancer offers some of the strongest and most lasting memories and relationships due to the intensity and literally deadly nature of their shared experiences.

Discussion on Findings

Qualitative data indicated a presence of the camp war buddy philosophy in that campers found value in being around others who understood what it is like to live with a chronic illness. The qualitative findings related to the theme of a *supportive community* are consistent with Dawson and Lid-dicoat's (2010) findings on the therapeutic value of community for adult campers with cerebral palsy as well as a recent study by Goodwin et al. (2011) indicating the value the camp community has on youth with visual impairments. The theme of campers having *a sense of normalcy* supports the study by Meltzer and Rourke (2005) on social comparison in which they found that campers with cancer experience increased feelings of peer acceptance, feel happier about themselves, and feel happier about their appearance when comparing themselves to others who are similar in the camp setting versus comparing themselves to their peers outside of camp.

The quantitative findings derived from the pretest and posttest questionnaire show a uniform positive movement for independence, social skills, and self-esteem, with a significant difference found for self-esteem. Positive results for self-esteem mirror findings from Devine and Dawson (2010) on self-esteem in a medically specific camp for youth with cranial facial difference as well as Taylor's (1983) theory of adaptive cognitive coping specific to a client's effort to restore self-esteem through self-evaluation.

Social comparison theory suggests that humans have an innate drive to evaluate personal emotions and abili-

ties. One strategy for achieving comparison is to equate one's personal circumstances to those of others as a way to understand and cope with difficult life circumstances. The oncology camp used as the scenario for this investigation seemed to achieve a comparison that gave participants a strong feeling of social acceptance and an increased self-esteem. The findings of this study paired with work by Meltzer & Rourke (2005) provides support for future studies to further investigate the idea that youth experiencing cancer can benefit from attending medically specific camps.

Limitations

Paired identity testing was lost, resulting in not being able to compare the pretest and posttest scores individually. Future research should use paired identity testing to analyze differences in individual camper's ethnicity, age, gender, rural vs. urban residency, years attending camp, and diagnosis. The sample size is also low, thus limiting statistical power. In relation to sample size are the two low scores for self-esteem and social skill reliability; however, as suggested by Field (2006) and Hair, Anderson, Tatham, & Black (1998), these scores suffice for an exploratory study with a sample size consistent with the current study and a limited battery of prompts. Increasing the sample size in future studies will assist in strengthening the reliability scores as well as increasing the number of prompts used to assess and evaluate the dependent variables. Future studies should aim to explore camps for youth with disabilities and or chronic illness on a large scale and explore social comparison across diagnosis.

Conclusions and Future Implications

There are countless support groups for adults struggling with cancer, drug and alcohol addiction, and grief. However, there are relatively few support groups for youth who have disabilities or chronic illness. The authors believe the language of children is play, and the camp setting provides a unique, inclusive, and nonthreatening venue to discuss life struggles. For many, the camp setting may be the only true normalizing community resource for these youth to take refuge in while they work through their struggles.

Medically specific camps should be given more consideration as a recreation therapy modality. The role of camps for social support is rarely discussed in the recreation therapy literature. Austin (2009) highlights therapeutic community as a recreation therapy modality for use by a CTRS, but there is little discourse on therapeutic camps being a valid intervention. Future discussion should fully illustrate the use of this therapeutic experience in practice. Examples of this could include the APIE process being incorporated into the medically specific camp industry along with the use of theory as the foundation for practice.

A large-scale study is needed to answer many outstanding questions in the medically specific camp industry such as the specific camp interventions that cause positive change and the carry over impact post camp. Additionally, an empirically based camp model is also needed to direct best practice and ultimately impact youth across the country. Social Comparison

Theory should continue to be explored as a foundation for this model and as a basis for a future national study.

Indeed, the medically specific camp environment appears to be a very special place for youth with disabilities and chronic illness to take refuge and grow. Camp is one of the few places

youth can spend a substantial amount of time discussing the impact of their illness with other youth who are going through similar trials. Current research results are promising and social comparison theory appears to be a solid lens to frame medically specific camp experiences for youth with cancer.

References

- American Camp Association (2005). *Directions: Youth development outcomes of the camp experience*. Martinsville, IN: American Camp Association.
- Asher, S. R., Hymel, S., & Renshaw, P. D. (1984). Loneliness in children. *Child Development, 55*(4), 1456–1464.
- Aspinwall, L. G. (1998) Social comparison. In E. A. Blechman & K. D. Brownell (Eds). *Behavioral medicine and women: A comprehensive handbook* (pp 176-182). NY: Guilford.
- Austin, D. (2009). *Therapeutic recreation: Processes and techniques* (6th ed.). Urbana, IL: Sagamore.
- Austin, J. K., & Huberty, T. J. (1993). Development of the child attitude toward illness scale. *Journal of Pediatric Psychology, 18*, 467-480.
- Brannan, S. (1997). The national camp evaluation project. *Camping Magazine, 70*(1), 28.
- Briery, B. G., & Rabian, B. (1999). Psychosocial changes associated with participation in a pediatric summer camp. *Journal of Pediatric Psychology, 24*(2), 183-190.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five traditions* (2nd ed.). Thousand Oaks, CA: Sage.
- Creswell, J. W., & Clark, V. L. P. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.
- Cushner-Weinstein, S., Berl, M., Salpekar, J. A., Johnson, J. L., Pearl, P. L., Conry, J. A., Kolodgie, M., Scully, A., Gaillard, W. D., & Weinstein S. L. (2006). The benefits of camp designed for children with epilepsy: Evaluating adaptive behaviors over 3 years. *Epilepsy Behavior, 10*(1), 170-178.
- Dattilo, J. (1999). *Leisure education program planning*. State College, PA: Venture.
- Dawson, S., & Liddicoat, K. (2009). "Camp gives me hope": Exploring the therapeutic use of community for adults with cerebral palsy. *Therapeutic Recreation Journal, 43*(4), 9-24.
- Devine, M. A., & Dawson, S. D. (2010). The effect of a residential camp experience on self-esteem and social acceptance of youth with craniofacial differences. *Therapeutic Recreation Journal, 44*(2), 105-120.
- Farmer, J., & Knapp, D. (2008). Interpretation programs at a historic preservation site: A mixed methods study of long-term impact. *Journal of Mixed Methods Research, 2*(4), 340-361.

- Field, A. (2005). *Discovering statistics using SPSS* (2nd ed.). Thousand Oaks, California: Sage.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117-140.
- Gibbons, F. X., & Bunk, B. M. (1999). Individual differences in social comparison: Development of a scale of social comparison orientation. *Journal of Personality and Social Psychology*, 1,129-142.
- Gillard, A., Watts, C., & Witt, P. (2007). The effect of perceptions of support for autonomy, relatedness, and competence on interest in camp for adolescent girls In: LeBlanc, Cherie; Vogt, Christine, comps. *Proceedings of the 2007 Northeastern Recreation Research Symposium*; 2007 April 15-17; Bolton Landing, NY.Gen.Tech.Rep. NRS-P-23.
- Goodwin, L. D., Lieberman, L. J., Johnston, K., & Leo, J. (2011). Connecting through summer camp: Youth with visual impairments find a sense of community. *Adapted Physical Activity Quarterly*, 28(1), 40-55.
- Goethals, G. R., & Darley, J. M. (1977). Social comparison theory: An attributional approach. In J. M. Suls & R. L. Miller (Eds.) *Social comparison process: Theoretical and empirical perspectives* (pp. 259-278). Washington, D.C.: Hemisphere.
- Greenlee, R. T., Murray, T., Bolden, S., & Windgo, P. A. (2000). Cancer statistics, 2000. *CA-A Cancer Journal for Clinicians*, 50(1), 7-33.
- Hair, J. F., Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). Upper Saddle River, NJ. Prentice Hall.
- Harter, S. (1988). *Manual for the self-perception profile for adolescents*. Unpublished manual. Denver, CO: University of Denver.
- Henderson, K. A., Bialeschki, M. D., & James, P. A. (2007). Overview of camp research. *Child and Adolescent Psychiatric Clinics of North America*, 16, 755-767.
- Kyritsi H., Matziou V., Papadatou D., Evagellou E., Koutelekos G., & Polikandrioti M. (2007) Self-concept of children and adolescents with cancer. *Health Science Journal*, 1(3).
- Langeveld, N. E., Stam, H., Grootenhuis, M. A., & Last, B. F. (2002). Quality of life in young adult survivors of childhood cancer. *Support Care Cancer*, 10, 579-600.
- Leventhal, H., Hudson, S., & Robitaille, C. (1997). Social comparison and health: A process model. B. P. Buunk & F. X. Gibbons (Eds.), *Health, coping, and well-being: Perspectives from social comparison theory* (pp. 411-432). Mahwah, NJ: Erlbaum.
- Mabry, L. (2000). An emergent glossary of qualitative research terminology. Unpublished course syllabus, Indiana University.
- Maurice-Stam, H., Grootenhuis, M. A., Caron, H. N., & Last, B. F. (2007). Course of life of survivors of childhood cancer is related to quality of life in young adulthood. *Journal of Psychosocial Oncology*, 25(3), 43-58.
- Meltzer, L., & Rourke, M. (2005). Oncology summer camp: Benefits of a social comparison. *Children's Health Care*, 34(4), 305.
- Mosher, R., & Moore, J. (1998). The relationship of self-concept and self-care in children with cancer. *Nursing Science Quarterly*, 11(3), 116-122.

- Preiser, W., & Ostroff, E. (2001). *Universal design handbook*. New York, NY: McGraw-Hill.
- Roberson, S. G. (2010). Camp process or mechanisms that bring about reports of social support. *Therapeutic Recreation Journal*, 54(4), 255-269.
- Rosenberg, M. (1965). *The Rosenberg self-esteem scale*. Princeton, NJ: Princeton University Press.
- Sandlin, D. (2000). Locks of love: *Journal of PeriAnesthesia Nursing*, 15(5), 355-356.
- Spielberger, C. D. (1973). *Manual for the state-trait anxiety inventory for children*. Palo Alto, CA: Consulting Psychologist Press.
- Suls, J., Martin, R., & Leventhal, H. (1997). Social comparison, lay referral, and the decision to seek medical care. In B. P. Buunk, F. X. Gibbons (Eds.) *Health, coping, and well-being: Perspectives from social comparison theory* (pp. 195-226). Mahwah, NJ: Erlbaum.
- Taylor, C. L. C., Kulik, J., Badr, H., Smith, M., Basen-Engquist, K., Penedo, F., & Gritz, E. R. (2007). A social comparison therapy analysis of group composition and efficacy of cancer support group programs. *Social Science and Medicine*, 65, 262-273.
- Taylor, S. E. (1983). Adjustments to threatening events: A theory of cognitive adaptation. *American Psychologist*, 38(11), 1161-1173.
- Theofanidis, D. (2007). Chronic illness in childhood: Psychological adaptation and nursing for the child and family support. *Health Science Journal*, 1(2), 1-9.
- Wood, J. V., (1989). Theory and research concerning social comparisons of personal attributes. *Psychological Bulletin*, 106(2), 231-248.
- Wood, J. V., Taylor, S. E., & Lichtman, R. R. (1985). Social comparison in adjustment to breast cancer. *Journal of Personality and Social Psychology*, 49, 1169-1183.