

# AT-RISK BOYS' SELF-EFFICACY IN A SUMMER SPORTS CAMP

A Dissertation

by

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## ABSTRACT

Research has documented that summer sports camps can provide opportunities for social and physical benefits for at-risk boys who are often from low-income families and vulnerable to academic failure. However, whether these boys can reap such benefits is largely determined by their self-efficacy, including social self-efficacy and physical activity self-efficacy. Thus, the purpose of this study was to examine at-risk boys' social self-efficacy and physical activity self-efficacy in a summer sports camp setting.

Specifically, this study addressed the following research questions: (1) Can at-risk boys differentiate between social self-efficacy and physical activity self-efficacy? (2) What level of social self-efficacy and physical activity self-efficacy do at-risk boys in this sample display? (3) What is the relationship between social self-efficacy and physical activity self-efficacy? (4) Do at-risk boys' mean scores of social self-efficacy and physical activity self-efficacy change over the course of the summer sports camp? (5) What are the predictive powers of social self-efficacy and physical activity self-efficacy on behaviors, effort, and intention for future physical activity participation, and (6) What factors do at-risk boys perceive contributing to their social self-efficacy and physical activity self-efficacy?

The results of this study indicated that social self-efficacy and physical activity self-efficacy were clearly distinguishable, but they were also positively related. Both of them significantly predicted prosocial behaviors, with social self-efficacy having stronger predictive power. Physical activity self-efficacy was a better predictor of effort

and intention than social self-efficacy. Boys with higher levels of social self-efficacy or physical activity self-efficacy were more likely to display prosocial behaviors. Besides the sources proposed by Bandura's self-efficacy theory, such as mastery experience, vicarious experience, social persuasion, and emotional and physiological reactions, boys also identified some unique sources contributing to their social self-efficacy and physical activity self-efficacy.

This study provides an initial effort using self-efficacy theory to understand at-risk boys' behaviors, effort, and intention for future physical activity participation in a summer sports camp setting. Given the finding that social self-efficacy and physical activity self-efficacy were related to their behaviors, effort, and intention, it is critical to enhance at-risk boys' social self-efficacy and physical activity self-efficacy in summer sports camps.

## DEDICATION

To my mother-in-law who passed away on October 7, 2012. She gave birth to and brought up my beloved husband, Jeff Hsiao. One of her important wishes was to attend Jeff's graduation ceremony when he got his Ph. D. degree in the United States. In order to save money for this expensive trip, she had been saving a 10 Yuan coin each day for several years. She did this consistently and finally she collected enough money for the flight, but she could not make it. She worked as a wonderful elementary teacher for more than 30 years and deserved a rest. Though I only lived with her for two weeks while I was in Taiwan in 2011, I have always been impressed with her elegance and kindness. May my Ph. D. diploma fulfill one of my mother-in-law's wishes!

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## TABLE OF CONTENTS

	Page
ABSTRACT .....	ii
DEDICATION .....	iv
ACKNOWLEDGEMENTS .....	v
TABLE OF CONTENTS .....	vi
LIST OF FIGURES.....	viii
LIST OF TABLES .....	ix
CHAPTER I INTRODUCTION .....	1
Summer Sports Camps .....	5
At-Risk Children/Students .....	7
Research on the Social Domain Development in PE/PA Settings .....	9
Self-Efficacy Theory .....	10
Social Self-Efficacy.....	15
Physical Activity Self-Efficacy .....	19
Distinction between SSE and PASE .....	20
Relationship between SSE and PASE.....	23
Relationships among SSE, PASE, Behaviors, Effort, and Intention.....	24
CHAPTER II THE STUDY.....	28
Introduction .....	28
Methods.....	38
Results .....	51
Discussion .....	78
CHAPTER III CONCLUSIONS.....	94
REFERENCES.....	96
APPENDIX A ASSENT FORM-BOYS.....	116
APPENDIX B CONSENT FORM-COACHES.....	117

APPENDIX C PARENTAL PERMISSION FORM .....	119
APPENDIX D BOYS' PERCEPTION OF PHYSICAL ACTIVITIES (PRETEST)...	122
APPENDIX E BOYS' PERCEPTION OF PHYSICAL ACTIVITIES (POSTTEST).	124
APPENDIX F BOYS' BEHAVIORS-COACH RATING SCALE.....	126
APPENDIX G BOYS' BEHAVIOR OBSERVATION FORM.....	127
APPENDIX H BOYS' BEHAVIOR OBSERVATION MANUAL.....	128
APPENDIX I INTERVIEW PROTOCOL .....	131
APPENDIX J FIGURES.....	133
APPENDIX K TABLES .....	136

## LIST OF FIGURES

	Page
Figure 1 Frequency of observed prosocial behaviors.....	133
Figure 2 Frequency of observed disruptive behaviors. ....	134
Figure 3 Trends of observed behaviors by self-efficacy groups. ....	135



## LIST OF TABLES

	Page
Table 1 EFA Factor Structure and Item Loadings for Pretest Self-Efficacy .....	136
Table 2 EFA Factor Structure and Item Loadings for Posttest Self-Efficacy .....	137
Table 3 Descriptive Statistics .....	138
Table 4 Bivariate Correlations among Variables .....	139
Table 5 Hierarchical Regression Results-Pretest Self-Efficacy as Predictors .....	140
Table 6 Hierarchical Regression Results-Posttest Self-Efficacy as Predictors .....	142
Table 7 Frequencies and Percentages of Observed Behaviors .....	144
Table 8 Contingency Tables of Self-Efficacy and Observed Behaviors .....	145
Table 9 Categories, Subcategories, and Quotes of the Sources of Self-Efficacy .....	146
Table 10 Emerged and Theoretical Categories of the Sources of Self-Efficacy .....	149

# CHAPTER I

## INTRODUCTION

Nowadays, obesity is an urgent issue facing American children and adolescents. According to a recent study, 16.9% of American children and adolescents from two through 19 years of age were considered obese (Ogden, Carroll, Kit, & Flegal, 2012). Obesity not only affects children's physical health but also affects their psychological development. Research has shown that childhood obesity has lasting effects on self-esteem, body image, and social well-being (Must & Strauss, 1999). It also has a carryover effect on adulthood weight status. Those who are obese in childhood are more likely to be overweight in adulthood (Parsons, Powers, Logan, & Summerbell, 1999). Physical inactivity is one of the key factors contributing to weight gain. The importance of physical activity (PA) cannot be overemphasized in this modern society which promotes a sedentary lifestyle.

In the promotion of physical activity, school physical education (PE) plays a central role. The majority of American children are enrolled in public school systems. PE classes provide children opportunities to learn the necessary knowledge, skills and dispositions to be physically active. However, due to the limited PE class time, the majority of children fail to reach the physical activity standard set by the 2010 Dietary Guidelines for Americans, which requires K-12 students to take part in 60 minutes or more physical activities per day (Dietary Guidelines Advisory Committee, 2010).

The inadequate amount of physical activity is more prevalent during school breaks, including the summer months. Research indicates that children are likely to regain their weight during the summer break, especially for at-risk children who are often from minority, underprivileged families and are at the risk of school dropouts (Von Hippel, Powell, Douglas, & Rowland, 2007). Being aware of this, many organizations sponsored charity summer sports camps to help at-risk children become physically active, learn sportsmanship, and learn how to work cooperatively with others.

Proper socialization is one of the key factors in children's whole-development. Healthy social development in children correlates with their cognitive development and future academic success, especially for at-risk boys, who are more likely to experience social-emotional problems and be prone to antisocial behaviors (Costello, Compton, Keeler, & Angold, 2003). The ability to positively interact with others and resist peer pressure is important for at-risk boys' success in navigating the challenges from their social environments. The after-school programs, specifically summer sports camps, can provide opportunities for at-risk boys to learn to respect themselves and others, make friends, and interact with others in a positive manner.

Summer sports camps also have the potential to keep at-risk boys physically active while facilitating their social development. However, whether they can experience these physical and social benefits is largely determined by their self-efficacy. Self-efficacy refers to "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p.3). Bandura (1977,

1997) pointed out that self-efficacy is an important motivational determinant for people's choice of behaviors, effort, and perseverance when confronting obstacles.

Social self-efficacy refers to an individual's perceptions of his/her ability to form and maintain friendships and work cooperatively with others (SSE; Bandura, Pastorelli, Barbaranelli, & Caprara, 1999). Research has shown that those children with strong social self-efficacy are happier and have higher self-esteem (Caprara & Steca, 2005). Though many researchers have examined how social self-efficacy affects children's academic performance (e.g., Bandura, Barbaranelli, Caprara, & Pastorelli 2001; Di Giunta, et al., 2010), little is known about how social self-efficacy influenced children's motivation and behavior in a summer sports camp setting. Another limitation of the current research is that their participants were primarily Caucasian students from middle-class families. There is a need to extend this line of research to at-risk boys who are mainly Hispanic and African-American from low-income families.

Physical activity self-efficacy is an individual's perceptions of his/her ability to do well in physical activities (PASE; Feltz & Magyar, 2006). The current literature has a substantial body of research conducted in PE setting (e.g., Gao, Lochbaum, & Podlog, 2011; Feltz & Magyar, 2006). These studies indicate that children with stronger physical activity self-efficacy are more likely to put in effort, perform well, and enjoy physical activities than those with weaker self-efficacy (e.g., Gao, Lee, Xiang, & Kosma, 2011). The current research on physical activity self-efficacy, however, is mostly conducted among middle-class college students. As a result, the relationships between physical

activity self-efficacy and educational outcomes, including behaviors, effort, and intention for future PA participation, among at-risk boys remain unknown.

Thus, the purpose of this study was to examine the social self-efficacy and physical activity self-efficacy among a group of 10-13 year-old at-risk boys in a summer sports camp. Specifically, it addressed the following research questions: (1) Can at-risk boys differentiate between social self-efficacy and physical activity self-efficacy in a summer sports camp? (2) What level of social self-efficacy and physical activity self-efficacy do at-risk boys in this study's sample display? (3) What is the relationship between social self-efficacy and physical activity self-efficacy? (4) Do at-risk boys' mean scores of social self-efficacy and physical activity self-efficacy change over the course of the summer sports camp? (5) What are the predictive powers of social self-efficacy and physical activity self-efficacy on at-risk boys' behaviors, effort, and intention for future physical activity participation, and (6) What factors do at-risk boys perceive contributing to their social self-efficacy and physical activity self-efficacy? The following sections of this chapter review the literature on (a) summer sports camp, (b) at-risk children/students, (c) research on the social domain development in PE/PA settings, (d) self-efficacy theory, (e) social self-efficacy, (f) physical activity self-efficacy, (g) distinction between social self-efficacy and physical activity self-efficacy, (h) the relationship between social self-efficacy and physical activity self-efficacy, and (i) relationships among social self-efficacy, physical activity self-efficacy, behaviors, effort, and intention for future PA participation.

## **Summer Sports Camps**

In the U.S., every summer there are millions of children attending various summer camps which are being held with purposes. Some summer camps focus on improving campers' academic learning. Tichenor and Plavchan (2010) reported that a summer camp improved at-risk elementary students' reading and math skills. Other summer camps are designed to facilitate students' whole development, including social skills and sports skills. Those summer camps focus on sports and physical activities are called summer sports camps.

In summer sports camps, children participate in one or more types of sports and physical activities. They learn sports skills, practice drills, and play competitive games. They can also build up friendships with children from diverse backgrounds through participating in physical activities together. Many summer sports camps emphasize the teaching of certain values, such as sportsmanship, respecting self and others, and leadership (Thurber, Scanlin, Scheuler, & Henderson, 2007).

Children can experience unique benefits of the residential summer sports camp: community living, prolonged time in physical activity participation, experiences away from home, and time in an outdoor setting (Thurber et al., 2007). Unlike school PE classes that at most can provide children one hour daily of physical activities five days a week, a summer sports camp can keep children being physically active for a prolonged time daily.

Research has documented that participating in summer sports camps may be helpful in the promotion of social skills, independence, and positive leadership (Dimock

& Hendry, 1929; Garst & Johnson, 2005). Summer sports camps can also serve the role of providing day care for working families (Thurber et al., 2007). Hupp and Reitman (2008) investigated the effect of a summer sports among a group of children diagnosed with Attention-Deficit/Hyperactivity Disorder (ADHD). They reported that the contingencies placed on sportsmanship in that summer sports camp increased participants' communication skills, social competence, and emotional regulation.

Several other researchers also explored the psychological constructs underlining children's participation in summer sports camps. For example, Hulleman, Durik, Schweigert, and Harackiewicz (2008) examined the expectancy-value, achievement goals, and interest in a summer football camp and concluded that performance-approach goal and utility value significantly predicted children's coach-rated performance. Watson, Newton, and Kim (2003) investigated the relationships between perception of values-based construct and affection and attitude among 135 ethnically diverse children attending the National Youth Sports Program. They found that emphasizing values-based criteria positively correlated with children's enjoyment, interest, positive future expectations, and greater respect for leaders. Little research, however, has been conducted on how at-risk boys' self-efficacy toward participating in physical activities and interacting with others affects their behaviors, effort, and intention for future PA participation.

The camp in this study is a residential summer sports camp that provides underprivileged boys an opportunity to attend a summer camp without charge. The goals of this camp are to improve 10-13 year-old at-risk boys' sports skills and teach them the

characteristics of integrity, honesty, respect for self and others, sportsmanship, and hard work to help them become productive citizens. Each year, this camp provides two consecutive 3-week sessions to approximately 50 boys per session. The boys were often invited to attend the camp when they were ten years old and could be invited back for three more consecutive summers. The activities boys do in this camp include basketball, football, soccer, baseball, archery, tennis, golf, volleyball, swimming, canoeing, weight training, and cooperative games.

### **At-Risk Children/Students**

“At-risk” is a term commonly used in K-12 educational research. Though a substantial body of research exists on at-risk children/students, there are many definitions of “at-risk” children/students (Ernst & Moye, 2013). The majority of research defines “at-risk” as being vulnerable of academic failure: having a high possibility of low academic achievement or school dropout (Bulger & Watson, 2006). For example, Quinna (1997) stated that “at-risk” means students “are poorly equipped to perform up to academic standards” (p. 31). Garza (2012) defined “at-risk” as “a freshman high school student consistently demonstrating academic difficulty in previous grade levels and/or failing to meet a passing standard on state-mandated assessments” (p. 27).

There have also been attempts of defining “at-risk” children/students beyond the K-12 context. For example, Sagor and Cox (2004) provided a broad definition of at-risk as “any child who is unlikely to graduate on schedule, with both the skills and self-esteem necessary to exercise meaningful options in the areas of work, leisure, culture, civic affairs, and inter/intra personal relationships” (p.1). Bulger and Watson (2006) also



called for a broader definition of at-risk students/children, and they suggested the adding of technology proficiency into this definition.

Many researchers also have put efforts in identifying risk factors that could be used as indicators of students at-risk for informing and implementing necessary prevention or interventions (Chen & Kaufman, 1997; Vesely, 2013). Causadias, Salvatore, and Sroufe (2012) defined risk factors as “those that have the harmful effect of enhancing the probability of developing maladaptive behaviors” (p. 293). Historically, students’ economic status was regarded as the only risk factor. Nevertheless, to date, researchers have expanded the list of risk factors to include background characteristics (e.g., low socio-economic status, from a single parent family, an older sibling dropped out of school, the students themselves changed schools two or more times, low grades, and repeated a grade), internal characteristics (e.g., a weak self-concept, hostility towards peers and instructors, having unrealistic goals, rebelliousness, delinquency, and drug use), and environmental factors (e.g., lack of access to student services, inadequate access to tutoring/mentoring, lack of flexible class schedule, and poor parental supervision) (Bulger & Watson, 2006; Janosz, Blanc, Boulerice, & Tremblay, 2000).

Examining the effects of intervention programs is another popular topic within at-risk research. Johnson and Lampley (2010) examined the effects of a mentoring program called Linking Individual Students to Educational Needs. They found that at the end of this program, at-risk students aged 11 to 15 years had increased school GPAs, reduced discipline referrals, and higher attendance rates. Hastie and Sharpe (2009) examined whether a sports education curriculum helped to increase at-risk rural

adolescent boys' prosocial behaviors. They reported that this curriculum benefitted at-risk boys in the promotion of prosocial behaviors. Reglin, Akpo-Sanni, and Losike-Sedimo (2012) reported that the implementation of the Professional Development Classroom Management Model helped to reduce at-risk elementary students' misbehaviors.

Though the above mentioned studies have enriched our understanding of at-risk children/students, no research exists regarding whether self-efficacy would predict at-risk boys' behaviors and psychological constructs including effort and intention, particularly in the context of summer sports camps. Therefore, this study examines how self-efficacy operates among at-risk boys in a summer sports camp. In this study, "at-risk" boys refer to those who have a high possibility of school dropout. The associated risk factors include 1) are from low-income families, 2) below average school academic performance, 3) repeated a grade, 4) displayed problem behaviors, and 5) ages 10-13.

### **Research on the Social Domain Development in PE/PA Settings**

Recent researchers have begun to recognize the social benefits of PE/sports/PA, as "social skills can be learned fairly 'naturally' in sports settings as a result of the social interactions that are required to play games" (Hotz, Sehn, Spence, Newton, & Ball, 2012). The National Standards for Physical Education (National Association for Sports and Physical Education, 2013) includes two standards addressing the social development through PE/PA participation. Specifically, a physically literate person is defined as one who "exhibits responsible personal and social behaviors that respect self and others" (standard 4) and "recognizes the value of physical activity for health, enjoyment,

challenges, self-expression and /or social interaction” (standard 5). Siedentop (1980) also suggested that participation in physical activities may serve as a useful vehicle for improving children’s prosocial skills.

Researchers have documented the benefits PA participation in facilitating children’s social development. For example, Holt et al. (2012) reported that students in PE classes viewed the empathy and social connections as the two most prevalent outcomes of PE/PA programs. Samalot-Rivera and Porretta (2009) conducted a study examining the perceptions and practices of adapted PE teachers on the teaching of social skills and reported that 93% of the participants believed that it was important to teach social skills through PE/PA participation. They also generalized four types of social skills that could be taught in PE/PA settings: a) interaction, b) getting along, c) making and maintaining friends, and d) coping with situations.

The above mentioned research, however, is merely focused on students’ social goals (e.g., Garn, Ware, & Solmon, 2011; Guan, Xiang, McBride, & Bruene, 2006). No data are available concerning self-efficacy and its relationship with children’s social behaviors in a summer sports camps setting. This line of inquiry will enrich the knowledge base on the social domain development of PA participation in different settings other than PE.

## **Self-Efficacy Theory**

### **Definition and Characteristics of Self-Efficacy**

Self-efficacy refers to an individual’s perceptions of his or her ability to carry out certain actions (Bandura, 1997). There are four key characteristics of self-efficacy: a)

self-efficacy is a judgment focusing on the capabilities to perform courses of action rather than psychological traits or personality characteristics, and it addresses how well one can do something; b) self-efficacy is criterion-referenced perception. It does not contain the social comparison element; c) self-efficacy is a multi-dimensional construct which means that one's efficacy belief may vary across different domains of human functioning; and d) self-efficacy is a forethought process (Zimmerman & Cleary, 2006).

Bandura (1997) pointed out self-efficacy may vary on dimensions of magnitude, generality, and strength. Magnitude refers to the degree of task difficulty. Within a particular domain of functioning, one's self-efficacy may vary corresponding to the levels of challenge. For example, in the high jump, a student may have strong self-efficacy in jumping over the bar placed at low height, but may have weak self-efficacy in jumping over the bar placed at high height. The generality of self-efficacy refers to the transferability of self-efficacy from one domain of tasks to another domain of tasks. For example, a student's increased self-efficacy in algebra may also increase his/her self-efficacy in accounting. The strength of self-efficacy refers to how certain an individual is about his/her ability to carry out the required actions. The current study focused on the strength and generality of self-efficacy<sup>1</sup> due to the fact that no microanalytic measure assessing the gratitude of social self-efficacy or physical activity self-efficacy is available within existing literature (Feltz et al., 2008).

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<sup>1</sup> Note that in the rest of this dissertation, high level of self-efficacy/high self-efficacy refers to strong self-efficacy and low level of self-efficacy/low self-efficacy refers to weak self-efficacy.

Bandura (1977, 1997) proposed that self-efficacy can predict the performance, persistence, and behaviors. There are several conditions need to be met to maximize self-efficacy's predictive power. First, only when an individual is motivated to perform the activity could the self-efficacy predict his/her performance, persistence, and behaviors. An individual may have high self-efficacy but is not motivated to perform a certain task. Second, an individual must have a clear understanding of task requirements. Discrepancies between self-efficacy and behavioral performance may occur when the task or circumstances are ambiguous. Third, the way in which performance, persistence, and behaviors are measured needs to be consistent with the way in which self-efficacy is measured to confirm that the predictor and outcome variables are referring to the same constructs.

### **Sources of Self-Efficacy**

There are four sources of how an individual gathers information to make self-efficacy judgments: mastery experience (also called performance accomplishments), vicarious experience, verbal and social persuasion, and physiological and emotional states (Bandura, 1986, 1997). Mastery experience refers to an individual's interpretation of his/her previous engagement in the activity and is the most influential information source for self-efficacy. Self-efficacy can be enhanced through frequent personally identified success and can be decreased through consistent personally identified failure. Vicarious experience refers to the modeling effect. If a student observed a close friend successfully performing a new task, that student might think that he/she can successfully perform the new task too. Verbal and social persuasion refers to the evaluative feedback

and comments from parents, teachers, and peers. Positive feedback or comments help increase self-efficacy, and negative feedback or comments may decrease self-efficacy. Physiological and emotional states refer to what an individual experiences physically and emotionally while he/she is performing the task. Anxiety, sweating palms, and fatigue are often perceived as indicators of weak self-efficacy, whereas enjoyment and the flow of motion are often interpreted as the indicators of strong self-efficacy (Bandura, 1986, 1997).

Derived from these four hypothesized sources of self-efficacy, many researchers have examined what information individuals use to form their self-efficacy. In a recent review, Usher and Pajares (2008) compared 27 studies on the sources of academic self-efficacy, mainly mathematics self-efficacy and science self-efficacy. Mastery experience consistently emerged as an influential source of academic self-efficacy throughout these studies. Chase (1998) examined the sources of self-efficacy in PE and sports among three age groups: 8 to 9 years, 10-12 years, and 13-14 years. She reported that performance and encouragement from peers and coaches were two importance sources of self-efficacy for all ages. Participation and subjective measures of success were two other sources of self-efficacy for younger children; whereas practice hard to improve, comparisons with others, and objective measures of success were three other sources of self-efficacy for older children.

### **The Evolution of the Measures for Self-Efficacy**

Bandura (1977) advocated that the measure of self-efficacy should be at the microanalytic level, in which one needs to “analyze the congruence between self-

efficacy and action at the level of individual tasks” (Bandura, 1986, as cited in Feltz, Short, & Sullivan, 2008, p. 51). In this approach, the individuals should be measured on items representing different levels of task difficulties. In other words, the microanalytic measure of self-efficacy is a hierarchical scale that lists out tasks at different levels of difficulties. Factor analysis needs to be performed to ensure the homogeneity these test items. Though measuring self-efficacy at the microanalytic level is advocated, few studies were conducted in such a way, which may be due to the lack of well-established microanalytic self-efficacy measures (Feltz et al., 2008).

Bandura (2006a) also recommended using 100-point format with 10-unit intervals when measuring self-efficacy. The 100-point units ranged from 0 (cannot do) through 50 (moderately certain can do) to 100 (highly certain can do). Most researchers, however, used Likert-type response rather the 100-point format (e.g., Gao, Lochbaum, & Podlog, 2011; Scherbaum, Cohen-Charash, & Kern, 2006). Maurer and Pierce (1998) compared the self-efficacy instrument using Likert scale and the traditional 100-point scale. They concluded that a measure using the Likert scale demonstrated similar psychometric properties as if it was constructed using the 100-point scale.

The recent research on self-efficacy was mainly conducted at domain-level (e.g., math self-efficacy) rather than task-level (e.g., self-efficacy of multiplying and dividing integers). Bandura (1990) developed a multi-dimensional measure of self-efficacy which captured self-efficacy of seven domains key to students’ school lives, using the 5-point Likert type response scale. This measure was later labeled as Children’s Perceived Self-Efficacy (CPSE) scale. The seven domains in CPSE include academic self-efficacy (i.e.,

perceived ability to do well in coursework), self-regulatory self-efficacy (i.e., perceived ability to resist peer pressure to engagement in high-risk activities), self-efficacy toward leisure and extracurricular activities (i.e., perceived ability to engage in sports and other group activities), social self-efficacy (i.e., perceived ability to form and maintain social relationships), self-assertive self-efficacy (i.e., perceived ability to voice their opinions and refuse unreasonable requests), and self-efficacy to meet others' expectations (i.e., perceived ability to live up to parents, teachers, and peers' expectations). Since then, domain-level measures have dominated self-efficacy research, such as teachers' self-efficacy (Dellinger, Bobbett, Olivier, & Ellett, 2008), academic self-efficacy (Bong & Skaalvik, 2003), science self-efficacy (Britner & Pajares, 2006), career self-efficacy (Betz & Hackett, 2006), mathematics self-efficacy (Lopez & Lent, 1992), and computer self-efficacy (Compeau & Higgins, 1995).

### **Social Self-Efficacy**

Social self-efficacy is a domain-specific belief and refers to one's efficacious belief in initiating and maintaining positive relationships with others (SSE; Bandura, 2001). In other words, social self-efficacy is viewed as "an individual's confidence in his/her ability to engage in the social interactional tasks necessary to initiate and maintain interpersonal relationships" (Smith & Betz, 2000, p. 286). Having a good quality of friendship was reported as a predictor of adaptive achievement motivation, whereas having a poor quality of friendship was found to be related to maladaptive achievement motivation (Nelson & DeBacker, 2008). During adolescence, individuals may face many new social challenges, such as an emphasized value on peer relationships



and expectation of independently resolving social conflicts (Ford, 1982). A high sense of social self-efficacy is important for coping with such new stressors and interpersonal demands upon entering adolescence (Bandura, 1997).

Realizing the importance of social well-being in youth development and throughout the entire course of life, many researchers investigated the effects of social self-efficacy. The early studies of social self-efficacy were mainly focused on developing the measures of social self-efficacy. Inspired by Bandura's (1977, 1982) conceptualization of self-efficacy, Sherer et al. (1982) developed a generalized self-efficacy scale, with 376 college students as participants. Exploratory factor analysis identified a Social Self-efficacy subscale within this scale, containing items measuring one's perceptions of ability to work effectively with others. Gresham, Evans, and Elliott (1988) developed the Academic and Social Self-Efficacy Scale to assess third through fifth graders' academic self-efficacy and social self-efficacy. They also reported that social self-efficacy predicted sociometric status while academic self-efficacy predicted academic achievement.

Bandura and his colleagues are the main contributors to recent studies on social self-efficacy. They mainly used the CPSE to measure participants' social self-efficacy. The CPSE consisted of four statements measuring children's ability to interact appropriately with others in social situations, e.g., "How well can you carry on conversations with others? Bandura and colleagues also investigated social self-efficacy's affective, cognitive, and behavioral effects. For example, they reported that high social self-efficacy contributed to academic attainments, among 279 middle school

children aged 11 to 14 years (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). Caprara and Steca (2005) reported that high social self-efficacy promoted successful adaptation and well-being among 773 adults aged from 20 to 90 years old. Di Giunta et al. (2010) assessed the social self-efficacy of 1007 college students from Italy, the U.S., and Bolivia. They observed that social self-efficacy was associated with self-esteem, psychological well-being and the use of adaptive and maladaptive coping strategies across all the three countries. Caprara, Steca, Cervone, and Artistic (2003) reported that weak social self-efficacy was associated with shyness, anxiety, and social withdrawal among 364 adolescents aged from 14 to 17 years. Similar results were also reported by Bandura et al. (1999) who found that perceived social inefficacy impacted academic achievement and prosocialness and contributed to problem behaviors and depression. In a longitudinal study, Vecchio, Gerbino, Pastorelli, Bove, and Caprara (2007) reported that social self-efficacy in early adolescence predicted life satisfaction in late adolescence.

An examination of the above-reviewed studies revealed that the participants in Bandura and his colleagues' studies were mainly from Italy. The studies conducted in the U. S., however, targeted homogeneous participants in terms of race and ethnicity. Considering the increasingly diverse American K-12 student populations, it is important to examine social self-efficacy and its cognitive, affective, and behavioral outcomes among students from different backgrounds, including at-risk children.

Researchers also have examined the changes of social self-efficacy in various intervention programs. Harrell, Mercer, and DeRosier (2009) evaluated the effects of a

12-week social skill training program called Social Skills Group Intervention-Adolescent. This program focused on the improvement of 13-16 year-old at-risk children's social skills, such as developing positive character traits, communicating thoughts and feelings, building empathy and the ability to see the viewpoint of others, and developing positive social problem-solving skills. They reported that there was a significant increase in social self-efficacy at the end of this program. Kvarme et al. (2010) examined the changes of social self-efficacy at the end of a 6-week intervention called Reteaming among 150 socially withdrawn children aged 12-13 years in Norway. This program, guided by a solution-focused approach, also focused on strengthening children's social skills. But Kvarme et al. did find a significant change in participants' social self-efficacy either at the end of the intervention or 3 months after the intervention.

In another study, Escartí, Gutiérrez, Pascual, and Marín (2010) evaluated the improvement of social self-efficacy among a group of at-risk American children aged 13-14 years. This intervention was a year-long after-school program applying Hellison's Teaching Personal and Social Responsibility (TPSR) model (Hellison, 2003). They observed a significant improvement in students' social self-efficacy. And they suggested that the TPSR model could be applied in PE classes to improve at-risk children's social development. Up to date, not study has examined the change of social self-efficacy in the context of summer sports camps.

## **Physical Activity Self-Efficacy**

Physical activity self-efficacy refers to an individual's beliefs about his or her capabilities to learn or perform physical activities (PASE; Feltz & Magyar, 2006). Gao and his colleagues conducted several studies examining self-efficacy in PE classes. Their studies indicated that students with stronger strength of physical activity self-efficacy were more likely to have better performance, expend more effort, and demonstrate persistence when encountering obstacles (e.g., Gao, Xiang, Lee, & Harrison, 2008). Gao, et al. (2011) found that physical activity self-efficacy significantly predicted moderate-to-vigorous physical activity (MVPA) and effort/persistence among 225 6<sup>th</sup>-8<sup>th</sup> graders enrolled in a suburban public school in the southeastern U.S. Gao, Lochbaum, and Podlog (2011) reported that physical activity self-efficacy mediated the relationships among students' achievement goals, perceived mastery climate, and physical activity levels among 194 6<sup>th</sup>-8<sup>th</sup> graders enrolled in a public school in the southern U.S.

The most often used measure of physical activity self-efficacy is a six-item scale devised and modified by Gao, Lee, Solmon, and Zhang (2009). With the stem "with regard to this week's fitness activity class, I have confidence in ...". The six units include: a) my ability to do well in fitness activities, b) my ability to learn skills well in fitness activities, c) my performance in fitness activities, d) my knowledge needed to do well in fitness activities, e) my success in fitness activities if I exert enough effort, and f) my ability to handle the anxiety related to fitness activities. Participants were required to rate their self-efficacy level to a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. This six-item scale has demonstrated acceptable internal consistency and

validity among middle school students with majority being Caucasian Americans (Gao et al. 2009, 2011).

Huang, Gao, Hannon, Schultz, Newton, and Jenson (2012) examined the changes of physical activity self-efficacy in an after-school program among a group of children aged 12 to 15 years old. Their program was an 8-week program aimed to provide children opportunities to engage in sports-based physical activities during after school hours. Huang et al. reported that the participants had increased physical activity self-efficacy at the end of the program. Thus far, no study has examined the changes of physical activity self-efficacy in a summer sports camp setting.

The existing research on social self-efficacy and physical activity self-efficacy has advanced our understanding of social self-efficacy, physical activity self-efficacy and their effects. However, the participants in these research works were mainly middle-class Caucasian students. Again, given that American K-12 student populations are increasingly diverse (Villegas & Lucas, 2002), there is a need to examine how social self-efficacy and physical activity self-efficacy affect students from diverse backgrounds in general and at-risk boys in a summer sports camps setting in particular. Such inquiry may contribute to the understanding of the psychological characteristics of diverse groups and help in identifying motivational strategies that facilitate the physical and social well-being of students in such diverse groups.

### **Distinction between SSE and PASE**

In the CPSE, Bandura et al. (1990) conceptualized “social self-efficacy” and “self-efficacy of leisure and extracurricular activities” as two different constructs. The

items on social self-efficacy measure children's "beliefs in their capabilities to form and maintain social relationships, work cooperatively with others, and manage different types of interpersonal conflicts" (Bandura et al., 1999, p. 261). The items on self-efficacy of leisure and extracurricular activities measure "children's perceptions about their abilities in performing leisure and extracurricular activities involving mainly group activities" (Bandura, 1999, p. 261). Sample items measuring the self-efficacy of leisure and extracurricular activities include: "How well can you learn sports skills?" "How well can you learn dance skills?" "How well can you do regular physical education activities?" and "How well can you learn the skills needed for team sports (for example, basketball, volleyball, swimming, football, and soccer)?" (Choi, Fugua, & Griffin, 2001, p. 478). From these items, it is clear that the measure of "self-efficacy of leisure and extracurricular activities" taps into what is now known as "physical activity self-efficacy."

Social self-efficacy and physical activity self-efficacy are theorized to represent two distinct constructs. But empirical studies failed to provide consistent findings to support this distinction. For example, Pastorelli et al. (2001) examined the factor structure of the CPSE in Italy, Hungary, and Poland among 272 children aged 11-15 years old and revealed that social self-efficacy and self-efficacy of leisure and extracurricular activities were indistinguishable. This result is consistent with Bandura et al.'s (1996) findings among 279 Italian children aged 11-14 years old, as they reported that social self-efficacy and self-efficacy of leisure and extracurricular activities were loaded on one same factor. However, other studies reported that social self-efficacy and

self-efficacy of leisure and extracurricular activities were two distinct constructs. For example, Choi et al. (2001) explored the factor structure of the CPSE and reported that “sports/physical self-efficacy” and “social self-efficacy” were perceived as two distinct factors among college students. Apparently, more research is needed to further examine the nature of the relationship between social self-efficacy and physical activity self-efficacy.

Self-efficacy, like other concepts of personal agency, is conceptualized to vary as a function of socio-demographic factors such as age, setting, and socioeconomic status (Gecas, 1989). For example, Eccles, Midgley, and Adler (1984) found that perceptions of sports ability declined across the sixth and seventh graders. Xiang, Lee, and Williamson (2001) also reported that younger children held different ability perceptions than older children, because younger children were more likely to view effort as part of their ability judgments, whereas older children considered task mastery to be the most salient evidence of their ability. Parsons and Ruble (1977) showed that young children had difficulties using all the cues presented to them to make accurate predictions about task expectations, which may influence their self-efficacy strength. Bandura (1977, 1997) conceptualized self-efficacy as a domain-specific belief. But to date, it remains unclear whether 10-13 year-old at-risk boys can differentiate social self-efficacy and physical activity self-efficacy in the context of summer sports camps. Such inquiry can help researchers and practitioners better understand the domain-specific nature of self-efficacy and to identify strategies to facilitate at-risk boys’ social and physical development.

## **Relationship between SSE and PASE**

According to Bandura, Adams, Hardy, and Howell (1980), self-efficacy beliefs across different domains of functioning may be correlated with each other. This phenomenon was referred as the generality feature of self-efficacy. Schunk (1991) stated that self-efficacy might transfer to a new domain of tasks that builds on prior skills or transfer to a dissimilar domain if students believe that the two domains share skills. In other words, an individual's increased self-efficacy in performing a task may result in increased self-efficacy in performing another task that requires similar skills.

Bandura (1982) found that the generality of self-efficacy occurred across different treatment modalities and behavioral domains. Though this study provided an initial evidence of self-efficacy's generality, in recent decades, only a few studies empirically examined self-efficacy generality (Bong, 2010). Holladay and Quinones (2003) reported that self-efficacy for one version of a task transferred to other versions of the same task. Bong (1997) found that when students perceived different school subjects having similarities, their self-efficacy were likely to generalize across these subjects. Bong also reported a greater level of generality among quantitative school subjects than that among verbal subjects. Bong (2010) examined how personal factors affected the generality of academic self-efficacy. She reported that non-Hispanic boys and the students who were in advanced placement classes demonstrated greater generality of academic self-efficacy than their counterparts.

The literature reviewed above reveals that no study exists on the generality feature of self-efficacy in PA/PE settings. Therefore, research is needed in this area of



inquiry (Schunk, 1991). Social self-efficacy and physical activity self-efficacy represent two distinct domains of human functioning. But they both require the skills of communication, working cooperatively with others, and dealing with conflicts. Therefore, it is reasonable to assume that social self-efficacy may be related to physical activity self-efficacy. However, this assumption needs to be tested empirically.

### **Relationships among SSE, PASE, Behaviors, Effort, and Intention**

Behaving well, showing no disruptive behaviors, putting forth effort, and demonstrating a strong intention for future PA participation are all desirable educational outcomes in PE/PA settings (Agbuga, Xiang, & McBride, 2010; Guan, Xiang, McBride, & Bruene, 2006). Prosocial behaviors are “behaviors that show a concern for the well-being of others and include displays of empathy, helping behavior, and altruism” (Stevenson, 1997, p. 46). Caprara, Barbaranelli, Pastorelli, Bandura, and Zimbardo (2000) defined prosocial behaviors as cooperating, helping, sharing, and consoling behaviors. They conducted a longitudinal study reporting that prosocial behaviors in early childhood predicted academic achievement and peer relations in adolescence five years later. They also proposed that prosocialness mediated the relationships between academic achievement and other socially desirable development outcomes such as peer social preference.

Disruptive behaviors are students’ behaviors that disrupt teaching or the learning of other students (Fernández-Balboa, 1991). Kulinna, Cothran, and Regualos (2003) developed an instrument to measure students’ disruptive behaviors in PE classes. They identified six types of disruptive behaviors: aggressive, low engagement or

irresponsibility, fails to follow directions, illegal or harmful, distracts or disturbs others and poor self-management. Agbuga et al. (2010) examined the relationship between achievement goals and children's disruptive behaviors in an after-school PA program. Agbuga et al. reported that mastery goal was negatively associated with low engagement, whereas performance-approach goal and performance-avoidance goal were positively associated with students' disruptive behaviors. Though these studies provide us insightful information about students' disruptive behaviors in PE classes, little is known whether self-efficacy theory can be utilized to understand students' disruptive behaviors in summer sports camps. If a link between self-efficacy and disruptive behaviors can be established in those camps, then self-efficacy theory can be used to help camp coaches understand children's disruptive behaviors, which in turn may lead to increased engagement and prosocial behaviors.

Effort refers to how hard children work to engage in certain activities (Xiang, Bruene, & McBride, 2004). Effort has been regarded as one of the important educational outcomes. Its relationships with achievement goals, self-determination motivation, expectancy value beliefs have been established (Gao, Podlog, & Harrison, 2012; Xiang et al., 2004; Zhang, Solmon, & Gu, 2012). Guan et al. (2006) reported that social responsibility goal (the desire to adhere to social rules and social expectations) significantly predicted students' persistence and effort in PE classes. Wentzel (1996) examined the long-term relationship between social motivation and academic effort among middle school students. They found that social motivation (i.e., goals to behave in prosocial and responsible ways) significantly predicted effort in sixth- and eighth-

grade English classes after controlling the effect of academic motivation. However, no research has examined the role of social self-efficacy on effort in the summer sports camp setting. Considering the prominent role of self-efficacy in human endeavors, the importance of such research is warranted.

Intention refers to boys' inclination to perform a behavior in the future (Ajzen, 1991). The intention for future PA participation has been regarded as an important educational outcome or mediation variable within PE/PA research. For example, Rhodes, MacDonald, and McKay (2006) investigated the predictive role of leisure-time physical activity intention and behaviors among 364 children aged 9-11 years old. They reported that intention was a significant predictor of children's actual PA engagement. Shen, McCaughtry, and Martin (2007) reported that perceived autonomy and competence indirectly predicted intention through the mediating of attitude, subjective norm, and perceived control among 653 African American students aged 11-15 years old. They also found that intention directly predicted children's MVPA level. Xiang, Bruene, and Chen (2005) found that interest and task importance significantly predicted intention for running among 119 fourth-graders aged 11-15 years old. Since the existing research mainly was conducted within the PE setting, more research is needed on how social self-efficacy and physical activity self-efficacy affect at-risk boys' intention for future PA participation in the summer sports camp setting.

In summary, the literature review indicated that summer sports camps can be valuable in the promotion of at-risk boys' social and physical development. Self-efficacy theory offers an important perspective on the examination of what influences at-risk

boys' participation in summer sports camps. A review of the literature also indicated that more research on social self-efficacy, physical activity self-efficacy, and their relations to at-risk boys' behaviors, effort, and intention for future PA participation is needed. Such effort can broaden the understanding of how social self-efficacy and physical activity self-efficacy operate in the summer sports camp setting, which may help camp coaches and administrators identify strategies to maximize the social and physical benefits of summer sports camps for at-risk boys.

## CHAPTER II

### THE STUDY

#### **Introduction**

During the past 20 years, there has been a dramatic increase in childhood obesity in the U. S. For example, 16.9% of American children and adolescents were found obese in 2009-2010 (Ogden, Carroll, Kit, & Flegal, 2012). Obesity is even more prevalent among minority groups. Compared to the obesity rate of 14.0% among Caucasian children and adolescents, 24.3% of African-American children and adolescents and 21.2% of Hispanic children and adolescents were obese (Ogden et al., 2012).

In the fight against obesity, physical activity (PA) is critical for school-age children to achieve or maintain the healthy weight (Centers for Disease Control and Prevention [CDC], 2003). Though school physical education (PE) programs offer opportunities to provide physical activities for all children, they cannot reach students when they are out of school. Research shows that children may have more chances of gaining weight during the summer break (Von Hippel, Powell, Douglas, & Rowland, 2007). Jago and Baranowski (2004) claimed that summer sports camps can provide valuable opportunities for children to be physically active during the summer months.

Besides physical benefits, physical activities offered in summer sports camps can also help to enhance children's social skills, especially for at-risk boys. At-risk boys are often economically disadvantaged and likely to fail academically or drop out of school. They have been found to have lower self-esteem and were likely to experience social

anxiety and withdrawal (Brown & Rife, 1991). Physical activities can facilitate at-risk boys' social development. Holt, Sehn, Spence, Newton, and Ball (2012) stated that some of the most important and meaningful aspects of physical activities were the opportunities for children to make social interactions.

However, whether children can experience the physical and social benefits of summer sports camps can be influenced by their self-efficacy (Bandura, 1977). Bandura (1997) defines self-efficacy as “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (p. 3). In other words, self-efficacy is the judgment of capability to execute certain performance. As one of the key factors of human agency, self-efficacy regulates aspirations, choice of behavioral courses, and maintenance of effort (Bandura, 1977; Pajares, 2009; Schunk, 1995). According to Bandura (1997, 2006), self-efficacy is multifaceted and domain-specific. Social self-efficacy (SSE) refers to an individual’s belief about his or her capabilities to form and maintain social relationships, work cooperatively with others, and manage interpersonal conflicts (Bandura, Pastorelli, Barbaranelli, & Caprara, 1999). Physical activity self-efficacy (PASE) refers to an individual’s belief about his or her capabilities to learn and perform physical activities (Feltz & Magyar, 2006).

Students’ self-efficacy has been extensively examined in academic settings (e.g., Multon, Brown, & Lent, 1991; Usher & Pajares, 2006), but it has not been adequately studied in PE/PA settings (e.g., Gao, Lee, Kosma, & Solmon, 2010; Gao, Lee, Xiang, & Kosma, 2011; Gao, Lodewyk, & Zhang, 2009). No study has examined at-risk boys’ self-efficacy in the summer sports camp setting. Therefore, the purpose of this study was

to examine at-risk boys' social self-efficacy, physical activity self-efficacy and how these two types of self-efficacy relate to their behaviors, effort, and intention for future PA participation.

### **Self-Efficacy Theory**

Self-efficacy is the core construct of Bandura's (1997) self-efficacy theory. According to Bandura (2006b), self-efficacy is the most pervasive mechanism of human agency, which may serve as the foundation of people's motivation, performance accomplishments, and emotional well-being, as "unless people believe they can produce desired effects by their actions, they have little incentive to act or to persevere in the face of difficulties" (Bandura, 2006b, p. 3).

Self-efficacy is the judgment of capability rather than actual capability. This construct is domain-specific and varies in three dimensions: magnitude, strength, and generality (Bandura, 1977). Magnitude refers to the relative difficulty of the task compared to other tasks in a hierarchy. For example, a child may have high self-efficacy in basketball free throws but low self-efficacy in jump shots. The strength of self-efficacy refers to an individual's level of certainty to perform a specific task. The generality of self-efficacy pertains to the phenomenon that one's self-efficacy may transfer across different domains of tasks (Tipton & Worthington, 1984; Zimmerman, 1995).

Self-efficacy is not a personal trait or characteristic. It can be enhanced or decreased by four types of information sources: mastery experience, vicarious experience, social persuasion, and emotional and physiological reactions. Mastery

experience is the strongest sources of self-efficacy (Bandura, 1997; Schunk, 2003). Frequent success increase self-efficacy and consistent failure decrease self-efficacy. Vicarious experience refers to the observation and modeling of others' actions. Through observing others, children may receive influential information on their self-efficacy judgments. A child observing similar peers successfully learn a task may believe that he/she also can learn it (Shunk & Meece, 2006). Social persuasion refers to the feedback children receive from others. Encouraging comments and reassuring statements from parents, coaches, or peers may help struggling children sustain their self-efficacy. Lastly, self-efficacy can also be informed by emotional and physiological reactions such as stress, anxiety, fatigue and mood. Children may read their own emotional and bodily reactions as indicators of their personal competence.

### **Social Self-Efficacy**

Bandura (1990) defined social self-efficacy as an individual's belief about his or her capabilities to form and maintain social relationships, work cooperatively with others, and manage interpersonal conflicts. Research shows that positive relationships, teamwork skills, and interpersonal conflict solving skills all play pivotal roles in children's healthy development (Coe & Lubach, 2001; Nelson & DeBacker, 2008).

Bandura, Barbaranelli, Caprara, and Pastorelli (1996) proposed the concept of social self-efficacy and conducted a series of studies examining students' social self-efficacy in relation to their academic achievement, life satisfaction, prosocial behaviors, delinquent conduct, and depression. Their findings revealed that high social self-efficacy was related to prosocial relationships whereas low social self-efficacy led to socially



alienating behavior. Di Giunta, Eisenberg, Kupfer, Steca, Tramontano, and Caprara (2010) observed that social self-efficacy was related to students' psychological well-being and their using of maladaptive and adaptive coping strategies.

Despite the significant amount of time children spend interacting with peers in PA participation (Elliot, Gable, & Mapes, 2006), no study has examined the role of social self-efficacy in a summer sports camp setting. Information from this context can provide a better understanding of how at-risk boys' social self-efficacy is related to their behaviors, effort, and intention for future PA participation.

### **Physical Activity Self-Efficacy**

Physical activity self-efficacy is an individual's belief about his or her capabilities to learn and perform physical activities (Feltz & Magyar, 2006). A number of studies have found that children with high physical activity self-efficacy are more likely to perform better, expend more effort, and persevere longer when encountering challenges than those with low physical activity self-efficacy (e.g., Gao et al., 2009, 2010, 2011). Lodewyk, Gammage, and Sullivan (2009) examined how physical activity self-efficacy predicted achievements among 316 high school PE students. They reported that physical activity self-efficacy significantly predicted students' PE achievement. Gao et al. (2011) further indicated that physical activity self-efficacy significantly predicted moderate-to-vigorous physical activity (MVPA) and effort/persistence across soccer and fitness learning activities among 225 sixth to eighth graders in PE classes.

Physical activity self-efficacy also impacts other motivational determinants such as achievement goals and expectancy-value related beliefs. Gao et al. (2010) found that

physical activity self-efficacy mediated the relationships between students' expectancy-related beliefs, mastery goal, outcome expectancy, and students' MVPA levels. Gao, Lochbaum, and Podlog (2011) further supported the mediating effect of self-efficacy on the relationships between mastery-approach goal and leisure time PA participation among 194 students of 6th, 7th, and 8th grades. They reported that to these students who endorsed mastery-approach goal, the more they became efficacious to do well in physical activities, the more frequently they engaged in leisure time PA.

To the best of our knowledge, Chase (1998) was the only study that examined the sources of physical activity self-efficacy. Consistent with Bandura's (1997) conceptualization, Chase found that past performance experience was the most important source of physical activity self-efficacy. Praise and encouragement from peers and coaches also played an important role in affecting children's perceptions about their physical activity self-efficacy levels.

Though existing research provides valuable insights into students' physical activity self-efficacy, it is important to note that sampled participants were mostly middle class Caucasian Americans. Given that physical activity may differ by race/ethnicity and vary as a function of settings (e.g., Felton, et al., 2002), it is necessary to study at-risk boys' physical activity self-efficacy in a summer sports camp setting. Such effort may provide evidence to support the utilization of self-efficacy theory in understanding at-risk boys' behaviors, effort, and intention for future PA participation in the summer sports camp setting.

## **Distinction between SSE and PASE**

Bandura (1990) theorized that “social self-efficacy” and the “self-efficacy of leisure and extracurricular activities” as different types of self-efficacy in the multi-dimensional measure called Children’s Perceived Self-Efficacy (CPSE; Bandura, 1990). An examination of measure for self-efficacy of leisure and extracurricular activities revealed that its items primarily assessed children’s ability to perform PA, e.g., “How well can you learn sports skills?” and “How well can you do regular physical education activities?” Conceptually, the self-efficacy of leisure and extracurricular activities in Bandura (1990) is similar to the physical activity self-efficacy examined in this study.

Though social self-efficacy and the self-efficacy of leisure and extracurricular activities represented different types of self-efficacy in the CPSE, empirical studies on the factor structure of the CPSE revealed mixed results. Bandura et al. (1996) and Pastorelli et al. (2001) found that the items of social self-efficacy and self-efficacy of leisure and extracurricular activities were loaded onto one same factor in the factor analyses. However, Choi et al. (2001) observed separate factors for social self-efficacy and self-efficacy of leisure and extracurricular activities. One possible reason for such inconsistent results may be related to participants’ characteristics. The participants in Bandura et al. (1996) were Italian children aged 11-14 years old. The participants in Pastorelli et al. (2001) were Italian, Hungarian, and Polish children aged 10-15 years old. The participants in Choi et al. (2001) were American college students. Considered together, it seems that culture and age may contribute to the distinction between social self-efficacy and physical activity self-efficacy. To gain more knowledge in this area, the

current study also examined whether at-risk boys aged 10-13 years old could distinguish social self-efficacy and physical activity self-efficacy in a summer sports camp.

### **The Relationship between SSE and PASE**

As mentioned earlier, the generality feature of self-efficacy suggests that self-efficacy in one domain of tasks may transfer to other domains of tasks. In other words, self-efficacy in one domain may be correlated with the self-efficacy of other certain domains. Researchers have investigated the generality of self-efficacy in academic settings (e.g., Bong, 1997; Zimmerman & Ringle, 1981). Bong (1997) examined the generality of self-efficacy and found that self-efficacy was generalized between English and U.S. History and between Algebra and Geometry among 588 high school students. Zimmerman and Ringle (1981) observed that an increased self-efficacy on the wire puzzle led to an increased self-efficacy on the embedded word puzzle, among 100 first and second grade black and Hispanic children. With regards to the generalization effects of self-efficacy, Bandura (1986) stated that:

Once established, enhanced self-efficacy tends to generalize to other situations...

As a result, behavioral functioning may improve across a wide range of activities. However, the generalization effects occur most predictably in activities that are most similar to those in which self-efficacy was enhanced. (p. 399)

In the summer sports camp examined in this study, at-risk boys participated in PA. They also learned social skills. Both of these contributed to the development of their physical activity self-efficacy and social self-efficacy. Therefore, it is logical to assume that their social self-efficacy would be related to their physical activity self-efficacy.

Research documenting such relationship will provide additional empirical evidence on the generality of self-efficacy across different domains of human functioning.

### **Children's Behaviors, Effort, and Intention**

In PE/PA settings, behaving well, cooperating with others, demonstrating high levels of effort, and possessing a strong intention for future participation in physical activities have been recognized as key outcomes of PA participation (e.g., Garn et al., 2011; Gao, et al., 2011; Martin & Kulinna, 2005). In this study, children's behaviors were categorized into two dimensions: prosocial behaviors and disruptive behaviors. Prosocial behaviors included helping, encouraging, working cooperatively with others, and following coaches' directions. Disruptive behaviors referred to the behaviors of disturbing coaches or peers, making fun of others, failing to follow directions, and demonstrating low engagement or irresponsibility. Effort referred to the overall amount of energy invested in the process of learning (Zimmerman & Risemberg, 1997). Intention for future physical activity participation referred to whether children plan to engage in PA when the camp was over.

Research reveals that students' behaviors, effort, and intention for future PE/PA participation can be predicted by motivational constructs such as achievement goals, expectancy beliefs, and task values (Gao et al., 2009; Gao, Newton, & Carson, 2008; Guan, et al., 2006; Xiang, Bruene, & McBride, 2004; Xiang, McBride, & Bruene, 2006). Achievement goals are students' reasons for doing a task (Pajares, Britner, & Valiante, 2000). Expectancy beliefs are students' beliefs about how well they will perform on the task. Task values refer to the extent to which students value the activity they are doing

(Wigfield & Eccles, 2000). However, little is known about whether social self-efficacy and physical activity self-efficacy could predict those outcome variables in a summer sports camps setting.

In sum, more research is needed to examine whether at-risk boys can differentiate social self-efficacy and physical activity self-efficacy and how these two types of self-efficacy operate in a summer sports camp setting. Therefore, the purpose of the current study is to examine at-risk boys' social self-efficacy, physical activity self-efficacy, and their relations to at-risk boys' prosocial behaviors, disruptive behaviors, effort, and intention for future PA participation in a summer sports camp setting.

Specifically, the current study aims to answer the following research questions: (1) Can at-risk boys differentiate between social self-efficacy and physical activity self-efficacy? (2) What level of social self-efficacy and physical activity self-efficacy do at-risk boys in this study's sample display? (3) What is the relationship between social self-efficacy and physical activity self-efficacy? (4) Do at-risk boys' mean scores of social self-efficacy and physical activity self-efficacy change over the course of the summer sports camp? (5) What are the predictive powers of social self-efficacy and physical activity self-efficacy on at-risk boys' behaviors, effort, and intention for future PA participation? (6) What factors do at-risk boys perceive contributing to their social self-efficacy and physical activity self-efficacy?

## Methods

### Setting and Participants

The current study was conducted in a summer sports camp located in south-central U.S. The camp was designed to provide economically disadvantaged adolescent boys aged 10-13 years old opportunities to attend a summer sports camp at no cost. This camp's primary goal is to teach boys character including integrity, discipline, respect for self and others, sportsmanship, and hard work, through PA participation.

Each year, the camp provides two separate 3-week overnight camp sessions for approximately 50 at-risk boys per session. Those boys were invited to attend the camp when they were ten years old and could be invited back for three more consecutive summers. On a typical camp day, the boys get up at 7:00 a.m. and eat breakfast at 7:30 a.m. From 8:50 a.m. to 11:50 a.m. there are four physical activity sections with each lasting 30 minutes. These activities include basketball, baseball, soccer, football, track and field, archery, tennis, swimming, and canoeing. From 12:00 p.m. to 2:20 p.m., the boys have lunch and nap time. From 2:30 p.m. to 5:20 p.m. they participate in free time playing including baseball, weight training, ultimate frisbee, and swimming. At 5:30 p.m., they eat dinner. At 7:30 p.m., boys have basketball and soccer competitions. At 9:40 p.m., the boys return to their cabins and go to sleep.

Participants in this study included 97 boys enrolled in the camp during the summer of 2012 ( $M = 12.04$  years,  $SD = 1.26$ ). All boys were from economically disadvantaged families and consisted of 52.6% Hispanic, 25.8% Caucasian, 16.5% African-American, and 5.2% from other ethnic backgrounds. Institutional review board

approval, campers' assent (see Appendix A), coaches' consent (see Appendix B), and parents' permission (see Appendix C) were obtained prior to the study.

### **Variables and Measures**

A battery of questionnaires measuring social self-efficacy and physical activity self-efficacy labeled Boys' Perception of Physical Activities-Pretest (BPPA-Pretest, see Appendix D) was used to capture boys' demographic information including name, age, race, school, and grade level, social self-efficacy (pretest), and physical activity self-efficacy (pretest) at the beginning of camp. Another battery of questionnaires labeled Boys' Perception of Physical Activities-Posttest (BPPA-Posttest, see Appendix E) assessed social self-efficacy (posttest), physical activity self-efficacy (posttest), self-reported prosocial behaviors, self-reported disruptive behaviors, self-reported effort, and intention for future PA participation near the end of the camp. Similar to Allison, Dwyer, and Makin (1999) and Gao, Lee, Solmon, and Zhang (2009), all items in the BPPA-Pretest and BPPA-Posttest were on a 5-point Likert scale ranging from 1= not at all true to 5 = very true. All questionnaire variables were obtained by taking the mean of their measuring items.

**Social self-efficacy.** Five items of the CPSE (Bandura et al., 1996) assessed boys' social self-efficacy. These items measure boys' perceived ability in establishing peer relationships (e.g., make and keep friends), working cooperatively with others (e.g., carry on conversations with others) and demonstrating self-assertiveness in dealing with interpersonal conflicts (e.g., stand up for myself when I feel I am not being treated fairly). A one factor CFA on the five-item measure of social self-efficacy with the



pretest data generated good model fit to the data,  $\chi^2/df = 1.43$ , CFI = .98, TLI = .93, RMSEA = .067. A one-factor CFA with posttest data also showed good model fit,  $\chi^2/df = 1.03$ , CFI = .999, TLI = .99, RMSEA = .018. These results indicated that this social self-efficacy measure had good construct validity with this population. The scale also showed acceptable reliability with Cronbach's  $\alpha = .64$  and  $\alpha = .69$  in the pretest and posttest.

**Physical activity self-efficacy.** The six-item scale used in Gao et al.'s (2008) study assessed boys' physical activity self-efficacy. This measure has demonstrated acceptable internal consistency and validity in previous studies (Gao et al., 2008, 2009, 2011). Boys responded to statements with the stem, "In my physical activity sections, I have the ability to ..." Sample statements were (a) perform well, (b) learn skills well, and (c) succeed if I do my best.

Using the pretest data, a one-factor CFA analysis with the six items showed poor model fit,  $\chi^2/df = 2.22$ , CFI = .92, TLI = .86, RMSEA = .11. The model modification index suggested correlating the residual variances of items "do well" and "learn new knowledge needed to do well". After this correlation was added into the model, the model still did not exhibit good fit,  $\chi^2/df = 2.01$ , CFI = .93, TLI = .90, RMSEA = .80. An examination on the correlations among these six items revealed that the item "deal with the stress" may be problematic as it did not significantly correlated with any other items within this scale. After this item was deleted, the one-factor CFA analysis with five items exhibited good model fit,  $\chi^2/df = 1.11$ , CFI = .998, TLI = .992, RMSEA = .033. The Cronbach's  $\alpha$  of the five items was acceptable at .78. The one-factor CFA

model with five items in posttest data also showed good model fit,  $\chi^2/df = 1.08$ , CFI = .99, TLI = .99, RMSEA = .03. The Cronbach's  $\alpha$  for the posttest data was also acceptable at .84. Therefore, the item of dealing with stress was deleted in subsequent data analyses.

**Self-reported prosocial behaviors.** The measure of self-reported prosocial behaviors included three items adopted from the Prosocial Behavior Scale developed by Caprara and Pastorelli (1993) and two items adapted from Liu, Karp, and Davis (2010). Boys were asked to reflect on their camp PA participation and rate their level of agreement or disagreement to items like: "I cooperate well with others," "I often say nice words to others for their good performance and behaviors," and "I follow my coach's directions." A one-factor CFA analysis with the five items showed poor model fit,  $\chi^2/df = 2.29$ , CFI = .91, TLI = .81, RMSEA = .12. The model modification index suggested negatively correlating the residual variances of items "I always followed my coach's direction" and "I often expressed my ideas and opinions". This suggestion was not consistent with the theoretical positive relationship between these two items as both of them were constructed to measure prosocial behaviors (Liu, Karp, & Davis, 2010). An examination on the correlations among the five items revealed that the item "I often expressed my ideas and opinions" did not significantly correlated with other items except its negative correlation with "I always followed my coach's direction". After this item was deleted, the one-factor CFA analysis with four items exhibited acceptable model fit without negative correlations,  $\chi^2/df = 1.64$ , CFI = .98, TLI = .93, RMSEA = .08, and an acceptable reliability of Cronbach's  $\alpha = .75$ . Therefore, the item of

expressing ideas and opinions during camp activities was removed from the self-reported measure of prosocial behaviors.

**Self-reported disruptive behaviors.** Students' self-reported disruptive behaviors were measured by five items adapted from Agbuga et al. (2010). Boys reflected on their PA participation and rated their level of agreement or disagreement to items like: "I sometimes do not line up correctly," "I sometimes make fun of other boys," and "I sometimes do not pay attention to my coach." With this group of at-risk boys, this measure demonstrated good validity,  $\chi^2/df = .73$ , CFI = 1.00, TLI = 1.02, RMSEA = .00, and acceptable reliability with Cronbach's  $\alpha = .78$ .

**Self-reported effort.** The 4-item effort scale from Guan et al. (2006) was used to measure boys' efforts. This scale has demonstrated acceptable reliability in previous studies (Gao et al., 2011; Guan et al., 2006). Boys responded to items like: "I put a lot of effort," "I worked very hard," and "I did my best even if I didn't like what we are doing." In the current study, this measure demonstrated good construct validity,  $\chi^2/df = 1.59$ , CFI = .99, TLI = .97, RMSEA = .08, and a Cronbach's  $\alpha$  of .76.

**Intention for future physical activity participation.** This construct was measured by a 3-item scale from Shen et al. (2007). Boys were asked to rate their level of agreement or disagreement to statements like, "when the camp is over and I get home, during my free time, I plan to do physical activity that makes me breathe hard or feel tired." The current study revealed acceptable construct validity,  $\chi^2/df = .99$ , CFI = 1.00, TLI = 1.00, RMSEA = .00, and a Cronbach's  $\alpha$  value of .85 for this measure.

**Coach-reported prosocial behaviors, disruptive behaviors, and effort.** In accordance with Cox and Whaley (2004), teacher-rated behaviors may provide valuable information about children's actual behaviors. Near the end of each session, camp coaches rated boys' prosocial behaviors, disruptive behaviors, and effort using a scale that had the same items as those measured boys' self-reported prosocial behaviors, disruptive behaviors, and effort (see Appendix F). Specifically, coaches were asked to "indicate to what extent each of the following items is true for \_\_\_ (boy's name)". The sample statements included, "He often helped others" (prosocial behaviors), "He sometimes talked with his friends while I was talking" (disruptive behaviors), and "He worked very hard" (effort). The CFA model fit indexes for coach-rated prosocial behaviors are  $\chi^2/df = .06$ , CFI = 1.00, TLI = 1.02, RMSEA = .00; coach-rated disruptive behaviors,  $\chi^2/df = .35$ , CFI = 1.02, TLI = 1.00, RMSEA = .00; coach-rated effort,  $\chi^2/df = .68$ , CFI = 1.00, TLI = 1.00, RMSEA = .00. The Cronbach's  $\alpha$  for coach-rated prosocial behaviors, disruptive behaviors, and effort were .90, .89, and .93 respectively. Together, these results indicated that these coach-rated scales had good validity and reliability.

**Observed behaviors.** In addition to the self-reported and coach-reported data of boys' behaviors, observational data were also collected for methodological triangulation. A total of 16 boys were observed for prosocial and disruptive behaviors during their participation in camp physical activities. The criteria for boys to be observed were: a) they participated in each of the three video-taped physical activity sections for 30 minutes, and b) their social self-efficacy or physical activity self-efficacy score was

either one standard deviation above the mean or one standard deviation below the mean. Of the 16 boys selected, four boys had high social self-efficacy ( $M = 4.70$ ,  $SD = .26$ ), four boys had low social self-efficacy ( $M = 2.40$ ,  $SD = .26$ ), four boys had high physical activity self-efficacy ( $M = 5.00$ ,  $SD = .10$ ), and four boys had low physical activity self-efficacy ( $M = 2.85$ ,  $SD = .34$ ).

Each of these 16 boys was observed and videotaped for three PA sections. While videotaping boys' behaviors, the researcher observed and took field notes about what activities they participated in. Videotaped PA sections were watched and their behaviors were coded using the Boys' Behavior Observation Form (BBOF, see Appendix G) according to the Boys' Behavior Observation Manual (see Appendix H). The BBOF was developed by the research and her doctoral advisors using the items measuring prosocial behaviors and disruptive behaviors in BPPA-Posttest.

**Perceived contributors of self-efficacy.** To assess boys' perceptions of what contributed to their physical activity self-efficacy and social self-efficacy, 38 boys who recorded a social self-efficacy (pretest) or physical activity self-efficacy (pretest) one standard deviation above the mean ( $SSE \geq 4.39$ ;  $PASE \geq 4.73$ ) or below the mean ( $SSE \leq 3.11$ ;  $PASE \leq 3.63$ ) were individually interviewed. The reason of such sampling was to improve the richness of the information obtained from the interviews, as boys with different levels of self-efficacy may mention different information sources. It was possible that the boys with low self-efficacy may mention stress and anxiety, whereas those with high self-efficacy may mention enjoyment in their PA participation.

The interviews followed a semi-structural format with probe statements. Sample interview questions and probing statements included: “What made you feel such confident to do well in the physical activity sections at this camp?” “Are there any other reasons?” and “What experiences did you have in this camp that helped you feel confident?” The complete interview questions are listed in Appendix I.

To ensure the interview questions were understandable to the participating boys, the researcher piloted interviews with one 9-year old and two 8-year old boys. The interview questions remained unchanged but were situated in the context of PE classes to which pilot interviewees could relate. For example, they were asked, “What made you feel such confident in doing well in your physical education classes?” Additionally, the pilot interviewees were asked about how they understood the word “confident” and whether they had difficulty understanding the interview questions. All of them knew what “confident” meant and had no difficulty understanding all the interview questions.

During the interviews with the 38 boys, however, several of them did not provide any meaningful information after responding to the original interview question, “What made you feel such confidence in doing well in the PA sections at this camp?” As such, the researcher had to prompt them by asking, “How do you know you can/can’t do well in the physical activity sections at this camp?”

## **Procedures**

The summer sports camp in this study included two 3-week sessions. Session one began on June 10, 2012 and ended on June 30, 2012. Session two began on July 8, 2012

and ended on July 28, 2012. Identical data collection procedures were used for both sessions.

Participating boys completed, at day four of the camp, the BPPA-Pretest regarding their demographic information, social self-efficacy (pretest), and physical activity self-efficacy (pretest). They also completed, on the penultimate day of camp, the questionnaire titled BPPA-Posttest assessing their social self-efficacy (posttest), physical activity self-efficacy (posttest), self-reported prosocial behaviors, self-reported disruptive behaviors, self-reported effort, and intention for future physical activity participation.

During week 2 and week 3, each of selected 16 boys were observed and videotaped for three physical activity sessions. Two digital video cameras were positioned on two opposite corners of the activity area to ensure the majority of the boys' behaviors were captured. A cordless microphone system was utilized to capture the coaches' instructions. These videotaped sections were watched and the selected boys' behaviors were coded according to the CBOF. To eliminate observation bias, the researcher lived in the camp during the two camp sessions, ate together with boys at the camp cafeteria, and occasionally participated in their activities, and developed rapport and trust with participating boys. The researcher also videotaped them for one physical activity section before formal data collection to allow them get accustomed to being videotaped.

During week 3, selected 38 boys were individually interviewed about their perceptions of what contributed to their social self-efficacy and physical activity self-

efficacy. All interviews took place in the camp office or on the corners of the playground and lasted about 10 minutes. All interviews were audio-recorded using tape recorders and then transcribed for content analysis.

### **Data Analysis**

**Questionnaire data.** Preliminary analyses included data screening for missing data, outliers, and normality. Confirmatory factor analyses (CFA) were conducted to examine the construct validity of the self-reported data, and then Cronbach's  $\alpha$  determined the internal consistency of the data.

To address the first research question, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) tested whether at-risk boys in this study could differentiate social self-efficacy and physical activity self-efficacy with both pretest and posttest data. In the EFA analyses, a principal components analysis (PCA) with Promax rotation method was applied as it took into consideration the possible non-orthogonal nature of self-efficacy beliefs and included all items measuring the two types of self-efficacy: social self-efficacy and physical activity self-efficacy. In the CFA analyses, a one-factor model and a two-factor model were compared on their model fit indexes, Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) were used to determine whether the two-factor model was superior to the one-factor model. In the one-factor model, the items of social self-efficacy and physical activity self-efficacy were loaded on one single factor, whereas in the two-factor model, the items of social self-efficacy and physical activity self-efficacy were load on each of their corresponding factors.



To address the second research question, descriptive statistics were provided for social self-efficacy, physical activity self-efficacy, and other study variables. Paired sample *t*-test analyses were conducted to examine whether boys scored higher on one self-efficacy than on the other.

To address the third research question, Pearson-product correlation coefficient (*r*) indicated the bivariate correlations between social self-efficacy and physical activity self-efficacy within the pretest data, within the posttest data, and crossed over the pretest and posttest data. Pearson-product correlation coefficients were also provided for the correlations among other study variables.

To address the fourth research question, a MANOVA with repeated measures tested whether the mean scores of boys' social self-efficacy and physical activity self-efficacy changed over the course of the summer sports camp.

To address the fifth research question, a series of hierarchical regression analyses examined whether social self-efficacy (pretest and posttest) and physical activity self-efficacy (pretest and posttest) emerged as significant predictors of at-risk boys' behaviors (self- and coach-reported), effort (self- and coach-reported), and intentions that were assessed in the posttest. In these hierarchical regressions, a dummy coded variable of ethnicity (Hispanic boys = 1, *n* = 51; non-Hispanic boys = 0, *n* = 46) was entered in the first steps of the regressions to control for ethnicity. Social self-efficacy and physical activity self-efficacy were entered in the second steps of the regressions. The reason of examining Hispanic boys versus non-Hispanic boys was to balance the sample sizes of different ethnicity groups, as nearly half of the boys were Hispanic-

Americans. This study tested the pretest self-efficacy's effects and posttest self-efficacy's effects separately.

Except for CFAs, all other analyses were carried out using IBM SPSS Statistics Version 20.0 (IBM Corp., 2011). The CFAs were conducted using Mplus Version 6.11 (Muthén & Muthén, 2010). Multiple fit indexes were used to assess the fit of CFA models, including ratio of chi-square to degrees of freedom ( $\chi^2/df$ ), comparative fit index (CFI), the Tucker–Lewis index (TLI), and root-mean-square-error of approximation (RMSEA). A ratio of chi-square to degrees of freedom smaller than 3.0 indicates an adequate fit (McIver & Carmines, 1981). CFI and TLI exceeding .90 indicate a good fit and exceeding .95 an excellent fit (Hu & Bentler, 1995). An RMSEA smaller than .10 is considered an adequate fit and less than .05 an excellent fit (Browne & Gudeck, 1993). Besides the use of  $\chi^2/df$ , CFI, TLI, and RMSEA, AIC and BIC were used to compare the one-factor CFA model and the two-factor model when addressing research question one. When comparing between non-nested models, considering the fit indexes equal, a smaller AIC or BIC indicates a more parsimonious model (Kline, 2010).

**Observation data.** The Boys' Behavior Observation Form (BBOF) was developed by the researcher and her doctoral advisors based on the questionnaire items assessing prosocial behaviors and disruptive behaviors was used to code at-risk boys' prosocial behaviors and disruptive behaviors from 48 videotaped PA sections. Four observers were trained prior to coding. The training included studying the observation instrument manual as listed in Appendix H to make sure the observers had a clear understanding of the target behaviors. It also included two 2-hour practices. The

practices involved viewing videotaped PA sections, discussing dimensions and their subcategories, and simultaneous coding followed by discussions on ambiguous situations. After training, the four observers simultaneously and independently coded three boys' behaviors during three sessions. The inter-rater agreement ranged from 91% to 96%.

During the coding process, within each 15 second interval signaled by a recorded audiotape, when a prosocial behaviors or a disruptive behavior was observed, a tally was made. The number of tallies for a given behavior was determined by both frequency and duration. For example, if a prosocial behavior, "helping others" lasted longer than 15 seconds but less than 30 seconds, two tallies were made. No tally would be marked when no prosocial behaviors or disruptive behaviors occurred. Chi-square analyses examined the association between the level of self-efficacy and the frequency of prosocial behaviors and disruptive behaviors.

**Interview data.** All recorded interviews were transcribed and then analyzed using the constant comparative method (Glaser & Strauss, 1967). The three major interview questions were analyzed separately. The analytical objective was to develop categories to represent the commonality on the sources of self-efficacy across the 41 interviewed boys. The first step of the constant comparative method involved breaking data down into units. Each unit was the "smallest piece of information that can be interpreted in the absence of any additional information other than a broad understanding of the context in which it occurred" (Lincoln & Cuba, 1985, p. 345). Each unit was then printed on an index card, read and reread, compared to the meanings of other responses,

and then separated into categories and sub-categories. To establish trustworthiness of interview data, the researcher employed the techniques of prolonged engagement in the research site, peer debriefing, and member-checking.

## **Results**

Results of the study are presented in three sections as shown below. The first section reports the results of questionnaire data analyses on social self-efficacy (pretest and posttest), physical activity self-efficacy (pretest and posttest), self-and coach-reported prosocial behaviors, self-and coach-reported disruptive behaviors, self-and coach-reported effort, and intention for future PA participation. The second section reports the results of observed prosocial behaviors, observed disruptive behaviors, and on the relationship between self-efficacy and observed behaviors. The third section reports the interview data. The figures are included in Appendix J, and the tables are included in Appendix K.

### **Questionnaire Results**

**Preliminary analyses.** The amount of missing data was small, and no variable had more than .07% of missing values. The missing data were Missing Completely At Random (MCAR) and the item-mean substitution (IMS) method was used in this study to compute the missing values. According to Bono, Ried, Kimberlin, and Vogel (2007) and Shrive, Stuart, Quan, and Ghali (2006), when variables have less than 10% of missing value, the IMS method reproduces the dataset as accurately as the multiple imputation method.

**Exploratory factor analyses.** With the pretest self-efficacy, the single EFA analysis with both the items measuring social self-efficacy and the items measuring physical activity self-efficacy specified two factors with eigenvalues greater than one, accounting for a total of 48.92% of the variance (see Table 1). All the factor loadings were above the cut-off criteria of .30 (Cudeck & O'Dell, 1994). The first factor included all five items measuring physical activity self-efficacy. The second factor included all five items measuring boys' social self-efficacy. This structure showed that the boys were able to distinguish between social self-efficacy and physical activity self-efficacy.

With the posttest self-efficacy, the EFA analysis with all the self-efficacy items in posttest data also yielded two factors with eigenvalues greater than one, accounting for 54.5% of the variance with all factor loadings exceeding .30 (see Table 2). The first factor contained all five items measuring physical activity self-efficacy; and the second factor contained all five items measuring social self-efficacy. In sum, the EFA analyses results indicated that a two-factor structure of the self-efficacy measures existed in both the pretest data and posttest data.

**Confirmatory factor analyses.** To further test whether at-risk boys could differentiate social self-efficacy and physical activity self-efficacy, two CFA models were specified: a one-factor model in which the factor loading matrix contained all the items assessing the two types of self-efficacy, and a two-factor model in which the factor loading matrix consisted of the social self-efficacy items loading on one factor and the physical activity self-efficacy items loading on a second factor. With the pretest data, the one-factor model showed marginal fit to the data,  $\chi^2/df = 1.66$ , CFI = .91, TLI = .86,

RMSEA = .08, AIC = 2279.44, BIC = 2372.13. The two-factor model, however, had an excellent fit to the data,  $\chi^2/df = 1.21$ , CFI = .97, TLI = .96, RMSEA = .05, AIC = 2265.60, BIC = 2355.71.

With the posttest data, the one-factor model showed adequate fit to the data,  $\chi^2/df = 1.42$ , CFI = .95, TLI = .94, RMSEA = .07, AIC = 90.71, BIC = 147.35. However, the two-factor model showed good fit to the data,  $\chi^2/df = 1.10$ , CFI = .99, TLI = .98, RMSEA = .03, AIC = 81.34, BIC = 140.56. Considering the better fit indexes and smaller AIC and BIC in both the pretest and posttest data, it is concluded that the two-factor model had better model fit than the one-factor model for both the pretest and posttest data.

**Descriptive statistics.** Descriptive statistics are presented in Table 3. The mean scores of social self-efficacy was above the midpoint (i.e. 3.00) in both pretest and posttest ( $M = 3.75$ ,  $SD = .64$ ;  $M = 3.79$ ,  $SD = .68$ ) indicating that, on average, the boys held relatively high social self-efficacy levels. The mean scores of physical activity self-efficacy were also above the midpoint in both pretest and posttest ( $M = 4.18$ ,  $SD = .55$ ;  $M = 4.26$ ,  $SD = .56$ ). This suggests that, on average, boys had high levels of physical activity self-efficacy.

The mean scores of self- and coach-reported prosocial behaviors were also above the midpoint (i.e., 3.00) with a mean of 3.70 ( $SD = .69$ ) and 3.49 ( $SD = 1.05$ ) respectively. Both the means of self-reported and coach-reported disruptive behaviors were below the midpoint of 3.00 ( $M = 2.60$ ,  $SD = .97$ ;  $M = 2.77$ ,  $SD = 1.23$ ). As to students' effort, both the self-reported score ( $M = 3.86$ ,  $SD = .79$ ) and coach-reported

score ( $M = 3.56$ ,  $SD = 1.15$ ) had a mean above the midpoint. As to their intentions, on average, boys indicated a relatively high tendency to participate in future PA after the camp was over ( $M = 3.53$ ,  $SD = 1.08$ ).

In sum, the descriptive statistics showed that the boys in this study generally demonstrated a high level of physical activity self-efficacy and a relatively high level of social self-efficacy. They also demonstrated relatively high amounts of self-and coach-reported prosocial behaviors and relatively low amounts of self-and coach-reported disruptive behaviors. As to their efforts and intentions, the descriptive statistics indicated that boys in this study generally put forth efforts in their camp activities and were likely to participate in future physical activities after the camp.

**Paired sample *t*-tests.** Paired sample *t*-tests were conducted to test whether boys' scores on physical activity self-efficacy differed from those on social self-efficacy. Within the pretest data, boys scored significantly higher on physical activity self-efficacy ( $M = 4.18$ ,  $SD = .55$ ) than on social self-efficacy ( $M = 3.75$ ,  $SD = .64$ ),  $t(96) = -5.86$ ,  $p < .001$ , Cohen's  $d = .72$ . Within the posttest data, boys also scored higher on physical activity self-efficacy ( $M = 4.26$ ,  $SD = .56$ ) than on social self-efficacy ( $M = 3.79$ ,  $SD = .68$ ),  $t(96) = -7.62$ ,  $p < .01$ , Cohen's  $d = .75$ . In sum, the paired sample *t*-test results indicated that, in this study, boys' levels of physical activity self-efficacy were generally higher than those of social self-efficacy. In other words, they were more confident to do well in physical activities than making and keeping friends over the 3-week camp.

**Bivariate correlations.** The correlations among social self-efficacy, physical activity self-efficacy, and other study variables are presented in Table 4. Boys' social self-efficacy was significantly related to physical activity self-efficacy in both pretest ( $r = .28, p < .01, r^2 = .08$ ) and posttest ( $r = .54, p < .01, r^2 = .29$ ). Boys social self-efficacy in the pretest was significantly correlated with their physical activity self-efficacy in posttest ( $r = .20, p < .05, r^2 = .04$ ). Boys' social self-efficacy in posttest also significantly correlated with their physical activity self-efficacy in pretest ( $r = .22, p < .01, r^2 = .05$ ).

Boys' social self-efficacy in the pretest did not correlate with any outcome variables. Boys' physical activity self-efficacy in the pretest negatively correlated with self-reported disruptive behaviors ( $r = -.20, p < .05, r^2 = .04$ ), but positively correlated with self-reported effort ( $r = .28, p < .01, r^2 = .08$ ) and self-reported intention ( $r = .41, p < .01, r^2 = .17$ ).

Boys' social self-efficacy in the posttest was positively correlated with self-reported prosocial behaviors ( $r = .45, p < .01, r^2 = .20$ ), coach-reported prosocial behaviors ( $r = .22, p < .05, r^2 = .05$ ), self-reported effort ( $r = .40, p < .01, r^2 = .16$ ), and coach-reported effort ( $r = .23, p < .05, r^2 = .05$ ). Boys' physical activity self-efficacy in the posttest was negatively correlated with self-reported disruptive behaviors ( $r = -.24, p < .05, r^2 = .06$ ), but positively correlated with self-reported prosocial behaviors ( $r = .43, p < .01, r^2 = .18$ ), coach-reported prosocial behaviors ( $r = .24, p < .05, r^2 = .06$ ), self-reported effort ( $r = .50, p < .01, r^2 = .25$ ), coach-reported effort ( $r = .27, p < .01, r^2 = .07$ ), and boy's intention for future physical activity participation ( $r = .41, p < .01, r^2 = .17$ ).



Among the outcome variables, boys' self-reported prosocial behaviors were positively related to their coach-reported prosocial behaviors ( $r = .36, p < .01, r^2 = .13$ ), self-reported effort ( $r = .61, p < .01, r^2 = .37$ ), coach-reported effort ( $r = .38, p < .01, r^2 = .14$ ), intention ( $r = .30, p < .01, r^2 = .09$ ), and were negatively correlated with both self-reported disruptive behaviors ( $r = -.29, p < .01, r^2 = .08$ ) and coach-reported disruptive behaviors ( $r = -.36, p < .01, r^2 = .13$ ). Boys' self-reported disruptive behaviors were positively related to coach-reported disruptive behaviors ( $r = .47, p < .01, r^2 = .22$ ), but were negatively associated with self-reported effort ( $r = -.49, p < .01, r^2 = .24$ ), coach-reported prosocial behaviors ( $r = -.43, p < .01, r^2 = .19$ ), and coach-reported effort ( $r = -.50, p < .01, r^2 = .25$ ). Boys' self-reported effort was negatively related to coach-reported disruptive behaviors ( $r = -.30, p < .01, r^2 = .09$ ), but positively related to self-reported effort ( $r = .30, p < .01, r^2 = .09$ ), coach-reported effort ( $r = .39, p < .01, r^2 = .15$ ), and coach-reported prosocial behaviors ( $r = .38, p < .01, r^2 = .14$ ). Boys' intention for future physical activity participation was positively related to coach-reported prosocial behaviors ( $r = .28, p < .01, r^2 = .08$ ) and coach-reported effort ( $r = .24, p < .05, r^2 = .06$ ). Coach-reported prosocial behaviors were negatively related to coach-reported disruptive behaviors ( $r = -.78, p < .01, r^2 = .61$ ) but positively related to coach-reported effort ( $r = .92, p < .01, r^2 = .85$ ). Coach-reported disruptive behaviors were negatively related to coach-reported effort ( $r = -.76, p < .01, r^2 = .58$ ). All the correlations among outcome variables fit the theoretical predictions, which provided further evidence for the validity of the measures used in this study.

**MANOVA with repeated measures.** A MANOVA with repeated measure analysis examined whether boys' social self-efficacy and physical activity self-efficacy changed over the course of the camp. Results indicated no significant change for both social self-efficacy and physical activity self-efficacy between pretest data and posttest data, Wilks'  $\lambda = .977$ ,  $F(2, 95) = 1.12$ ,  $p = .33$ .

**Hierarchical regression analyses.** The hierarchical regression analyses on prosocial behaviors, disruptive behaviors, effort, and intention were presented below in two sections. The independent variables in the first section were ethnicity in the first step of the regression and pretest social self-efficacy and pretest physical activity self-efficacy in the second step of the regression. The independent variables in the second section were ethnicity in the first step of the regression and the posttest social self-efficacy and posttest physical activity self-efficacy in the second step of the regression. The hierarchical regression results are presented in Table 5 and Table 6.

**Pretest self-efficacy as predictors.** In the prediction of self-reported disruptive behaviors, ethnicity was a significant predictor in the first step,  $F(1, 95) = 12.16$ ,  $p < .01$ ,  $R^2 = .11$ , adjusted  $R^2 = .10$ . When pretest social self-efficacy and pretest physical activity self-efficacy were entered in the second step of the regression, the model was also significant,  $F(3, 93) = 6.70$ ,  $p < .01$ ,  $\Delta R^2 = .06$ ,  $\Delta F = 3.64$  ( $p < .05$ ), but only pretest physical activity self-efficacy significantly predicted self-reported disruptive behavior,  $\beta = -.27$ ,  $p < .01$ .

In the prediction of self-reported effort, ethnicity was a significant predictor in the first step,  $F(1, 95) = 6.63$ ,  $p < .05$ ,  $R^2 = .07$ , adjusted  $R^2 = .06$ . When pretest social

self-efficacy and pretest physical activity self-efficacy were entered in the second step of the regression, the model was also significant,  $F(3, 93) = 5.86, p < .01, \Delta R^2 = .09, \Delta F = 5.19 (p < .01)$ , but only pretest physical activity self-efficacy significantly predicted self-reported effort,  $\beta = .30, p < .01$ .

In the prediction of intention, ethnicity was not a significant predictor in the first step. When pretest social self-efficacy and pretest physical activity self-efficacy were entered in the second step of the regression, the model was significant,  $F(3, 93) = 6.41, p < .01, \Delta R^2 = .17, \Delta F = 9.36 (p < .01)$ , but only pretest physical activity self-efficacy significantly predicted intention,  $\beta = .42, p < .01$ .

When entered in the first steps of the regressions, ethnicity was a significant predictor of self-reported prosocial behaviors,  $F(1, 95) = 4.42, p < .05, R^2 = .04$ , adjusted  $R^2 = .03$ , coach-reported prosocial behaviors,  $F(1, 95) = 8.42, p < .01, R^2 = .08$ , adjusted  $R^2 = .07$ , coach-reported disruptive behaviors,  $F(1, 95) = 4.76, p < .05, R^2 = .05$ , adjusted  $R^2 = .04$ , and coach-reported effort,  $F(1, 95) = 6.97, p < .05, R^2 = .07$ , adjusted  $R^2 = .06$ . Pretest social self-efficacy and physical activity self-efficacy were not significant predictors of self- and coach-reported prosocial behaviors, coach-reported disruptive behaviors, and coach-reported effort when entered into the second step of the regression models.

***Posttest self-efficacy as predictors.*** In the prediction of self-reported prosocial behaviors, posttest social self-efficacy and posttest physical activity self-efficacy, when entered in the second step of the regression, together explained an additional 22.80% of its variance,  $F(3, 93) = 11.59, p < .01, \Delta R^2 = .23, \Delta F = 14.55 (p < .01)$ . Posttest social

self-efficacy significantly predicted self-reported prosocial behavior,  $\beta = .30, p < .01$ . Posttest physical activity self-efficacy also significantly predicted self-reported prosocial behavior,  $\beta = .25, p < .05$ . Based on the value of their  $\beta$  coefficients (Cohen, Cohen, West, & Aiken, 2003), it was concluded that posttest social self-efficacy was a better predictor of self-reported prosocial behaviors than posttest physical activity self-efficacy.

In the prediction of self-reported effort, posttest social self-efficacy and posttest physical activity self-efficacy, when entered in the second step of the model, together explained an additional 23.80% variance of self-reported effort,  $F(3, 93) = 13.47, p < .01, \Delta R^2 = .24, \Delta F = 15.85 (p < .01)$ . Posttest social self-efficacy did not significantly predict self-reported effort. However, posttest physical activity self-efficacy significantly predicted effort,  $\beta = .38, p < .01$ . Since posttest physical activity self-efficacy was a significant predictor, but not posttest social self-efficacy, it was concluded that compared to posttest social self-efficacy, posttest physical activity self-efficacy was a better predictor of self-reported effort.

In the prediction of intention for future PA participation, posttest social self-efficacy and posttest physical activity self-efficacy, when entered in the second step of model, together explained an additional 18.00% of its variance,  $F(3, 93) = 7.00, p < .01, \Delta R^2 = .18, \Delta F = 10.24 (p < .01)$ . Posttest social self-efficacy did not significantly predict intention. However, posttest physical activity self-efficacy significantly predicted intention,  $\beta = .45, p < .01$ . Since posttest physical activity self-efficacy was a significant predictor of intention but not posttest social self-efficacy, it was concluded that

compared to posttest social self-efficacy, posttest physical activity self-efficacy was a better predictor of boys' intention for future physical activity participation.

Posttest social self-efficacy and posttest physical activity self-efficacy did not significantly predict self-reported disruptive behaviors, coach-reported prosocial behaviors, coach-reported disruptive behaviors, or coach-reported effort.

In sum, both pretest and posttest physical activity self-efficacy were better predictors of boys' self-reported effort and intention for future PA participation. However, posttest social self-efficacy had more predictive power than posttest physical activity self-efficacy on boys' self-reported prosocial behaviors.

### **Observation Results**

A summary of the frequencies and percentage of each observed prosocial behavior and disruptive behavior are presented in Table 7.

**Observed prosocial behaviors.** A total of 4124 prosocial behaviors across 48 PA sections were observed among 16 boys. An examination of the 4124 prosocial behaviors revealed that the frequencies of prosocial behaviors differed by self-efficacy groups. Specifically, boys with high SSE displayed a total of 1212 (29.39%) prosocial behaviors, boys with low SSE displayed a total of 891 (21.61%) prosocial behaviors, boys with high PASE displayed a total of 1151 (27.91%) prosocial behaviors, and boys with low PASE displayed a total of 870 (21.10%) prosocial behaviors.

Prosocial behaviors consisted of five sub-behaviors: following coaches' directions, cooperating with others, helping others, congratulating, complimenting, accepting others, and expressing ideas and opinions (see Appendix H for the detailed

explanation). Figure 1 reveals the most often occurring prosocial behavior was following coaches' directions (3499; 84.87%), followed by cooperating with others (285; 6.91%) and expressing ideas and opinions (195; 4.73%). The least observed prosocial behaviors were helping others (77; 1.87%) and congratulating, complimenting, or accepting (68; 1.65%).

A further examination of the observation data revealed that boys with high SSE or PASE displayed higher frequencies on all the five sub-behaviors than the boys with low SSE or PASE. Specifically, boys with high SSE engaged in 953 following coaches' directions behaviors, 121 cooperating with others behaviors, 56 helping others behaviors, 28 congratulating or complementing or accepting others behaviors, and 54 expressing ideas and opinions behaviors. Boys with low SSE engaged in 779 following coaches' directions behaviors, 45 cooperating with others behaviors, three helping others behaviors, 11 congratulating or complementing or accepting others behaviors, and 53 expressing ideas and opinions behaviors. Boys with high PASE engaged in 966 following coaches' directions behaviors, 80 cooperating with others behaviors, 18 helping others behaviors, 26 congratulating or complementing or accepting others behaviors, and 64 expressing ideas and opinions behaviors. Boys with low PASE engaged in 801 following coaches' directions behaviors, 39 cooperating with others behaviors, three congratulating or complementing or accepting others behaviors, and 27 expressing ideas and opinions behaviors.

**Observed disruptive behaviors.** A total of 1600 disruptive behaviors were observed among the 16 boys across the 48 video-taped PA sections. Boys with high SSE

or PASE displayed fewer disruptive behaviors than boys with low SSE or PASE. Specifically, boys with high SSE displayed 221 (13.81%) disruptive behaviors; boys with low SSE displayed 564 (35.35%) disruptive behaviors; boys with high PASE displayed 284 (17.75%) disruptive behaviors, and boys with low PASE displayed 531 (33.19%) disruptive behaviors.

The disruptive behaviors consisted of five sub-behaviors: not paying attention, talking with others while the coach was speaking, making fun of other students, not lining up correctly, and moving slowly on purpose (see Appendix H for detailed information). As shown in Figure 2, among these five sub-behaviors, the most often observed disruptive behavior was not paying attention (1272; 79.50%), followed by not lining up correctly (119; 7.44%). The least observed disruptive behaviors included talking with others while coach was speaking (98; 6.13%), making fun of others (59; 3.69%), and moving slowly on purpose (52; 3.25%).

A further examination of the observation data revealed that boys with high SSE displayed fewer frequencies on all the five sub-behaviors than the boys with low SSE. Compared to boys with low PASE, these with high PASE displayed more frequencies on talking with others while coach was speaking and making fun of others, but lower frequencies on other disruptive behaviors including not paying attention, not lining up correctly and moving slowly on purpose.

Specifically, boys with high SSE displayed 184 not paying attention behaviors, nine talking with others while coach was speaking behaviors, 12 making fun of others behaviors, nine not lining up correctly behaviors, and seven moving slowly on purpose

behaviors; boys with low SSE displayed 437 not paying attention behaviors, 39 talking with others while coach was speaking behaviors, 20 making fun of others behaviors, 41 not lining up correctly behaviors, and 27 moving slowly on purpose behaviors; boys with high PASE displayed 219 not paying attention behaviors, 26 talking with others while coach was speaking behaviors, 21 making fun of others behaviors, 12 not lining up correctly behaviors, and six moving slowly on purpose behaviors, and boys with low PASE displayed 432 not paying attention behaviors, 24 talking with others while coach was speaking behaviors, six making fun of others behaviors, 57 not lining up correctly behaviors, and 12 moving slowly on purpose behaviors.

**Association between self-efficacy and observed behaviors.** Chi-square analyses tested whether students' observed behaviors differed as a function of their self-efficacy. The contingency tables are presented in Table 8. Results showed significant associations between SSE and observed behaviors [ $\chi^2(1) = 198.71, p < .001$ ] and between PASE and observed behaviors [ $\chi^2(1) = 113.54, p < .001$ ]. The relationship between self-efficacy and behaviors are reported in Figure 2. The high SSE and high PASE groups often demonstrated prosocial behaviors, whereas the low SSE or PASE groups often demonstrated disruptive behaviors.

### **Interview Results**

The interviews tapped boys' self-efficacy level and their perceptions of what contributed to their self-efficacy. Detailed pictures of the emerged categories with their sub-categories and representative quotes are presented in Table 9. The boys' names listed in Table 9 and below are pseudonyms. The detailed findings are also reported



below in relation to each of the three major interview questions. It is important to note that, though the researcher applied follow-up probes, such as using the silent probe and giving time for the boy to answer, to elicit more elaborative information, the majority 10-13 year-old at-risk boys interviewed in this study were not communicative. A total of 369 units were generated from the 41 boys. Each boy expressed an average of three units to each interview question.

**Question 1: Sources of self-efficacy to do well in camp activities.** Of the 38 boys interviewed, 13 boys (34.2%) chose five (very true) indicating they had very high self-efficacy levels; 21 boys (55.3%) chose four (true) indicating they had high self-efficacy levels; three boys (7.9%) chose three (sometimes true), indicating they had medium self-efficacy levels; two boys (2.6%) chose two (not true) indicating they had low self-efficacy levels. One boy with a score of two mentioned that he had an injury that prohibited him from doing well in camp activities. He said, “I have a lower-back problem, and it’s hard of me to run and do well.” Among those who had high self-efficacy levels, three expressed that they had strong beliefs regarding efficacy. For example, Frank said, “Everything is possible to accomplish.” Kevin mentioned, “Everybody can do well if you try.” Wayne also agreed on the power of strong belief, “Because basically I think I can, helps me to push myself.” Two boys with high self-efficacy also expressed that the camp activities were easy for them; as Dylan mentioned, “It’s pretty much that the most camp activities are really easy,” and David said, “The camp is really easy for me.”

Seven boys, five with self-efficacy scores of five and two with self-efficacy scores of three, felt that they had high self-efficacy on certain activities only. For example, Justin mentioned, “Some things I do well; some things I don’t.” DM stated, “Not all the time I have the ability to do all the activities.” Dennis knew clearly that he was good at soccer but bad at basketball. Kevin expressed the same concern, “Sometimes I do well in some activities and some of them I have not done much. I am good at running but bad at discs.” Jacob said, “I feel confident in dodgeball, basketball, and running; but some of the things, like I am afraid of heights, in the obstacle course, I wasn’t very good at it.”

It is notable that two boys judged their self-efficacy based on normal comparison while two other boys judged their self-efficacy level based on task mastery/performance. Daniel compared himself to others, “I’m good at activities, but I’m not the best. For example, I’m not like too good at Frisbee golf, but I’m like average. I compare myself to other people.” Jorge and Dylan rated their efficacy levels based on their task mastery/performance. Jorge stated, “One time at the beginning, I was just blocking, but at last I made a shot.” Dylan said, “Basketball is hard to make it inside the goal. Soccer is hard to play defense and get the soccer ball to my team.”

As to the sources of their efficacy beliefs, a total of 133 units were generated by the 37 boys interviewed. These units fell into four categories emerged from the constant comparison analysis: experience (45 responses; 34%), support from others (33 responses; 25%), effort (31 responses; 23%), fun/enjoyment (19 responses; 14%), and modeling (5 responses; 4%).

**Category: Experience.** Experience refers to previous exposure and understanding of physical activities that may contribute to the boys' increased skill or knowledge base. This category consists of two subcategories: outside experience and camp experience. Outside experience refers to boys' statements related to their participation in physical activity/sports at home, school or other settings prior to the camp. Twelve boys (20 responses) mentioned their outside experiences. For example, Justin stated, "When I was little, I got a coach who put me in the starter." Julio said, "Most of the things we do here, I am kind of done before... I play soccer in a soccer team." Daniel mentioned, "Basketball, when I was little, that's all I played, so I start practicing a lot." Justin said that he was confident to do well in the soccer competitions at camp because, "I grew up playing it [soccer] since I was little." Abisai, Micale, and Allen had similar experiences, "I am good at soccer because I really liked it when I was little" (Abasai), "For all the activities we do here such as swimming, basketball, soccer, I actually do at home" (Micale), and "When I was little, I started to play soccer" (Allen).

The second source of experience occurred at the camp. These experiences included both the day-to-day camp activity participation and the long-term experiences they accumulated from previous years' engagement in camp activities. Ten boys' 25 units fell into this subcategory. For example, Francisco stated, "Just everything we do in general every day help a lot." Reese said, "The mistakes I made will help me to fix my mistakes." Kennedy, Nathan, and Daniel all mentioned the carry-over effects from their previous years' participation in the camp activities, "The longer you stay here at the camp, you get to know more about the camp" (Kennedy), "Because I've been here [at

camp] for three years and this is my last year, so I know how to do it” (Nathan), and “My first year I’d never played it before; I never knew what it was. Then my three years’ camp, I learned a lot” (Daniel).

It is important to note that three boys (six responses) expressed that they faced the lack of experiences in certain types of camp activities. Justin had a low self-efficacy for playing frisbee golf. He said, “I have never played it [frisbee golf] before. I never knew what it was.” DM said, “I don’t do all the activities I do here at home.” Daniel had low self-efficacy level toward hockey when he was a first-year camper, “My first year I’d never played it [hockey] before.”

***Category: Support from others.*** Support from others refers to the verbal and nonverbal encouragement and judgments boys received on their abilities to do well in camp activities. This category includes two sub-categories, support from coaches and support from friends/family members. Support from coaches refers to the care and encouragement boys received from their coaches. Eleven boys (19 responses) mentioned coaches’ support. For example, Francisco stated, “In track, the coaches help us on how to communicate and to do things. They make us feel good about ourselves, and they prove to us that we can do it if we put our mind to it.” David said, “I have coaches encourage me to do things well and that just help me a lot.” Victor said, “If I mess up, and I can’t get something right, they [coaches] support me and they give me confidence. They are like ‘hey, you can do this’ or ‘come on’ or help you do something.” Julio, DK, and Dylan also were encouraged by coaches’ support, such as “The coaches sometimes

say that they are really impressed. They help us out” (Julio), and “Because the coaches gave me a lot of encouragement” (DK).

Support from friends/family members refers to the validation and encouragement boys received from others outside the camp. A total of 14 units from 11 boys fell into this subcategory. For example, Trey stated, “I have been told by friends and my family, and started to believe that I have the athleticism in me.” Gavin stated, “People around me tell me that I am good at sports.” Reese, Rodolfo, DK, Jonathan, and Victor all expressed that their friends’ encouragement and compliments made them felt confident to do well in camp activities. As Jonathan put it, “Sometimes when I’m doing wrong, my friends helped me. Like running, they encouraged me. We help each other.” Victor also realized the importance of friends’ support, “A lot of confidence comes from my friends, because they help me and support me.”

**Category: Effort.** Effort refers to how hard boys tried in camp activities. A total of 31 units from seventeen boys fell into this category. For example, Victor stated, “You push yourself. No one else pushes you.” Rene said, “Because sometimes I push myself not to give up. Try to hustle. Try your hardest. Try to be the best and don’t give up.” There were seven boys who expressed that they regarded putting in an effort equaled having ability to do well. These units included, “Doing well means I have to do my best” (Omar), “I do as best as I can” (DM), “I play hard and give my best effort” (Jorge), “Just do it” (Kennedy), “I try hard on everything” (Mario M), “Like expectation number two is to play hard, so like you always go as high as you can until you cannot do anymore”

(Mario), and “I just get out there and do hustle like they [coaches] told me to do, and I won” (David).

**Category: *Fun/enjoyment.*** Fun/enjoyment refers to the pleasure boys experienced during their participation in camp activities. A total of nineteen units from 12 boys indicated they enjoyed doing camp activities. For example, Nathan stated, “I have been doing the fun stuff here [at camp], and I like playing team basketball and soccer for competition.” Abisai stated, “I really like most of the games I played.” Vallen said, “We had a lot of fun.” Rodolfo, Omar, Kennedy, Wymola, and Mathew all agreed that they had enjoyed doing camp activities and they had lots of fun at camp.

**Category: *Modeling.*** Modeling refers to having family members as former campers or seeing others perform in physical activities/sports. Five units generated by three students fell into this category. Daniel stated, “I see some people that are really good on it.” DM stated, “Because my dad used to play for the college team. He just wants us to know how to play basketball when we were young.” Trey had family members who were former campers at the camp, so he had the experience of watching others perform camp activities: “All my families including my brother, my dad, and my uncles have been to this camp. And I came here before when I visited my brother here now and then.”

**Question 2: Sources of self-efficacy to make and keep friends.** Among the 38 boys 13 boys (35.1%) gave themselves a score of five; 16 boys (42.1%) gave themselves a score of three; seven boys (18.4%) gave themselves a score of two, one boy (2.7%) gave himself a score of one indicating that he had a very low level of self-efficacy, and

one boy was not interviewed for this question due to time constraint. Five boys expressed that making friends was easy for them and they could be friends with anyone. For example, DK stated, "I'm like everybody is my friend, and I'm friend with everybody." Micael said, "I'm always good at making friends." Kennedy stated, "Everybody can make friends here. I am a friend of everybody." Mario said, "It's easy to make friends." David said, "I just think I am good at making friends because I can make friends easily." One boy mentioned that he was not confident in friendship making because "I am not very good expressing myself. Sometimes I make friends, and like, they turn mean to me" (Jay).

A total of 111 units were generated by boys on the sources of their self-efficacy beliefs to make and keep friends with others at camp. These units fell into four categories emerged from the constant comparison analysis: experience (63 responses; 57%), personality traits (37 responses; 33%), coaches' support/teaching on friendship (6 responses; 5%), and enjoying friendship (5 responses; 5%).

***Category: Experience.*** Experience refers to boys' friend-making practices at home, school, and camp settings. This category can be further separated into four sub-categories: camp experience (22 responses), previous experience (14 responses), acknowledging that arguments is part of friendship (14 responses), and communication (13 responses). Camp experience refers to boys' friend-making experiences at camp. Twenty two units generated by 14 boys fell into this subcategory. All those 14 boys mentioned that they and their friends played sports or engaged in cooperative camp activities together, which enabled them to make and keep friends. For example, Kennedy

said, “For faces that you don’t know, you get to play with them. Then you get to know them better and become friends.” Vallen stated, “We usually just make friends and start to play. Like basketball, we play together.” Micael said, “Meet new people, start to get along, and know each other when playing sports.” Victor stated, “We all do activities together, and we bond as a team.” Julio also made friends through sports: “Like some of the campers here, I really ignore them first. Then they just doing activities with me; I then made friends with them. We hang out play sports together.”

Though many boys realized that doing camp activities together may create opportunities for them to make and keep friends, three boys expressed their concern that competitive activities may hurt their friendship. For example, DM said, “Everything here is very competitive. You always compete with somebody. It may mess up your friendship. You never know if you will against your friend.” Harrison stated, “Sports kind of help me to make friends, but it depends on how well your team perform on the sports.”

The previous experience subcategory contains the units (14 responses) generated by nine boys that referred to their friend-making experiences before they attended the camp, mainly in the settings of school or at home. For example, David stated, “My experiences of making friends are mostly at school.” Victor said, “I have a bunch of friends in school.” Trey mentioned, “Because my cousin used to be a coach, and he used to bring me here and talked to the coaches and staffs and all the kids.” Jorge mentioned he had lots of friends at home.



Seven boys (14 responses) acknowledged having arguments was part of friendship. For example, Trey stated, “Me and my friends have arguments, and we’ll get mad at each other for like one or two days. And we just go on and off, on and off.” Wymola shared the same concern: “Sometimes we fight or yell at each other, and then argue and become friends again.” Kevin said, “It [making and keeping friends] depends on my attitude and how I behave in front of them. Sometimes I might keep my friends happy, sometimes I might keep them mad.”

Thirteen units generated by eight boys fell into the subcategory of communication that refers to boys’ use of verbal conversation in their previous friend-making experiences. The typical units in this subcategory included:

I just talk to other people and make friends, and just talk a little and I can make them and keep them as friends...We can keep conversations easily. (David)

I can communicate with other people. (Mario)

Talk to each other. (Jonathan)

When we start talking to him, we became friends, and really close friends. (Rene)

They [coaches] showed us a lot how to communicate with others and that really help a lot. (Francisco)

**Category: *Personality traits*.** Personality traits refer to the self-perception of one’s own characteristics and the perception of others’ characteristics. The 37 units in this category captured 19 boys’ perceptions of their own or other people’s characteristics or attributes. The subcategory of self refers to boys’ perceptions of their own characteristics, including being nice/friendly to others, liking talking to people, and not

being shy. For example, Nathan stated, “I’m great at making friends since I’m nice.” Matthew said, “Because I’m very friendly.” They also mentioned the avoiding of negative attributes, such as not hating, not yelling at others, not getting mad at people, and not being mean. For example, David mentioned, “I can make my friends laugh easily, and I don’t do anything to lose them.” DK stated, “I don’t hate anybody.” Daniel said, “I don’t get mad at people. I don’t yell at someone.” Two boys also expressed their tendency to help others: “I helped people out” (Nathan), and “If they [my friends] have problems, I help them with their problems” (Reese).

Six boys also expressed their perceptions of other people’s personality characteristics/attributes. For example, Dylan said, “Some kids are mean. Some kids are nice.” Francisco stated, “Because there are lots of people that are different. They [some people] don’t like to make friends with certain types of people. Some people chose not to be my friends, and some choose to be my friends.” Rene mentioned, “There’s a kid in camp. He’s kind of quiet.” Julio expressed that he knew his friends like playing sports: “They [his friends] like sports. I like sports.”

***Category: Coaches’ support/teaching on friendship.*** This category consisted of six units generated by five boys showing that boys received other people’s verbal or nonverbal encouragement, mainly from coaches. For example, Allen stated, “A coach in this camp told me that I was good at making friends here.” Joshua mentioned, “They [coaches] teach us integrity to make friends.” Justin said, “The coaches help me making friends with other because they care who you are.” Francisco was confident to make and

keep friends in this camp because “They [coaches] showed us a lot how to communicate with others.”

**Category: *Enjoying friendship*.** Five boys expressed that they enjoyed making friends and spending time together with their friends at camp. For example, Omar said, “It is fun to have friends.” Micael stated, “We have a good time together.” Rodolfo said, “When I came, I just like to make friends.” Justin liked talking to his friends while Julio enjoyed playing sports with friends.

**Question 3: Sources of self-efficacy to deal with social conflicts.** Among the 38 boys interviewed, 10 boys (26.3%) gave themselves a score of five (very true) indicating they had a very high level of self-efficacy to deal with social conflicts; 15 boys (39.5%) gave themselves a score of four (true) indicating they had a high level self-efficacy to deal with social conflicts; nine boys (23.7%) gave themselves a score of three (sometimes true) indicating they had a medium level of self-efficacy to deal with social conflicts; three boys (10.5%) gave themselves a score of two (not true) indicating they had a low level of self-efficacy to deal with social conflicts, and one boy (2.6%) gave himself a score of one (not true at all) indicating he had a low level of self-efficacy for dealing with social conflicts. Jaequon had a low level of self-efficacy for dealing with social conflicts because he did not remember he had any experiences of dealing with social conflicts: “Nobody even picks on me.” Seven boys with a high or very high level of self-efficacy to deal with social conflicts expressed that dealing with social conflicts were very easy. For example, Rene said, “Not that much problem.” Kennedy expressed, “I can deal with it [social conflicts].” Trey is the kind of person who did not care about

the results of social conflicts: “Because I don’t think of they think about me; and I think myself with my own opinion. So if they want to hurt me, it’s not going to affect me because I have other friends too.”

A total of 124 units were generated on the sources of self-efficacy to deal with social conflicts. These units were separated into four categories emerged from the constant comparison analysis: coping strategies (79 responses), modeling (20 responses), emotional reactions (13 responses), and recognition of potential social conflicts (12 responses). It is notable that two boys, Jaequon and Jonathan, mentioned that social conflicts were a non-issue for them because they were much bigger and taller compared to their peers. Jonathan stated, “People don’t mess with me. I’m kind of big. So if they mess with me, they get scared because I’m bigger than them. I’m like the tallest one.”

***Category: Coping strategies.*** This category refers to the techniques boys used from their previous experiences dealing with social conflicts. The commonly used strategies included: ignoring/walking away, talking over, telling the coach, stopping myself/telling others to stop, and other strategies. There were 24 units mentioned by 16 boys that referred to the use of ignoring others or walking away to deal with social conflicts. The typical units included:

When people being mean to me, I just ignore and walk away. (Omar)

I’ll ignore them [those who annoy him] and they’ll probably stop. (David)

I feel really, really mad, but I just like walk away. (Julio)

I don’t mess with them. I am kind of ignoring them. (Mario)

Two boys mentioned that they used the strategy of ignoring or walking away because they did not care much about losing a friend: “So if they want to hurt me, it’s not going to affect me because I have other friends too” (Trey), and “I am just like, whatever, I don’t care anything” (Vallen).

The subcategory of talking over included 21 units generated by 12 boys that referred to boys’ use of communication to solve social conflicts. For example, Victor stated, “If you say something nice, like when they say something bad and I say agree, they can’t come back with anything because the way it is.” Rodolfo said, “By speaking up... and by talking more.” Francisco also used communication to deal with social conflicts: “Sometimes, you know, just pull him [the person hurt his feeling] to the side, and ask him what’s going on and why are you acting like this. Usually, that will solve anything.” Rene would speak up if others annoy him or hurt his feeling: “I am kind of telling them [others who were annoying] I don’t like what they are doing.”

The subcategory of telling the coach was mentioned by ten boys (15 responses). They knew they could turn to the coaches for help to deal with the situations when others were annoying them or hurting their feeling. For example, Matthew said, “Tell the coach. It works efficiently.” Mario said, “If someone is being annoying, we can always say it to the coach. The coach will try to help us fix it.” Dylan said, “I can always tell the coaches. They will take care of that for me.”

The subcategory of telling others to stop refers to boys’ use of strategy telling others to stop to deal with social conflicts. Ten boys mentioned (13 responses) that they would tell others to stop their annoying behaviors. For example, Nathan said, “Usually,

if someone is annoying me, I just tell him to stop.” David stated, “If someone annoys me and doing something that hurts my feeling, I can just like ‘please stop’, if that does not work, I can keep telling them to stop until they finally do.” Harrison mentioned, “When somebody was hurting my feeling, I can say stop or don’t do that.”

The subcategory other strategies refers to other ways the boys used to solve social conflicts but could not be included in the above mentioned categories. These other strategies include: do thing they like to do (Joshua), help them (David), and yell at them (DK).

**Category: Modeling.** Modeling (20 responses) refer to experiences of seeing or knowing how other people dealt with social conflicts. Two sources emerged within this category: coaches’ modeling and family members’ modeling. Eight boys expressed that their coaches taught/showed/told them how to deal with the situations when others are annoying or hurting their feeling. Francisco stated, “In a lot of things, the coaches took great examples on everything with other people on different activities, like in soccer, the coach show teamwork, and in basketball, they show how to communicate.” Mario stated, “The coach told us how we should handle this situation.” Wymola mentioned, “The coach says if others do something to you, don’t fight back.” Rene said, “Coach told us get out your feeling.”

Within the category of modeling, two boys mentioned that they were influenced by their parents on social conflict resolving. David received a positive influence from his parents on social conflict solving, “It is most at my house because of my mum and dad. We were in the living room; my mum and dad told me don’t use harsh words, yelling

others and stuff.” Trey was influenced negatively on social conflict resolving, “Because I was raised with people who you know they may hurt you. For people who try to hurt me or annoy me, I really don’t get hurt no more, because I don’t think of they think about me, and I think myself with my own opinion.”

**Category: Emotional reactions.** Ten boys mentioned (13 responses) their emotional units when social conflicts occurred. Such reactions included getting angry or getting hurt, being tolerant, and letting it go. For example, DM said, “Sometimes, when someone messes up with me, I get mad at them.” Dennis stated, “Sometimes, people are amazed at me and I get angry and cost them something.” Justin expressed, “If others mess with me a lot, then I’ll be really mad.” Dylan mentioned, “I actually am used to it [others annoys him or hurt his feeling].” Joshua said, “Lots of times, I can’t control it [others annoys him or hurt his feeling].”

**Category: Recognition of potential social conflicts.** Nine boys (12 responses) could identify the potential and current existing of social conflicts. Jacob said, “One person in the camp kept on bothering me because I did not get a shot in basketball.” Francisco admitted, “It is hard to get along with lots of people.” Reese stated, “People do kind of making fun of me sometimes.”

## **Discussion**

The purpose of this study was to examine social self-efficacy, physical activity self-efficacy, and their relations to behaviors, effort, and intention for future PA participation among at-risk boys aged 10-13 years old in a summer sports camp. Data were collected through questionnaires, interviews, and observation. All results are

discussed in regard to the six research questions followed by the implications for practice and future research in the following sections.

**Question One: Can At-Risk Boys Differentiate between Social Self-Efficacy and Physical Activity Self-Efficacy?**

The EFA and CFA results both in pretest and posttest indicated that the at-risk boys were able to differentiate social self-efficacy from physical activity self-efficacy. This result is in contrast to previous work showing that the 11-14 year-old children from Italy (Bandura et al., 1996) and 10-15 year-old children from Hungary and Poland were unable to distinguish these two constructs. Since this study is an initial effort to examine whether social self-efficacy and physical activity self-efficacy are distinguishable among at-risk boys in a summer sports camp, this study cannot give definitive explanations on why this discrepancy exists. Future researchers may examine the possible cultural and context differences on the distinction between social self-efficacy and physical activity self-efficacy.

The ability to differentiate social self-efficacy from physical activity self-efficacy among the at-risk boys in this study is consistent with previous research suggesting that children were able to differentiate some other theoretical constructs such as competence perception and expectancy-related motivation. For example, Eccles, Wigfield, Harold, and Blumenfeld (1993) examined the competence perceptions of four activity domains including math, reading, sports, and instrumental music among 865 first, second, and fourth grade American children 7-10 years of age. They reported that even the first graders were able to distinguish their competence perceptions for the four types of



activities. Xiang et al. (2003) indicated that American children in second and fourth grades were able to tell that their expectancy-related beliefs and subjective task values toward physical education and toward the motor skill of throwing were different constructs. That the boys in this study could differentiate social self-efficacy from physical activity self-efficacy also supports Bandura's (1977, 1997) theoretical assumption that self-efficacy belief is domain-specific, meaning that people's self-efficacy varies across different activity domains.

### **Question Two: What Levels of Social Self-Efficacy and Physical Activity Self-Efficacy Do At-Risk Boys in This Study's Sample Display?**

The descriptive statistics revealed that the at-risk boys in this study endorsed relatively high levels of social self-efficacy and high levels of physical activity self-efficacy in both the pretest and the posttest. This result was supported by the interview data provided by the selected 13 boys. Previous studies, with Caucasian middle-class students as majority participants, also revealed medium to high levels of physical activity self-efficacy (Gao, et al., 2009, 2011). The finding that at-risk boys had high levels of physical activity self-efficacy is encouraging because it indicates their confidence levels were comparable to those of Caucasian middle-class students. The boys in this study as a whole scored above the midpoint of 3.0 in social self-efficacy. Kvarme et al. (2010) also reported the above midpoint social self-efficacy scores among 56 socially withdrawn boys aged 12-13 years old in a solution-focused intervention program conducted within the school health service system.

The boys in this study generally reported higher mean scores of physical activity self-efficacy than social self-efficacy. This is not surprising given that the current research occurred in a summer sports camp where boys engaged in various physical activities. The relatively low levels of social self-efficacy may be related to the teaching styles used in this camp being mainly command style and practice style (Mosston & Ashworth, 1990). In these styles of teaching, coaches made nearly all decisions, and students were required to reproduce predicted performances on cues and feedback provided by the coaches. Though the command and practice styles of teaching are effective in improving boys' sports skills, there is a lacking of emphasis on teamwork (Mosston & Ashworth, 2002). Camp coaches might figure out strategies that promote social self-efficacy development when getting boys engage in physical activities. Such strategies may include the application of reciprocal style of teaching. In this style of teaching, boys can learn tasks in pairs by alternating in the roles of doer, who performs the tasks, and observer who offers feedback to the doer. Social interactions promoted in the reciprocal style of teaching may help improve boys' social skills and enhance their social self-efficacy (Akkuzu, 2014).

### **Question Three: What Is the Relationship Between Social Self-Efficacy and Physical Activity Self-Efficacy?**

Although viewed as distinct constructs, social self-efficacy was found to be significantly positively related to physical activity self-efficacy in the pretest, in the posttest, and across the pretest and posttest. This fairly stable relationship, but small in effect sizes ( $r^2$ s range from .04 to .29), between social self-efficacy and physical activity

self-efficacy may suggest that self-efficacy can be generalized across activities (Bandura, 1977, 1997). Specifically, “when differing tasks require similar sub-skills, judgments of capability to demonstrate the requisite sub-skills should predict the differing outcomes” (Bandura, 1997, p. 18). Pajares (1997) reinforced the significance of such empirical investigations in helping trace the genesis of self-efficacy and possible interconnections. The correlations between social self-efficacy and physical activity self-efficacy observed in the current study may be because both social self-efficacy and physical activity self-efficacy require the sub-skills of communication and cooperating with others when engaging in physical activities.

Based on the nature of the data collected, the significant positive correlations between social self-efficacy and physical activity self-efficacy can be interpreted in two ways. On the one hand, boys who believed themselves having strong physical activity capabilities were more likely to be confident in their abilities to perform well in social interactions. This is in line with previous studies proposing that PE/PA/sports participation could facilitate boys’ social development. For example, Siedentop (1980) suggested PE/PA may serve as useful vehicles for promoting children’s prosocial skills and values. On the other hand, it can be interpreted that boys who believed themselves had strong social capabilities were more likely to be confident to do well in physical activities. This is also not surprising due to the rich social interactions occurring in PE/PA/sports settings (Bailey, 2006).

#### **Question Four: Do At-Risk Boys' Mean Scores of Social Self-Efficacy and Physical Activity Self-Efficacy Change Over the Course of the Summer Sports Camp?**

MANOVA with repeated measures showed no significant change on the mean scores of social self-efficacy and physical activity self-efficacy over the course of the summer sports camp. This result is in line with Kvarme et al. (2010) who examined the effect of a solution-focused program among a group of socially withdrawn children aged 12-13 years old in Norway. They observed an increased level of general self-efficacy (i.e., the belief in one's capabilities to handle difficult or novel tasks in daily lives). However, children's social self-efficacy did not change significantly at the end of this 6-week intervention. Escartí, Gutiérrez, Pascual, and Marín (2010) evaluated the effects of a year-long intervention using Hellison's Teaching Personal and Social Responsibility (TPSR) model in physical education classes. The TPSR model's goal was to teach youth who were at-risk of social exclusion the personal and social skills and responsibilities in sports and life settings. Escartí et al. reported a significant improvement in social self-efficacy at the end of TPSR program among 30 children aged 13-14 years old. In another study, Huang et al. (2012) also observed a significant increase in physical activity self-efficacy at the end of a year-long after-school program that primarily focused on providing children sports opportunities in the hours after school.

Taken together, these results may suggest that children's social self-efficacy improvement is depended on whether the intervention emphasizes social development. This study recommends camp administrator and coaches if possible, to implement the TPSR model to increase at-risk boys' social self-efficacy in the summer sports camp.

Another possible explanation for the non-significant change in social self-efficacy and physical activity self-efficacy may be related to the length of the camp. Escartí et al.'s (2010) and Huang et al.'s (2012) year-long interventions improved children social self-efficacy and physical activity self-efficacy respectively. The three weeks' summer sports camp in this study might not be long enough to bring changes in self-efficacy. If applicable, this study recommends camp administrators to expand the length of the summer sports camp to increase at-risk boys' social self-efficacy and physical activity self-efficacy.

**Question Five: What Are the Predictive Powers of Social Self-Efficacy and Physical Activity Self-Efficacy on Behaviors, Effort, and Intentions?**

Hierarchical regression analyses indicated physical activity self-efficacy in the pretest positively predicted boys' self-reported effort and intention and negatively predicted self-reported disruptive behaviors assessed in the posttest. Pretest social self-efficacy in the pretest did not predict any outcome variables. In the posttest, social self-efficacy was a better predictor than physical activity self-efficacy on boys' self-reported prosocial behavior, but physical activity self-efficacy had more predictive power than social self-efficacy on boys' self-reported effort and intention.

Taken together, it was concluded that social self-efficacy was a stronger predictor than physical activity self-efficacy when predicting prosocial behaviors; whereas physical activity self-efficacy was a stronger predictor than social self-efficacy when predicting effort. These results indicated that boys who were confident making and keeping friends were more likely to exhibit prosocial behaviors such as following

coaches' directions, cooperating, and helping others. Those boys who were confident to do well in physical activities were more likely to put effort and intend to participate in physical activities when the camp was over. The results also provide empirical support for Bandura's (1977, 1997) argument that self-efficacy will best predict the performances that most closely correspond with such beliefs. Pajares (1997) also proposed that "self-efficacy beliefs will differ in predictive power depending on the task they are asked to predict... all this is to say that capabilities assessed and capabilities tested should be similar capabilities" (p. 8).

The chi-square tests of the observation data also confirmed that the boys with high social self-efficacy or physical activity self-efficacy were more likely to engagement in prosocial behaviors. All these results suggest that the two types of self-efficacy are critical to boys' positive outcomes in summer sports camps. Given this finding, camp designers are recommended to include strategies to increase at-risk boys' social self-efficacy and physical activity self-efficacy. The strategies to increase social self-efficacy include: a) the construction of a welcoming and inclusive PA learning environment, b) the inclusion of cooperative games, and c) encouragement for prosocial behaviors. Chase (1998) suggested four strategies to improve physical activity self-efficacy: a) provide opportunities for boys to attain success, b) give timely and sincere feedback on boys' actual performances, c) use the peer teaching strategy to allow boys to be able to model their peer's behaviors, and d) create a pleasant learning climate to reduce children' anxieties during their participation in physical activities.

The hierarchical regression analyses also showed that the dummy coded ethnicity variable significantly predicted boys' self-reported prosocial behavior and disruptive behavior, self-reported effort, coach-reported prosocial behavior and disruptive behavior, and coach-reported effort. Specifically, compared to non-Hispanic boys, Hispanic boys were more likely to demonstrate higher levels of self-and coach-reported prosocial behavior, self-and coach-reported effort, and lower levels of self-and coach-reported disruptive behavior. However, this difference should be interpreted with caution, and no conclusions regarding the mechanisms underlying such difference can be made here, as ethnicity was not a main purpose of the current study.

**Question Six: What Factors Do At-Risk Boys Perceive Contributing to Their Social Self-Efficacy and Physical Activity Self-Efficacy?**

A snapshot of the emerged categories (i.e., the categories emerged from the constant comparison analysis) with their corresponding theoretical categories (i.e., the categories proposed in self-efficacy research) are presented in Table 10. Mastery experience emerged as the largest, based on the unit counts, self-efficacy source across the three interview questions. This finding supports Bandura's (1977, 1997) theorization that performance accomplishment/mastery experience is the most influential source of self-efficacy. The categories of experience within the sources of physical activity self-efficacy and the self-efficacy to make and keep friends both included camp experiences and outside/previous experience. The participation in day-to-day camp activities and the participation in sports/PA at school and home helped boys to be efficacious to do well in

camp activities. The friend-making experience at camp and school helped boys to be confident in their abilities to make and keep friends with others.

The categories “support from others” from the physical activity self-efficacy and the category of “coaches’ support/teaching on friendships” emerged as another important sources of self-efficacy. The support from others included the validation (e.g., “the coaches sometimes say that they are really impressed”), the encouragement (e.g., “I have coaches encourage me to do things well and that just help me a lot”), and the teaching (e.g., “they [coaches] teach us integrity to make friends”) boys received from coaches, friends, and family members, mainly from coaches. These categories supported and refined Bandura’s (1977, 1997) theorization of social/verbal persuasion. They supported Bandura’s (1977) assumption because boys’ replies such as “you can do it” correspond to Bandura’s definition of verbal persuasion as the verbal suggestion about outcome expectancy. They also refined Bandura’s (1977, 1997) theorization because the encouragement and teaching boys received from their coaches also contributed to boys’ self-efficacy. Knowing coaches are present to teach, encourage, and help them when experiencing difficulties, boys would feel more confident that they can do well in camp activities.

Bandura’s (1977, 1997) stated that emotional and physiological status also contributed to the formation of one’s self-efficacy. The “fun/enjoyment” category in physical activity self-efficacy, the “enjoy friendship” category in the self-efficacy to make and keep friends, and the “emotional reactions” category captures boys’ physiological or emotional reactions. Boys’ enjoying camp activities and liking



interacting with friends contributed to their physical activity self-efficacy and the self-efficacy to make and keep friends. The emotional reactions such as getting mad contributed to boys' low self-efficacy in dealing with social conflicts.

Vicarious experience is another source of self-efficacy proposed by Bandura (1977, 1997). Bandura (1977) defined vicarious experience as seeing others perform a task. The category of "modeling" in physical activity self-efficacy and the self-efficacy to deal with social conflicts captured the vicarious experience. Having seen others who were good at sports or having family members who were former campers contributed to some boys' high level of physical activity self-efficacy. Having family members who modeled the correct way to deal with social conflicts could have helped increase self-efficacy dealing with social conflicts. Whereas growing up in a family where social conflicts were not positively modeled could have hindered the improvement of self-efficacy to deal with social conflicts.

The boys also regarded putting effort as a source of physical activity self-efficacy. When asked why they felt confident to do well in camp activities, many boys expressed that they put forth effort in doing camp activities, such as "try to be the best and don't give up" (Rene) and "I play hard and give my best effort" (Jorge). Their reactions follow Nicholls' (1984, 1988) theorization of an undifferentiated conception of ability, i.e., believing that effort increases ability. Differentiated conception of ability, however, defines ability as a fairly stable capability that would not be affected by effort. Lee, Carter, and Xiang (1995) compared kindergartners, first, fourth, and fifth graders' conception of ability and observed that younger children were more likely to equate

harder work with more ability. Xiang and Lee (1998) also found that, among students in 4th, 8th, and 11th grades, the older students were more likely to believe that ability was unaffected by effort. Since the at-risk boys in this study were from fourth to seventh grades, it was possible they still held an undifferentiated conception of ability and regarded putting forth effort equated with the ability.

It is important to note that though effort is often mentioned in Bandura's work, effort was not listed as a source of self-efficacy in his studies (Bandura, 1977, 1997). The term effort was used mainly for two purposes: to explain how self-efficacy predicted casual attributions, and as an outcome variable which could be predicted by self-efficacy. An example of the first usage is "those who perceived themselves to be highly efficacious attributed their failures to insufficient effort, whereas those who regarded themselves as inefficacious ascribed their failures to deficient ability" (Bandura, 1984, p. 233). An example of the second usage is "a strong sense of self-efficacy for goal attainment fosters sustained effort, strong goal commitment, and superior performance" (Bandura, 1984, p. 249).

Besides effort, there are two other elements not listed in Bandura's (1977, 1997) model, but emerged from the interview data, i.e., "personality traits" and "recognition of potential social conflicts". Personality traits refer to the perceptions of one's own and others' characteristics. Such characteristics include "being nice", "liking talking to people", and "not being shy". The category of recognition of potential social conflicts represents the foresight of interpersonal conflicts, i.e., knowing that people are different. Though the "personality traits" is not present in previous research, it is reasonable that

knowing one's and others' characteristic and attributes can contribute to one's social self-efficacy. Voegler-Lee and Kupersmidt (2011), for example, pointed out self-awareness and social awareness were both core competencies of social learning.

In sum, the information obtained from interviews, together with the information obtained from questionnaires and observations, provide a more complete picture on how self-efficacy operates in the summer sports camp setting. The interview data analyses results supported Bandura's (1997) theorization and empirical studies showing that mastery experience is powered source of self-efficacy (Usher & Pajares, 2008). This result implies that it is important for camp coaches to adapt tasks difficulties to boys' ability levels to make the tasks reachable. Bandura's (1997) hypothesized sources of vicarious experience, social persuasion, and the emotional/physiological status were also supported in this study. Thus, camp coaches should value the using of modeling into teaching and value the development of a positive climate where the boys feel safe, welcoming, and supportive. Three new sources for self-efficacy also emerged in this study, i.e., effort for physical activity self-efficacy, personality traits for the self-efficacy to make and keep friends and recognition of potential conflicts when dealing with social conflicts. Therefore, this study also recommends camp coaches to value effort, to emphasize the desirable personality traits and characteristics such as respecting self and others, and to teach boys how to work with people who are different from them.

### **Implications for Practice and Future Research**

As a key construct underlying human endeavor (Bandura, 1997), self-efficacy has been studied extensively in academic and PE settings with Caucasian American

students as majority participants. However, little is known about its utilization in summer sports camp setting among at-risk boys. Results of this study revealed that social self-efficacy and physical activity self-efficacy represented two distinct but correlated constructs. Social self-efficacy and physical activity self-efficacy had different predictive powers on boys' behaviors, effort, and intention for future PA participation.

That the boys were able to distinguish social self-efficacy and physical activity self-efficacy supports Bandura's (1977, 1997) assumption that people's self-efficacy may vary across different domain of activities. This study recommended that follow-up studies are conducted in other settings, such as PE classes. In doing so, the researcher would be able to investigate whether social self-efficacy and physical activity self-efficacy are distinguishable in different contexts.

This study revealed social self-efficacy significantly predicted prosocial behaviors and physical activity self-efficacy significantly predicted prosocial behavior, effort, and intention. Camp coaches need to apply strategies to improve at-risk boys' social self-efficacy and physical activity self-efficacy. To improve boys' social self-efficacy, camp coaches are recommended to apply the reciprocal style of teaching to create more social interaction opportunities to enhance boys' social skills. Camp administrators are also recommended to implement the TPSR model, which has been documented to be effective in improving children's ability to help others and to solve social conflicts (Walsh, 2008). To improve boys' physical activity self-efficacy, camp coaches are recommended to create a positive learning environment where boys feel

comfortable, safe, and engaged, provide construct learning activities that allow boys to experience success, and give constructive, positive, and timely feedback on boys' performances in physical activities.

From the interview data, mastery experience, vicarious experience, social persuasion, emotional/physiological reactions, effort, personality traits, and recognition of potential conflicts were found to be the sources of physical activity self-efficacy and social self-efficacy. Future research could focus on how to take advantage of these sources to increase at-risk boys' social self-efficacy and physical activity self-efficacy so the social and physical benefits of summer sports camps can be maximized.

This study acknowledges several limitations in this study. First, only at-risk boys aged 10-13 years old served as participants. Future research should include females in the examination of social self-efficacy and physical activity self-efficacy in summer sports camps. Another limitation is that this study collected data at two-time points with three weeks apart. As such, future research should utilize a longitudinal design to identify the time point when boys begin to have the ability to distinguish between social self-efficacy and physical activity self-efficacy.

Despite these limitations, this study represents an initial effort to investigate two types of self-efficacy (i.e., social self-efficacy and physical activity self-efficacy) simultaneously in a summer sports camp setting. Another merit of this study is that three types of data collection methods were used to ensure triangulation: questionnaires, interviews, and observations. Including these three types of data in a single study helped provide a complete picture of how social self-efficacy and physical activity self-efficacy

operated in a summer sports camp for at-risk boys. As a result, the findings of this study may improve the understanding of the feature and sources of social self-efficacy and physical activity self-efficacy in PA setting.

### CHAPTER III

### CONCLUSIONS

Summer sports camps play an important role in offering opportunities to promote physically active lifestyles among at-risk boys. These camps can also provide rich opportunities for social interactions and thus enhance their social skills. However, whether at-risk boys can acquire PA skills and improve their social competence is largely determined by their social self-efficacy and physical activity self-efficacy. Therefore, this study is designed to examine social self-efficacy, physical activity self-efficacy, and their relations to at-risk boys' behaviors, effort, and intention in a summer sports camp. The importance of this study is summarized below.

First, this study represents the first attempt to examine whether at-risk boys can distinguish social self-efficacy from physical activity self-efficacy in a summer sports camp setting. Social self-efficacy and physical activity self-efficacy were found to be two distinct but positively correlated constructs. The finding supports Bandura's theoretical assumption that self-efficacy may vary across domains, but also can be generalized between domains that require similar sub-skills.

Second, this study represents the first attempt to describe the levels of at-risk boys' social self-efficacy and physical activity self-efficacy. The boys in this study reported above midpoint scores of social self-efficacy and physical activity self-efficacy. That boys' social self-efficacy was significantly lower than their physical activity self-

efficacy suggests camp coaches to implement strategies to improve at-risk boys' social self-efficacy.

Third, this study established positive links between physical activity self-efficacy and prosocial behaviors, effort, and intention. These established links reinforce the view that enhanced physical activity self-efficacy is important for promoting at-risk boys' positive outcomes in physical activity settings.

Fourth, this study is one of the very few studies focusing on the domain of social development in summer sports camps. The finding that social self-efficacy significantly predicted prosocial behaviors suggest that more emphasis should be paid to develop at-risk boys' social self-efficacy in summer sports camps. One such way is that summer sports camps must explicitly teach and promote social skills (Vidoni & Ulman, 2012), which in turn may result in enhanced social self-efficacy.

Last, this study is the first study examining the sources of two types of self-efficacy from a qualitative perspective. The comparison between social self-efficacy's and physical activity self-efficacy's emerged categories enhanced the understanding of the similarities and differences on the sources of self-efficacy across social and physical domains. The comparison between emerged categories and theoretical categories enabled a clearer picture of how this study supported and refined Bandura's (1977, 1997) theorization of the sources of self-efficacy.



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APPENDIX A

ASSENT FORM-BOYS

**TEXAS A&M UNIVERSITY HUMAN SUBJECTS PROTECTION PROGRAM MINOR'S  
ASSENT FORM**

Version Date: 09-01-12

Page 1 of 1

Project Title: Children's Social and Physical Self-Efficacy in A Summer Camp

You are being asked to join a research study. A research study is a science project that is trying to answer a question. This research project is trying to understand your perceptions about participating in activities at this camp. To do this, we will ask you to fill out two questionnaires, one at the beginning of camp and the other at the end of camp. Each questionnaire will take you no more than 20 minutes to complete. You will also be videotaped for three sections between week 2 and week 3. Finally, you may be interviewed for no more than 15 minutes about your thoughts and feelings toward camp activities. Interview means you will be asked to answer several questions in person. What you tell me during the interview will be recorded.

You do not have to be in this research study and you can stop at any time. If you have any questions, you can talk to your coach or the person talking to you about this form.

If you are willing to volunteer for this research, please sign below. If not, please leave it blank.

Minor's Name \_\_\_\_\_ Date \_\_\_\_\_

Presenter's Signature \_\_\_\_\_ Date \_\_\_\_\_

## APPENDIX B

### CONSENT FORM-COACHES

#### **TEXAS A&M UNIVERSITY HUMAN SUBJECTS PROTECTION PROGRAM CONSENT FORM**

Version Date: April 30, 2012

Page 1 of 2

Project Title: **Children's Social and Physical Self-Efficacy in A Summer Camp**

You are invited to take part in a research study being conducted by Texas A&M University researchers. The information in this form is provided to help you decide whether or not to take part. If you decide to take part in the study, you will be asked to sign this consent form. If you decide you do not want to participate, there will be no penalty to you, and you will not lose any benefits you normally would have.

#### **Why Is This Study Being Done?**

The purpose of this study is to examine children's social self-efficacy (i.e. individual's beliefs in his or her capabilities to form and maintain social relationships, work cooperatively with others, and manage interpersonal conflicts), physical self-efficacy (i.e. individual's beliefs about his or her capabilities to learn and perform physical activities) and their relations with children's participations in the camp.

#### **Why Am I Being Asked To Be In This Study?**

You are being asked to be in this study because you are coaches of the camp in the summer of 2012. You are recruited to provide assessment of participating boys' social behaviors.

#### **How Many People Will Be Asked To Be In This Study?**

Participants in this study include 100 boys enrolled in the summer of the camp and their 10 coaches.

#### **What Will I Be Asked To Do In This Study?**

During the last week of camp, you will be asked to assess participating boys' social behaviors during their participation in the camp using the Boys' Behaviors-Coach Rating Scale. This may take you about 30-40 minutes to complete the assessments of all your boys.

#### **Are There Any Risks To Me?**

The things that you will be doing are no greater than risks than you would come across in everyday life.

#### **Will There Be Any Costs To Me?**

Aside from your time, there are no costs for taking part in the study.

#### **Will I Be Paid To Be In This Study?**

You will not be paid for being in this study.

**Will Information From This Study Be Kept Private?**

Yes. Information from this study will be kept private. No identifiers linking you and participating boys to this study will be included in any sort of report that might be published. Research records will be stored securely and only the principal investigator and her research team will have access to the records.

**Who may I Contact for More Information?**

You may contact the Principal Investigator, Dr. Ping Xiang, to tell her about a concern or complaint about this research at 979-845-1668 or ping @hlkn.tamu.edu. You may also contact Dr. Michael Thornton at 979-845-4558 or mthornton@hlkn.tamu.edu.

For questions about your rights as a research participant; or if you have questions, complaints, or concerns about the research, you may call the Texas A&M University Human Subjects

Protection Program office at (979) 458-4067 or [irb@tamu.edu](mailto:irb@tamu.edu).

**What if I Change My Mind About Participating?**

This research is voluntary and you have the choice whether or not to be in this research study. You may decide to not begin or to stop participating at any time. If you choose not to be in this study or stop being in the study, there will be no effect on your relationship with the camp.

**STATEMENT OF CONSENT**

I agree to be in this study and know that I am not giving up any legal rights by signing this form. The procedures, risks, and benefits have been explained to me, and my questions have been answered. I know that new information about this research study will be provided to me as it becomes available and that the researcher will tell me if I must be removed from the study. A copy of this entire consent form will be given to me.

Participant’s Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_ Date \_\_\_\_\_

**INVESTIGATOR'S AFFIDAVIT:**

Either I have or my agent has carefully explained to the participant the nature of the above project. I hereby certify that to the best of my knowledge the person who signed this consent form was informed of the nature, demands, benefits, and risks involved in his/her participation.

Signature of Presenter \_\_\_\_\_ Date \_\_\_\_\_

Printed Name \_\_\_\_\_ Date \_\_\_\_\_

## APPENDIX C

### PARENTAL PERMISSION FORM

#### TEXAS A&M UNIVERSITY HUMAN SUBJECTS PROTECTION PROGRAM

#### PARENTAL PERMISSION FORM

Version Date: April 30, 2012 Page 1 of 3

Project Title: **Children's Social and Physical Self-Efficacy in A Summer Camp**

Your child is invited to take part in a research study being conducted by Texas A&M University researchers. The information in this form is provided to help you and your child decide whether or not to take part. If you decide to allow your child to take part in the study, you will be asked to sign this permission form. If you decide you do not want your child to participate, there will be no penalty to you or your child, and your child will not lose any benefits they normally would have.

#### **Why Is This Study Being Done?**

The purpose of this study is to examine children's social self-efficacy (i.e. individual's beliefs in his or her capabilities to form and maintain social relationships, work cooperatively with others, and manage interpersonal conflicts), physical self-efficacy (i.e. individual's beliefs about his or her capabilities to learn and perform physical activities) and their relations with children's participation in the camp.

#### **Why is My Child Being Asked to Be in This Study?**

Your child is being asked to be in this study because your child will be enrolled in the camp in the summer of 2012.

#### **How Many People Will Be Asked To Be In This Study?**

Participants in this study include 100 boys enrolled in the camp in the summer of 2012 and their 10 coaches.

#### **What Are the Alternatives to being in this study?**

The alternative to being in the study is not to participate. Another activity will be given if your child chooses not to participate.

#### **What Will My Child Be Asked To Do In This Study?**

Your child will be asked to, during week 1 of camp, fill out the questionnaire titled Boys' Perceptions about Participation in Camp Activities-Pretest regarding his biographical information as well as his social and physical self-efficacy. This survey has 22 items and will take him about 10 minutes to complete. During week 2 or week 3 of camp, your child may be selected and interviewed for about 15 minutes regarding his



perceptions about what contributes to his social and physical self-efficacy. During week 3, the last week of camp, your child will be asked to complete the questionnaire titled "Boys' Perceptions about Participation in Camp Activities-Posttest" which assess children's social and physical self-efficacy, social behaviors, self-reported effort and physical activity intentions. This questionnaire has 34 items and will take him about 20 minutes to complete. Finally, three of the sections that your child participates in will be videotaped between week 2 and week 3. His social behaviors displayed in these sections will be coded and analyzed.

**Will Photos, Video or Audio Recordings Be Made Of My Child during the Study?**

The researchers will make an audio recording during interviews and video recording during three selected physical activity sections so that children's units and behaviors can be coded and analyzed later. If you and your child do not give permission for the audio and video recording to be obtained, he cannot participate in this study.

**Are There Any Risks To My Child?**

The things that your child will be doing are no greater than risks than your child would come across in everyday life. Your child does not have to answer anything he does not want to.

**Will There Be Any Costs To My Child?**

Aside from their time, there are no costs for taking part in the study.

**Will My Child Be Paid To Be In This Study?**

Your child will not be paid for being in this study.

**Will Information From This Study Be Kept Private?**

Yes. Information from this study will be kept private. No identifiers linking your child to this study will be included in any sort of report that might be published. Research records will be stored securely and only the principal investigator and her research team will have access to the records.

**Who may I Contact for More Information?**

You may contact the Principal Investigator, Dr. Ping Xiang, to tell her about a concern or complaint about this research at 979-845-1668 or [ping@hlkn.tamu.edu](mailto:ping@hlkn.tamu.edu). You may also contact the Dr. Michael Thornton at 979-845-4558 or [mthornton@hlkn.tamu.edu](mailto:mthornton@hlkn.tamu.edu). For questions about your child's rights as a research participant; or if you have questions, complaints, or concerns about the research, you may call the Texas A&M University Human Subjects Protection Program office at (979) 458-4067 or [irb@tamu.edu](mailto:irb@tamu.edu).

**What if I Change My Mind About Participating?**

This research is voluntary and you have the choice whether or not to allow your child to be in this research study. Your child may decide to not begin or to stop participating at

any time. If he chooses not to be in this study or stop being in the study, there will be no effect on his relationship with the camp.

**STATEMENT OF CONSENT**

The procedures, risks, and benefits of this study have been told to me and I agree to allow my child to be in this study. My questions have been answered. I may ask more questions whenever I want. I do not give up any of my child's or my legal rights by signing this form. A copy of this consent form will be given to me.

\_\_\_\_\_  
Child's Name

\_\_\_\_\_  
Parent/Legal Guardian Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Parent/Legal Guardian Printed Name

\_\_\_\_\_  
Date

**INVESTIGATOR'S AFFIDAVIT:**

Either I have or my agent has carefully explained to the parent the nature of the above project. I hereby certify that to the best of my knowledge the person who signed this consent form was informed of the nature, demands, benefits, and risks involved in his/her participation.

\_\_\_\_\_  
Signature of Presenter

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Date

APPENDIX D

BOYS' PERCEPTION OF PHYSICAL ACTIVITIES (PRETEST)

• Your name: \_\_\_\_\_ (first) \_\_\_\_\_ (last)

• Date of birth: \_\_\_\_\_ (month) \_\_\_\_\_ (day) \_\_\_\_\_ (year)

• What grade were you in before camp? (check one)

4<sup>th</sup> \_\_\_\_\_

5<sup>th</sup> \_\_\_\_\_

6<sup>th</sup> \_\_\_\_\_

7<sup>th</sup> \_\_\_\_\_

• I am (check one) Caucasian-American \_\_\_\_\_

African-American \_\_\_\_\_

Hispanic-American \_\_\_\_\_

Asian-American \_\_\_\_\_

Other \_\_\_\_\_

• Do you participate in physical activities outside of school (e.g., play basketball, running, or ride your bike)?

Yes / No

If yes, please write down below what kind of activities

**Direction:** Please answer each question truthfully. **Circle one number only on each statement.** There is no right or wrong answer. If you have questions, please feel free to ask me.

**1. In my physical activity sections at camp, I have the ability to...**

	Not		Sometimes		Very
	at all		true		true
(a) Do well.	1	2	3	4	5
(b) Make and keep friends easily.	1	2	3	4	5
(c) Perform well.	1	2	3	4	5
(d) Succeed if I do my best.	1	2	3	4	5
(e) Learn skills well.	1	2	3	4	5
(f) Deal with situations where others are	1	2	3	4	5
(g) Stand up for myself when I feel I am	1	2	3	4	5
(h) Learn new knowledge needed to do	1	2	3	4	5
(i) Carry on conversations with others.	1	2	3	4	5
(j) Express my opinions clearly.	1	2	3	4	5
(k) Deal with the stress.	1	2	3	4	5

## APPENDIX E

### BOYS' PERCEPTION OF PHYSICAL ACTIVITIES (POSTTEST)

**Direction:** Please answer each question truthfully. **Circle one number only on each statement.** There is no right or wrong answer. If you have questions, please feel free to ask me.

**1. In my physical activity sections at camp, I have the ability to...**

	Not at all true	1	2	Sometimes true	3	4	Very true	5
(a) Do well.	1	2	3	4	5			
(b) Make and keep friends	1	2	3	4	5			
(c) Perform well.	1	2	3	4	5			
(d) Succeed if I do my best.	1	2	3	4	5			
(e) Learn skills well.	1	2	3	4	5			
(f) Deal with situations where	1	2	3	4	5			
(g) Stand up for myself when I	1	2	3	4	5			
(h) Learn new knowledge	1	2	3	4	5			
(i) Carry on conversations with	1	2	3	4	5			
(j) Express my opinions clearly.	1	2	3	4	5			
(k) Deal with the stress.	1	2	3	4	5			

**2. In my physical activity sections at camp,**

	Not like me	1	Little like	2	Sort of like me	3	Like me	4	Very much like me	5
a. I always followed my coach's directions.	1	2	3	4	5					
b. I put a lot of effort.	1	2	3	4	5					
c. I often helped others.	1	2	3	4	5					
d. I worked very hard.	1	2	3	4	5					
e. I cooperated well with others.	1	2	3	4	5					

f.	I sometimes did not pay attention to my coach.	1	2	3	4	5
g.	I sometimes talked with my friends while my coach is	1	2	3	4	5
h.	I sometimes did not line up correctly.	1	2	3	4	5
i.	I often said nice words to others for their good performance and	1	2	3	4	5
j.	I always paid attention to my coach.	1	2	3	4	5
k.	I did my best even if I didn't like what we were doing.	1	2	3	4	5
l.	I often expressed my ideas and opinions to others.	1	2	3	4	5
m.	I sometimes moved slowly on purpose.	1	2	3	4	5
n.	I sometimes made fun of others.	1	2	3	4	5

**3. When the camp is over and I get home, during my free time, I will...**

	Not at all true	Not true	No idea	True	Very true
a.	1	2	3	4	5
b.	1	2	3	4	5
c.	1	2	3	4	5

## APPENDIX F

### BOYS' BEHAVIORS-COACH RATING SCALE

We are interested in your perceptions about boys' behaviors during their participation in physical activity sections at camp. Using the scale below, please indicate to what extent each of the following items is true for \_\_\_\_\_ (boy's name). There is no right or wrong answer. If you have questions, please feel free to ask Sue.

**In the physical activity sections at camp, \_\_\_\_\_ (boy's name)...**

		Not like him	Little like him	Sort of like him	Like him	Very much like him
1	Always followed my directions.	1	2	3	4	5
2	Often helped others.	1	2	3	4	5
3	Cooperated well with others.	1	2	3	4	5
4	Sometimes did not pay attention to me.	1	2	3	4	5
5	Sometimes talked with his friends while I was talking.	1	2	3	4	5
6	Sometimes did not line up right.	1	2	3	4	5
7	Often said nice words to others for their good performance and behaviors.	1	2	3	4	5
8	Often expressed his ideas and opinions to others.	1	2	3	4	5
9	Sometimes moved slowly on purpose.	1	2	3	4	5
10	Sometimes made fun of others.	1	2	3	4	5

APPENDIX G

BOYS' BEHAVIOR OBSERVATION FORM

Instructor \_\_\_\_\_ Date \_\_\_\_\_ Activity \_\_\_\_\_ Observer \_\_\_\_\_

Targeted Student \_\_\_\_\_ Period \_\_\_\_\_

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<b><i>1. Prosocial Behaviors</i></b>																				
Follow coach's directions																				
Cooperate with others																				
Help others																				
Congratulate/compliment/ acceptance																				
Express ideas and opinions																				
<b><i>2. Disruptive Behaviors</i></b>																				
Doesn't pay attention																				
Talk with others while the coach is speaking																				
Make fun of other students																				
Doesn't line up correctly																				
Move slowly on purpose																				



## APPENDIX H

### BOYS' BEHAVIOR OBSERVATION MANUAL

This instrument is designed to record the kinds and frequencies of boys' behaviors during camp activities. There are two sections: positive behaviors and disruptive behaviors. Each component includes several subsections of behaviors.

#### **Instructions**

Each "block" represents a 15-second time span. During the 15 seconds, each time one of the behaviors in the categories of positive and disruptive behaviors is observed, a tally is made. At the end of the fifteen seconds, the recorder moves over to time segment two and repeats the same process.

Note: When the target child cannot be observed during a specific time segment, leave that time segment blank.

#### **1. Prosocial Behaviors**

This section focuses on behaviors that are desirable and meet coach's expectations.

- **Helping others.** Helping others refers to children's actions that give assistance or support to others. E.g., helping partner get blindfolded, helping coach distribute or collect back equipment, helping peers gain knowledge or improve skills, etc.
- **Follow coach's directions.** Follow coach's directions are coded when the observed child is doing what he is instructed to do (except those behaviors that fall into other subsections of "Positive Behaviors". No double coding is needed when using this observation instrument. For example, regardless a child helps others as instructed by

coach or doing it voluntarily, a tally will only be made under “Helping others”). E.g., listening attentively; on-task work.

- **Cooperate with others.** Cooperate with others is coded when the observed child act or work with another or others during activities to achieve activity goals. E.g., executing a task with another child; working together toward a common goal, etc.
- **Congratulate/compliment/acceptance of others.** These behaviors are coded when the observed child congratulates others, encourages others or offers positive feedback. E.g., have five, thumbs up, pat on the back, clapping hands following a good performance, “good job”, “come on” “you can do it” etc.
- **Express ideas and opinions related to activities.** Express ideas and opinions to others related to activities are coded when the observed child raises or answer questions or express his thoughts related to activities.

## 2. **Disruptive Behaviors**

This section focuses on children’s behaviors that disturb coaches or peers.

- **Talk with others while the coach is speaking.** These behaviors refers to that a child says things to peers while the coach is talking to the class or the child’s group.
- **Make fun of other students.** These behaviors are coded when the observed child teases others in an unkind way. E.g., mimic other’s tone in an aggravated way.
- **Doesn’t pay attention.** These behaviors are coded when the observed child engages in any motor activity not related to assigned activity (e.g., playing with clothing or shoes), talks things that is not related to the current activity with peers when he is supposed to engage in activities, or he is passively not orienting toward the instructed

activity for at least 3 s consecutively (e.g., looking around). “Doesn’t pay attention” only capture those undesirable behaviors that cannot be categorized under other subsections of “Disruptive Behaviors”. For example, when the observed child teases others in an unkind way, a tally will only be made under “make fun of other students”.

- **Doesn’t line up correctly.** These behaviors occur when the observed child does not form up as instructed.
- **Move slowly on purpose.** These behaviors occurs when the observed child demonstrate low engagement.

APPENDIX I

INTERVIEW PROTOCOL

I am \_\_. I am talking with \_\_\_\_ (boy's name). \_\_\_\_, how old are you? Today is \_\_\_\_ (date). We are going to talk about your feelings toward participating in camp activities and how you make friends here.

**Physical Self-Efficacy Beliefs**

- 1) Did you have good time in this camp?
- 2) Please tell me how true this statement is for you.

“In my physical activity sections at camp, I have the ability to do well.”

Not at all true	Little true	Sort of true	True	Very true
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

- 3) What made you feel such confident? (How do you know you are good/bad at \_\_\_\_?) Are there any other reasons?
- 4) What experiences did you have in this camp that helped you feel confident?

**Social Self-Efficacy Beliefs**

*1. Peer relationships*

- (1) Have you made new friends in this camp? Please name two or three for me. You did such a great job!
- (2) Please tell me how true this statement is for you.

“In my activity sections at camp, I have the ability to make and keep friends easily.”

Not at all true	Little true	Sort of true	True	Very true
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

- (3) What made you feel such confident? Are there any other reasons?
- (4) What experiences did you have in this camp that helped you feel confident?

2. *Dealing with interpersonal conflicts*

- 1) Please tell me how true this statement is for you.

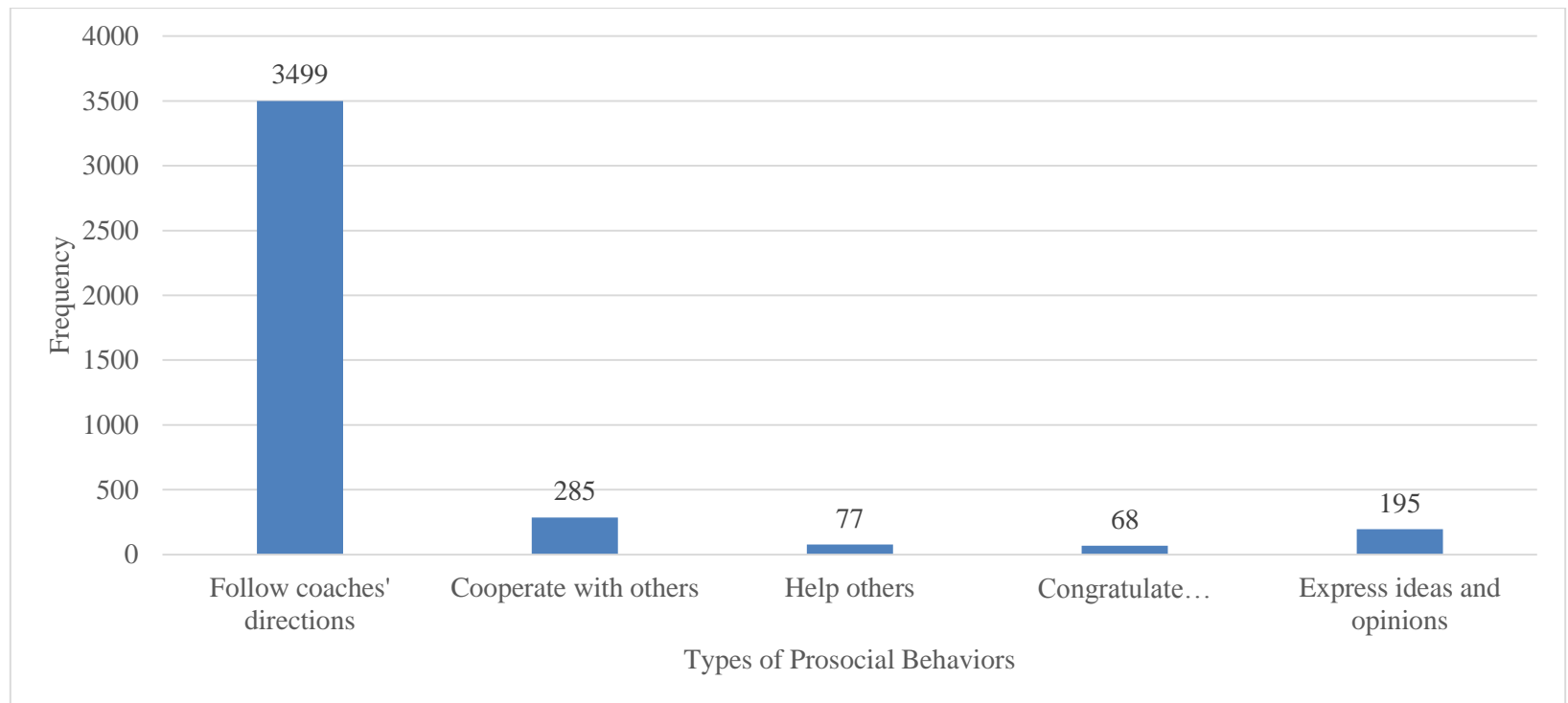
“In my activity sections at camp, I have the ability to deal with situations where others are annoying me or hurting my feelings.”

Not at all true	Little true	Sort of true	True	Very true
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>

- 2) What made you feel such confident? Any other reasons?
- 3) What experiences did you have in this camp that helped you feel confident?

## APPENDIX J

### FIGURES



*Figure 1.* Frequency of observed prosocial behaviors.

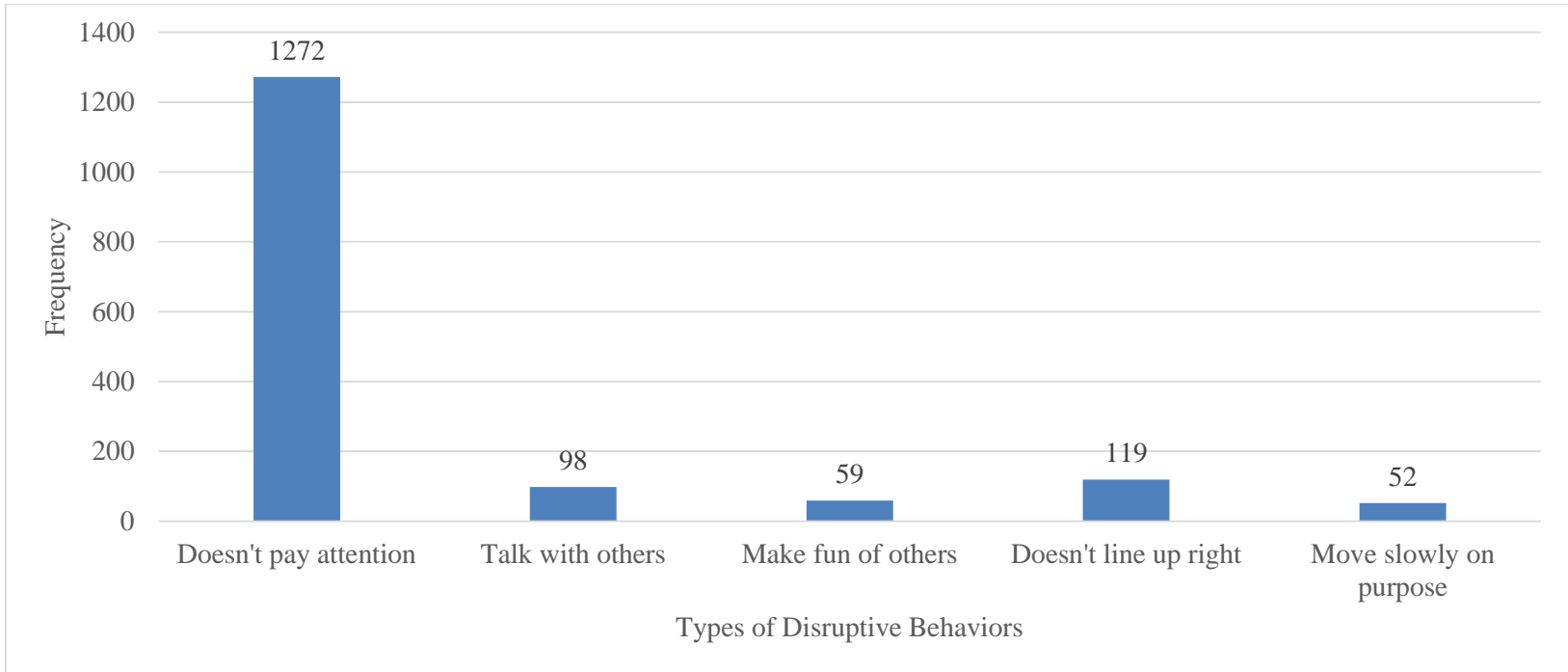


Figure 2. Frequency of observed disruptive behaviors.

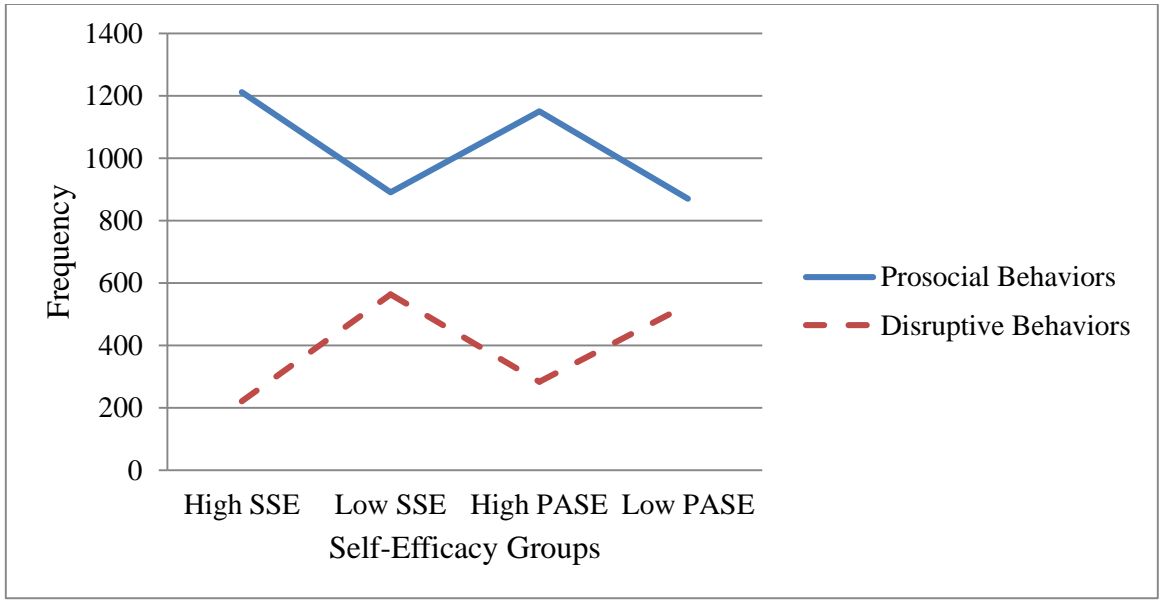


Figure 3. Trends of observed behaviors by self-efficacy groups.



APPENDIX K

TABLES

Table 1

*EFA Factor Structure and Item Loadings for Pretest Self-Efficacy*

Items	Factor 1	Factor 2
(a) To do well.	.84	
(c) To perform well.	.79	
(h) To learn new knowledge needed to do well.	.73	
(e) To learn skills well.	.73	
(d) To succeed if I do my best.	.55	
(b) To make and keep friends easily.		.73
(i) To carry on conversations with others.		.73
(j) To express my opinions clearly.		.66
(g) To stand up for myself when I feel I am not being treated fairly.		.58
(f) To deal with situations where others are annoying me or hurting my feelings.		.51
Eigenvalue	3.17	1.73
% variance	31.66	17.26

*Note.*  $N = 97$ .

Table 2

*EFA Factor Structure and Item Loadings for Posttest Self-Efficacy*

Items	Factor 1	Factor 2
(a) To do well.	.92	
(c) To perform well.	.92	
(e) To learn skills well.	.74	
(h) To learn new knowledge needed to do well.	.68	
(d) To succeed if I do my best.	.55	
(i) To carry on conversations with others.		.86
(j) To express my opinions clearly.		.80
(g) To stand up for myself when I feel I am not being treated fairly.		.57
(b) To make and keep friends easily		.54
(f) To deal with situations where others are annoying me or hurting my feelings.		.32
Eigenvalue	4.17	1.28
% variance	41.70	12.80

*Note.*  $N = 97$ .

Table 3

*Descriptive Statistics*

	<i>M</i>	<i>SD</i>	Range
Social self-efficacy			
Pretest	3.75	.64	1.60 – 5.00
Posttest	3.79	.68	1.40 - 5.00
Physical activity self-efficacy			
Pretest	4.18	.55	2.40 - 5.00
Posttest	4.26	.56	1.80 - 5.00
Self-reported behaviors			
Prosocial behaviors	3.70	.69	1.25 - 5.00
Disruptive behaviors	2.60	.97	1.00 - 5.00
Coach-reported behaviors			
Prosocial behaviors	3.49	1.05	1.00 - 5.00
Disruptive behaviors	2.77	1.23	1.00 - 5.00
Self-reported effort	3.86	.79	1.00 - 5.00
Coach-reported effort	3.56	1.15	1.00 - 5.00
Self-reported intention	3.53	1.08	1.00 - 5.00

*Note.*  $N = 97$ .

Table 4

*Bivariate Correlations among Variables*

	1	2	3	4	5	6	7	8	9	10	11
1. SSE (pre)	1										
2. SSE (post)	<b>.46**</b>	1									
3. PASE (pre)	<b>.28**</b>	<b>.22*</b>	1								
4. PASE (post)	<b>.20*</b>	<b>.54**</b>	<b>.61**</b>	1							
5. S_PB	.09	<b>.45**</b>	.13	<b>.43**</b>	1						
6. S_DB	.02	-.14	-.20*	-.24*	-.29**	1					
7. S_Eff	.11	<b>.40**</b>	<b>.28**</b>	<b>.50**</b>	<b>.61**</b>	-.49**	1				
8. S_Int	.10	.19	<b>.41**</b>	<b>.41**</b>	<b>.30**</b>	-.17	<b>.30**</b>	1			
9. C_PB	.14	<b>.22*</b>	.11	<b>.24*</b>	<b>.36**</b>	-.43**	<b>.38**</b>	<b>.28**</b>	1		
10. C_DB	-.11	-.06	-.07	-.06	-.36**	<b>.47**</b>	-.30**	-.11	-.78**	1	
11. C_Eff	.10	<b>.23*</b>	.11	<b>.27**</b>	<b>.38**</b>	-.50**	<b>.39**</b>	<b>.24*</b>	<b>.92**</b>	-.76**	1

*Note.*  $N = 97$ ; Cronbach alpha coefficients are provided along the diagonal; The relationships between social self-efficacy and physical activity self-efficacy were bolded; \*  $p < .01$ , \*\*  $p < .01$ ; SSE (pre) = pretest social self-efficacy; SSE (post) = posttest social self-efficacy; PASE (pre) = pretest physical activity self-efficacy; PASE (post) = posttest physical activity self-efficacy; S\_PB = self-reported prosocial behavior; S\_DB = self-reported disruptive behavior; S\_Eff = self-reported effort; S\_Int = intention for future physical activity participation; C\_PB = coach-reported prosocial behavior; C\_DB = coach-reported disruptive behavior; C\_Eff = coach-reported effort.

Table 5

*Hierarchical Regression Results-Pretest Self-Efficacy as Predictors*

Variable	$R^2$	$\Delta R^2$	$\beta$	$t$
<i>Self-Reported Prosocial Behavior</i>				
Step 1	.04			
Ethnicity			.21	2.1*
Step 2	.07	.03		
Ethnicity			.03	2.26*
SSE (pre)			.06	0.54
PASE (pre)			.14	1.35
<i>Self-Reported Disruptive Behavior</i>				
Step 1	.11			
Ethnicity			-.34	-3.49**
Step 2	.17	.06		
Ethnicity			-.36	-3.85**
SSE (pre)			.09	0.88
PASE (pre)			-.27	-2.69**
<i>Self-Reported Effort</i>				
Step 1	.07			
Ethnicity			.26	2.58*
Step 2	.16	.09		
Ethnicity			.29	3.01**
SSE (pre)			.03	0.24
PASE (pre)			.30	3.01**

Note.  $N = 97$ ; \*  $p < .01$ , \*\*  $p < .01$

Table 5 continued

	Variable	$R^2$	$\Delta R^2$	$\beta$	$t$
<i>Intention</i>					
Step 1		.01			
Step 2	Ethnicity	.17	.17		
	Ethnicity			-.07	-0.66
	SSE (pre)			-.02	-0.19
	PASE (pre)			.42	4.20**
<i>Coach-Reported Prosocial Behavior</i>					
Step 1		.08			
Step 2	Ethnicity	.11	.03	.29	2.90**
	Ethnicity			.30	3.04**
	SSE (pre)			.12	1.16
	PASE (pre)			.10	1.01
<i>Coach-Reported Disruptive Behavior</i>					
Step 1		.05			
Step 2	Ethnicity	.07	.02	-.22	-2.18*
	Ethnicity			-.23	-2.26*
	SSE (pre)			-.09	-0.88
	PASE (pre)			-.07	-.69
<i>Coach-Reported Effort</i>					
Step 1		.07			
Step 2	Ethnicity	.09	.02	0.26	2.64*
	Ethnicity			0.28	2.77**
	SSE (pre)			0.07	0.64
	PASE (pre)			0.12	1.13

Table 6

*Hierarchical Regression Results-Posttest Self-Efficacy as Predictors*

Variable	$R^2$	$\Delta R^2$	$\beta$	$t$
<b>Self-Reported Prosocial Behavior</b>				
Step 1	.04			
Ethnicity			.21	2.10*
Step 2	.25	.23		
Ethnicity			.13	1.46
SSE (post)			.30	2.84**
PASE (post)			.25	2.37*
<b>Self-Reported Disruptive Behavior</b>				
Step 1	.11			
Ethnicity			-.34	-3.49**
Step 2	.15	.04		
Ethnicity			-.31	-.32**
SSE (post)			.02	0.16
PASE (post)			-.21	-1.81
<b>Self-Reported Effort</b>				
Step 1	.07			
Ethnicity			.26	2.58
Step 2	.30	.24		
Ethnicity			.17	1.98
SSE (post)			.17	1.63
PASE (post)			.38	3.39**

Table 6 continued

	Variable	$R^2$	$\Delta R^2$	$\beta$	$t$
<i>Intention</i>					
Step 1		.01			
	Ethnicity			-.07	0.66
Step 2		.18	.18		
	Ethnicity			-.13	-1.38
	SSE (post)			-.03	-0.3
	PASE (post)			.45	3.98**
<i>Coach-Reported Prosocial Behavior</i>					
Step 1		.08			
	Ethnicity			.29	2.9**
Step 2		.13	.05		
	Ethnicity			.25	2.54*
	SSE (post)			.10	0.9
	PASE (post)			.14	1.24
<i>Coach-Reported Disruptive Behavior</i>					
Step 1		.05			
	Ethnicity			-.22	-2.18*
Step 2		.05	.00		
	Ethnicity			-.21	2.07*
	SSE (post)			-.02	-0.17
	PASE (post)			-.02	-.15
<i>Coach-Reported Effort</i>					
Step 1		0.07			
	Ethnicity			0.26	2.64*
Step 2		0.13	0.06		
	Ethnicity			0.22	2.24*
	SSE (post)			0.11	0.91
	PASE (post)			0.17	1.5



Table 7

*Frequencies and Percentages of Observed Behaviors*

	Total Frequency	High SSE	Low SSE	High PASE	Low PASE
<b>Prosocial Behaviors</b>					
Follow coaches' directions	3499 (84.84%)	953 (78.63%)	779 (87.43%)	966 (83.93%)	801 (92.07%)
Cooperate with others	285 (6.91%)	121 (9.98%)	45 (5.05%)	80 (6.95%)	39 (4.48%)
Help others	77 (1.87%)	56 (4.62%)	3 (.34%)	18 (1.56%)	0 (.00%)
Congratulate/complement/accept others	68 (1.65%)	28 (2.31%)	11 (1.23%)	26 (2.26%)	3 (.34%)
Express ideas and opinions	195 (4.73%)	54 (4.46%)	53 (5.95%)	61 (5.30%)	27 (3.10%)
Total	4124	1212	891	1151	870
<b>Disruptive Behaviors</b>					
Doesn't pay attention	1272 (79.50%)	184 (83.26%)	437 (77.48%)	219 (77.11%)	432 (81.36%)
Talk with others while coach is speaking	98 (6.13%)	9 (4.07%)	39 (6.91%)	26 (9.15%)	24 (4.52%)
Make fun of others	59 (3.69%)	12 (5.43%)	20 (3.55%)	21 (7.39%)	6 (1.13%)
Doesn't line up correctly	119 (7.44%)	9 (4.07%)	41 (7.27%)	12 (4.23%)	57 (10.73%)
Move slowly on purpose	52 (3.25%)	7 (3.17%)	27 (4.79%)	6 (2.11%)	12 (2.26%)
Total	1600	221	564	284	531

Table 8

*Contingency Tables of Self-Efficacy and Observed Behaviors*

		Prosocial Behavior	Disruptive Behavior
Social Self-Efficacy	High SSE	1213	222
	Low SSE	890	563
Physical Activity Self-Efficacy	High PASE	1151	284
	Low PASE	870	531

Table 9

*Categories, Subcategories, and Quotes of the Sources of Self-Efficacy*

<b>Sources of Physical Activity Self-Efficacy</b>	<b>Experiences</b>	Outside experiences
		<i>"When I was little, I started to play soccer." (Allen)</i>
		<i>"For all the activities we do here such as swimming, basketball, soccer, I actually do at home." (Micale)</i>
		Camp experiences
		<i>"Just everything we do in general every help a lot." (Francisco)</i>
		<i>"The longer you stay here at the camp, you get to know more about the camp." (Kennedy)</i>
	<b>Support from Others</b>	Support from Coaches
		<i>"I have coaches encourage me to do things well and that just help me a lot." (David)</i>
		<i>"The coaches sometimes say that they are really impressed." (Hulio)</i>
		Support from friends/family members
		<i>"A lot of confidence comes from my friends, because they help me and support me." (Victor)</i>
	<i>"People around me tell me that I am good at sports." (Gavin)</i>	
	<b>Effort</b>	<i>"I play hard and give my best effort." (Jorge)</i>
		<i>"I try hard on everything." (Mario)</i>
	<b>Fun/Enjoyment</b>	<i>"I have been doing the fun stuff here [at camp]." (Nathan)</i>
		<i>"I really like most of the games I played." (Abisai)</i>
	<b>Modeling</b>	<i>"I see some people that are really good on it [soccer]." (Daniel)</i>
		<i>And I came here before when I visited my brother here [camp] every now and then." (Trey)</i>

Table 9 continued

<b>Sources of Self-Efficacy to Make and Keep Friends</b>	<b>Experience</b>	Camp experience
		<i>"We usually just make friends and start to play. Like basketball, we play together."</i> (Vallen)
		<i>"Meet new people, start to get along, and know each other when playing sports."</i> (Micael)
		Previous experience
		<i>"My experiences of making friends are mostly at school."</i> (David)
		<i>"I have a bunch of friends in school."</i> (Victor)
		Acknowledging arguments is part of friendship
		<i>"Me and my friends have arguments."</i> (Trey)
		<i>"Sometimes we fight or yell at each other, and then argue and become friends again."</i> (Wymola)
		Communication
	<i>"When we start talking to him, we became friends, and really close friends."</i> (Rene)	
	<i>"We can keep conversations easily."</i> (David)	
	<b>Personality Traits</b>	Self
		<i>"I'm great at making friends since I'm nice."</i> (Nathan)
		<i>"I don't get mad at people. I don't yell at someone."</i> (Daniel)
		Others
		<i>"Some kids are mean. Some kids are nice."</i> (Dylan)
	<i>"There's a kid in camp. He's kind of quiet."</i> (Rene)	
	<b>Coaches' Support/Teaching on Friendships</b>	
	<i>"The coaches help me making friends with other because they care who you are."</i> (Justin)	
<i>"They [coaches] teach us integrity to make friends."</i> (Joshua)		
<b>Enjoying Friendship</b>		
<i>"It is fun to have friends."</i> (Omar)		
<i>"We have a good time together."</i> (Micael)		

Table 9 continued

<b>Sources of Self-Efficacy to Deal with Social Conflicts</b>	<b>Coping Strategies</b>	Ignoring/walking way
		<i>"I feel really, really mad, but I just like walk away." (Hulio)</i>
		<i>"When people being mean to me, I just ignore and walk away." (Omar)</i>
		Talking over
		<i>"I am kind of tell them [who is annoying to him] I don't like what they are doing." (Rene)</i>
		<i>"By speaking up... and by talking more." (Rudolf)</i>
		Telling the coach
		<i>"Tell the coach. It works efficiently." (Matthew)</i>
		<i>"If someone is being annoying, you can always say it to coach." (Mario)</i>
		Telling others to stop
		<i>"Usually if someone is annoying me, I just tell him to stop." (Nathan)</i>
		<i>"When somebody hurting my feeling, I can say stop or don't do that." (Harrison)</i>
		Other strategies
	<i>"Try to do things they like to do." (Joshua)</i>	
	<i>"I can just help them. I help them, they won't annoy me." (David)</i>	
	<b>Modeling</b>	Coaches' modeling
		<i>"The coach told us how we should handle this situation." (Mario)</i>
		<i>"Coach told us get out your feeling." (Rene)</i>
		Family members' modeling
		<i>"It is most at my house because of my mum and dad." (David)</i>
		<i>"Because I was raised with people who you know they may hurt you." (Trey)</i>
	<b>Emotional Reactions</b>	
	<i>"Sometime when someone messes up with me, I get mad at them." (DM)</i>	
<i>"Sometimes people are amazed at me and I get angry and cost them something." (Dennis)</i>		
<b>Recognition of Potential Social Conflicts</b>		
<i>"It is hard to get along with lots of people." (Francisco)</i>		
<i>"People do kind of making fun of me sometimes." (Reese)</i>		

Table 10

*Emerged and Theoretical Categories of the Sources of Self-Efficacy*

<b>Interview Questions</b>	<b>Emerged Categories</b>	<b>Theoretical Categories</b>
Sources of Self-Efficacy to Do Well in Camp Activities	Experiences	Mastery Experience
	Support from Others	Social Persuasion
	Effort	
	Fun/Enjoyment	Emotional/Physiological Status
	Modeling	Vicarious Experience
Sources of Self-Efficacy to Make and Keep Friends	Experiences	Mastery Experience
	Personality Traits	
	Coaches' Support/Teaching on Friendships	Social Persuasion
	Enjoy Friendship	Emotional/Physiological Status
Sources of Self-Efficacy to Deal with Social Conflicts	Coping Strategies	Mastery Experience
	Modeling	Vicarious Experience
	Emotional Reactions	Emotional/Physiological Status
	Recognition of Potential Social Conflicts	