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The Effects of a Summer Camp Experience on Factors of Resilience in At-Risk Youth

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The Effects of a Summer Camp Experience on Factors of Resilience in At-Risk Youth

Abstract
This pilot study addressed the impact of a summer camp experience on at-risk middle school youth by exploring self-reported growth in skill development and resilience. Campers who attended a five-week summer day camp were compared to a control group who maintained typical activities throughout the summer. Results showed statistically significant differences in the campers' belief of a good future for themselves ($U = 179.40$, $P = 0.05$). Campers reported sustained or positive growth in domains of social skills and positive values from the baseline to a six-month follow up. Three significant themes emerged from individual in-depth interviews including: (a) engagement influences skill competence, (b) the camp environment expands positive choice and availability of positive occupations, and (c) males developed skills and resilience from informal physical activity while no equivalent existed for females. Middle school aged at-risk youth can benefit from occupation-based summer camp programs that promote active engagement in an enriched environment and sustain gains once they return to high-risk environments. This research contributes to a growing understanding of the potential contribution of occupational therapy in the design and delivery of effective summer camp experiences for at-risk youth.

Keywords
summer camp, occupational therapy, middle school

Cover Page Footnote
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In the United States, the adolescent population is growing to over 40.7 million and represents a more racially and ethnically diverse group than the general population (National Adolescent Health Information Center, 2003). Adolescence is a unique period of development during which many changes occur. Youth develop the ability to comprehend abstract content, establish satisfying personal relationships, and acquire a sense of identity and purpose (Brown, 2011). When youth develop resilience, they are better able to progress through essential developmental tasks that lead to success in adulthood (Simpson, 2001).

During adolescence, the prevalence of psychopathology and mental disorders increases dramatically (Silk, Steinberg, & Morris, 2003). A recent study found that 20 percent of youth reported suffering from symptoms of a mental disorder to a degree that it affected their daily functioning (Merikangus, et al., 2010). Mental illness can substantially impact daily life, disrupting one's engagement in meaningful occupations and negatively influencing development. All children, regardless of their physical or emotional health, are likely to struggle with situational stressors (Bazyk, 2011). Occupational therapists build adaptive mechanisms such as character strength, coping strategies, and environmental supports that may buffer youth facing challenging circumstances (Catalano, Hawkins, Berglund, Pollard, & Arthur, 2002).

Adolescents living in disadvantaged environments are at an increased risk for mental health problems and therefore may face compounding adversities (National Center for Children in Poverty, 2009). These children may have limited access to supports outside of the school day (Chung, Coquillette, Dizon, & Kovanda, 1998). Youth, when they are habitually exposed to poverty, family distress, and community violence, have an increased risk for delinquency, child abuse and neglect, and lower educational and occupational expectations (Mason & Chuang, 2001). Urban environments offer few opportunities for leisure occupations (Snyder, Clark,

Masunaka-Noriega, & Young, 1998) and social and emotional learning (Nabors, Proescher, & DeSilva, 2001). Therefore, research aimed at minimizing the effects of harmful environmental conditions by fostering protective factors in at-risk adolescents is critical to their successful development.

Literature Review

Prevention-oriented Occupational Therapy and At-risk Youth

Little published research addresses a role for prevention-oriented, occupation-based approaches to programming with at-risk youth (Bazyk, 2011a). Milliken, Goodman, Bazyk, and Flinn (2007) surveyed school-based occupational therapists in Ohio using interventions to address grief issues within their student populations. Although therapists acknowledged the presence of grief, not all directly addressed the need for occupation-based approaches. Cahill and Suarez-Balcazar (2009) articulated a role for occupational therapy in the school environment to support healthy nutrition and fitness habits and promote self-efficacy relative to obesity prevention. Copley, Turpin, Gordon, and McLaren (2011) used an action research approach to develop an occupational therapy service for refugee adolescents in a school in Australia. Each of these studies highlighted the overarching need to address the mental health concerns of students in order to facilitate successful role performance.

Bazyk (2011b) articulated a framework for occupational therapy mental health promotion based on positive psychology, positive youth development, and mental health promotion concepts incorporated into an ecological model. The model emphasized a Person-Environment-Occupation (PEO) orientation that included person level skill development in psychosocial resilience, an enriched environment that supported positive growth, and engagement in a variety of experiences that were meaningful and built skill and role

development (p. 23). Molineux and Whiteford (1999) described occupational enrichment as the purposeful design of environments and engagement strategies to support healthy participation and counteract the effects of occupational deprivation. In their study of occupation in prison environments, they proposed that opportunities to engage in meaningful occupations that supported role development increased the likelihood that inmates would have a successful community transition. Jackson and Arbesman (2005) identified occupational competence as a key intervention focus in occupational therapy for youth with psychosocial needs. They specifically articulated a role for occupational therapy in youth mental health promotion including violence prevention, conflict resolution, and social competence programming. Law and colleagues (1996) described a transactive and bi-directional relationship between the three constructs employed in the PEO model, and emphasized the continual interaction and dynamic effects on and by each in carrying out daily life activities. While the literature clearly supports the value of occupation-based programming and active use of the environment to support prevention and health promotion initiatives, few studies address the effects of such an intervention with at-risk youth.

Also unexplored is summer camp using an occupation-based approach and positive youth development philosophy. Several articles described a role for occupational therapy in camps designed for youth with specific conditions or needs, such as visual impairments (Loukas & Cote, 2005), sensory integration (Candler, 2003), and autism spectrum (Banet et al., 2008), but none for a socio-economically at-risk population within the general population of middle school youth.

Positive Youth Development and Resilience

The framework for health promotion and prevention has shifted from a problem-based to a strengths-based model. Positive Youth Development (PYD) is founded on the belief that successful development does not occur from the absence of risky behavior, but from the presence of positive attributes that enable youth to reach their full potential (Lerner & Benson, 2003). PYD is an applicable model in youth programs to improve resilience in at-risk youth. Resilience has been defined as a "process through which positive outcomes are achieved in the context of adversity" (Masten, 2001, p. 228). Resilience assets such as persistence, positive values and identity, and social skills are believed to maximize one's ability not only to survive but to flourish in dangerous, stressful, or vulnerable environments (Damon, 2004). Adolescents may struggle to develop resilience independently in challenging environments. However, PYD youth programs can provide a safe environment, healthy activities, positive relationships, and an opportunity to build skills that promote resilience (Catalano, Berglund, Ryan, Lonczak & Hawkins, 1998).

Summer Camp

Little research exists regarding the effects of camp on at-risk middle school youth. Seal and Seal (2011) studied the effects of a nutrition- and health-oriented camp on at-risk youth. They found a significant increase in awareness of healthy eating behaviors and self-perceived competence. Readdick and Schaller (2005) found that 63 economically disadvantaged youth from urban neighborhoods scored significantly higher on dimensions of self-concept after participating in a 12-day camp. Their study specifically attributed the social and environmental factors of the camp, such as positive relationships with counselors, to self-esteem growth (Readdick & Schaller, 2005). Allen, Akinyanju, Milliken, Lorek, & Walker (2011) found that

urban at-risk students entering middle school significantly improved their responses to situations requiring sound character after attending a two-week summer character education program. Allen, Cox, and Cooper (2006) studied youth resilience following participation of economically at-risk youth in a summer day camp focusing on outdoor adventure and community volunteering. Among the findings were the value of regular attendance, a stable staff, and a program model that encouraged a high level of interaction between the staff and youth. Each of these studies contributed to understanding the effects of camp on at-risk youth, but they lacked inclusion of an occupational therapy perspective and a camp specific assessment of program outcomes.

Methods

This pilot study explored the effects of a summer camp offered by a federally-funded youth empowerment program on at-risk urban youth by examining self-reported growth in skill development and resilience from a PYD and occupation-based perspective. Prior to engaging in this research, the study was approved by the Towson University Institutional Review Board.

Study Design

A pragmatic worldview guided this study, as it was problem-oriented and focused on the real world of the summer experiences of socio-economically disadvantaged middle school youth (Creswell & Plano Clark, 2007). We used an explanatory sequential design in this mixed methods study (Creswell & Plano Clark, 2007). This methodology proceeds in two distinct phases, in which the quantitative data is most prominent in addressing the research questions. Using an experimental design to collect quantitative data assists in examining the impact of an intervention on outcomes (Creswell & Plano Clark, 2007). The second phase involves the collection of qualitative data to assist in explaining the quantitative results. It is also acceptable in this design to use the same participants in both phases as the second informs the first. Follow-

up using qualitative data from semi-structured interviews provides a more holistic understanding of the lived experience as described by the participants themselves (Creswell & Plano Clark, 2007). Overall, a mixed methods approach utilizing practices from both quantitative and qualitative research enables integration of the data to provide a more complete understanding of the findings. A mixed methods approach is effective when one of the methods, specifically the quantitative portion, cannot fully address the research questions.

The first phase of the study addressed the research question: What is the effect of participation in a youth empowerment summer camp on skill development and resilience? A quantitative approach was used, specifically the Camper Growth Index (CGI), a self-report survey to assess factors of resilience on at-risk youth (Henderson, Thurber, Whitaker, Bialeschki, & Scanlin, 2006). Researchers collected data one month prior to camp, one month after camp, and six months post-camp, for both campers and controls. Data was collected on controls inside a classroom experience and on the campers in the after-school program in the middle school.

The second phase of the study addressed the research question: What aspects of the environment and occupations of summer experiences contributed to skill development and resilience? This phase followed the collective case study qualitative tradition in that multiple cases were used to describe the area of research interest (Creswell, 2012). We used the same procedures to conduct each interview. Triangulation was employed to strengthen study validity by using an additional data source, method, and researcher involvement (Creswell, 2012). Other measures to improve validity included examining researcher bias through weekly debriefing meetings, as the researchers also staffed the camp, conducting member checking following the first interview to assure interpretation of findings, and completing two interviews per participant to encourage expanded responses to obtain rich, detailed descriptions of their summer

experiences. Multiple researchers independently and then jointly reviewing transcripts to generate findings contributed to reliability (Creswell, 2012).

Data collection included individual in-depth interviews with three campers and three controls at six months post-camp. Interview questions relied upon the results of the quantitative data to elicit a broader understanding of the effects of camp across the four domains of positive identity, social skills, physical and thinking skills, and positive values. The questions utilized occupation-based language to identify aspects of the environment and occupations that were instrumental in summer skill development (Law et al., 1996). Interviewers asked participants about their summer experiences and then probed about the characteristics of those experiences relative to skill development, novel environments and activities, and enjoyment.

Recruitment and Participant Description

A convenience sample of males and females between the ages of ten and thirteen (at baseline) was recruited from middle schools in a socio-economically disadvantaged urban neighborhood in the Mid-Atlantic region of the U.S. The students were enrolled in one of four neighborhood Title I schools, only one of which was meeting annual academic progress.

The camper (experimental) group contained youth who were attending a federally-funded youth empowerment after-school program focused on increasing resilience through life skills and obesity prevention. Students were familiar to researchers, who provided life-skills programming using the principles of PYD and occupational therapy in the after-school program. Inclusion criteria for this group required student enrollment in the grant-funded after-school program, a willingness to attend and participate in a summer camp, and appropriate consent to participate from a parent or guardian. Most of the students came from a school in corrective action due to poor academic progress, resulting in extremely high faculty turnover. According to the school's

staff, parents of children in schools that do not make academic progress receive a letter entitling them to transfer their child to another school. The children at this school had the opportunity to transfer but did not.

Controls were recruited from the same neighborhood, but from a different Title 1 school, the only school in the neighborhood to meet annual academic progress. Although similar demographically, this school had stable, dynamic leadership and faculty. This group was chosen because access was facilitated by outreach initiatives between the school and the university. The control participants did not have a relationship with researchers, and they participated in data collection during a physical education class. Inclusion criteria for the control group required student enrollment in a health/physical education class, a willingness to attend data collection periods, and appropriate consent to participate from a parent or guardian.

Intervention

The experimental group attended a five-week summer day camp on the campus of a local university and the control group maintained typical activities throughout summer with no intervention. The federally-funded youth empowerment summer camp was an extension of the after-school program, adhering to the principles of positive youth development and occupation-based programming, emphasizing an enriched environment and involving the campers in exercising choice in activity characteristics, attitude, and behavior. The camp goals matched the grant by addressing nutrition and fitness as well as psychosocial resilience. Physical activities included basketball, a rock-climbing wall, and swimming. Occupation-based groups addressed psychosocial skills through developing a personal webpage, exploring career interests, engaging in self-regulating craft activities, such as ceramics and jewelry making, preparing healthy snacks, and completing a five-session peer pressure module. Each session incorporated the principles of

PYD and occupational engagement with most modules incorporating pre- and post-knowledge and skills measures. The researchers decided to write session plans specific to the needs of the youth attending the camp, as prepared curricula were not adequate as developed (Jackson & Weissberg, 1991; Weissberg & Greenberg, 1998).

Measurements and Data Collection

Camper Growth Index. The Camper Growth Index (CGI), developed by the American Camp Association, is a valid and reliable self-report survey that provides a unique perspective of camp (Henderson, Thurber, Whitaker, Bialeschki, & Scanlin, 2006). The instrument measures four domains and ten constructs including: (1) positive identity (positive identity and independence), (2) social skills (leadership, friendship skills, insecurity, and peer relationships), (3) physical and thinking skills (adventure/exploration and environmental awareness), and (4) positive values (positive values and decision making). Convergent validity was determined by validating relevant domains with existing psychological scales including the Social Anxiety Scale for Children ($r = 0.41$-0.53), Personal Values Scale ($r = 0.36$), and Piers-Harris Children's Self-Concept Scale ($r = 0.26$-0.51). While correlations were low, they were statistically significant and therefore demonstrate construct validity (Henderson et al., 2006).

One study that used the Camper Growth Index was a systematic longitudinal study of 2,300 families with children who attended camp for a minimum of one week (Thurber, Scanlin, Scheuler, & Henderson, 2006). Campers demonstrated statistically significant change across several constructs as a result of attending camp. It is noteworthy that this study did not include a control or comparison group, and only identified change in the experimental group (Henderson et al., 2006). Adventure/exploration, independence, making friends, positive identity, and peer relationships were among those constructs with the highest effect sizes. These constructs

moderately correlated to the campers' responses, which indicated their improvements were in self-esteem, independence, leadership, friendship skills, and adventure/exploration (American Camp Association, 2005). While this research study contributed to the literature on the outcomes of camp using a valid and reliable measure, it did not represent campers from low-income urban environments. Research on at-risk low-income youth regarding their experiences in summer camp using the Camper Growth Index will add to the literature on the effects of camp on those youth. Furthermore, research addressing at-risk youth is critical as this population may benefit more from camp as a means to ameliorate the negative effects of risky environments.

The CGI, a valid and reliable measure of self-reported skill development, was administered at three points throughout the study including pre (defined as one month prior to camp), post (defined as one month after camp), and follow up (defined as six months after the cessation of camp). The CGI obtained the perspective of youth based on a four-point Likert scale ("1" meaning disagree a lot to "4" meaning agree a lot). Participants rated themselves on 48 items that fit into the four aforementioned domains.

In-depth interviews. The second phase of this pilot study involved individual in-depth interviews with two males and one female from each group six months post camp. The campers were selected based on camp attendance, and the controls were chosen by the physical education teacher based on their verbal skills and positive attitude. Interviews were conducted in a quiet area in the school building, were audio taped, and transcribed verbatim. All participants required cues to recall summer experiences since the interviews occurred after six months, following final quantitative data collection. Follow-up interviews were conducted with each participant after initial independent analysis of the transcripts by two researchers as a form of member checking

and to encourage deeper reflection and expansion of responses. Each interview lasted between 15-30 minutes.

The researchers formulated questions after reviewing and analyzing responses to the CGI. Phrasing of the questions aimed to elicit responses about their experiences of the environment and related engagement in daily summer activities, as the purpose was to explicate and aid understanding of quantitative findings from an occupational perspective. Sample questions included: Describe a typical day and routine during your summer break. Questions formulated to expand on CGI findings included: Were you a leader during any activities? Did you explore new environments over your summer break? Do you feel like you were able to make decisions about any activities last summer? Did any of your summer activities change the way you see yourself? In each of these instances, participants were also asked to describe an example.

Data analysis

For each group, self-reported values of the four domains identified within the CGI were calculated as means. In addition, mean change scores by group from pretest to posttest and posttest to follow up were calculated for each separate statement on the CGI. A Mann-Whitney U test, appropriate for ordinal data, was performed to compare differences between the camper and control groups' self-reported change at a significance level of $p \leq 0.05$.

Each interview was transcribed verbatim and read independently by two researchers, who initially coded by highlighting important quotes, phrases, and sections that assisted in characterizing the case findings according to interview questions. The researchers then shared findings and completed follow-up interviews with each participant to clarify initial responses and member check the representativeness of their lived experience. This information was again reviewed individually and then jointly and an organizing framework was developed according to

the PEO framework (Law et al., 1996). Categories were skill development, environment, and engagement in occupation. Quotes and phrases were jointly reviewed and assigned to the three categories. Joint review until consensus then generated three overarching themes from the data.

Initially, the cases were expected to be campers and controls. As data were examined and reexamined to review patterns and differences across and within cases, however, the whole group evolved as the case, as the findings were relatively similar between the groups and described the summer experiences of this group of economically at-risk middle school youth.

Results

Participant Characteristics

Data reflect baseline demographics of the participants. For demographic data presentation only, we included participants who were involved in at least one of the three designated data collection points. This was necessary to describe the total population of participants before attrition. The fact that the control group data was collected in a classroom is reflected in the larger number for this group (50) versus for the campers (23), who attended the after-school program on their own volition and often had family obligations or disciplinary requirements after school that affected attendance. Since the control group pre-camp data was collected before school let out, those students identified as 5th graders, where the pre-camp data on campers was collected after school let out and they were considered 6th graders. An examination of demographic characteristics reveals that the groups are similar in age, race, and gender. Only those who had three CGI data sets were included in that analysis.

Twenty-three participants in the experimental group completed the five-week youth empowerment summer camp. The campers were both male (43%) and female (57%) with a mean age of 11. These rising 6th and 7th graders were predominantly African American (91%).

Of the participants in the camper group, 77% reported living with five or more people in their household. Fifty participants in the control group reported similar demographics for age, gender, grade, and race. Of the participants in the control group, 51% reported living with five or more people in their household.

Table 1

Demographic Data of Campers (N = 23) and Control Group (N = 50)

	Campers, *n* (%)	Control group, *n* (%)
Total	23 (100.0)	50 (100.0)
Age		
10	4 (18.2)	8 (17.0)
11	9 (40.9)	22 (46.8)
12	7 (31.8)	15 (31.9)
13	2 (9.1)	2 (4.3)
Gender		
Female	13 (57.0)	23 (46.0)
Male	10 (43.0)	27 (54.0)
Grade		
5th	0	14 (28.0)
6th	15 (65.2)	30 (60.0)
7th	8 (34.8)	6 (12.0)
Race		
African American	21 (91)	47 (94)
Other	2 (9)	3 (6)
Number of people in household		
2-4	5 (22.7)	23 (48.9)
5-8	15 (68.2)	22 (46.8)
9+	2 (9.1)	2 (4.3)

Note. Percentages were rounded so total percentages may not be 100%. For the experimental group, N = 22 for "age," "grade," and "number of people in household." For the control group, N = 47 for "age" and "number of people in household."

Quantitative Findings

Among the challenges to data collection was attrition. Each of the three data sets was examined independently for descriptive statistical analysis. Camper participation ranged from

14-22 youth and control participation from 25-40 youth across the three quantitative data collection phases. Only those participants who completed all three data collection phases were considered in the Mann-Whitney analysis, which included 25 controls and 14 campers.

A comparison of camper and control group mean pre, post, and follow-up scores reveals that control means were higher at each data collection phase. The researchers discussed this finding and surmised that collecting data during class time appeared to focus youth on the task versus having individual youth complete the same task in the after-school environment. Another possibility was that the school environment described earlier might positively affect controls and/or negatively affect campers. There also may be a difference in the groups beyond the demographic data that is unknown. The quantitative results revealed participant self-reported skill development and factors associated with resilience from the CGI's four-point scale ("1" meaning disagree a lot to "4" meaning agree a lot) and are discussed by domain.

Table 2

Camper and Control Group's Mean Pretest, Posttest, and Follow Up CGI Scores by Domain

CGI Domains	Mean score pretest	Mean score posttest	Mean score follow up
Campers			
Positive identity	3.10	3.16	3.06
Social skills	2.97	3.10	2.99
Physical and thinking skills	3.28	3.42	3.13
Positive values	3.11	3.27	3.11
Control group			
Positive identity	3.39	3.44	3.31
Social skills	3.25	3.32	3.09
Physical and thinking skills	3.46	3.53	3.40
Positive values	3.26	3.45	3.24

Table 3

Mean Change on CGI in Campers and Controls Pretest to Posttest and Posttest to Follow Up

	Mean change		U	Significance
	Camper	Control		
Pretest summer to posttest summer				
Positive identity				
Positive identity				
I have a good life ahead of me.	.48	.04	179.50	.05*
I feel confidence in myself.	-.10	.17	201.50	.06
Independence				
I need my parents to help me do things.	-.24	.33	165.50	.03*
I do just fine with my parents around.	.19	-.33	190.50	.07
Social skills				
Insecurity				
I worry about making new friends.	.29	-.28	190.50	.05*
It's hard to make new friends.	.81	.33	189.50	.06
Physical and thinking skills				
Environment				
We should take care of our planet.	.57	.21	190.50	.05*
Posttest to follow up				
Positive identity				
Positive identity				
I'm not worth much.	-.79	.28	81.00	.03*
Social skills				
Leadership				
I get other kids together for games.	.36	-.24	85.50	.07
Making friends				
I like to talk to kids I don't know yet.	-.50	.22	69.00	.01*
I like to play with new kids.	.21	-.29	85.50	.07
Insecurity				
It's hard to keep new friends.	.08	.65	73.00	.05*
Physical and thinking skills				
Environment				
Wild animals should be protected.	-.71	.06	61.50	.01*

Note. Statistically significant $p < .05$

The domain of positive identity is composed of two constructs including positive identity and independence. Both groups improved their self-reported mean positive identity from pretest to one-month post summer. However, both groups self-reported decreased positive identity at follow up with respect to the baseline. From pretest to post summer, campers (M = 0.48) had statistically significant positive growth in their belief that they "have a good life ahead" of them as compared to the control group (M = 0.04), (U = 179.40, P = 0.05). Campers (M = 0.-24) reported an increased need for parent support compared to controls (M = .33), (U = 165.5), P = 0.03). This result indicates a strength for this population as they were encouraged to seek support when troubled.

The domain of social skills is composed of four constructs including leadership, making friends, insecurity, and peer relationships. Both groups improved their self-reported social skills from pretest- to post-summer. However, at the follow up, the children who attended summer camp reported increased social skills with respect to the baseline while the control group reported decreased social skills with respect to the baseline. This suggests that positive growth in social skills was maintained only in children who attended the camp. Children who attended camp (M = 0.29) reported statistically significant increased positive growth (U = 190.50, P = 0.05) to the statement, "I worry about making new friends," meaning they worried less from pretest to post summer as compared to children who did not attend the camp (M = -0.28). Campers reported statistically significant decreased positive growth in the statement, "It's hard to keep new friends" (U = 73.00, P = 0.05) from post summer to follow up. The loss of the safe and enriched environment in which to interact with new friends met at camp could have had a profound impact on the campers' ability to maintain friendships once the school year began.

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The domain of physical and thinking skills is composed of two constructs including adventure/exploration and environmental awareness. Both groups improved their self-reported physical and thinking skills from pretest- to post-summer but scores declined lower than the baseline at the follow up. Both statistically significant areas were related to environmental awareness that was not directly addressed at camp.

The domain of positive values is composed of the construct positive values and decision making. Both groups improved self-reported positive values from pretest- to post-summer. However, at follow up the children who attended camp maintained their self-reported positive values from the baseline while the children who did not attend the camp decreased self-reported positive values from the baseline.

Qualitative Findings

The qualitative results explored aspects of the environment and occupations in the participants' summer experiences that contributed to skill development and resilience. Two males and one female from both the camper and control groups were interviewed. All interviewees were 11 years old and reported a mean of five people living in their households. Each participant completed two individual interviews, the second to clarify responses and encourage reflection and elaboration. Because of the age and developmental stage of the participants, they were asked to think about their experiences more fully and read their responses (Pownall, 2001).

Three significant themes emerged through analysis of the interviews that reflect principles related to occupational engagement and successful participation. The themes included (a) engagement influenced skill competence, (b) the camp environment expanded positive choice

and availability of positive occupations, and (c) males developed skills and resilience from informal neighborhood physical activity while no equivalent existed for females.

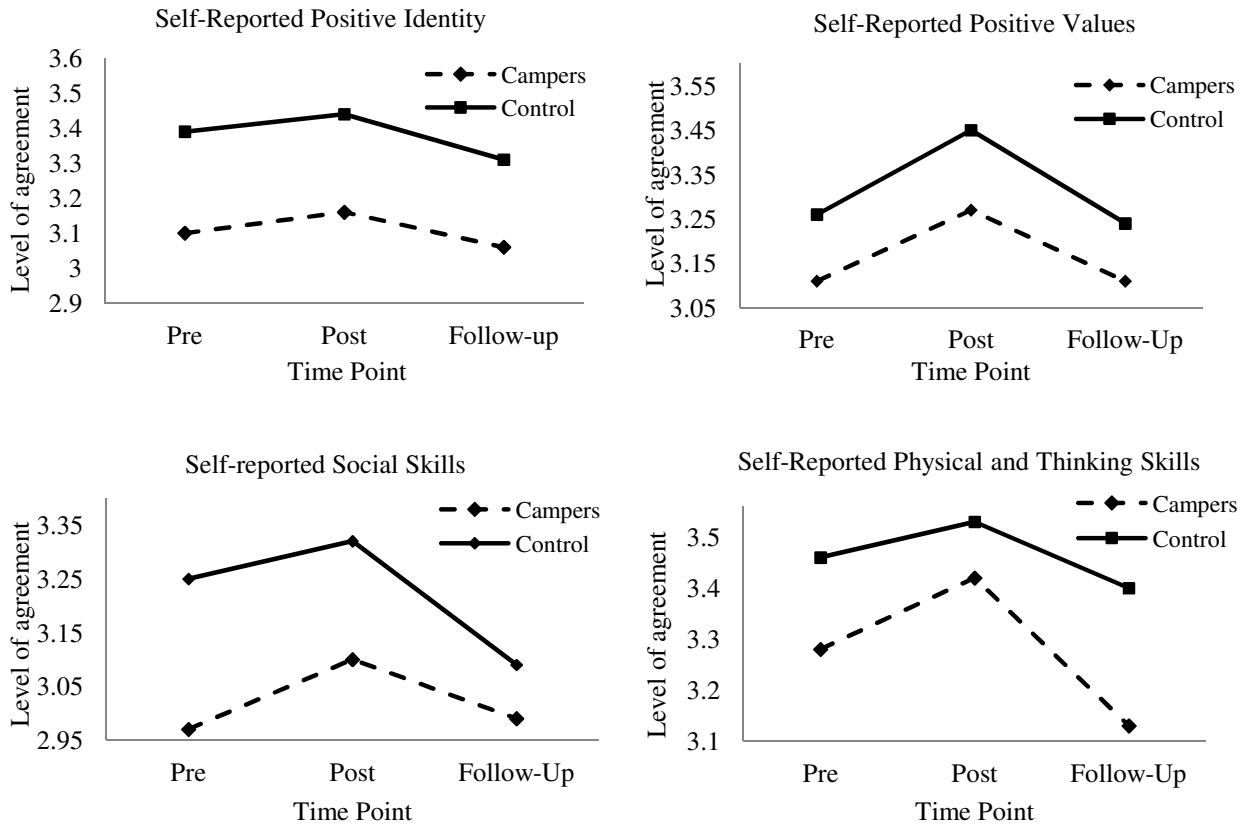

Figure 1. Camper and control self-reported results on four domains of CGI pre (one month pre summer), post (one month post summer), and follow up (six months post summer).

Camp was purposefully structured to support opportunities for campers to practice healthy decision-making skills. This occurred daily through sessions on making ceramics, designing a personal website, exploring a profession and making a presentation about it, and practicing refusal skills during peer pressure modules. One camper stated that it was important to make his own choices because, "they don't come around a lot." Another camper stated that she valued making her own decisions in ceramics and other healthy activities at camp because she got the opportunity to "just be me [since I] can't always do what I want."

Those children who did not attend camp seemed to exercise decision-making skills predominantly to avoid risky situations. One non-camper stated that it was important for her to make her own decisions "cause if other people are doing something wrong I can decide not to do it," while another reflected on making "decisions to say no" to peer pressure. This group, interpreted decision making as a skill that was present in mostly negative opportunities within their community. Non-campers seemed hindered in skill development due to restricted access to healthy occupations within a framework that supports decision making and experiential learning. The summer camp provided opportunities to foster skill competence in practicing leadership and decision making through engaging in healthy occupations which were minimally available in the non-campers' home and community environment.

Environment expands positive choice and availability of positive occupations. The environment clearly affected choice and availability of daily occupations for all participants. For example, males and females in both groups stated that they were sedentary in their home environments and more active and social within their community environments. In addition, safe environments greatly impacted the choice of occupations in this population. One camper stated that she valued the safe camp environment because, "sometimes my mom don't let me go outside just because of the dangerous neighborhood." Another camper stated that camp provided safety because when she was home, she couldn't go outside: "No! I never go anywhere by myself. That's just one thing my mother don't like and that's one thing I'm not gonna do is go nowhere by myself. Like . . . something's outside your door . . . like . . . especially this world we livin' in out here." She contrasted this to the safety of the suburban campus on which the camp was held: "It (camp) impacted me by just being out here every day . . . not like on the streets." Campers valued the opportunity to spend time in a safe place through the summer and felt safe to take

healthy risks, try new activities, and practice decision making and leadership while engaged in meaningful occupations.

Both campers and non-campers discussed few structured activities and little availability of positive occupations within their community. Males reported that engagement in informal, pick-up basketball games within their community allowed them to be leaders due to physical skill or chance, as the "first to make the ball" or win the "coin toss" becomes the captain. While one non-camper reported that he likes being a leader because he "feel[s] responsible," a lack of structured positive occupations seemed to limit opportunities for skill development. Furthermore, only non-campers who reported leaving their community for vacations discussed engaging in positive occupations such as roller skating, walking, and going to the beach, while those who stayed within the community lacked opportunities for engagement in occupations that provided positive leisure activities and other critical skill development.

All participants identified that they enjoyed exploring new environments, mostly because they provided "adventures." Campers stated that they liked exploring new places and meeting new people. One camper valued the ability to make positive decisions such as choosing craft materials, "because they (positive decisions) don't come around a lot," and values the new and different environment provided by camp because, "I might not get to see it again." Another camper said he enjoyed traveling to camp, "because I wanna know how different places look." A non-camper who was afforded the opportunity to visit a new state over summer vacation said she, "got to go to new places that I never went before . . . I like having adventure." All of the interviewees greatly valued a safe environment that supports experiential learning, as it provides an opportunity to get "more knowledge about the places [they are] at" and the chance not to be "stuck in one place." The environment of camp clearly provided unique and greatly valued

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opportunities. One camper stated that she liked "just do[ing] something for myself" over the summer by going to camp.

Males had informal activity outlets with no equivalent for females. The occupation of physical activity clearly had the largest impact on all of the participants, as they easily recalled physical activities over other activities that the camp and home environments provided. When asked to describe a typical day, one camper stated, "We went swimming, we went to the basketball court … the baseball field, and we did yoga and martial arts." Children in the control group also described their summer occupations of choice as physical in nature, such as swimming, playing basketball, and skating. Participants in both groups identified moments where they attempted to learn a new physical skill even if it was difficult. For example, one camper stated that she learned how to use the equipment in the college campus gym properly and liked, "listening and paying attention and … doing what I was supposed to do." For those in the non-camper group, however, skill development, beyond neighborhood basketball for the males, typically occurred when they were away from the neighborhood, such as visiting relatives or going on a vacation.

For each of the males, time spent outside of the home and school was structured by informal pick-up sports. Specifically, basketball provided a positive social outlet for males to engage with same-age peers both at camp and in their community. Each male identified that they met at the "same time and same place," and were able to practice decision making and leadership skills as well as increased basketball skills because, "the first person to make the ball" became the captain. Males were able to practice leadership while engaging in physical activity by "playing fair" and "call[ing] the defense plays and offense plays." Males also improved skill development through leadership in physical activities because as a captain they were afforded the

opportunity to, "show exactly what my skill [is]." None of the females interviewed identified similar informal community opportunities. Therefore, females from such communities may be at an increased risk in the summer due to decreased opportunities to develop leadership and skill development through informal activities within their community.

Discussion

This study suggested that summer camp experiences employing occupation-based principles were effective in increasing skill development and resilience factors in at-risk youth. In terms of positive identity, youth who attended the summer camp reported significantly greater positive growth in their belief of a good future life for themselves from pre to post summer. According to Mahoney, Larson, Eccles, and Lord (2005), engagement in structured leisure occupations has been found to increase self-esteem. The development of positive identities and feelings of self-worth contribute to character strength which may ultimately buffer children against mental illness (Catalano et al., 2002). Since youth living in poverty may not have social or financial resources to engage in a variety of leisure occupations, summer camps may provide an environment that promotes skills critical for resilience.

Youth engage in the process of self-exploration by trying new activities (Dworkin, Larson, & Hansen, 2003). At-risk youth who attended the summer camp reported skill development in leadership and decision making due to engagement in enriched activities and developmentally appropriate occupations at camp. This supports research by Larson (2000) who proposed that participation in structured activities such as sports, arts, and organized clubs provides a context for personal development of core qualities of PYD. Bazyk and Bazyk (2009) also found that the form and challenge of leisure occupations aided low-income youth both to identify meaning and develop coping skills. Campers described being afforded the opportunity

to practice leadership skills when they felt personal competence in activities provided by the summer camp. Campers were able to make decisions in healthy occupations due to the greatly expanded availability of positive occupations within a safe and structured camp environment. Structured leisure activities, which are often unavailable to low-income, urban youth, have been found to foster interpersonal development by improving cognitive, physical, and emotional skills (Hansen, Larson, & Dworkin, 2003) and are the building blocks of occupation-based interventions.

Children living in poverty often experience occupational deprivation due to factors beyond their control (Wilcock, 2006), which can lead to mental health problems such as depression, anxiety, or substance abuse (Bazyk, 2011a). Restricted access to positive occupational opportunities and the unsafe environment within their community negatively affected the non-campers' skills of resilience such as leadership and decision making. Non-campers who did report skill development cited examples of leadership and decision making as a result of negative circumstances, such as avoiding risky situations and refusing peer pressure. For both of the males, informal pick-up sports within their community provided a small yet important opportunity for healthy social participation as well as skill development in leadership. The females lacked this opportunity, as there were no reports of an equivalent healthy community activity available to them. This supports research by Fuligni and Stevenson (1995), which found that at-risk males spend more time within and outside of their neighborhoods, are involved in a greater number of activities, and are less supervised than females, while females spend more time doing homework and household chores. Since informal activities clearly provided males with opportunities to develop skills within their community, females may be at a greater risk to miss skill development due to occupational deprivation, and therefore may greatly

benefit from a structured summer camp and after-school programming that provides safe, enriched occupations and environments.

Social competence is "the ability to select and pursue desired, attainable goals by achieving control over one's actions and emotions by understanding, connecting with, and influencing other people" (Ewart, Jorgensen, Suchday, Chen, & Matthews, 2002, p. 339). The children who attended the camp were significantly less worried about making new friends pre- to post-summer; however, they worried more about keeping new friends after summer camp. Summer camps afford friendships through their unique supported social environment as they have previously been found to foster inclusivity among people who may not necessarily be friends in school (Smith, Steel, & Gidlow, 2010). The developmentally appropriate activities and supportive environment at an occupation-based summer camp provided a safe place for youth to develop friendships, which they were worried about maintaining after the cessation of summer camp.

While all children reported positive growth over the summer in domains of positive identity, social skills, physical and thinking skills, and positive values, mechanisms to maintain these skills must be developed to assist their ability to flourish in dangerous, stressful, or vulnerable environments (Damon, 2004). Campers reported sustained or increased growth in social skills and positive values, while non-campers reported decreased skills in all four domains from the baseline to the follow up. This summer camp experience provided an opportunity for at-risk youth to engage in experiential learning opportunities that improved skills of resilience. Resilience can be facilitated, as it is not related to demographic variables (Rogers, Chamberlin, Ellison, & Crean, 1997). Therefore, designing learning experiences that promote resilience may serve to mitigate the effects of challenging environmental circumstances.

The greatest limitation of this pilot study was attrition. It was difficult to obtain data at three points in time with this population. In addition, there was no measure of change attributed to maturation. However, by performing in-depth follow-up qualitative interviews with participants, outcomes from campers and non-campers were better understood.

Conclusion

This study contributes to research on the benefits of summer camp relative to skills of resilience, and presents a role for occupational therapy in designing environments and occupations aimed at social, emotional, and mental health promotion in at-risk youth. According to the U.S. Department of Education (2007), at-risk youth can benefit from a variety of PYD characteristics such as safe environments, an encouraged sense of belonging or connectedness, and skill building. This study suggests that at-risk youth can develop skills of positive identity, social skills, physical and thinking skills, and positive values through an occupation-based approach that provides an enriched, structured camp experience designed to increase skills through occupational engagement (Poulsen, Rodger, & Ziviani, 2006). Campers were able to maintain gains in social skills and positive values as compared to children who did not attend the camp. Campers valued the safe, enriched environment that the camp provided, and were able to develop factors of resilience that may enable at-risk youth to thrive in adverse environments.

Additionally, qualitative studies regarding youth's personal, environmental, and occupational engagement can provide additional insight into youth's summer experiences both at camp and in their home communities. This can provide an important perspective for occupational therapists interested in health promotion and community practice. There is great potential for the role of occupational therapy in summer camps for at-risk youth. Those who are disempowered by their environmental circumstances can benefit from summer camp programs

that promote skill development and resilience through engagement in occupations within safe, enriched environments.

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