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Measuring Collective Efficacy Among Children in Community-based Afterschool Programs: Exploring Pathways toward Prevention and Positive Youth Development

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Background and Introduction

Over the past several decades, researchers across the multiple fields of psychology, criminology, education, human development, public health, and sociology have concerned themselves with the degree to which people feel connected and are able to exert a positive influence upon each other (Battistich, Schaps, & Wilson, 2004; Drake & Cayton, 1945; DuBois, 1899; Chavis & Wandersman, 1990; Furstenberg, 1993; Leventhal & Brooks-Gunn, 2000; Putnam, 1995; Rappaport, 1981; Sampson, Raudenbush, & Earls, 1997; Sarason, 1976; Zimmerman, 1995). Collective efficacy, a concept that has emerged in the past decade or so, is defined as the degree to which a group of individuals feel connected and are confident in the willingness and ability of the group to act on behalf of its members (Sampson, et al. 1997; Sampson, Morenoff, & Earls, 1999). Theories of social cohesion and informal social control suggest that when people feel a sense of connectedness to each other and are willing to exert reciprocal and positive behavioral influence, less deviant and delinquent behavior is likely (Hirschi, 1969). The “sense of a caring community” has also been examined in educational settings, exploring the degree to which youth feel close to each other and are willing to help each other (Battistich et al., 2004). Seminal research based upon these theories examines collective efficacy among neighborhood residents, parents, and teachers in schools, by asking individuals not only about the degree to which they feel that their group is cohesive and willing to help each other, but are also effective in positive behavioral influence (Goddard, Hoy, & Hoy; 2000; Odgers, Moffitt, Tach, Sampson, Taylor, Matthews, Caspi, 2009; Sampson et al., 1997). Adult collective efficacy assessed at the neighborhood level has been found to predict lower levels of crime and violence. However, it is rare that children’s collective efficacy has been examined in relation to their behavior. Thus the aim of the current study is to examine the degree to which collective efficacy is a relevant concept for children and youth that can be measured with considerable reliability and validity.

Based upon previous research, collective efficacy is conceptualized in the current study as individual perceptions of group connectedness and a willingness on the part of the group to intervene to reduce problem behavior. The concept of collective efficacy is distinguishable from self-efficacy (Bandura, 1997; 2000) in that self-efficacy concerns perceptions of specific individual abilities whereas collective efficacy examines the individual’s perception of a particular group and its attributes. Yet, collective efficacy shares theoretical tenets with self-efficacy. Self-efficacy is concerned with judgments of how well one can execute courses of action required to deal with prospective situations while collective efficacy

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concerns the degree to which a group is expected to execute courses of action that actively discourage problem behavior (Bandura, 1982). Bandura posited that “judgments ofefficacy can determine how much effort people will expend and how long they will persist in the face of obstacles or aversive experiences” (p. 122). Gradual increases in the challenge of a task, vicariously observing the success of role models with whom one identifies, along with one’s own success, all potentially inform efficacy (Bandura, 1982). These premises of self-efficacy and human agency can be extended to the mechanisms of collective efficacy. Indeed, Bandura’s social-cognitive theory posited three modes of agency: “1) direct personal agency; 2) proxy agency that relies on others to act on one’s behest; and 3) collective agency exercised through socially coordinated and interdependent efforts” (Bandura, 2001, p.1).

Bandura’s social-cognitive theory of human agency has formed the basis of research among teachers in which collective efficacy was defined as their combined beliefs that they can work together to produce desired effects. Using data from 452 teachers in 47 schools, collective efficacy was measured predominantly by focusing on assessment of competence, that is perceptions of overall teacher effectiveness in helping children to learn and grow (a sample item states: Teachers in this school can get through to the most difficult students). Teacher collective efficacy emerged as the strongest predictor of higher student achievement, accounting for 50% of the variance, more than race-ethnicity or socio-economic status, all statistically significant factors (Goddard, Hoy & Hoy, 2000). Consistent with social cognitive theory, mastery experience informed teacher collective efficacy (Goddard, 2001). Based upon this research, children benefit from adults who feel confident that they can offer supportive social control, and guide “other people’s children” (Delpit, 1995).

Openness to socializing other people’s children is a theme in qualitative research that has described the benefits of collective socialization in neighborhoods where parents know each other and willingly socialize each other’s children (Jarrett, 1995). The so-called nosy but caring neighbor who is willing to act and intervene on behalf of children is associated with a sense of neighborhood goodwill, more effective informal social control, and less problem behavior among children. While learned helplessness emanating from a failure to exert social control within one’s group, neighborhood, or community may lead to communal depression and hopelessness, banding together for the common good may bode well for child and family development (Burton & Jarrett, 2000; Furstenburg & Hughes, 1995; Sampson & Laub, 1992).

Both families and communities are important contexts of youth development and more research is attending to the meso-system and the ways in which community and family might interact to affect youth behavior (Smith, Faulk, & Sizer, under review). Simons, Simons, Burt, Brody, and Cutrona (2005) examined collective efficacy in order to predict conduct problems among rural African American youth in Georgia and Iowa. The measure of collective efficacy was based upon previous research (Sampson et al., 1997, Sampson, Morenoff, & Earls, 1999) including assessments of both cohesion and informal social control. The adult care-givers were asked about whether adults in the neighborhood know each other and would be likely to correct unruly children or notify the police if necessary. They also asked children similar items but the scale demonstrated less internal consistency for the children than the adults (Cronbach’s α of .80 for adults compared to .60 for children). This longitudinal study demonstrated that collective efficacy was related across time to increased authoritative parenting, (i.e., clear guidelines coupled with warmth and support), which in turn led to less peer deviance and delinquency among African American elementary school-age children (Simons, Simons, Burt, Brody, & Cutrona, 2005). Furthermore, high collective efficacy, combined with high authoritative parenting resulted in

the lowest levels of peer deviance, evidence for the amplifying effect of collective efficacy upon parenting. This study demonstrates that collective efficacy is related to both parenting and youth behavior.

Collective Efficacy in Children and Youth: An Emerging Area of Inquiry

Research that explores collective efficacy among youth is still emerging. However, there is a great deal of literature suggesting that children's individual sense of agency, empowerment, and engagement are influential aspects of positive youth development (Eccles & Gootman, 2002; Larson, 2000; Smith, 2007; Vandell, Shumow & Posner, 2005; Villaruel, Perkins, Borden, & Keith, 2003). Given the dearth of research on children's collective efficacy, in this section we review related research on children's agency and willingness to act in volatile or risky situations. Studies of children's behavioral influence upon each other typically focus on delinquent or deviant peer influence. However, the theme of collective efficacy directs our attention to the possibility that children and youth may also influence one another toward positively valued behaviors and away from antisocial behavior. Positive youth development brings with it a recognition that development is not by definition problematic, fraught with psychopathology, substance abuse, and delinquency and, draws attention to the positive characteristics and potentialities of youth (Larson, 2000; Lerner, Fisher, & Weinberg, 2000; Smith, 2007).

One of the few studies of positive peer influence was conducted in a classroom setting that was beginning to implement points-based rewards (L. Smith & Fowler, 1984). Peers were found to be effective monitors helping to keep disruptive behavior at bay. However, compared to adults, the youth were more liberal in rewarding other peers and less likely to sanction undesirable behavior with the loss of points. It is possible however, that children sanction each other in other ways or give verbal reminders that are cautionary and/or encouraging to each other (e.g., let's stay on track, or let's do our best). Attention to ways to foster engagement and participation for children of diverse racial-ethnic and social backgrounds in various types of groups settings might be particularly timely given increasing diversity in the U.S. and disproportionate risks for the development of ethnic minority youth (Smith & Hasbrouck, 2006; Smith, Richardson, & Belue, 2009; Watts & Flanagan, 2007).

The conditions in which youth are more likely to act are another topic of examination. For example, Syvertsen, Flanagan, and Stout's (2009) study of adolescents in a Midwestern school district (77% European American, 12% African American, 4% Latino and 2% Asian American) has shown that the majority of youth prefer taking action to avoid dangerous situations, rather than just standing-by. The presence of trusted teachers, along with a school climate that is intolerant of bullying behavior, helps to empower youth to act when needed (Horne & Orpinas, 2005; Syvertsen et al., 2009). Teachers can help youth feel more confident in acting and can engage them in fostering a positive classroom climate.

Parents may also help youth feel confident in taking action. In the one other study of collective efficacy among youth of which we are aware, Johnson, Finigan, Bradshaw, Haynie, and Cheng (2011), explored not only parent but also adolescent collective efficacy among a sample of 143 caregiver-adolescent dyads. Collective efficacy was assessed based upon previous research (Sampson et al., 1997) assessing the dimensions of social cohesion and informal social control. Similar to research discussed earlier, the parent measure demonstrated higher internal consistency than the youth measure (α of .82 for parents versus .62 for youth). Furthermore, parent and adolescent reports of their collective efficacy were unrelated. In their structural equations models, though parental collective efficacy was not related to parental attitudes towards violence, it was related to the messages parents reported they relayed to their youth about violence. Also, youth collective efficacy was

found to be negatively related to attitudes endorsing violence; youth who felt more connected and willing to intervene, were less likely to endorse violent attitudes. Though this study did not assess the relationship of parent or youth collective efficacy to actual youth behavior, it begins to examine the role of parental and adolescent collective efficacy in attitudes toward violence.

Research thus far has demonstrated that parents, teachers, and neighbor's perceptions of collective efficacy are related to both youth attitudes and behavior. One study has used a parent-child composite measure of collective efficacy and found it to be related to youth deviant peer affiliation and delinquency (Simons et al., 2005). Another has found adolescent collective efficacy to be related to violence attitudes (Johnson et al., 2011). However, in both those studies, youth collective efficacy was assessed less reliably than among adults, and relationships between child and youth collective efficacy to their own behavior was not explored. As a relatively new child-related research topic, there is much to be learned and researched. One foundational contribution to this research agenda is to develop and/or adapt a reliable and valid measure of collective efficacy that relates to lower levels of youth problem behavior as theorized, the focus of the present study.

Community-based Afterschool as a Context For Children's Collective Efficacy

Along with the home and school context, afterschool is an important context in children's lives. In recent years, children's participation in afterschool programs has been increasing. Two-thirds of children in the United States have both parents in the workforce and 77 percent of children in single-parent homes have a parent in the labor force (Snyder & Sickmund 2006). Furthermore, youth are "90 percent more likely to be violently victimized between the hours of 3 and 7pm on school days than after 8pm" (Snyder & Sickmund, 2006, p. 34). This is a work-family issue in that working, dual career and single-parent families need care and supervision for their children afterschool. Racial-ethnic minority children, whose parent(s) are more likely to be working, especially subscribe to afterschool care (Hynes and Sanders, 2011). Nearly seven million children attend afterschool programs (Capizanno, Tout & Adams, 2000), and the U.S. Government spends 1.1 billion dollars per year for afterschool programming (Afterschool Alliance, 2009). This comes at a time in which school authorities feel inundated by demands for success and accountability leaving less time to offer activities designed to promote socio-emotional skills and development during the school day (Smith, Boutte, Zigler, & Finn-Stevenson, 2004). Thus, at this juncture, supervised afterschool programs present an opportunity for prevention and promotion activities to benefit youth.

Afterschool is a potentially helpful setting for children and youth. Youth engagement in structured and supportive out-of-school and recreational opportunities are related to both their positive development and decreased involvement in delinquency and substance abuse (Caldwell, 2005; Durlak & Weissberg, 2007; Gottfredson, Gerstenblith, Soulé, Womer, & Lu, 2004; Osgood, Anderson, & Shaffer, 2005). Further, out-of-school time opportunities can help promote a sense of belonging, engagement, leadership, and involvement among youth (Eccles & Gootman, 2002; Larson, 2000; Smith, 2007; Villaruel et al., 2003). Elementary school youth who participate in activities outside of school seem more motivated to continue these activities long-term during adolescence (Simpkins, Vest, & Becnel, 2010). Thus, elementary school may be a critical time in which participation in quality out of school activities are more likely to lead to longer term beneficial involvement. Because afterschool programs are an important setting for many youth in the U.S., and have been found to impact both problem behavior and positive youth development (Durlak & Weissberg, 2007), we believe that afterschool presents a novel and important setting in which to examine children's collective efficacy and youth behavior.

The Current Study

Collective efficacy among adults has been found to be an important factor related to reduced levels of children's violent and aggressive behavior. Though cross-disciplinary research has examined adult collective efficacy and the impact upon violence and aggression (Odgers et al., 2009; Sampson et al., 1997; Simons et al., 2005), few studies have focused upon the effects of youth collective efficacy. Our search of the literature identified one study that examined adolescent collective efficacy and attitudes toward violence (Johnson et al., 2011) and another studying using a parent and child composite of collective efficacy in a longitudinal design that affirmed the causal direction of collective efficacy upon parenting and behavior. In both, the youth measure was in need of further psychometric development demonstrated by lower internal consistency reliability. Furthermore, the direct relationship between youth collective efficacy and behavior was not examined. In the current study, we explore a newly adapted measure of collective efficacy for school-age children that allows us to examine the relationships between child collective efficacy and child behavior. A focus on youth agency paves the way for strategies that not only do things for but with youth, acknowledging the possibility that youth can have an influence upon each other (Watts, personal communication). Further, given the important research that points to the afterschool hours as particularly salient in promoting connectedness, supportive relationships, and youth agency in afterschool (Eccles & Gootman, 2002; Villaruel et al., 2003), we assess these constructs among elementary children in afterschool settings to ascertain that the concept is a meaningful one for groups of children.

As with any relatively new research focus, conceptual and methodological groundwork needs to be laid that will generate and support continued research on the topic. This study aims to fill that void by examining the internal consistency reliability, construct and concurrent validity of a newly adapted measure of collective efficacy for children, the Collective Efficacy Among Children Scale (CEACS). We assess the construct and concurrent validity of our measure by exploring its factor structure and relationships to children's adjustment and behavior in hypothesized directions congruent with social control theory and the research that links adult collective efficacy to youth problem behavior (Cronbach & Meehl, 1955; Hirschi, 1969; Sampson et al., 1997; and Sampson et al., 1999). Though aggregate level collective efficacy has been a major focus of research in recent years, led by the influential work of Sampson and colleagues (1997), there is also research on individual perceptions of collective efficacy (Johnson et al., 2011). Given the need for psychometric development, the focus of this paper is to first establish the reliability and validity of the measurement of collective efficacy among children, with analytical models that acknowledge the nested nature of children in afterschool programs. Based upon theories of social control and previous research discussed here, we hypothesized that both connectedness and willingness to intervene will be inversely related to problem behavior and adjustment, in that among children and youth higher levels of collective efficacy will be associated with lower levels of problematic adjustment and behavior.

Methodology

This study was conducted as a part of the LEGACY (Leading, Educating, Guiding, A Community of Youth) Together Afterschool research project examining a cooperative game, the Paxis version of the Good Behavior Game (GBG, Barrish, Saunders, & Wolf, 1969; Embry, Straatemeier, Richardson, Lauger, & Mitich, 2003; Kellam et al; 2008). GBG uses praise and group-based contingencies to reduce acting out behavior among children. Teams of children can "win" activity prizes for appropriate and on-task behavior. These contingencies are expected to foster group cohesion, encouragement, and congenial warnings from peers on their team to behave well. This paper focuses upon data collected in

fall, prior to the start of intervention, testing the reliability and validity of one of the important constructs in our model, children's collective efficacy.

Programs and Participants

Afterschool programs in three proximal school districts were solicited and all agreed to participate in the research project. The first program, provided by a private community agency serving local schools, was located in the capital of the state. This small urban center is comprised of approximately 47,418 residents who are 29% White, 50% African American, and 14% Hispanic with a median household income of 29,945 dollars (City Data, 2009). The second program was run by a local YMCA/YWCA encompassing the suburban area outside the small capital city with approximately 258,934 residents who were 73% White, 16% African American, and 5.6% Hispanic. The median income across the county was \$48,742. The third provider was a local parks and recreation commission in a school district that was approximately 20–30 miles from the other two with a population of 55,439 residents who were 47% White, 14% African American, 33% Hispanic with a median household income of \$33,312. Thus from the archival data available for these programs, it can be seen that this study includes children who are diverse in terms of race-ethnicity, socio-economic status, and urban/suburban geographic dwelling.

Data was collected from children in fall, generally from October to December of 2009 before the start of intervention. Across all of the programs, 308 2–5th grade children were listed on the program enrollment lists. Afterschool enrollment lists are quite fluid and change weekly as parents make alternate plans for their children's out-of-school time based upon family employment, needs, and finances. Consent forms were mailed to all of the parents/guardians of all of the children in grades 2 through 5 in the program on their enrollment lists which were checked weekly for accuracy. Parents could decline to have their child participate simply by selecting this option, signing, and returning the consent forms in postage-paid envelopes to the research team, thus making the process easier for busy families to participate, and enhancing the generalizability of the sample. Surveys were administered on scheduled and make-up days, with 236 children present, 227 of whom were previously consented and thus surveyed, resulting in 74% of the available enrollment list, and 96% of those present. Table 1 describes the children demographically. Overall, the sample was fairly equally distributed by gender (55% male and 45% female). The participating children were 30% African American, 35% White, 12% Latino, and 22% Asian, Native American and multi-racial children. The sample included similar proportions of 2nd to 5th grade children².

Procedures and Measures

Surveys were group-administered in the fall of the academic school year, prior to implementation of the Pax Good Behavior Game, to children in the 2nd to 5th grade afterschool programs using small electronic PDA (personal digital assistant) devices. In general, the children completed the survey in 45 and 60 minutes. (Kindergarten and first grade children were not included because of reduced ability to comprehend the questions.) The PDA's included child-friendly cartoon characters encouraging and praising children periodically for the work done so far.

This study used several measures to gather information about children's collective efficacy, adjustment problems and behavior. Due to the lack of a previously existing measure of children's collective efficacy in relation to the afterschool setting, we developed a measure

²The survey data described in this study is from children in grades 2–5 who provide data on age, gender, race-ethnicity, but are unlikely to provide accurate data on family socio-economic status and income. This information is provided at the program level.

that examined the two core elements of collective efficacy relevant to after-school. The first element from previous research on collective efficacy concerns the degree to which children participating in the program felt connected as a group. The second element based upon previous research, examines the degree to which children report that they and their peers in the afterschool are willing to intervene to encourage positive behavior and discourage bullying and aggression. This measure was informed by two measures of collective efficacy among adults that also focused upon social cohesion and informal social control (Sampson et al., 1997) and a collective efficacy measure developed for teachers (Goddard et al., 2000). From an item pool generated by previous work on willingness to intervene, a high school and a college student adapted the items to language more relevant and understandable by children, endeavoring to capture the voice of youth and the ways in which they might think about these themes. The resulting 16 items were then tested with a small group of 6 elementary students who suggested revisions to the wording. The measure was further tested in a pilot study with over 100 children, allowing us to examine the items psychometrically, ultimately resulting in the current 12-item subscale.

The 12 items assessing a willingness to intervene were also all rated on a response scale of 1 to 3 (Not True, Sometimes True, Very True). In our pilot work we found that a 5-point scale did not demonstrate a range of scores that were internally consistent, likely because they were neither easily understandable nor distinguishable by elementary children. Furthermore, other important, widely cited measures of children's behavior have found a 3-point scale to be reliable, valid, and reasonable for child-oriented measures (Goodman, Meltzer, & Bailey, 2003; Mellor, 2004). One sample item states "If children in this program are misbehaving, other children remind them to do their best." The scores on the items of this scale exhibited moderately high item-total correlations ranging from .56 to .74, and an overall Cronbach's α of .92 (Table 2). The scale was computed as an average of the items.

The dimensions of social cohesion were assessed using a measure of afterschool connectedness based upon the work of Resnick et al. (1997). A sample item states "I feel like I am a part of my afterschool program." Children could respond to the connectedness items on a range where 1 is "not true," 2 "sometimes true" and 3 "very true." This scale has one negatively-valenced item, (I have trouble getting along with the staff at my afterschool program) which was reversed prior to computing a mean for the scale. The item-total correlations, which represent the correlations of the individual items with all of the other remaining items in the scale, ranged from .23 to .74. Only one item had an item-total correlation of .23 and it was a negatively worded item, one that might have been difficult for elementary children to comprehend. The higher item-totals, which can range from 0 to 1.00, are all over .40 and are indicators of internal consistency along with the overall Cronbach's α of .83.

Later sections will fully explore construct validity and the degree to which these two measures comprise one or two distinct dimensions conceptually using factor analyses. In the ground-breaking research on collective efficacy, it was found to be related to levels of problem behavior; we adopt a similar focus to test concurrent validity in theoretically congruent ways (Cronbach & Meehl, 1955). Youth behavioral adjustment was assessed in two ways, one of which was the Strengths and Difficulties Questionnaire (SDQ), a measure that has been found to be reliable and valid for children as young as 11 years old (Goodman, Meltzer, & Bailey, 2003; Mellor, 2004). We adapted some of the wording of the SDQ for these younger children in grades 2–5. For example, one item states, "I often volunteer to help others" and we revised it to "I often help others" eliminating "volunteer," a word likely cognitively difficult for some of the children. We used 22 items all rated on the 3-point response scale used by the original developers (1=Not True, 2=Somewhat True, 3=Certainly True). The total scale includes items assessing: prosocial behavior (I am kind to younger

children); hyperactivity (e.g., “I have trouble concentrating on my work”); physical/emotional symptoms (e.g., “I get a lot of headaches, stomachaches or sicknesses”); and conduct problems (e.g., “I get very angry and often lose my temper”). The prosocial scale items were reverse scored such that high scores on prosocial behavior resulted in low scores on emotional maladjustment. The scores on all 22 of the items were averaged to obtain a total score with an internal consistency, Cronbach’s α , of .81.

A measure created by Loeber and colleagues at the University of Pittsburgh in their longitudinal study of youth assessed children’s involvement in problem behavior including cheating, vandalism, and experimenting with smoking and drinking (Russo et al., 1993). The measure is developmentally sensitive and begins by asking youth if they know where to obtain certain typical items (e.g., apples, money) and then proceeds to ask them whether they know where to get cigarettes or alcohol. Youth are then presented with 5 items to which they respond by indicating if they have been involved in the activity and a second item where they indicate the frequency of their involvement (e.g., once, twice, or more often). Because of the low frequency of these items among these elementary-school children, our measure of problem behavior was the sum of the behaviors the child had engaged in at least once, which ranged from zero through five. The 5 items exhibited item-total correlations ranging from .24–.55 with a Cronbach’s α of .66. We did not expect high levels of internal consistency for this scale in that children who are involved in one type of behavior are not necessarily involved in the other problem behaviors that comprise the scale.

Analyses and Results

The present study examines the internal consistency reliability, construct, and concurrent validity of a measure of children’s collective efficacy.

First, exploratory factor analysis is used to examine the construct validity of the measure by identifying whether collective efficacy was indeed comprised of the two dimensions of connectedness and willingness to intervene. Second, descriptive data and statistics explore the extent to which collective efficacy, adjustment and behavioral problems vary in relation to gender, grade, and race-ethnicity. Third, hierarchical linear models were used to examine validity in a way that accounts for youth being nested in afterschool programs. Congruent with Cronbach and Meehl’s (1955) idea of a nomological net of theoretically based concurrent validity, we tested the degree to which collective efficacy, that is connectedness and willingness to intervene, is related to various aspects of adjustment and problem behavior. Based upon social control theory (Hirschi, 1969) and findings with adults, we conjecture that connectedness and agency are related to less problem behavior and maladjustment.

Construct Validity - Exploratory Factor Analyses—Exploratory factor analysis from the Statistical Package for the Social Sciences (SPSS) was used to examine whether willingness to intervene and connectedness comprise two distinct dimensions of collective efficacy. A principal axis factoring approach was used with varimax rotation to allow for the possibility that the concepts were independent and distinct. A solution with oblimin rotation was tested as well and yielded the same factor structure for connectedness and willingness to intervene. The scree plot, which was the same for both varimax and oblimin models, suggested that a 2-factor solution fit the data best (Figure 1). The eigenvalue for Factor 1, willingness to intervene, exceeded 7.00, accounting for 35 % of the variance. The eigenvalue for Factor 2, connectedness was 1.97, accounting for 9 % of the variance (Table 3). The item loadings ranged from .30 - .80 on Factor 1 and .48 - .72 on Factor 2. Except for 2 items (“I like the children in my afterschool program” and “In this program I fell like other children listen to me when I have something to say”) the difference between the loadings on

Factor 1 versus Factor 2 ranged from .29 to .68. Yet, the Willingness to Intervene and Afterschool Connectedness factors were related, ($r = .50, p < .00$). Thus, our data with children suggests that collective efficacy is comprised of two related dimensions of willingness to intervene and connectedness, each an aspect of the broader construct. Subsequently, we provide descriptive data on these measures and explore the degree to which these dimensions demonstrate similar validity in relationship to children's problematic adjustment and behavior.

Descriptive Results—Given that this was a newly developed measure of children's collective efficacy, we provide descriptive data on scores by gender, race, and age, not only on our new measure, but also on children's emotional adjustment and problem behavior. The number of respondents, means and standard deviations of the measures are presented in Table 4. The skewness, representing the degree to which responses are mostly in the low to negative range, versus higher more positive scores, ranged from .074 to $-.414$ for experimentation with tobacco products. The kurtosis, delineating an elongated versus more normal shaped bell curve, ranged from 1.14 for vandalism to 5.44 for experimenting with marijuana representing the relative rarity of these events among elementary children. In examining the data, thirteen percent of these children in grades 2nd to 5th have been involved in vandalism (broke or damaged property belonging to someone else on purpose), 10% tried drinking wine, beer, or alcohol, 7% stole something, 6% tried smoking cigarettes, and 5% tried marijuana.

Table 4 reveals that gender differences did emerge. Girls reported higher scores on collective efficacy (i.e., willingness to intervene and connectedness) and lower scores on emotional maladjustment and problem behavior. Grade differences were found on connectedness, emotional maladjustment, and problem behavior as can also be seen in Table 4. Younger children exhibited lower levels of connectedness (2nd versus 4th graders) and higher levels of emotional maladjustment and problem behavior (2nd versus 5th graders). However, the most frequently reported problem behavior was purposely breaking and damaging property belonging to someone else (13%), a behavior in which 2nd grade children might demonstrate less respect than 5th graders for the property of others. Statistically significant differences in willingness to intervene, connectedness, adjustment, and behavior by race-ethnicity were not apparent.

Concurrent Validity of Collective Efficacy—Initially, we examined the zero-order relationships between collective efficacy, emotional adjustment and problem behavior. Hierarchical linear models (HLM, Raudenbush & Bryk, 2002) were used to further examine the specific interrelationships between our focal concepts of collective efficacy, adjustment difficulties, and problem behavior. This analytic approach enabled us to adjust for the lack of independence among observations for children attending the same after-school program by treating the programs as level 2 cases and the individual children as level 1 cases in the analysis. We estimated these models using the HLM 6.08 software (Raudenbush, Bryk, & Congdon 2009). Full data were available for over 94% of the sample (214 students), and analysis was limited to cases with no missing data.

Our models treat problem behavior and adjustment difficulties (assessed by the total SDQ score) as outcomes and the two components of collective efficacy, willingness to intervene and connectedness to the program, as explanatory variables. Thus, we assess validity as the degree to which our newly developed measure of collective efficacy demonstrates concurrent relationships with important and theoretically relevant concepts in hypothesized directions. Given the previous differences in both the independent and dependent variables, gender and grade were included in the models. We also controlled for the influence of gender and grade because of the association with the indicators of collective efficacy in the

previous analyses. Race-ethnicity was not included in the models because the descriptive data did not indicate statistically significant relationships to the other variables. We hypothesized that both cohesion (afterschool connectedness) and willingness to intervene would be inversely related to emotional maladjustment and problem behavior, consistent with theories of social control and attachment and the patterns exhibited by adult collective efficacy and children's problem and delinquent behavior. Because we expect that these two concepts are two distinct but related concepts based upon the exploratory factor analysis, we entered them into the models as manifest variables. Table 5 presents the results of this analysis.

The composite hierarchical linear model for the analyses (which combines the Level 1 and Level 2 equations) is:

$$Y_{ij} = \gamma_{00} + \gamma_{10} \text{Gender}_{ij} + \gamma_{20} \text{Grade}_{ij} + \gamma_{30} \text{WI}_{ij} + \gamma_{40} \text{Con}_{ij} + u_j + e_{ij}$$

Y_{ij} is the outcome measure, i represents the individual student, j refers to the afterschool program, WI is willingness to intervene, Con is connectedness, u_j is the residual term for the random intercept, and e_{ij} is the individual level residual term. The standard linear version of HLM assumes normally distributed residuals, but the problem behavior measure was highly skewed, with 77% of student reporting that they engaged in none of these acts. We therefore applied the overdispersed Poisson version of this model to this outcome (Raudenbush, Bryk, & Congdon, 2009). The overdispersed Poisson model does not include the individual level residual term and instead includes an overdispersion term, and $\log(Y_{ij})$ replaces Y_{ij} . We report population average coefficients for that nonlinear model. Table 6 includes intraclass correlation values for a null model, indicating the proportion of variance between afterschool programs, rather than within them. These values are relatively low ($<.04$), indicating limited variation across the programs. We report Wald tests for the overall statistical significance of the model we report versus the null model (Table 6). The Wald test is decidedly significant for both outcomes. In our HLM models, gender and grade in school are both significantly associated with both outcomes. Girls and students in higher grades report fewer adjustment difficulties and lower levels of problem behavior. In our HLM models, gender and grade in school are both significantly associated with both outcomes. Girls and students in higher grades report fewer adjustment difficulties and lower levels of problem behavior.

Willingness to intervene and cohesion connect to youth outcomes in somewhat different ways. Afterschool connectedness exhibited a strong inverse relationship to children's emotional maladjustment such that children who felt connected had less emotional maladjustment and reported more prosocial behavior including caring about others, being nice, and willingness to share (standardized hlm coefficient, $\gamma^* = -.24$, $p < .01$). Thus, a standard deviation of increase in afterschool connectedness was associated with a decrease of .24 standard deviations in emotional maladjustment. Connectedness is more weakly, but still significantly, related to problem behavior (semi-standardized hlm coefficient, $\gamma^* = -.26$, $p < .05$). In this case a standard deviation of increase in connectedness corresponds to a .26 decrease in the natural log of the problem behavior index, which would be a 23% reduction in problem behavior. Children who report higher levels of willingness to intervene, that is the expectation that their peers in afterschool will encourage them to behave well and discourage misbehavior, report fewer behavioral problems such as involvement in stealing, vandalism, smoking, and drinking ($\gamma^* = -.42$, $p < .01$). These data support the validity of the measure of collective efficacy with its two components of willingness to intervene and connectedness in that they are associated with behavioral adjustment in anticipated ways (Cronbach & Meehl, 1955).

Discussion and Implications

The present study examined a newly developed measure of children's collective efficacy. This work is important in that it is measuring an aspect of positive youth development, collective efficacy, among a sample of youth that is diverse in age, race-ethnicity, and geographic locale. The measure demonstrated strong internal consistency in the dimensions of willingness to intervene and connectedness. Exploratory factor analysis supported connectedness and willingness to intervene as two dimensions of collective efficacy, albeit they are related. We tested the validity of our measure by exploring concurrent relationships with related concepts in expected directions. As expected based upon social control theory, collective efficacy was related to youth emotional adjustment and behavior. Willingness to intervene is related to reduced problem behavior while connectedness is related to more sharing, caring, and kindness among youth in elementary afterschool programs. It seems appropriate that the dimension representing behavioral influence--willingness to intervene--is more related to children's lower levels of problem behavior while feeling connected and supported by others is related to more prosocial attitudes and less reported emotional symptoms like hyperactivity and internalizing. This pattern of relationships supports the nomological net underlying the measurement of this concept among children.

Our descriptive results point to some variation by grade and gender. Interestingly, younger children were found to exhibit lower levels of connectedness and higher levels of problem behavior. This is enigmatic in that other research generally finds problem behavior to be lower for young children and increase upon entry into adolescence (Aber, Brown, & Jones, 2003). We explored our data specifically for the items in question and were able to identify 9–12 2nd and 3rd grade students who consistently reported being involved in behaviors such as smoking, drinking, stealing, and vandalism (breaking something on purpose). The positive relationships between the scores on problem behavior and the SDQ supports the accuracy of the scores entered into the PDA's. It is plausible that these elementary students in 2nd and 3rd grades are learning to regulate their behaviors, a skill more exhibited by the older elementary children. For example, the most frequently reported problem behavior was purposely breaking and damaging property belonging to someone else (13%), a behavior in which 2nd grade children might demonstrate less respect than 5th graders for the property of others. However, it would be worthwhile to explore this data further to examine if these trends change with older middle school youth increasing levels of problem behavior once the 5th grade children age and more fully enter adolescence.

The descriptive results also indicate that girls in these settings report higher levels of collective efficacy. More work is needed to understand not only why girls feel connected and more comfortable exerting positive peer pressure, but also how to develop this attitude and willingness among boys. One might posit based upon the work of Gilligan (1993) that girls place more value on care and connectedness. This might result in girls feeling more comfortable being inquisitive about others and making suggestions about others' behavior, while males are more reticent to intervene for whatever reason. Yet, given the disproportionate rates of arrest and incarceration for males and particularly ethnic minority males (Smith & Hasbrouck, 2006; Smith, Richardson, & Belue, 2009) fostering effective positive behavioral influence among them could be quite powerful. This issue certainly deserves more attention.

Consistent relationships between our new measure of collective efficacy by race-ethnicity were not detected in this study. We interpret this as good news in that children of various racial-ethnic backgrounds can exhibit collective efficacy. Data on even more diverse populations could help assess the reliability and validity of our measure of collective efficacy across age and race-ethnicity. The findings in this paper are also limited to data at

one time-point and test-retest reliability nor predictive validity is assessed, another important area for future inquiry. Further, in this study, a substantial degree of between-program variance, measured by the Intraclass Correlation Coefficient, was not demonstrated in our hierarchical models. However, the purpose of this paper was more focused upon measurement development and later research with a larger, more diverse sample of programs will likely add to our ability to detect program level variance and effects. Such research could also give more information about the types of afterschool programs that promote collective efficacy and other positive youth developmental outcomes. Further, should positive results with collective efficacy continue to be found, attention should be given to ways to discover and promote the characteristics of afterschool programs that foster children's collective efficacy, adjustment, and behavior.

Afterschool programs have previously been shown to be a "safe haven" from substance abuse, delinquency, and teen pregnancy, but only for programs with certain characteristics such as appropriate structure, adult support, thoughtfully sequenced activities, and the use of empirically-supported practices (Durlak & Weissberg, 2007; Mahoney, Stattin, & Lord, 2004). Programs in which adults foster children's engagement, involvement, and leadership might be more likely to help children in the program develop a sense of collective efficacy and therefore work together to support positive behavior. In addition, it is worthwhile to inquire about the role of afterschool staff's collective efficacy, similar to the research on teachers in elementary schools (Goddard et al., 2000).

Quality afterschool programs offer the opportunity for youth to develop a positive sense of belonging and engagement, to decrease risky behaviors, and to foster positive youth development. At a time when the public schools in our nation are appropriately mandated with the important job of educating children in our society, leaving less time for other activities, afterschool can offer more academic and social enrichment. This presents a unique opportunity for children and youth in afterschool programs to further develop meaningful connections with adults and peers there, which can help them become empowered to play a positive role, not only in their own development, but also in that of their peers.

References

- Aber JL, Brown JL, Jones SM. Developmental trajectories toward violence in middle childhood: course, demographic differences, and response to school-based intervention. *Developmental Psychology*. 2003; 39(2):324–348. [PubMed: 12661889]
- Afterschool Alliance. 21st Century Community Learning Centers Providing Afterschool Supports to Communities Nationwide. 2009. Retrieved 3 March 2010 from www.afterschoolalliance.org
- Bandura A. Self-efficacy mechanism in human agency. *American Psychologist*. 1982; 37(2):122–147.
- Bandura, A. *Self-efficacy: The exercise of control*. New York: Freeman; 1997.
- Bandura A. Exercise of human agency through collective efficacy. *Current Directions in Psychological Science*. 2000; 9(3):75–78.
- Barrish H, Saunders M, Wolf M. Good behavior game: Effects of individual contingencies for group consequences on disruptive behavior in a classroom. *Journal of Applied Behavioral Analysis*. 2:119–124.
- Battistich V, Schaps E, Wilson N. Effects of an Elementary School Intervention on Students' "Connectedness" to School and Social Adjustment During Middle School. *The Journal of Primary Prevention*. 2004; 24(3):243–262.
- Burton LM, Jarrett RL. In the mix, yet on the margins: The place of families in urban neighborhood and child development research. *Journal of Marriage and Family*. 2000; 62:1114–1135.
- Caldwell, LL. Recreation and youth development. In: Witt, P.; Caldwell, L., editors. *Recreation and Youth Development*. State College: Venture Publishing; 2005. p. 169-189.

- Capizzano, J.; Tout, K.; Adams, G. Assessing the New Federalism. Washington, DC: The Urban Institute; 2000. Child care patterns of school-age children with employed mothers.
- Chavis DM, Wandersman A. Sense of community in the urban environment: A catalyst for participation and community development. *American Journal of Community Psychology*. 1990; 18(1):1–27. [PubMed: 2375308]
- City Data. 2009. Retrieved March 2, 2012 from <http://www.city-data.com/city/Harrisburg-Pennsylvania.html>, http://www.city-data.com/county/Dauphin_County-PA.html, <http://www.city-data.com/city/Lancaster-Pennsylvania.html>
- Cronbach L, Meehl P. Construct validity in psychological tests. *Psychological Bulletin*. 1955; 52(4): 281–302. [PubMed: 13245896]
- Delpit, L. *Other people's children: Cultural conflict in the classroom*. New York: The New Press; 1995.
- Developmental Studies Center. Child Development Project – Student Questionnaire – Student Perceptions and Feelings about Classroom and School. 2005. http://www.devstu.org/sites/default/files/media/pdfs/cdp/DSC_ElemSch_scales.pdf
- Drake, SC.; Cayton, HR. *Black metropolis: A study of Negro life in a northerncity*. New York: Harcourt, Brace, and Company; 1945.
- DuBois, WEB. *The Philadelphia Negro*. New York: Lippincott; 1899.
- Durlak, J.; Weissberg, R. *The impact of after-school programs that promote personal and social skills*. Chicago: Collaborative for Academic, Social, and Emotional Learning; 2007.
- Eccles, JS.; Gootman, JA. *Community programs to promote youth development*. Washington, D. C.: National Academy Press; 2002.
- Embry, DD.; Straatemeier, G.; Richardson, C.; Lauger, K.; Mitich, JE. *The Pax Good Behavior game*. Center City: Hazelden; 2003.
- Furstenberg, FF, Jr.. How families manage risk and opportunity in dangerous neighborhoods. In: Wilson, WJ., editor. *Sociology and the Public Agenda*. Newbury Park, CA: Sage; 1993. p. 231-258.
- Furstenberg FF Jr. Hughes ME. Social capital and successful development among at-risk youth. *Journal of Marriage and Family*. 1995; 57(3):580–592.
- Gilligan, C. *In a Different Voice: Psychological Theory and Women's Development*. Cambridge: Harvard University Press; 1993.
- Goddard R. Collective efficacy: A neglected construct in the study of schools and student achievement. *Journal of Educational Psychology*. 2001; 95(3):467–476.
- Goddard RD, Hoy WK, Hoy AW. Collective teacher efficacy: Its meaning, measure, and effect on student achievement. *American Educational Research Journal*. 2000; 37(2):479–507.
- Goodman R, Meltzer H, Bailey V. The strengths and difficulties questionnaire: A pilot study on the validity of the self-report version. *International Review of Psychiatry*. 2003; 15:173–177. [PubMed: 12745329]
- Gottfredson DC, Gerstenblith SA, Soulé DA, Womer SC, Lu S. Do after school programs reduce delinquency? *Prevention Science*. 2004; 5(4):253–266. [PubMed: 15566051]
- Hirschi, T. *Causes of delinquency*. Berkeley, CA: University of California Press; 1969.
- Horne, A.; Orpinas, P. *Bullying prevention: Creating a positive school climate and developing social competence*. Washington, DC: American Psychological Association; 2005.
- Hynes K, Sanders F. Diverging experiences during out-of-school time: The race gap in exposure to after-school programs. *The Journal of Negro Education*. 2011; 80(4):464–476.
- Hynes K, Smith Ep, Perkins Df. Piloting a school-based intervention in after-school settings: A case study in science migration. *Journal Of Children'S Services*. 2009; 4(3):4–20.
- Jarrett R. Growing up poor: The family experiences of socially mobile youth in low-income African American neighborhoods. *Journal of Adolescent Research*. 1995; 10(1):111–135.
- Johnson, SR Lindstrom; Finigan, NM.; Bradshaw, CP.; Haynie, DL.; Cheng, TL. Examining the link between neighborhood context and parental messages to their adolescent children about violence. *Journal of Adolescent Health*. 2011; 49(1):58–63. [PubMed: 21700158]

- Kellam SG, Brown HC, Poduska JM, Ialongo NS, Wang W, Toyinbo P, Wilcox HC. Effects of a universal classroom behavior management program in first and second grades on young adult behavioral, psychiatric, and social outcomes. *Drug and Alcohol Dependence*. 2008; 95:S5–S28. [PubMed: 18343607]
- Larson R. Toward a psychology of positive youth development. *American Psychologist*. 2000; 55:170–183. [PubMed: 11392861]
- Lerner RM, Fisher CB, Weinberg RA. Toward a science for the people: Promoting civil society through the application of developmental science. *Child Development*. 2000; 71:11–20. [PubMed: 10836553]
- Leventhal T, Brooks-Gunn J. The neighborhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin*. 2000; 126(2):309–337. [PubMed: 10748645]
- Mellor D. Furthering the use of the strengths and difficulties questionnaire: Reliability with younger child respondents. *Psychological Assessment*. 2004; 16(4):396–401. [PubMed: 15584800]
- Ogden CL, Moffitt TE, Tach LM, Sampson RJ, Taylor A, Matthews CL, Caspi A. The protective effects of neighborhood collective efficacy on British children growing up in deprivation: A developmental analysis. *Developmental Psychology*. 2009; 45(4):942–947. [PubMed: 19586172]
- Osgood, DW.; Anderson, AL.; Shaffer, JN. Unstructured leisure in the after-school hours. In: Mahoney, J.; Larson, R.; Eccles, J., editors. *Organized activities as contexts of development: Extracurricular activities, after-school and community programs*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers; 2005. p. 45-64.
- Putnam R. Bowling alone: America's declining social capital. *Journal of Democracy*. 1995; 6:65–78.
- Rappaport J. In praise of paradox: A social policy of empowerment over prevention. *American Journal of Community Psychology*. 1981; 9(1):1–25. [PubMed: 7223726]
- Raudenbush, SW.; Bryk, A.; Congdon, R. *HLM6, Hierarchical Linear and Nonlinear Modeling*. Chicago, IL: Scientific Software International; 2009.
- Resnick MD, Bearman PS, Blum RW, Bauman KE, Harris KM, Jones J, Udry JR. Protecting adolescents from harm: Findings from the national longitudinal study on adolescent health. *Journal of American Medical Association*. 1997; 278(10):823–832.
- Russo JF, Stokes GS, Lahey BB, Christ J, McBurnett K, Loeber R, Green S. A sensation seeking scale for children: Further refinement and psychometric development. *Journal of Psychopathology and Behavioral Assessment*. 1993; 15(2):145–157.
- Sampson R, Laub J. Crime and deviance in the life course. *Annual Review of Sociology*. 1992; 18:63–84.
- Sampson R, Raudenbush S, Earls F. Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*. 1997; 277:918–924. [PubMed: 9252316]
- Sampson RJ, Morenoff J, Earls F. Beyond social capital: Spatial dynamics of collective efficacy for children. *American Sociological Review*. 1999; 64:633–660.
- Sarason SB. Community psychology, networks, and Mr. everyman. *American Psychologist*. 1976; 31(5):317–328. [PubMed: 1008335]
- Simons RL, Simons LG, Burt CH, Brody GH, Cutrona C. Collective efficacy, authoritative parenting and delinquency: A longitudinal test of a model integrating community- and family-level processes. *Criminology*. 2005; 43:989–1029.
- Simpkins SD, Vest AE, Becnel JN. Participating in sport and music activities in adolescence: The role of activity participation and motivational beliefs during elementary school. *Journal of Youth and Adolescence*. 2010; 39(11):1368–1386. [PubMed: 19756994]
- Smith E. The role of afterschool settings in positive youth development. *Journal of Adolescent Health*. 2007; 41(3):219–220. [PubMed: 17707289]
- Smith, EP.; Boutte, GS.; Zigler, E.; Finn-Stevenson, M. Opportunities for schools to promote resilience in children and youth. In: Maton, KI.; Schellenbach, CJ.; Leadbeater, BJ.; Solarz, AL., editors. *Investing in children, youth, families, and communities: Strengths-based research and policy*. Washington, DC: US: American Psychological; 2004. p. 213-231.

- Smith EP, Faulk MT, Sizer M. Exploring the Meso-System: The Roles of Community, Family, and Peers in Adolescent Delinquency and Positive Youth Development. *Youth and Society*. under review.
- Smith, E.; Hasbrouck, L. The sociocultural context of risk and protective factors. In: Guerra, N.; Smith, E., editors. *Preventing Youth Violence in a Multicultural Society*. Washington, DC: American Psychological Association; 2006. p. 169-197.
- Smith, E.; Richardson, J.; Belue, R. Homicide and violence among African American youth: From epidemic to endemic?. In: Braithwaite, S.; Taylor, S.; Treadwell, H., editors. *Health Issues in the Black Community*. 3rd Edition. San Francisco: Jossey Bass; 2009. p. 133-155.
- Smith LK, Fowler SA. Positive peer pressure: The effects of peer monitoring on children's disruptive behavior. *Journal of Applied Behavior Analysis*. 1984; 17(2):213–227. [PubMed: 6735953]
- Snyder, Howard N.; Sickmund, Melissa. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention; 2006. *Juvenile Offenders and Victims:2006 National Report*.
- Syvertsen AK, Flanagan AK, Stout MD. Code of silence: Students' perceptions of school climate and willingness to intervene in a peer's dangerous plan. *Journal of Educational Psychology*. 2009; 101(1):219–232. [PubMed: 20126300]
- Vandell, DL.; Shumow, L.; Posner, J. After-school programs for low-income children: Differences in program quality. In: Mahoney, J.; Larson, R.; Eccles, J., editors. *Organized Activities as Contexts of Development*. Mahway, NJ: Lawrence Erlbaum Associates, Publishers; 2005. p. 437-456.
- Villaruel, FA.; Perkins, DF.; Borden, LM.; Keith, JG., editors. *Community Development: Programs, Policies, and Practices*. Thousand Oaks, London: Sage Publications; 2003.
- Watts R. Personal communication. 2011
- Watts R, Flanagan C. Pushing the envelope on youth civic engagement: A developmental and liberation psychology perspective. *Journal of Community Psychology*. 2007; 35(6):779–792.
- Zimmerman MA. Psychological empowerment: Issues and illustrations. *American Journal of Community Psychology*. 1995; 23(5):581–599. [PubMed: 8851341]

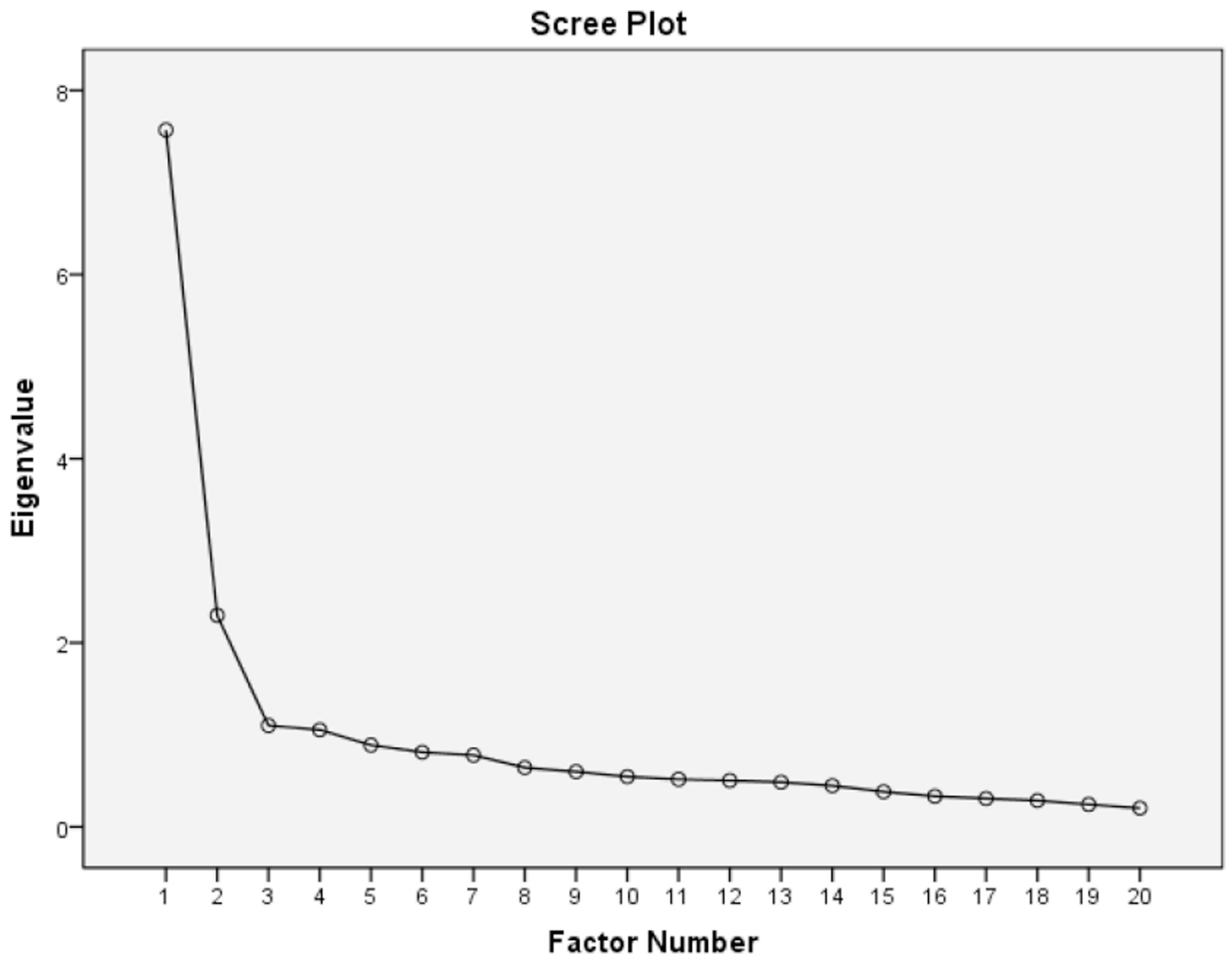


Figure 1.
Figure Caption – Scree Plot – Principal Axis Factor – Varimax Rotation

Table 1

Demographic Description by Program Provider Site ¹

Site	Harrisburg		Central Dauphin		Lancaster		Total	
	N	Percent	N	Percent	N	Percent	N	Percent
Race-ethnicity ¹								
African American	24	72.7	16	17.2	29	28.7	69	30.4
White	1	3.0	51	54.8	28	27.7	80	35.2
Latin	3	9.1	5	5.4	20	19.8	28	12.3
Asian American	1	3.0	0	0.0	2	2.0	3	1.3
Native American	1	3.0	4	3.0	1	0.0	6	2.6
Other (multiracial)	3	9.1	17	18.3	21	20.8	41	18.1
<i>Subtotal</i>	33	100.0	93	98.7	101	99.0	227	100.0
Gender								
Male	22	66.7	49	52.7	53	52.5	124	54.6
Female	11	33.3	44	47.3	48	45.4	103	45.4
Grade								
2nd	7	21.2	31	33.3	28	27.7	66	29.1
3rd	5	15.2	27	29.0	32	31.7	64	28.2
4th	9	27.3	15	16.1	26	25.7	50	22.0
5th	12	36.4	20	21.5	15	14.9	47	20.7
<i>Subtotal</i>	33	100.0	93	100.0	101	100.0	227	100.0

¹ does not include ask for race of Latino respondents

Table 2

Description of Study Measures

Subscale	Item Total Correlations	Alpha
Collective Efficacy – Afterschool Connectedness subscale – 8 items		.83
1. I feel close to people at my afterschool program	.43	
2. I feel like I am a part of my afterschool program.	.56	
3. I am happy to be at my afterschool program.	.67	
4. The staff in my afterschool program treats children fairly.	.60	
5. I have trouble getting along with the staff at my afterschool program ²	.23	
6. I feel that my afterschool program staff cares about me.	.74	
7. I feel safe in my afterschool program	.68	
8. I like the children in my afterschool program	.54	
Collective Efficacy – Willingness to Intervene Subscale – 12 items		.92
1. If children in this program are misbehaving, other children remind them to act their best	.67	
2. If other children start to say bad things to each other, children in this program remind them to say something good to each other.	.69	
3. In this program, if we see one child hurting another child, we would tell them to stop.	.71	
4. In our program, we can be leaders and help other children do well in our program.	.73	
5. In this program, I feel like other children listen to me when I have something to say.	.56	
6. The children in our program know how to stick up for a child who is being hurt or treated badly	.70	
7. The children in our program know how to do our work and not let other children get us in trouble.	.60	
8. At my afterschool program, if some other kids are going to do something bad, I tell someone who can help	.62	
9. In this program, we help each other when we have problems	.74	
10. If a child is teasing another child because they are not good at sports or exercise, other children tell him or her to stop	.72	
11. In this program, if a kid was going to do something to hurt another kid, one of the other kids would tell someone who can help.	.62	
12. If I was asked by another student at this program to do something that I shouldn't do, one of the kids in my afterschool program would tell me not to do it.	.70	
Strengths, Difficulties Questionnaire (SDQ) – 22 items		
Pro-social Behavior ³		
Sample item: "I usually share with others"	<i>na</i>	.81
Emotional Symptoms		
"I am sad a lot"	<i>Na</i>	
Conduct Problems		
"I am often accused of lying or cheating"	<i>Na</i>	
Hyperactivity		
"I have trouble staying in my seat when I am supposed to"	<i>Na</i>	
Problem behaviors		.66

Subscale	Item Total Correlations	Alpha
Smoked cigarettes	.47	
Broken or damaged property	.24	
Drunk wine, beer, alcohol	.49	
Shoplifted	.55	
Smoked marijuana/weed/reefer	.42	

²Item reverse-coded prior to analysis

³Items of this scale were reverse-coded

Table 3

Factor Analysis of Collective Efficacy: Willingness to Intervene and Connectedness

	Factor	
	1	2
1. I feel close to people at my afterschool program	.154	.443
2. I feel like I am a part of my afterschool program	.188	.607
3. I am happy to be at my afterschool program	.311	.710
4. The staff in my afterschool program treat children fairly	.244	.629
5. I have trouble getting along with the staff at my afterschool program ⁴	.096	.300
6. I feel that my afterschool program staff cares about me	.134	.815
7. I feel safe in my afterschool program	.051	.752
8. I like the children in my afterschool program	.384	.504
1. If children in this program are misbehaving, other children remind them to act their best	.636	.120
2. If other children start to say bad things to each other, children in this program remind them to say something good to each other.	.638	.181
3. In this program, if we see one child hurting another child, we would tell them to stop.	.633	.237
4. In our program, we can be leaders and help other children do well in our program.	.686	.360
5. In this program, I feel like other children listen to me when I have something to say.	.480	.371
6. The children in our program know how to stick up for a child who is being hurt or treated badly	.593	.202
7. The children in our program know how to do our work and not let other children get us in trouble.	.643	.035
8. At my afterschool program, if some other kids are going to do something bad, I tell someone who can help	.507	.262
9. In this program, we help each other when we have problems	.622	.299
10. If a child is teasing another child because they are not good at sports or exercise, other children tell him or her to stop	.715	.153
11. In this program, if a kid was going to do something to hurt another kid, one of the other kids would tell someone who can help.	.621	.207
12. If I was asked by another student at this program to do something that	.722	.182

⁴Item reverse-coded

I shouldn't do, one of the kids in my afterschool program would tell me not to do it.

Table 4

Descriptives and Results of One-way ANOVA for Each Scale

Category	Willingness to Intervene			After school Connectedness			Child Maladjustment			Problem Behavior		
	N	M	SD	N	M	SD	N	M	SD	N	M	SD
Male	117	2.28	0.55	120	2.43	0.47	122	1.59	0.38	124	0.62	1.20
Female	97	2.45	0.48	102	2.55	0.50	102	1.44	0.30	103	0.23	0.69
Gender	<i>F</i> (1, 212) = 5.642*			<i>F</i> (1, 220) = 3.152			<i>F</i> (1, 222) = 10.139**			<i>F</i> (1, 225) = 8.446**		
Race	76	2.35	0.53	79	2.52	0.51	79	1.48	0.34	80	0.40	0.94
African American/Black	64	2.35	0.50	66	2.40	0.44	67	1.55	0.34	69	0.55	1.17
Hispanic/Latino	27	2.34	0.53	27	2.55	0.48	28	1.52	0.40	28	0.36	1.06
Asian/Pacific Islander	2	2.66	0.13	3	2.29	0.67	3	1.79	0.57	3	1.00	1.73
Native American	6	2.16	0.92	6	2.45	0.64	6	1.89	0.42	6	0.33	0.52
Other	39	2.44	0.53	41	2.51	0.50	41	1.50	0.33	41	0.39	0.89
Grade	<i>F</i> (5, 208) = .504			<i>F</i> (5, 216) = .663			<i>F</i> (5, 218) = 2.073			<i>F</i> (5, 221) = .433		
2 nd grade	62	2.38	0.55	65	2.39	0.49	66	1.62	0.38	66	0.67	1.22
3 rd grade	62	2.34	0.58	62	2.48	0.52	63	1.53	0.37	64	0.56	1.27
4 th grade	44	2.50	0.44	48	2.65	0.40	48	1.51	0.35	50	0.28	0.64
5 th grade	46	2.23	0.48	47	2.44	0.49	47	1.38	0.25	47	0.15	0.36
Post-hoc test	<i>F</i> (3, 210) = 1.964			<i>F</i> (3, 218) = 2.750*			<i>F</i> (3, 220) = 4.585**			<i>F</i> (3, 223) = 3.182*		
	N/A			4th > 2nd			2nd > 5th			2nd > 5th		

* p<.05

** p<.01,

Table 5

Correlations and Standardized HLM Regression Coefficients for Test of Construct Validity of Collective Efficacy

	1	2	3	4
1) Connectedness	1.00			
2) Willingness to Intervene	.50**	1.00		
3) Emotional Adjustment	-.32**	-.18**	1.00	
4) Problem Behavior	.31**	-.34**	.44**	1.00

** significant at .01 level (2-tailed)

Table 6

Hierarchical Linear Model of Child Adjustment (SDQ) and Problem Behavior

Explanatory Variable	Outcome Variable	
	Problem Behavior ^a	SDQ Total ^b
Gender	-0.43 **	-0.16 *
Grade	-0.38 **	-0.18 **
Willingness to Intervene	-0.42 **	-0.04
Connectedness	-0.26 *	-0.24 **
Variance Components		
Level 2	0.383	0.001
Overdispersion/Level 1	1.190	0.104
Total	N. A.	0.104
Intraclass Correlation (null model)	0.032 ^c	0.017
R Squared	0.185 ^c	0.175
Improvement over null model (Wald, 4 df)	60.68 **	39.95 **
N	214	214

^aSemi-standardized Poisson regression coefficients, calibrated as change in log(*Y*) per standard deviation of *X*.

^bStandardized regression coefficients.

^cFor problem behavior, intraclass correlation and R Squared are from a corresponding linear model because these indices do not apply to the Poisson model.

* p < .05,

** p < .01