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## The Influence of Community-Based Summer Programs on Ethnically Diverse, Low-Income Chicago Youth

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LOYOLA UNIVERSITY CHICAGO

THE INFLUENCE OF COMMUNITY-BASED SUMMER PROGRAMS ON  
ETHNICALLY DIVERSE, LOW-INCOME CHICAGO YOUTH

A THESIS SUBMITTED TO  
THE FACULTY OF THE GRADUATE SCHOOL  
IN CANDIDACY FOR THE DEGREE OF  
MASTER OF ARTS  
PROGRAM IN DEVELOPMENTAL PSYCHOLOGY

BY  
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## ABSTRACT

How youth spend their time has become an increasingly important factor in studying adolescent development. During the summer months, longer periods of unsupervised time have been associated with a loss of academic skills and lower social-emotional skills. One support for at-risk youth and adolescents might be summer programs housed in community-based organizations. Using a pre-post test design over an 11-week period, the present study examines the linkages among participation in summer programs, individual characteristics, and youth outcomes among ethnically diverse, low-income Chicago youth. Analyses revealed ethnicity was related to math skills at the end of the summer, although the strongest predictor of mathematic ability at the end of the summer was academic skills at the beginning of the summer. Higher participation in summer programs was associated with more empathetic feelings on a self-report measure. Future directions and implications for studying community-based summer programs are discussed.

*Keywords:* summer learning loss, academic achievement, social skills, summer programs, low-income, positive youth development.

## CHAPTER ONE

### INTRODUCTION

From an adolescent's perspective, summer means freedom from the school-year responsibilities and all the accompanying stress. To a researcher, an adolescent's summer translates to longer periods of unsupervised time while likely engaging in tasks that provide little opportunity for growth in knowledge (McCombs, Augustine, Schwartz, Bodilly, Mcinnis, Lichter, & Cross, 2011). These long spans of unsupervised and unstructured time, such as hanging out with friends, are related to greater incidences of delinquency and problem behaviors in youth and adolescents (Fleming, Catalano, Mazza, Brown, Haggerty, & Harachi, 2008; Light, Rusby, Nies & Snijders, 2013; Parente, Sheppard & Mahoney, 2012). Without regular activities that challenge or engage, low-income students begin their next school year with less knowledge than the end of the previous academic year (Cooper, Charlton, Valentine, & Muhlenbruck, 2000; Cooper, Nye, Charlton, James, & Greathouse, 1996). Therefore, efforts to close the achievement gap during the school year alone might be unsuccessful because teachers of low-income children have to spend more time re-teaching material at the start of the new school year (Fairchild, 2011; McCombs, et al., 2011; Slates, Alexander, Entwisle, & Olson, 2012). Despite the acknowledgement of summer learning loss, as well as the risks associated with unstructured and unsupervised time, researchers have only recently begun to incorporate summer time use into studies of youth and adolescent development (Parente

et al., 2012). External supports, such as summer camps, summer schools, and community-based organizations serve as protective factors associated with unsupervised time (Fairchild, 2011; Kirschman, Roberts, Shadlow, & Pelley, 2010; McCombs et al., 2011; Thurber, Scanlin, Scheuler, & Henderson, 2007). Unfortunately, community-based summer programs are relatively unstudied compared to afterschool programs that take place during the school year (Kirschman et al., 2010; Parente et al., 2012; Riley & Anderson-Butcher, 2012). Community-based summer programs share many characteristics of community-based afterschool programs and school-based extracurricular programs, which have been shown to be effective in promoting academic, social-emotional, behavioral, and civic competencies (see Farb & Matjasko, 2012; Eccles & Gootman, 2002). To elucidate the relationship between community-based summer programs and youth outcomes, this study utilizes univariate, bivariate, and multivariate methods to determine how intensity of participation (measured as a function of days attended by total days of the program) and individual characteristics impact social skills and academic achievement at the end of the summer.

### **Summer Learning Loss, Problem Behaviors, and Time Use**

One of the most common theories why students lose knowledge between the months of June and September is known as the “faucet theory” (Alexander, Entwisle & Olson, 2001). The faucet theory posits that during the school year, all students have resources that turn on their “faucets” to academic knowledge. Therefore, as long as there are no major disruptions to learning, all students have the opportunity to make relatively similar gains. How much access a student has to their faucet once school is out depends



on their activities over the summer. Students who engage in activities such as visiting libraries, checking out books, and conversing with adults tend to gain knowledge at similar rates of academic growth, whereas students who spend excessive time watching television have lower rates (Gershenson, 2013; Kim, 2004; Larson, 2001; Slates, et al. 2012). Depending on access to different types of activities, a one- to three-month loss in academic ability is estimated to occur after the 12 week summer break (Cooper, et al., 1996; Fairchild, 2001; McCombs, et al. 2011). Therefore, learning loss varies according to factors such as social-economic status (Benson & Borman, 2010; Cooper, et al., 1996), neighborhood context (Benson & Borman, 2010), and parental involvement (Antunes & Ahlin, 2014; Parente, et al 2012;). These three facets of the youth's environment demonstrate the need for structured, organized activities to prevent detrimental outcomes over the course of the summer months.

For the past five decades, children from low-income household enter kindergarten with lower skills related to academic achievement, including lower levels of attention, persistence, and increased externalizing behaviors, compared to their middle-income peers (Reardon, 2011). As children age and begin taking standardized testing, gaps in academic achievement remain stable through high school (Duncan & Magnuson, 2011; Reardon, 2011). It has been suggested by some researchers that summer learning loss due to low socio-economic status (SES) predicts a more than half of the variance in the U.S. achievement gap found during the school year (Alexander et al. 2007). Despite the relevance of summer learning loss to academic abilities and classroom behavior at the beginning of each school year, the moderating effect of household income has only

recently been examined (Alexander, Entwisle & Olson, 2007; Light et al., 2013). A nationally representative study using the Early Childhood Longitudinal Study-Kindergarten Cohort (ECLS-K), found that low-income children lost the most knowledge over the summer months, middle-income children retained their skills, while high-income children improved (Benson & Borman, 2010). Other studies have found similar patterns of low-income students incurring losses in academic proficiency while middle-income students either retain or continue to gain proficiency (Cooper, et al., 1996; Cooper, et al., 2000; Gershenson, 2013; Slates, et al., 2012;). Even more troubling, losses accumulate over the years, thereby exacerbating the distance between low-class and middle-class groups despite relatively similar rates of academic growth throughout the school year (Benson & Borman, 2010).

In the education literature, two alternatives have been proposed to combat summer learning loss: extended school years and modified school calendars. Extended school years increase the number of days that children attend school, thereby shortening summer vacation. However, opponents argue extended school years might lead to greater teacher and student burnout, as well as cost significantly more money for school districts (Cooper, Valentine, Charlton & Melson, 2003). Alternatively, modified school calendars retain the same number of school days as a traditional school calendar, but alternate short breaks after a set number of weeks (similar to a university schedule). A meta-analysis of the effectiveness of American schools with modified calendars found that on average, modified school calendars has a significant, albeit small increase (one-twentieth of a standard deviation) in student's achievement relative to traditional school calendars

(Cooper et al., 2003). However, when comparing moderating effects of student populations, schools that served low SES students showed significant improvement in academic achievement, whereas mixed or middle income serving schools showed little to no improvement relative to traditional school years (Cooper et al., 2003). The results of this meta-analysis point to the unique risks for low-income students over the consecutive 12-week summer vacation. However, modified school systems suffer from some of the same criticisms as the extended school year model. Namely, it is cost prohibitive without showing dramatic improvements, requires sophisticated logistical planning from school administrators, and may not necessarily translate to more effective classroom strategies by teachers (Cooper et al., 2003).

If modified school systems are unrealistic for a majority of low-income youth, an attractive substitute would be to make more school-related resources and activities available over the summer. The faucet theory explains that over the summer, students from middle and high SES families have more access to the types of resources school can provide and therefore can make small gains in learning over the summer (Alexander et al., 2001; 2007). These resources include physical materials, such as books, games, and computers, as well as social capital, such as interactions with adults who have expectations for productive time use (Entwisle, Alexander, & Olson, 2001). While it is conceivable that all adolescents have access to free or low-cost stimulating activities, such as public libraries, only a small portion of low-income youth are likely to utilize this resource (Kim, 2004; Slates et al. 2012). Instead, low-income youth increase their television watching by two hours over the summer (Gershenson, 2013). Low-income

youth who do check out books from the library, are also likely to have parents who invest more time conversing with their children and have been shown to have similar levels of academic growth over the summer as their middle income peers (Slates et al. 2012). In addition to the multiple risk factors faced by youth who grow up in poverty, it is clear to see how a lack of opportunity to participate in diverse, cognitively stimulating activities during the summer contributes to deficits in academic outcomes for low-SES students (Barkto & Eccles, 2003; Halpern, 2000; Slates et al., 2012).

What are some additional protective factors available to low-income students to combat summer learning loss? To answer this question, a deeper understanding regarding adolescent time use is required. For decades, researchers have been interested in how adolescent activities outside of the classroom impact developmental outcomes. The earliest example of this occurred in 1935 when Mattie Crumpton Hardy published an article observing small positive relations between adjustment and time spent in recreational and educational clubs, and negative associations between adjustment and time spent at the movies (Hardy, 1935). Although most current studies focus on time use during the school year, thus limiting generalizations, a clear distinction between supervised and unsupervised time use can be found (e.g. Bartko, & Eccles, 2003; Larson, 2001; Mahoney & Stattin, 2000). More time spent in supervised, organized out-of-school time activities is generally related to better academic outcomes such as lower rates of school dropout, better grades and higher educational attainment (Fletcher, Nickerson, & Wright, 2003; Mahoney & Cairns, 1997; Mahoney, Cairns, & Farmer, 2003; Nelson & Gastic, 2009; Posner & Vandell, 1994).

With the absence of school, a majority of adolescents' time is made up of discretionary time during the summer. Chores, which are expected for most adolescents but are not developmentally interesting or challenging, account for less than one hour per summer day for the average American child and adolescent (Larson, 2001). With growing autonomy to choose how to spend their remaining 23 hours of the day, adolescents report spending more time away from their parents in both structured and unstructured activities (Fleming et al., 2008; Lam, McHale & Crouter, 2014). There is also a shift from spending an increasing time with friends of the same gender to spending increasing time with opposite sex friends or in mixed sex peer groups (Lam et al., 2014). Although more unsupervised time than usual with mixed sex peers was related to more reported problem behaviors and depressive symptoms, more supervised time with mixed sex peers than usual was related to better school grades (Lam et al. 2014). This again points to the idea that youth who spend time in supervised care or organized activities are likely to gain knowledge or academic skills even while spending time with peers (McCombs, et al. 2011; Parente et al., 2012). It should be noted that some studies of community-based activities show youth who spent time in centers with low supervision and structure report increased antisocial behavior (Mahoney & Stattin, 2000; Osgood, Wilson, O'Malley, Bachman & Johnston 1996; Parente et al., 2012). Therefore, to be a protective resource an activity must have appropriate levels of supervision by adults to discourage externalizing behaviors or delinquency.

Unsupervised time is consistently related to higher incidence of problem behaviors, such as deviancy and anti-social behavior, in part because it is thought to be

socially rewarding among adolescents (Fleming et al., 2008; Lam & McHale, 2014; Mahoney & Stattin, 2000; Osgood et al., 1996). However, authoritative parenting by low-SES parents, who may not be able to afford organized care, protects from some negative outcomes of self-care or deviant peer association (Antunes & Ahlin, 2014; Collins, Maccoby, Steinberg, Hetherington & Bornstein, 2000; Parente et al., 2014). In a study of summer time use, youth who spent a majority time caring for themselves, but whose parents had high awareness of their activities (i.e. who they spend time with and how they are spend their money), showed similar outcomes to youth who spend time in supervised, organized activities (Parente et al., 2012). However, these results are not exactly clear-cut. Harsher or more demanding parents might keep their teens in line at the expense of infringing on their growing desire for autonomy, therefore creating familial stress (Collins et al., 2000). For example, one study showed stricter curfew was predictive of more anxiety symptoms in low-income adolescent females (Elliot, Leventhal, Shuey, Lynch & Levine-Coley, 2014). Importantly, these symptoms were strongest in youth who lived in poor-quality housing, indicating that the increased time in a perceived unsafe space might be the true cause behind this relationship. These complex environments are important to consider when thinking about the motivation for low-SES students to participate in community-based programs and the barriers that impede participation.

Examining where youth spend their time within a community is crucial to understanding achievement among low-income youth. For one, factors such as neighborhood cohesion or disorganization greatly impacts mental and social functioning

of children and parents (Elliot et al., 2014; Fuller-Rowell, Evans, Paul, & Curtis, 2014; Popkins, Acs & Smith, 2009; Williams & Merten, 2014). In Benson and Borman's (2010) seasonal learning study, only high SES neighborhood context significantly predicted summer learning gains beyond individual child characteristics. Low-income neighborhoods might play an adverse role, especially impacting parent's ability to effectively parent (Collins et al., 2000; Williams & Merten, 2015). These results indicate neighborhood collective efficacy, or belief that neighbors will support or watch-out for each other as a driving force behind adolescent's behavior. Mirroring the need for supervision in afterschool and home contexts to regulate behaviors, neighborhoods that have low levels of collective efficiency are associated with negative outcomes such as higher substance use (Fagan, Wright & Pinchevsky, 2013). Additionally, youth are more likely to report feeling unsafe at community-based programs in violent neighborhoods, perhaps due to the increased exposure to the violence on the streets (Fauth, Roth, & Brooks-Gunn, 2007; McDonald, Deatrick, Kassam-Adams & Rickmond, 2011, Pedersen & Seidman, 2005).

Despite the challenges within low-income areas, community-based programs might be more relevant when examining academic achievement in low-income populations. Participation levels in school-based activities and childcare have clearly diverged along social class for generations, with rates for high SES and White students exceeding low-SES and ethnic-minority students (Bouffard, Wimer, Caronogan, Little, Dearing & Simpkins, 2006; Halpern, 2000; Hofferth, 1995). Unlike middle-income students, low-income children are more likely to attend community-based youth

development programs (Nelson & Gastic, 2009; Pedersen & Seidman, 2005). One reason for lower extracurricular participation is that few attractive school-based programs may actually exist, or less available resources exist for low-income parents to purchase necessary equipment (Halpern, 2000; Hall, Yohalem, Tolman & Wilson, 2004; McCombs, et al. 2011). Second, schools, which increasingly feel pressured from political and budgetary constraints to concentrate on common core curriculum, more often cut the social-emotional extracurricular activities that community programs offer (Hall, et al. 2003; McComb, et al. 2011; Posner & Vandell, 1994). Finally differences in parental expectations might drive selection of participation and activity type. Middle-class parents care more about allowing the adolescent to choose activities that best fit their interests and talents, while low-income parents are more concerned with providing a safe environment and opportunities for social mobility (Bennet, Lutz & Jayaram, 2012). This is ironic, considering youths' concerns regarding safety in community-based programs located in poorer neighborhoods.

Unfortunately, few conclusions can be drawn about the role of community-based summer programs among at-risk students from the extant literature. Studies that do examine summer program impacts on low-income students are often case studies of specific programs that do not account for selection factors (e.g. Fredricks & Simpkins, 2011; Kirschman, et al. 2010). Additionally, a common critique of summer learning loss involves confounding school effects, meaning that academic tests given at the beginning and end of the school year are rarely given on the first and last day of the academic calendar (Cooper, et al. 2000; Light, et al. 2013). One exception is a series of



monographs published by the RAND Corporation and the Wallace Foundation, examining the role of summer learning programs on youth in five different cities (McCombs, et al. 2011). The study is an extensive examination of various summer programs designed with specific goals of provides stimulating learning activities in supervised settings including, voluntary and mandatory summer learning programs, remedial summer schools, and community-based organizations. The authors found that while not all programs succeed in their mission to protect from summer learning loss, all programs have such potential to succeed. They conclude that effective summer learning programs all have the following qualities, “smaller staff to youth ratio, opportunities for individual instruction, high quality instruction, curriculum that lined up to previous school year instruction, engaging and rigorous programming, maximized attendance, at least 80 hours in total, involved parents, and flexible program based on feedback and evaluation”.

### **Afterschool Programs and Positive Youth Development**

More can be learned about community-based summer programs by examining the impacts of community-based afterschool programs. Community-based afterschool programs have long been identified as a protective resource for youth and adolescents (e.g. Eccles & Gootman, 2002; Flanagan, 2004; Mahoney, Larson, Eccles & Lord, 2005). Similar to afterschool programs, each summer programs will vary around characteristics such as purpose, place, attendance policies, and length of program (Halpern, 2000; McCombs, et al. 2011). Community-based summer programs and community afterschool programs take place within the same setting (albeit utilizing more outdoor activities), and

do not change their mission statements; therefore, comparisons between programs could be warranted. Importantly, community-based summer programs and afterschool programs hold the same theoretical mission- to increase positive youth development in order to provide each adolescent with the best possible opportunity for healthy development.

Positive youth development (PYD) is a theory of adolescent development that emphasizes the characteristics and supports necessary for a person to grow up to be a happy and contributing member of society (Hamilton, Hamilton, & Pitman, 2004; Roth, Brooks-Gunn, Murray & Foster, 1998). PYD differs from past theories of adolescent development in that it shies away from idea that adolescence is a time of distress, instead embracing adolescence can contain both threats to healthy development (Hamilton, 2014) and the potential for all adolescents to “thrive” (Bowers, Geldhof, Johnson, Lerner & Lerner, 2014; Lerner et al., 2011; Nokall, Bachmann, & Votruba-Drzal, 2010; Jelcic, Bobek, Phelps, Lerner, & Lerner, 2007; Mahoney et al. 2009). Since its inception, multiple models that consider what is necessary for adolescents, what environments are necessary, as well as a combination of what assets are necessary both internally and externally (Benson, Scales, Hamilton, & Semsal, 2006; Lerner, et al. 2005). Despite differences in conceptualization, the five C’s of PYD encompasses many of the developmental assets that researchers claim to be important for healthy development (Lerner et al. 2005; Roth & Brooks-Gunn, 2003). These five C’s are Competence, Connection, Character, Confidence, and Caring. Growth in these meta-indicators is said to indicate PYD taking place (Lerner, et al., 2011), such that if a program is shown to

increase the 5 C's in an adolescent, then positive youth development is taking place.

Not only are the 5 C's a holistic, recognizable measure of PYD based in developmental systems theory, in a principal components analysis of 1,000 adolescents in the 4-H study of PYD the 5 C's reflected one underlying PYD factor, and were found to be reliable and valid across a diverse sample of youths (Bowers, Li, Kiely, Brittian, Lerner, & Lerner, 2010; Lerner et al., 2005).

### **Outcomes of Youth Development Afterschool Programs**

By participating in afterschool programs, youth increase their connection to adults other than their parents and teachers. Research surrounding youth-adult partnerships (YAP), has shown positive outcomes related to supportive adult relationships such as, higher rates of academic motivation, pro-social behaviors, better decision making skills (Crean, 2012; Greene, Lee, Constance & Hynes, 2012; Ozer & Schotland, 2011; Ramey & Rose-Krasnor, 2012). Positive youth-adult partnerships in community programs are best predicted by their adults support of adolescent's agency and empowerment, meaning adults must respect and support youths' needs and decisions making abilities (Zeldin, Krauss, Collura, Lucchesi, & Sulaiman, 2014) Furthermore, in afterschool programs youth are likely to meet and socialize with their peers (Fredricks & Simpkins, 2013). Although research is mixed regarding peer associations in organized activities (Eccles, Barber, Stone & Hunt, 2003), spending time in a consistent schedule in which adolescents explore new activities and work towards a common goal, is associated with many pro-social outcomes such as developing high-quality, caring friendships (Fredricks & Simpkins, 2013; Travis & Leech, 2014). Although it is true that in "unstructured"

organized activities negative peer associations have been found, introducing positive adult supervision into organized activities negates this effect (Mahoney & Stattin, 2000).

As stated previously, connection to neighborhoods while in community-based organizations varies. On average, high levels of participation in organized activities from grades 7 to 12 is linked to greater contribution to one's community (Agans, Champine, DeSouza, Mueller, Johnson & Lerner, 2014), however this might not be true for all neighborhoods and social-economic statuses. Neighborhood programs also have the unique ability to house programs that engage families, such as teaching GED or health courses whereas school programs only target adolescent abilities. Further, while families are at centers, they have increased potential to meet with and interact with staff from their child's program (Parente et al. 2012). Programs that are able to increase community connection could hold rippling effect on adolescent's developing sense of agency and competency. In a nationally-representative longitudinal study, community connection led to higher perceived parental relations which in turn, impacted beliefs in one's abilities, decision-making, and positive outlook for the future (Williams & Merten, 2014).

Relatedly, afterschool programs have been shown to increase competence, character and confidence. This means that afterschool programs can teach about decisions-making skills (Crean, 2012), and competencies through activities that work progressively to reach a goal (Lam & McHale, 2014; Mahoney, Vandell, Simpkins, & Zarrett, 2009). In terms of confidence, multiple studies have shown a significant association between positive self-perception, such as increased self-esteem, and structured participation in organized activities (Bohnert, Richards, Kolmodin & Lakin,

2008; Durlak, Weissberg & Pachan, 2010; Eccles & Barber, 1999). For example, greater participation frequency in community-based programs has been related to improvements in self-worth in low-income Latino youth (Riggs, Bohnert, Guzman & Davidson, 2010). Self-esteem and greater self-concept increases are shown to be related to the exploration of multiple activities experienced in afterschool activities, which participants can find activities that interest them as they master new skills in safe spaces (Hal, Yohalem, Tolman & Wilson, 2003; Riggs, et al, 2010; Roth & Brooks-Gunn, 2003). However, to my knowledge, only a few studies have examined the social-emotional outcomes of a summer youth development program (Fredrick & Simpkins, 2011; Parente et al., 2012). However, these study were conducted on a sport-based program in one study and general organized activities in the other, and thus specific conclusions about community-based programs cannot be made.

Multiple activities during afterschool programs promote academic competence. As studies of social-emotional learning have demonstrated, activities do not necessarily have to be directly related to schoolwork in order to show gains in academic achievement (Durlak et al., 2010; Hall et al., 2003; Zmuda & Bradshaw, 2013). The social-emotional learning (SEL) framework has shown an increase in academic competencies by placing higher value in challenging activates, teaching self-awareness and self-control, and developing healthier social relationships (Durlak et al., 2010; Zmuda & Bradshaw, 2012). Afterschool programs that incorporate SEL into their curriculum show small improvements on grades, standardized testing, and school connectedness (Durlak et al., 2010). Individual programs such as the Boys and Girls Clubs of America, and LA's Best,

a community-based organization spread throughout Los Angeles, have all reported more participation relating to higher youth reported school grades, more school effort, lower drop-out rates and more positive feelings towards school and academic abilities (Anderson-Butcher, Newsome, & Ferrari, 2003; Huang, Kim, Marshall, & Perez, 2005). However, it should be noted that the effects of afterschool programs that do not specifically target academic topics are often small (Durlak et al., 2010).

### **Individual Characteristics and Academic Achievement**

Finally, individual characteristics in youth are often associated with academic gains. Gender, race, and bilingualism have all been shown to depress test scores among low-income individuals (Duncan & Magnusson, 2011; Eccles, et al. 2003; Farb & Matjasko, 2012; Randall & Bohnert, 2012). Girls often report better grades, but score lower on tests of academic achievement particularly math (Randall & Bohnert, 2012). As Duckworth & Seligman (2006) have argued, this might be due to girls' social competencies and stronger delay of gratification abilities, driving better grades. Additionally, while the achievement gap between high and low SES students, and White participants and ethnic minorities has been recorded, recent studies examining differences between academic achievement among low-income students have shown unique risk for low-income ethnic minority students (Duncan & Magnusson, 2011; Reardon, 2011). For example, Hispanic and Black low-income youth perform worse than White low-income youth in reading and math tests at as young as 3 years of age (Burchinal, McCartney, Steinberg, Crosnoe, Friedman, McLoyd, & Pianta, 2011).

## **The Current Study**

This study hopes to support and contribute to past research of community-based organizations. Crucially, it provides a snapshot regarding the impact of community-based summer programs on summer learning loss and social-emotional outcomes. Participants' academic abilities were measured during their first and last week at their respective community programs. During their final week of the program, participants also filled out a survey designed to capture indicators of positive youth development. Finally, information regarding participant attendance and individual characteristics was collected. This study utilizes univariate, bivariate, and multivariate analyses to explore the relation among participation levels, individual youth characteristics, and social and academic outcomes for an understudied population within an understudied setting.

## CHAPTER TWO

### METHODS

#### **Recruitment**

In the spring of 2014, I contacted various community-based organizations in Chicago. The first program that agreed to participate is a community center based in one of the most diverse communities of Chicago. The organization has two centers on the north-west side of Chicago, the smaller of the two which houses the youth development program. The majority of participants who attend the program identify as Latino. The summer day camp service has been running in some form since 1976. Although, the program serves children ranging in ages 5-12, I chose to recruit students in the 10-12 year old group. 14 participants were originally recruited from the first program. The second community-based program to agree to participate is located in a north-east neighborhood of Chicago. The second program serves a more diverse community of participants, 40% of total participants are Latino, 37% are African American with the rest being a mix of Caucasian, Asian, or other. The center has been running since 1971. In the summer youth program, participants can range in ages from 12-18. 16 participants were originally recruited from the second program. A third program in a north-side neighborhood was contacted, but had to drop out of the study due to concerns regarding staffing limitations.



## Programs

While no individual income information from participants was collected, both programs have income requirements set by the state of Illinois in order to be eligible for subsidized enrollment. According to the Illinois state Department of Human Services website subsidized summer programs for school age children in Cook Country costs, on average, \$40 (Illinois Department of Human Services, 2010). Program 1 had a time frame of June 16th, 2014- August 22nd, 2014 and a total number of 49 sessions. Program 2 was slightly shorter, going from June 23rd, 2014-August 22nd, 2014 for a total of 45 sessions. Both programs offered full-day services, Monday through Friday. Further, while 13 of the 14 participants in Program 1 were retained and had data collected at both time points, six participants in from Program 2 were absent everyday during the last week and thus dropped from all analyses. On average, participants in Program 1 were tested 55 days apart ( $SD= 3.66$ ), and in Program 2, 50.18 ( $SD=2.92$ ) days apart. There was a significant difference between the number of days between tests,  $t(21)=4.06, p=.001$ . This is most likely a reflection of the differences in length of programs, as procedure dictated testing on the first and last week of the respective programs. Program was not significantly related to PYD overall or any subscales, but reached trend level for Competence ( $t(21)=-1.80, p=.09$ ), Confidence ( $t(21)=-1.96, p=.06$ ), and Caring ( $t(21)=2.02, p=.06$ ) subscales. No significant differences were found between programs on academic scores at both time points, so participants from both programs will be collapsed in all analyses.

## **Procedure**

Prior to the beginning of the programs, parental consent was collected. In Program 1, parental consent was collected during pick-up hours of the afterschool program during the end of the 2014 school year. In Program 2, parental consent was collected during an information session hosted by the center prior to the start of the summer program. If parents did not attend the information session, consent forms were sent home in a packet that contained other registration forms. Once consent forms were collected, research assistants visited the summer programs during their first week of programming. After obtaining assent from participants, youth filled out demographic questionnaires and were administered tests of math and reading ability. During the final week of programming, research assistant returned to the program. Participants filled out a questionnaire regarding indicators of positive youth development and again were administered tests of math and reading ability.

## **Measures**

*Youth Demographic Questionnaires.* During the first week of the summer program, participants filled out youth questionnaires to determine individual characteristics. Questions asked about age, gender, ethnicity, and second language ability. Participants from both programs did not differ significantly on gender composition ( $\chi^2(1)=.381, p=.537$ ) or second-language ability ( $\chi^2(1)=3.49, p=.06$ ), but did differ on age and ethnicity. Results indicated 12 females and 11 males in total. 56.5% of all participants spoke another language at home. Although not significant, participants from Program 1 spoke another language at a trending ( $n=9$ ) than participants from

Program 2 (n=4). Most participants (n=10) who indicated they spoke another language at home, indicated they spoke Spanish. Participants' age averaged 12.13 ( $SD=1.36$ ), although participants in Program 2 were significantly older ( $m=13.27$ ,  $SD=.90$ ), than participants in Program 1 ( $m=11.08$ ,  $SD=.66$ ),  $t(21)=-6.64$ ,  $p<.001$ . 10 participants identified as Hispanic or Latino, 10 identified as African American, and 3 identified as other (White, Asian or other). Participants in programs 1 more identified as Hispanic (n=9), while participants in Program 2 significantly more identified as African American (n=9),  $\chi^2(2)=13.11$ ,  $p=.001$ . Differences in youth characteristic, as well as academic and social outcomes by program can be found in Table 1.

Table 1. Participant Characteristics and Differences Between Programs

Measure	Program 1		Program 2		Total	
	<i>M or %</i>	<i>SD</i>	<i>M or %</i>	<i>SD</i>	<i>M or %</i>	<i>SD</i>
Male	41.70		54.50		47.80	
Race*						
African American	8.30		81.80		43.50	
Hispanic	75.00		9.10		43.50	
Other	16.70		9.10		13.00	
Second-language ability	75.00		36.40		56.50	
Age*	11.08	0.67	13.27	0.90	12.13	1.36
Days between testing*	55.83	3.66	50.18	2.93	53.13	4.35
% of Attendance	0.90	0.12	0.79	0.15	0.85	0.14
WJ- LW W1	512.58	15.66	508.82	22.84	510.78	19.06
WJ- AP W1	508.42	22.05	507.91	27.28	508.17	24.11
WJ- LW W2	521.00	16.35	513.45	25.00	517.39	20.80
WJ- AP W2	507.92	24.83	513.18	22.44	510.43	23.33
Competence Score	12.42	3.37	14.82	2.99	13.57	3.36
Confidence Score	11.33	2.39	13.55	3.01	12.39	2.87
Character Score	15.58	2.39	15.55	2.46	15.57	2.37
Caring Score	19.08	1.73	17.55	1.91	18.35	1.94
Connection Score	29.42	7.94	30.81	5.78	30.09	6.87

Note: WJ-LW W score is from the Woodcock Johnson III- Test of Achievement Form A, Letter Word subscale. WJ-AP W is from the Woodcock Johnson III, Applied Problems (Woodcock, McGrew & Mathers, 2001). Competence, Confidence, Character, Caring, and Connection Scores are subscales from the Positive Youth Development Short Form (Geldhof et al. 2014). Scores are totals of 4-8 items, with higher scores reflect higher levels of each indicator.

\* indicates a significant difference (at  $p<.05$  level) between Program 1 and Program 2.

*Attendance Records.* At the conclusion of the programs, supervisors from each program sent daily attendance records to the primary investigator. To account for difference in program length, total program attendance percentage was used in analyses. Program percentage was calculated by divided by total number of days attended by total number of sessions offered by the program. In Program 1, percentage of program participation was .90 ( $SD=.11$ ) ranging from .58-.98. In Program 2, percentage of program participation was slightly lower ( $m=.79$ ,  $SD=.15$ ), ranging from .48-.95. Percentage of total attendance approached significance between programs,  $t(21)=1.93$ ,  $p=.07$ . Across both programs, average participation level was 85% ( $SD=.14$ ). Additionally, because past research has shown that differences in summer learning loss can vary as a function of time between pre-test and post-test measures (Cooper, et al. 1996), and because of the significant difference between testing times, days between testing was used as a control.

*Positive Youth Development Survey: Short Form.* The short form of the Positive Youth Development survey was adapted from a longer version developed for the 4-H Project on Positive Youth Development (Lerner, et al. 2005). The long forms questionnaire was developed by taking different scales from reliable and valid measures often used in studies of social-emotional development. For example, items were taken from Harter's Self-Perception scales (Harter, 1982), the Profiles of Student Life-Attitudes and Behaviors Survey (PSL-AB; Scales, Benson, Leffert & Blyth, 2000), and Eisenberg Sympathy Scale (Eisenberg & Lennon, 1983). The long form proved to be both reliable (Bowers, Li, Kiely, Brittan, Lerner & Lerner, 2010), and valid across

different populations (Jelic, Bobek, Phelps, Lerner & Lerner, 2007). The long form of the survey went from 78 items with five subscales each dedicated to one of the five C's of PYD, to 34 items on the short form. The short form was developed through a five-factor confirmatory factor analysis by Geldolf and colleagues (Geldolf, et al. 2014). The five subscales were retained and had strong psychometric results (Geldolf, et al. 2014). Analyses were conducted separately for each subscale as per the recommendation of Geldolf and colleagues. Each subscale had 6 to 8 items graded on a Likert-like scale from either 1-4 or 1-5.

Subscales totals could potentially range from 0-24 (Competence), 0-26 (Confidence) 0-38 (Character), 0-30 (Caring) and 0-40 (Connection), with higher scores reflecting higher dimensions of each PYD construct. Original Cronbach's alphas for each subscale were very small: Competence =.69, Character=.34, Confidence=.43, Caring =.41, and Connection=.87. Items were dropped from the following scales to create new subscales and ranges: Competence (1 item dropped, 5 items retained) ( $m=13.56$ ,  $SD=3.35$ , range 0-20), Character (4 items dropped, 4 items retained) ( $m=15.56$ ,  $SD=2.37$ , range 0-19), Confidence (2 items dropped, 4 items retained) ( $m=12.39$ ,  $SD=2.87$ , range 0-16), and Caring (2 items dropped, 4 items retained) ( $m=18.25$ ,  $SD=1.94$ , range 0-20). No items were dropped from the Connection subscale ( $m=30.09$ ,  $SD=6.86$ ). New Cronbach's alpha for the subscales were the following: Competence=.71, Character=.66, Confidence=.74, Caring =.51, and Connection=.87.

*Woodcock Johnson III: Test of Achievement Form A.* Two subscales of the Woodcock Johnson III Test of Achievement (WJ III-Ach) were chosen to represent

reading and mathematic academic skills. The Letter-Word and Applied Problems subscale of WJ-III has a high reliability and validity for predicting literacy and mathematic ability (Woodcock, McGrew, & Mather, 2001). In the Letter-Word subscale, participants are asked to smoothly read aloud a word, and scored a 1 for correct pronunciation and a 0 for incorrect or stumbled pronunciation. In the Applied-Problems subscale, participants are asked to solve increasingly harder math skills that start at addition and subtraction and move to algebra and geometry problems. Participants are scored again 1 for correct answers and 0 for incorrect answers. Finally, all scores use a basal and ceiling scores, in that the first six correct are counted as the base score and six consecutive wrong answers are the ceiling point. Scores were calculated and transformed into *W*-scores, which are based on the Rasch measurement model. *W*-scores are based on an equivalent 500-mean scale, giving more accurate understanding of academic growth by taking into account underlying latent abilities (Woodcock et al. 2001). At time point 1, average *W*-scores for Letter-Word Identification was 510.78 (*SD*=19.06, range 464-549) and *W*-scores for Applied Problem subsets were 508.17 (*SD*=24.11, range: 476-557). At time point 2, average *W*-scores for Letter-Word Identification was 517.39 (*SD*=20.79, range 470-559) and average *W*-scores for Applied Problems was 510.43 (*SD*=23.33, range 467-560).

## CHAPTER THREE

### RESULTS

#### **Analytic Approach**

*Missing Data Analysis.* To determine if significant differences existed between participants whose data we could not collect during the last week of their program, a dummy code was created for complete or missing data. No significant difference was found between participants' ages who did not complete data collection at time point 2 ( $t(28)=1.64, p=.113$ ), gender ( $\chi^2(1) = 1.20, p=.27$ ), ethnicity ( $\chi^2(2) = 1.08, p=.58$ ), or second language ability, ( $\chi^2(1) 0.40, p=.53$ ). However, a significant difference was found in terms of proportion of attendance,  $t(28)=-3.96, p<.001$ . As expected, participants who did not attend the last week of programming had significantly lower levels of participation on average ( $m=.61, SD=.13$ ) than those who did attend during the last week of testing ( $m=.85, SD=.14$ ). Importantly, participants with missing data did not differ significantly on WJ Time 1 Applied Problems scores, than participants who had complete data,  $t(28)=-1.00, p=.33$ . However, participants with missing data reached trend level of significantly higher Letter Word scores ( $m=524.71, SD=10.45$ ), than those with complete data ( $m=510.78, SD=19.06$ ),  $t(28)=-1.84, p=.08$ . Despite these findings, I cannot rule out the possibility that data is missing not at random, meaning the likelihood of a participant

having missing data could be related to how they would have performed on WJ tests at the end of the summer.

*Univariate Results.* In a univariate model, differences in reading and math ability were calculated by subtracting Time 1 scores from Time 2 scores and determining if on average academic scores differed significantly from 0 (indicating summer learning loss or growth). Results indicated Letter Word W-scores from Time 1 to Time 2 was on average, significantly different from zero in a positive direction ( $m = 6.61$ ,  $SD=5.66$ , 95% CI: 4.16-9.06). This means at the end of the summer participants had gained some literary abilities compared to the beginning of the summer. However, the difference in Applied Problems W-scores from Time 1 to Time 2 was not significantly different from 0, indicating neither loss nor growth ( $m=2.26$ ,  $SD=10.37$ , 95% CI: -2.22-6.74).

*Bivariate Results.* To determine important relations between independent and academic dependent variables, independent samples t-tests or one-way analysis of variance (ANOVAs) were first run on all categorical independent variables and WJ-III scores. Gender and second-language abilities were not significantly associated with Letter-Word Identification or Applied Problems at either time point. Race was significantly related to Applied Problem Score at Time 1,  $F(2, 20)=4.39$ ,  $p=.03$ , and Time 2,  $F(2, 20)=3.58$ ,  $p=.05$ . Follow-up analyses revealed the participants who identified as the Other Race ethnicity scored significantly better than the participants in the African American or Hispanic ethnicity, ( $t(20)=-2.58$ ,  $p=.02$ ). This meant participants who identified as White or Asian/Pacific Islanders scored on average than the ethnic minority youth.



Next, age, percent of days attended, and days between testing were correlated with academic outcomes. Results indicated no significant correlation with any independent variables and academic test at either time point. Not surprisingly, the strongest relation for Reading at Time point 2 was Reading score at Time point 1, ( $r=.96$ ,  $p<.001$ ), and the same held true for Math at time point 1 and time point 2 ( $r=.91$ ,  $p<.001$ ). There was also evidence that Reading ability was related to math ability at Time 1 ( $r=.66$ ,  $p=.001$ ) as well as at Time 2 ( $r=.58$ ,  $p=.004$ ). In general, this means that program participation had no unique impact on the variance on academic abilities.

To determine important relations between independent variables and social dependent variables, bivariate analyses were first run on all variables of interest and positive youth development measures. Ethnicity and second-language ability were not related to any PYD subscales. Gender was significantly related to confidence scores,  $t(21)=2.15$ ,  $p=.04$ , with males reporting higher on average confidence ( $m=13.63$ ,  $SD=2.98$ ) than females ( $m=11.25$ ,  $SD=2.34$ ). Girls reported higher (although not significantly) caring scores, ( $m=19.08$ ,  $SD=1.62$ ) than males ( $m=17.55$ ,  $SD=2.01$ ),  $t(21)=-2.02$ ,  $p=.06$ .

Next correlations were run to determine significant relations between any continuous independent variables and social outcomes. Age was not significantly correlated with any of the PYD subscales. Days between test sessions was significantly correlated to the Competence subscale ( $r = -.53$ ,  $p=.01$ ), but positively related the Caring subscale ( $r=-.64$ ,  $p=.001$ ). This suggests, the longer duration of the program, the worse a participant believed in their abilities. This also suggests the longer the duration, higher

levels of empathy and compassion were reported. Percentage of days was significantly negatively correlated to connection ( $r=-.43, p=.04$ ). This means the more days the participants, the more distant participants feel to the people in their lives. Two subscales of the PYD measure correlated with the confidence subscale; namely competence and confidence ( $r=.63, p=.001$ ), and connection and confidence ( $r=.58, p=.04$ ). All bivariate correlations can be found in Table 2.

Table 2. Correlational Results Between Program Intensity and Academic and Social Outcomes

	1	2	3	4	5	6	7	8	9	10
Days Btwn										
% Attend	.23									
LW W1	-.08	-.24								
AP W1	-.14	.07	.66**							
LW W2	-.07	-.26	.96***	.65**						
AP W2	-.13	-.13	.58**	.91***	.58**					
Competence	-.53**	-.35	.23	.14	.21	.18				
Confidence	-.41	-.10	-.27	-.17	-.28	-.17	.63**			
Character	.04	.03	.09	-.19	.03	-.29	.07	.09		
Caring	.64**	.03	.06	-.11	.07	-.17	-.25	-.22	.34	
Connection	-.22	-.43*	-.04	-.15	-.02	-.12	.39	.58**	.22	-.11

Note: \*indicates significance at the  $p < .05$  level. \*\*indicates significance at the  $p < .01$  level. \*\*\*indicates significance at the  $p < .001$  level

*Multivariate Results.* To determine if ethnicity could account for any unique variance in the Applied Problems Time-Point 2 above and beyond Applied Problems Time 1 W-score, a hierarchical linear regression was run. In a hierarchical multiple regression, in which ethnicity dummy codes were entered into the first model, Hispanic ethnicity was a significant negative predictor of Applied Problems W-score ( $\beta = -.80, p=.02$ ). However, this relation became non-significant ( $\beta = -.04, p=.84$ ) in the second Model when Time 1 Applied Problems W-score was considered ( $\beta = -.90, p < .001$ ). In a separate hierarchical linear regression determining if ethnicity accounted for unique variance above and beyond variance accounted for by Letter-word W-score at Time 1, Hispanic ethnicity remained a significant negative predictor in the second Model ( $\beta =$

.61,  $p=.03$ ). Letter-word W-score at Time 1 also uniquely accounted for some of the variance in Applied Problems W-score at Time 2 ( $\beta = -.49, p < .01$ ).

Overall these regressions suggest that ethnicity can be considered a significant predictor of mathematic ability at the end of the summer when comparing to other academic abilities, but is not a good predictor relative to mathematic ability at the beginning of the summer. Results for each regression can also be found displayed in Table 3.

Table 3. Hierarchical Simultaneous Multiple Regression Results

*Ethnicity and Applied Problems W-score Time 1 predicting Applied Problems W-score Time 2*

	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup> change
Block 1:				0.26**
Hispanic	-36.97	13.83	-.80***	
African American	-27.97	13.83	-0.61	
Block 2:				0.57***
Hispanic	-1.66	8.15	-0.04	
African American	3.32	7.88	0.07	
AP W score1	0.87	0.11	0.90***	

*Note.* \* indicates significance at the  $p < .05$  level, \*\* indicates significances at the  $p < .01$  level, \*\*\* indicates significant at the  $p < .001$  level

*Ethnicity and Letter Word W-score Time 1 predicting Applied Problems W-score Time 2*

	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup> change
Block 1:				0.26**
Hispanic	-36.97	13.83	-0.80***	
African American	-27.97	13.83	-0.61	
Block 2:				.22**
Hispanic	-27.97	12.28	-0.61*	
African American	-17.22	12.45	-0.37	
LW W score 1	0.60	0.21	0.49	

*Note.* \* indicates significance at the  $p < .05$  level, \*\* indicates significances at the  $p < .01$  level, \*\*\* indicates significant at the  $p < .001$  level

## CHAPTER FOUR

### DISCUSSION

This study, despite its small sample size, can provide a few insights regarding the potential role of community-based programs during the summer months. First, participants, on average, gained some literary skills, which is consistent with past research showing adolescents with access to reading materials make small gains in literacy over the summer (Kim 2004; McCombs, et al. 2011). Next, I found significant differences in levels of confidence and caring across participants' gender. I found that males reported higher levels of confidence, while girls reported slightly higher levels of caring/empathy. These findings are consistent with past research regarding differences in participants' social-emotional outcomes by gender in organized activities (Lerner et al., 2005).

I did not find support for hypothesizing that intensity of participation predicted academic achievement at the end of the summer. However, two different measures of program length were related to social-emotional outcomes. Longer time between the first and last week of program was related to lower levels of perceived competence, but higher levels of caring. One interpretation is that participants are gaining social competencies over the summer related to compassion and understanding for others, but they are not doing so regarding youth's physical or artistic abilities.

Other findings include proportion of attendance was significantly related to lower feelings of closeness to adults, neighbors, and peers. Using multivariate analyses, I also found ethnicity to be a significant predictor of math abilities at the end of the summer, above and beyond variance accounted for by measures of reading abilities, but not when accounting for math ability, at the beginning of the summer. This points to the importance of taking initial test scores when predicting youth outcomes over the course of the summer months.

What also might be interesting to explore is what this study did not find to be significant. My main independent variable, proportion of attendance, was not related to academic achievement, nor four of the social outcomes. However, average participation across participants in both programs was high ( $m=85\%$ ), with the lowest levels of participation being at 48%. Therefore, my results might reflect a threshold effect for participation, consistent with previous research, stating that effective programming occurs when participants attend above 80% of the time (McCombs et al. 2011). Because it is possible my results reflect what happens when youth have relatively high levels of participation in a summer program, future directions are discussed below. However, it is important to note that past research has shown low-income youth, on average, lose knowledge over the summer. The mere fact that I did not find evidence of summer learning loss in my participants might be a testament to the positive impact of community-based summer programs.

The lack of participation intensity effect contradicts reviews of afterschool literature that finds intensity of participation, that is how often one attends organized out-

of-school time programs, is related to more positive results (Lauer et al. 2006; Simpkins, Little & Weiss, 2004). One reason for the null findings here is that intensity of participation does not translate from school year programs to summer programs. During the school year, more activities are offered, both in community programs as well as school programs. Therefore, participation levels may just reflect a lack of other available programs in the summer. Increased diversity in activities inside and outside of school, as well as engagement in activities beyond just participation, has been suggested to be a stronger predictor of positive outcomes, while high intensity alone might be not as effective as originally thought (Durlak et al. 2010; Rose-Krasnor, Busseri, Willoughby & Chalmer, 2006; Roth, Malone, Brooks-Gunn, 2010). Future research should examine more nuanced measures of intensity of participation, including feelings of engagement while attending the program and specific motivations for attending or leaving the program.

An alternate hypothesis is that the risk factors associated with living in low-income communities, where the programs are located, are interfering with positive outcomes. Spending increased time in neighborhoods where youth feel unsafe has been implicated in increased negative social outcomes (Fagan et al. 2013; Fauth et al. 2007; McDonald et al. 2011, Pedersen & Seidman, 2005). Thus, future studies should more carefully examine the consequences of increased time in low-income community areas, including questions regarding youth's perception of basic safety.

It is not surprising that results show stable mathematic scores over the summer and small gains in literary skills. Two meta-analyses of summer learning loss and

summer programs, the first from 1990-1999 (Cooper, et al. 1996; 2007), and the second from 2000-2011 (McCombs, 2011), showed greater losses in mathematic and spelling ability compared to small losses in reading comprehension skills across the summer months. This is often explained by the types of activities offered in the summer programs that are more conducive to literary development than mathematics. For example, in Program 1, throughout the summer, participants worked together on a script that would eventually be performed for the center during an end-of-summer performance. Program 2 also focused on creative writing projects, through explorations of different types of poetry spread across several sessions. Previous literature has demonstrated that the types of activities in programs, such as free reading time, relates to specific increases in academic abilities (Durlak et al. 2010). Therefore, it may be more difficult to increase mathematic ability, which is dependent on factual and procedural knowledge, through engaging activities (Cooper et al., 1996). Future evaluations of summer programs might examine how certain activities target mathematical skills and test whether there is subsequent impact of mathematical growth over the summer.

Next, the negative relation between summer program participation and the PYD subscales should be examined. The first puzzling finding is the association between days between testing and self-reported measures of competency and caring. The finding that spending time in programs that focus on positive youth development was associated with higher self-reports of empathy and caring reflects a major tenet in youth development programming. Namely, providing a range of activities that emphasize bonding, pro-social behaviors, moral competence, and self-efficacy can lead not only to social-emotional

learning, but also to the prevention of problem behaviors (Catalano, Berglund, Ryan, Lonczak & Hawkins, 2004). However, this finding seems to contradict the relation between increased participation and lower levels of connection. How participants might simultaneously feel more empathy, but less close to those around them is not immediately clear. Differences might stem from underlying constructs in each subscale. For example, the connection subscale reflects a social component (i.e. asking questions “Adults in my city listen to what I have to say”) while the caring subscale reflects emotional components without being mentioning specific people, (i.e. “It bothers me when bad things happen to any person”).

One analogous example of youth searching for emotional connection to others while feeling socially disconnected can be found in studies of social media technologies. For example, in *Alone Together: Why We Expect More from Technology and Less from Each Other*, Sherry Turkle (2011) argues our society has become dependent on technology to fulfill needs for intimacy while removing the demands of friendship. Namely, youth and young adults utilize technology to avoid awkwardness in face-to-face interactions and all the potential for conflict and disappointment that accompany it. Despite this, humans still crave attention and emotional connections to others, therefore overly relying on technology to fill these needs.

Further the relation between days between testing and lower competency measures run contradictory to my hypotheses. On one hand, the lower levels of perceived competence could be related to normal feelings all youth feel at the end of summer, after a long absence from school and classmates (Marsh, 1999). To test whether decreased



levels of competence is related to potentially unmeasured feelings of forgetfulness and loss of ability, a comparison group of youth who participate in a variety of different summer programs, as well as those who do not participate in any program, is needed (Shadish, Cook, & Campbell, 2002). Self-selection could also be one reason that youth are showing lower levels of perceived competence, such that youth with already low levels of competence are more likely to be enrolled in a general summer program rather than a specialized summer sports or arts camp (McCartney, Bub, & Burchinal, 2006). Self-selection is one of the major issues with after-school research, with it being very difficult to randomly assign participants into activities. Therefore, future research should utilize other quasi-experimental approaches, such as an interrupted time series method, to determine if and when participation in summer or afterschool activities influences perceived competence, or if lower levels of perceived competence are predicting student's enrollment in summer programs (Shadish et al., 2002).

The negative relation between youth participation and connection is surprising given youth are spending increased time with peers, adults, and in outdoor physical activities in their community. Why would increased levels of participation lead to lower levels of connection to peers, adults, and neighborhood? One possible answer would be that participants are not enjoying their time in the center, possibly due to increased contact providing more opportunities for conflict or increased alienation with peers and staff, leading to lower levels of the connection subscale. Informal observations of the programs do not seem to coincide with this conflict theory. However, this pattern has been previously demonstrated, where summer camp participants reported having more

negative peer relationships and less interest in new friendships at the end of summer camp than during pre-camp measures (Thurber, et al. 2007).

Instead, an alternate solution could be explored. Jacquelynne Eccles' Expectancy Value Motivation Theory (Eccles & Wigfield, 2002), poses that youth choose to pursue activities that meet four subjective task values: expectation values, enjoyment values, usefulness value and cost. Understanding how cost, particularly social costs that influence how an adolescent feels about a task, might be the driving force behind this relationship. For example, youth might prefer to be spending unsupervised time with their friends over the summer, or at least be in activities with more autonomy. However, by spending high levels of participation in summer programs, it decreases the time available to spend with friends in unsupervised settings (a significant social cost). This may partially explain why participants might rate their connections to friends as being lower during the summer months.

The second significant finding relates to the association between participant's ethnicity and math skills. This paper is distinct in finding low-income Hispanic youth to be at greater risk for losing academic skills over the summer in comparison to other low-income groups. Latino children, experience unique acculturation stress, beyond the direct effects of poverty, that negatively impacts their self-regulation and later impacts learning ability (Li-Grining, 2012). At present, little research has been conducted on the needs or accessibility of afterschool resources specifically for Latino youth (Sanderson & Richards, 2010). One pilot study that explored the development of Latino urban youth's self-worth and ethnic identity in a youth development program found that intensity of

attendance and higher program quality belief (especially in terms of atmosphere and safety) was related to greater self-worth (Riggs et al., 2010). While intensity of participation or perception of program quality was not related to ethnic identity development, socialization with other Latino youth in the program was significantly related to ethnic identity development (but ethnic identity development was not related to self-worth). Because ethnicity and poverty is often confounded (Li-Grining, 2012; Reardon, 2011), future studies should examine specific risks, including specific barriers for participation in afterschool programs, for academic achievement among low-income Hispanic youth compared to risks faced by other low-income groups.

This study has a few limitations that should guide future research. The first is related to the study's small sample size and lack of power. Although program differences were not statistically significant, trend-level significant differences between programs in terms of age and second-language ability, suggest that with larger sample sizes differences between programs may become significant. Future research should restricting sampling and recruitment procedures. Because participants in Program 2 were unavailable during the last week of testing, their data had to be dropped from the analyses, further reducing sample size. To determine whether a relation between participation and decreased math ability actually exists, a greater number of participants will have to be recruited for future studies, and measures should be taken to ensure participant's data is obtained at both time points. Participants who did not attend the last week of programming had significantly lower rates of attendance. Although no significant differences were found in data collected at Time point 1, I cannot rule out the

possibility that their data was missing not at random. However, it is interesting to note that participants whose data was dropped had higher Letter Word scores than participants who provided data at both time points. This might bias results related to academic achievement, if participants are participating less because the program is not providing enough stimulating activities, such as low numbers of challenging books at the center. Unfortunately, little research on afterschool programs has examined the motivations of youth to attend programs, and even fewer have examined why participants drop out (Anderson-Butcher et al. 2003). Future studies should examine differences not just between participants and non-participants (in which it has been suggested the greatest difference will be found; Roth et al. 2010), but also participants who drop-out of the program prematurely and those participants who remain in programs.

A second limitation is the study's lack of a control group. A comparison group should be recruited to determine if the summer learning loss is somewhat less in participants of summer programs or if there is truly no effect of summer program participation (Shadish et al., 2002). A comparison group is needed to determine if summer programs are actually having an effect or if selection factors, such as high levels of family social capital leads some low income youth to gain academic skills over the summer (Slates, et al., 2013). Without a comparison group, the results of this study cannot firmly establish that summer program participation is related to youths' social or academic outcomes. Further, multiple methods, including measures from staff and parents, should be used to explore social relations between participants, their peers, and the staff. The literature clearly demonstrates that for community programs to be effective,

high levels of structure and organization need to be in place (McComb et al., 2011). That is, a center must have strong supervision and clearly states expectations to create a safe and welcoming environment, as well as a multitude of activities that help youth explore new areas of interest, work together, and achieve goals. Roth and Brooks-Gunn (2003) add a third factor- opportunities for youth contributions and feedback. Collectively, these factors are referred to as the “Big Three” important characteristics of a youth development program. In one sense, high levels structure and organization was informally observed in both centers. However, without additional centers in the study, or youth-level data of their perceived supervision and activity engagement, the differences between environmental variables cannot be compared. Future studies should include direct measures of youth engagement and observational reports of structure.

In conclusion, community-based summer programs have the potential to foster the well-being of low-income, ethnic minority youth (McCombs et al., 2011). This study showed low-income participants in summer programs did not have gains nor losses in mathematic ability and actually gained small amounts of literacy ability over the course of the summer. Although there were contradictory findings regarding participation and PYD measures, future studies could examine specific outcomes related to youth’s resiliency. Researchers and youth agree that summer programs hold much potential for fostering growth, happiness, and academic skills. For decades, there has been a significant difference between the academic achievement between White and Black (and other racial minority) students (Duncan & Magnusson, 2011), and high income and low-income youth (Reardon, 2011). Therefore, it is important for researchers to correct this

imbalance, by discovering all possible factors related to academic achievement, including participation in summer programs and various aspects of such participation. For instance, summer programs might have multiple missions – to keep youth off the street and in a safe supervised setting, to teach social skills, increase autonomy and empowerment, and to allow youth to explore and learn new skills. In the case of preventing summer learning loss and promoting positive youth development, the mechanisms of summer programs are highly overlooked processes. Future research should do more to discover protective factors related to academic achievement among low-income, ethnically diverse youth attending summer programs.

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## VITA

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