

# Examining the Potential of Community-Based After-School Programs for Latino Youth

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**Abstract** Results are presented from two pilot studies examining the potential influence of community-based after-school programs (ASPs) on regionally diverse Latino youth of varying ages. Study 1 examined relations between dimensions of ASP attendance and content, and ethnic identity development, and self-worth in urban Latino adolescents. In this study, higher ratings of the ASP's emphasis on ethnic socialization were associated with a more developed ethnic identity, while greater intensity of ASP participation and perceptions of ASP quality were associated with higher levels of self-worth. Study 2 examined relations between ASP participation and development of concentration and emotion regulation skills in rural Latino grade-school youth. In this study, youth who regularly attended the ASP demonstrated significantly better concentration and regulation skills than those who did not regularly attend, if they exhibited preexisting concentration and regulation problems. Findings illustrate how ASPs with varying strategies, activities, and assessment tools can be evaluated in the interest of designing future large-scale investigations into ASPs and Latino positive youth development.

**Keywords** After-school programs · Latino · Positive youth development

Few studies have examined the role of after-school programs (ASPs) in Latino positive youth development (e.g.,

Diversi and Mecham 2005; Riggs 2006). As a result there is little understanding of the sorts of program activities, structure, measurement strategies, and questions that are important areas of inquiry for this population. Conducting small-scale pilot studies can be useful when investigating underdeveloped areas of research, or those considered to be in the “discovery mode” (Bronfenbrenner and Morris 2006). This paper presents results from two separate small-scale pilot studies that examine the potential influence of community-based ASPs on Latino youth. Youth in these studies vary in setting and age, and the programs utilize diverse activities and measurement tools to assess a range of outcomes. The design and findings of these pilot studies are used to demonstrate the potential benefit of ASPs for Latino youth, and more importantly to illustrate the range of research questions and strategies that can be used in future large-scale after-school investigations for this population.

## The Need for Youth Development Programs in Urban and Rural Latino Youth

Latinos are the fastest growing minority group in the United States and make up approximately 12% of US youth (Brindis et al. 2002; United States Census Bureau 2005). Due in part to their minority status, Latino youth may face a disproportionate number of social and contextual challenges to positive development that may vary depending upon geographic region. For example, urban Latino youth often reside in socially isolated neighborhoods where they face high concentrations of poverty and fewer resources, which are in turn related to economic and social discrimination (Garcia Coll et al. 1995; Villarruel et al. 2005). In addition urban Latino youth often avoid

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participating in community or other after-school programs to avoid forced assimilation (Borden et al. 2006), further limiting access to quality skill-building or positive youth development programs (Moore and Gleib 1995).

Youth from Latino families living in rural communities may confront similar challenges including language barriers, relatively low socioeconomic and/or immigrant status, and high levels of family mobility and stress. In addition, they may face a lack of available and accessible social and public health services, a risk factor that applies to rural families in general (Human and Wassem 1991; Murray and Keller 1991; Spoth and Redmond 1996). This lack of services may be further exacerbated in communities with large numbers of newly residing Latino families since the diffusion and implementation of services meeting the specific needs for Latino families' may take time.

### **A Role for After-School Programs in Promoting Latino Positive Youth Development**

The numerous developmental challenges facing urban and rural Latino youth can result in higher rates of drug use, delinquency, and academic failure over and above those for non-minority youth (e.g., National Center for Educational Statistics 2001; Snyder and Sickmund 1999). These outcomes suggest the importance of including Latino youth in positive youth development programs. The positive youth development approach aims to understand, educate, and engage children in productive activities so that they can acquire important skills that promote their well-being, and thus can actualize their capacity to become successful and contributing members of their communities (Damon 2004; Larson 2000). In recent years the after-school hours have gained substantial public and fiscal support as a context for positive youth development programs (Mott Foundation 1998). Much of this research has focused on a role for ASPs in the positive youth development of low income youth (Durlak and Weissberg 2007). However, little has focused specifically on low-income Latino children and adolescents.

A lack of research demonstrating potential benefits of after-school participation for low-income Latino youth may be due, in part, to the fact that SES and ethnicity are often nested. This makes it very difficult to determine whether program effects generalize from low-income children to low-income Latino children. In addition, Latino youth often represent only a subset of the entire study population. When this is the case, studies frequently fail to report on any potential role that ethnicity may have played in program effects (e.g., LoSciuto et al. 1999). Others simply dichotomize participants into Caucasian versus non-Caucasian participants, where non-Caucasian participants

may include African-American, Latino, and/or other ethnic populations (e.g., Fauth et al. 2007). These strategies make it difficult to determine any potential role that the ASP may have had on Latino youth specifically.

To date, only a few pilot studies have focused on the role of ASPs in the positive youth development of solely low-income Latino youth. Those that have been conducted provide preliminary support for the notion that ASPs may be able to promote the academic, social, and behavioral adjustment of Latino youth (Riggs 2006; Riggs and Greenberg 2004b), as well as feelings of hope, desire, and success in school (Diversi and Mecham 2005). These studies have also demonstrated some initial insight into potential promising program activities and measurement strategies. The current study builds on this work by examining the potential role of ASPs on other important aspects of Latino positive youth development including ethnic identity, self-worth, and cognitive and emotion regulation skills.

Ethnic identity is an important component of Latino psychosocial development, and is defined as "one's sense of belonging to an ethnic group and the part of one's thinking, perception, feelings, and behavior that is due to ethnic group membership" (Rotheram and Phinney 1987, p. 13). It is thought to be an important component of Latino adolescents' identity, allowing them to establish a view of their ethnicity within the context of the dominant culture (Rotheram-Borus and Wyche 1994). Although familial sources are thought to be the primary contributors to ethnic identity development in Latino youth (Umaña-Taylor and Fine 2001), researchers have theorized that ASPs may be a context in which Latino youth can explore their ethnic identity without the fear of being stereotyped, harassed, or rejected (Eccles and Gootman 2002; Villarruel et al. 2005). However, to our knowledge no empirical study has directly addressed this topic.

Self-worth is another aspect of positive youth development that may be promoted through involvement in ASPs. Self-worth is regarded as "the totality of the individual's cognitive thoughts and affective emotions regarding the self, including social identity elements derived in part from processes of reflected appraisal" (Rosenberg et al. 1989, p. 44). Researchers have speculated that ASP involvement may lead to a greater sense of belonging, in turn affecting self-worth (Eccles and Gootman 2002). Investigations into the role of ASPs in the development of self-worth are mixed with differences in outcomes potentially resulting from varying sample characteristics including ethnicity (Durlak and Weissberg 2007; Fredricks and Eccles 2006a, b). To date, no study has examined whether ASP involvement is beneficial for the self-worth of Latino youth.

Developing cognitive and emotion regulatory skills are important tasks for grade-school children (e.g., Masten and Coatsworth 1998), particularly as they influence social and

academic development (e.g., Blair 2002; Graziano et al. 2007). A number of prior studies illustrate beneficial effects for youth involved in ASPs on a number of broad academic and social-emotional domains (e.g., Mahoney et al. 2003; Posner and Vandell 1994; Riggs 2006). However, few studies have directly addressed whether ASPs promote skills predictive of youth academic and social-emotional proficiency such as concentration and emotion-regulation (Larson 2000; Larson et al. 2007), and no study has done so specifically with Latino populations which may be of particular interest given relatively lower levels of academic and social proficiency among Latino youth (e.g., Phinney and Rosenthal 1992; Snyder and Sickmund 1999).

After-school programs may also serve a compensatory function for Latino youth with pre-existing self-worth or ethnic identity issues, or youth who demonstrate cognitive or emotion regulation deficits. Evidence from prior work suggests that at-risk youth, defined by pre-existing issues or deficits, can benefit from after-school programming. For instance, Mahoney and Cairns (1997) found that involvement in organized after-school activities was most advantageous to youth who were at greater risk for school dropout. In another study, adolescents with lower friendship quality and more loneliness at baseline benefited more from after-school activity involvement than those with higher levels of social adaptation (Bohnert et al. 2007). Taken together, these studies suggest that although ASP involvement may be beneficial for youth in general, the effects of involvement have the potential to be more pronounced among youth who are at risk for negative outcomes.

## Rationale and Hypotheses

The two pilot studies that are presented in this paper were started separately, but simultaneously. Combining our findings into a single report is consistent with the notion of “discovery research” in that others will be able to profit from our collective experiences and perspectives (Bronfenbrenner and Morris 2006). Our two pilot projects differ on participant characteristics, ASP activities, and the outcome measures chosen. Study 1 assessed multiple dimensions of attendance and implementation including intensity of involvement (i.e., hours per week), youth perceptions of program quality, and program emphasis on ethnic socialization. Controlling for prior functioning, it was expected that intense participation in the drop-in ASP over a 9-week period, as well as perceptions of better program quality, would be related to an enhanced self-worth, while intense participation, better program quality, and perceptions of greater program ethnic socialization would be related to a

more developed ethnic identity in Latino adolescents. It was anticipated that adolescents who exhibited initial low levels of self-worth and ethnic identity would demonstrate greater improvement over time than typically developing youth.

Study 2 examined whether participation in a community-based ASP with a highly structured curriculum over an eight month period was positively related to rural Latino youth cognitive and emotional functioning. Similar to the first study, the potential moderating role of baseline functioning was assessed. It is hypothesized that youth who regularly attend the ASP will demonstrate significantly better concentration and regulation skills than those who did not regularly attend, if they also exhibit preexisting concentration and regulation problems. Attendance is not expected to be significantly related to emotion regulation and concentration skills for youth who demonstrated baseline proficiency in these skills.

## Study 1

### Method

#### *Participants*

Study participants were recruited from an after-school program that offers year-long drop-in programming to approximately 250 first and second generation Latino adolescents between the ages of 12–18. On average, 35 adolescents attend the after-school program on a daily basis. The only eligibility criterion for inclusion into the program was low-income status (<\$30,000 annual family income). A total of 51 participants were recruited for the study. Five of these participants had incomplete data and were dropped from analyses. The final sample contained 46 participants, ranging in age from 12 to 18 years, ( $M = 15.41$ ,  $SD = 1.87$ ). All but one participant identified themselves as Latino (89% Mexican/Puerto Rican; 9% Mixed/Other Latino; 2% African American). The majority of participants were female (59%) and born in the US (82%). Data were not available for those youth who were enrolled in the ASP, but chose not to participate in the study.

*Program Activities* The ASP is affiliated with a long-standing community service agency that focuses on the needs of the predominantly urban Latino families in the area. The ASP, in operation since 1984, provides developmentally-appropriate activities weekdays from 2:30 to 8:00 p.m. The overarching goal of this programming is enhancement of participants’ academic and interpersonal skills, and self-worth. The activities implemented to achieve these goals are conducted in English and include

mentoring, homework help, tutoring, life skills workshops, sports and recreation, and technology/computer instruction.

In addition, youth have the opportunity to participate in discussions about culturally-relevant issues such as interactions with youth from other cultures, prejudice, and stereotyping. Staff members are also trained to provide culturally-sensitive leadership by looking for opportunities to facilitate discussion of cultural issues in both organized and informal interactions. At the time of the study the staff to youth ratio was one staff member for every ten youth, with 80% of the staff being Latino and bilingual.

### *Procedure and Measures*

Study 1 took place during the school year when the ASP focuses primarily on academic development. Recruitment announcements were made 1 month prior to initial data collection. Data collection took place during after-school sessions, monthly parent meetings, and youth council meetings. Participants completed a demographic form, two standardized measures, and two additional measures created for the purposes of the study at baseline (T1) and follow-up (T2), approximately 9 weeks apart ( $M$  weeks = 8.65,  $SD$  = .99, Range = 7–10 weeks). Data were collected over a 3-week period at each time point in order to capture a sample that was highly representative of the “drop-in” nature of the program youth.

**Ethnic Identity & Self-Worth** The Multi-group Ethnic Identity Measure (MEIM; Phinney 1992) is a 14-item measure addressing adolescents’ commitment and attitude about their ethnic identity (i.e., “I have a clear sense of my own ethnic group and what it means to me”). Participants rated each item using a 4-point Likert scale ranging from *strongly agree* to *strongly disagree*. Higher scores indicate greater exploration, commitment, and positive feelings toward one’s ethnic group. Overall scale reliability was similar to that of previous studies ( $\alpha$  = .83).

Adolescents also completed the global self-worth scale from the Self-Perception Profile for Adolescents (SPPA; Harter 1988). Participants were asked to choose one of two statements that most accurately described them (e.g., “Some teens like the kind of person they are or other teenagers wish they were someone else”), thereafter indicating if the statement they chose was *really true* or *sort of true* for them. Their responses were scored on a 4-point scale. Lower scores indicate poorer self-worth. The internal consistency of the global self-worth scale was high ( $\alpha$  = .87).

**ASP Indices** Several dimensions of the ASP were assessed: (1) intensity of participation in the youth program, (2) youth’s perceptions of program quality, and (3) youth’s

perceptions of program ethnic socialization. To assess intensity, adolescents were asked to circle a response indicating how many hours, on average, they had spent at the ASP in the past 8 weeks (i.e., “0–5 h/week”, “5–10 h/week”, “10–15 h/week”, “15–20 h/week”, “20+ hours per week”). Perceptions of program quality were assessed using The After School Program Quality Measure (ASPQM), which is available by request from the second author. This 15-item measure was created for the purposes of this study, and sought to operationalize all of Eccles and Gootman’s (2002) features of positive developmental settings that are relevant for ASPs, such as appropriate structure, and positive social norms (e.g., “When I do something I shouldn’t, the people at the youth program are supportive and encourage me to do better”). Responses on the 5-point Likert scale items (ranging from *not at all true* to *very much true*) were summed to yield a total score with higher scores indicative of better quality ( $\alpha$  = .94).

The After-School Youth Program Ethnic Socialization Measure (ASPESM) is an eight-item measure that was adapted from the Familial Ethnic Socialization Measure (FESM; Umaña-Taylor 2001) to assess how well an after-school youth program provides ethnic socialization experiences for youth (e.g. “I learn more about my cultural/ethnic background through conversations with other people in the youth program, including staff”; “I am free to express my opinion of my ethnic/cultural background while I am in the youth program.”). Each item was rated using a 5-point Likert scale with responses ranging from *not at all true* to *very much true* ( $\alpha$  = .87).

**Covariates** The Familial Ethnic Socialization Measure (FESM; Umaña-Taylor 2001) was administered to assess the degree to which adolescents believed their families were socializing them in terms of their ethnicity (e.g., My family teaches me about my ethnic/cultural background”). Each of the 12 items used a 5-point Likert scale with responses ranging from *not at all true* to *very much true*. Higher scores indicate that adolescents believe their families are positively socializing them. Similar to previous research, the overall composite score of the FESM demonstrated excellent reliability ( $\alpha$  = .89).

### *Data Analysis*

Analyses of variance were first conducted in order to determine whether there were significant differences between participants with and without complete data in any study variable. Hierarchical regression analyses were then conducted using T2 ethnic identity development and T2 self-worth as dependant variables and three ASP indices as independent variables including: (a) intensity of ASP participation, (b) ASP quality, and (c) ASP ethnic socialization.

In both models, T1 measures of ethnic identity development or self-worth were entered as control variables in the first step. For the model predicting ethnic identity development, T2 familial ethnic socialization was entered in the second step to account for familial influences on ethnic identity development. In both models, the three ASP indices were then entered in the next step, followed by the interaction terms for ASP indices and T1 measures of ethnic identity or self-worth entered in the final step.

## Results

**Preliminary Analyses** Significant differences between those with complete versus incomplete data emerged only for self-worth. Here, adolescents with complete data had significantly lower levels of self-worth than those with incomplete data. Means, standard deviations, and correlations among all of the study variables are shown in Table 1 for youth with complete data. Of the 62% of adolescents who attended the program more than 10 h per week, 13% attended 20 h or more per week. More intense ASP participation was associated with higher youth perceptions of ASP quality. Intensity of participation was also positively correlated with perceptions of program ethnic socialization at both time points, as well as with self-worth at T2. In addition, adolescents who reported higher levels of self-worth demonstrated a more developed ethnic identity at both time points. Age and gender were not significantly correlated with ethnic identity development, self-worth, or ASP indices, and were therefore not included as covariates in any subsequent analyses.

**T2 Self-Worth** As shown in Table 2, T1 levels of self-worth were significantly related to T2 self-worth. Intensity of ASP participation was significantly associated with T2 self-worth after controlling for T1 self-worth. Adolescents with more frequent ASP participation over the 8 week period demonstrated improved self-worth even when accounting for T1 levels of self-worth. ASP quality was also associated with T2 self-worth, suggesting that youth who perceived the program as of higher quality experienced increases in self-worth. ASP ethnic socialization, however, was not significantly associated with self-worth. Again, the relation between ASP indices and T2 self-worth did not differ based on T1 measures of self-worth. That is, youth with lower self-worth did not benefit more from ASP involvement than their peers with higher T1 levels of self-worth.

**T2 Ethnic Identity Development** As shown in Table 2, T1 levels of ethnic identity development were significantly related to T2 ethnic identity development. After controlling for T1 levels of ethnic identity development, familial socialization was also associated with T2 ethnic identity

development. Neither intensity of participation nor perceptions of ASP quality were associated with T2 ethnic identity development, but ASP ethnic socialization was significantly related with T2 ethnic identity development. Thus, greater perceptions of the program's ability to promote ethnic socialization were associated with a more developed ethnic identity even when accounting for baseline ethnic identity and familial influences on ethnic socialization. T1 measures of ethnic identity did not moderate the relation between any of ASP indices and T2 ethnic identity development, suggesting that youth with a less developed ethnic identity did not benefit more from involvement than those youth with a more developed ethnic identity.

## Study 2

### Method

#### Participants

The sample consisted of 118 Latino students ( $M$  age = 9 years, 1 month; Range = 6 years, 5 months to 12 years, 2 months) who participated in the *Generacion Diez* (G-10) ASP. Children were selected into G-10 based on referrals solicited from one of three major school districts located in one rural Pennsylvania county, as well as from the Office of Children and Youth and the Immigrant Health Services agencies. Once referred, the youth were selected into the program based on criteria chosen by the G-10 program leadership prior to collaboration with the primary author. The criteria for child selection were as follows: (1) academic performance, especially in reading and writing, was poor and below grade-level; (2) poor classroom conduct (e.g., poor self-control, socially withdrawn); and/or (3) low parent participation or involvement in school. Youth were not required to meet each of these three criteria. Most youth were selected into the program based on referrals for poor academic performance. In addition, many of the participants' parents demonstrated low parent-school participation and involvement.

Forty-four percent of the participants were female. Participants attended one of three school-based sites, each within separate school districts. Each site was chosen based on (1) the school's willingness to serve as a G-10 site and (2) its central location within the school district. *Generacion Diez* children were bused to the ASP if they did not attend school at the G-10 site within their school district. Site 1 contained 28 participants, Site 2 contained 59 participants, and Site 3 contained 31 participants. Nineteen percent of the children were in 1st grade, 26% in 2nd grade, 18% in the 3rd grade, 19% in the 4th grade, 13% in 5th grade, and 5% in 6th grade. Although detailed family

**Table 1** Descriptive statistics and correlations between study 1 variables ( $n = 46$ )

	Variable												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1. T1 EID	–	.67**	.50**	.43**	.62**	.45**	.29**	.45**	.37**	.41**	.21	.02	.26
2. T2 EID		–	.37*	.40**	.54**	.62**	.42**	.52**	.47**	.55**	.22	.12	–.04
3. T1 SW			–	.80**	.21	.13	.13	.17	.10	.25	.10	.13	.08
4. T2 SW				–	.21	.17	.34*	.33*	.18	.33*	.41**	–.09	–.02
5. T1 FES					–	.68**	.39*	.46**	.49**	.34*	.09	.14	.13
6. T2 FES						–	.31*	.58**	.33*	.40*	.15	–.01	–.08
7. T1 ASPQ							–	.66**	.65**	.49**	.28	.27	.07
8. T2 ASPQ								–	.46**	.64**	.32**	.08	–.01
9. T1 ASPES									–	.65**	.30*	.12	.16
10. T2 ASPES										–	.35*	–.02	–.08
11. ASP intensity											–	–.16	–.12
12. Age												–	.32
13. Gender													–
Mean	3.11	3.04	2.83	2.85	3.70	3.58	3.91	3.99	3.14	3.38	2.98	15.41	NA
SD	.43	.41	.36	.39	.81	.82	.79	.74	.82	.85	1.46	1.87	NA

\*  $p < .05$ ; \*\*  $p < .01$

EID ethnic identity development, SW self-worth, FES familial ethnic socialization, ASPEQ after-school program quality, ASPES after-school program ethnic socialization, ASP intensity after-school program intensity

**Table 2** Predictors of ethnic identity and self-worth ( $n = 46$ )

Variable	T2 self-worth			Variable	T2 ethnic identity		
	$\beta$	SE	$\Delta R^2$		$\beta$	SE	$\Delta R^2$
Step 1				Step 1			
T1 SW	.80**	.10	.65	T1 EID	.67**	.11	.44
Step 2				Step 2			
				T2 FES	.40**	.06	.13
Step 3				Step 3			
ASPI	.34**	.02	.11	ASPI	.06	.03	.03
ASPES	.13	.04	.02	ASPES	.25*	.05	.05
ASPQ	.20*	.05	.04	ASPQ	.11	.07	.01
Step 4				Step 4			
T1 SW $\times$ ASPI	–.67	.05	.01	T1 EID $\times$ ASPI	–1.12	.06	.02
T1 SW $\times$ ASPES	.04	.09	.00	T1 EID $\times$ ASPES	–.12	.11	.00
T1 SW $\times$ ASPQ	–.38	.14	.01	T1 EID $\times$ ASPQ	.23	.13	.00

\*  $p < .05$ ; \*\*  $p < .01$

EID ethnic identity development, FES familial ethnic socialization, ASPI after-school program intensity, ASPES after-school program ethnic socialization, ASPEQ after-school program quality

income levels were not available, all youth were receiving free school lunches.

*The Generacion Diez Program*

The county in which G-10 is located is a predominantly rural area that has served as a magnet for migrant families due to the local agricultural industry. Increasingly, Latino

families have chosen to settle in the county rather than continue to migrate. This has led to a rapid influx of Latino youth, primarily of Mexican descent, into area schools which have struggled to meet their educational needs. Local teachers are usually not well-versed in Mexican culture and there are few educators or other social service personnel who speak Spanish. In response, a partnership between area schools and a local community agency

developed the G-10 program to address the social and academic development of area Latino youth.

A mixture of Latino and non-Latino individuals staffed G-10. Each site had a bilingual program director and two head teachers. In addition, a number of volunteers aided G-10 staff. Half of the head teachers and many of the volunteers were bilingual and, with children, participated in many Mexican and other Latino cultural activities. Examples include lessons in traditional Mexican music (e.g. guitar lessons) and dance. Other activities included events staged by G-10 participants such as dinners where traditional Mexican meals were prepared.

G-10 youth were also taught lessons from two curricula, in English, each 2–3 times a week, for 20–30 min (see Riggs and Greenberg 2004b for full description of the G-10 program). The first was an academic curriculum. The second was the Promoting Alternative THinking Strategies (PATHS) curriculum (see Greenberg and Kusché 1993 for a full description of PATHS). PATHS is a universal, comprehensive, developmentally-based curriculum targeting the promotion of social and emotional competence in elementary school-aged children. PATHS attempts to achieve the integration of affect, cognition, and behavior by implementing a curriculum that, for the current study, was adapted for the after-school context. Children received an average of 40.24 (SD = 18.97) PATHS lessons throughout the year.

#### *Procedure and Measures*

Both children's after-school providers, referred to as G-10 teachers, and regular school teachers completed ratings of youth social and academic functioning approximately 8 months apart, in the fall of 2005 (T1) and spring of 2006 (T2). Youth also completed self-reported ratings of acculturation at T1.

*Concentration and Emotional Regulation Skills* The Social Health Profile [SHP; Conduct Problems Prevention Research Group (CPPRG) 1991] is a teacher report assessing children's social-cognitive skills. Children's G-10 and regular day teachers rated children's social skills at T1 and T2 in the domains of cognitive concentration (12 items including easily distracted, works hard, concentrates) and emotion regulation (4 items including controls temper when there is a disagreement, thinks before acting, expresses needs and feelings appropriately, can calm down when excited or all wound up) using a 6-point Likert scale (1 = "almost never," 2 = "rarely," 3 = "sometimes," 4 = "often," 5 = "very often," and 6 = "almost always"). Summary scores were constructed with scale alphas of .97 for cognitive concentration and .89 for emotion regulation. In order to test for interaction effects participants were then categorized at T1

into having either "high" or "low" concentration or emotion regulation problems. Here, participants were considered to be "high" in concentration and regulation problems if their summary scores were  $\geq 3$  indicating that the youth "sometimes" demonstrated problems with these skills.

*Attendance* *Generacion Diez* teachers kept strict attendance records and reported year-end totals of program attendance. Attendance ranged from 35 to 98 days ( $M = 71.76$ ,  $SD = 19.74$ ). Participants were categorized into one of two groups based on attendance rates. Participants were considered "Low Attenders" if they were in the bottom quintile of attendance. This strategy resulted in Low Attenders having attended G-10 fewer than 52 days ( $n = 22$ ). The remaining participants who attended 52 days or more were considered "Regular Attenders." Although dichotomizing variables removes natural variation and decreases statistical power, we chose to categorize attendance rates in order to generate initial thresholds for "low attendance" rates that future studies may use for comparison purposes.

*Covariates* In addition to child age, sex, and program site, the Short Acculturation Scale for Hispanic-Youth Version (SASH-Y; Marin et al. 1987) was used to adjust for T1 levels of acculturation, or the process of changes in behavior and values that result from one culture coming in contact with a new group, nation, or culture (Berry 1980; Marin et al. 1987). The SASH-Y is a 12-item measure assessing the predominant language used (8 items) in different contexts of a child's day (e.g., reading, speaking, thinking, and television/radio) and the predominant ethnicity of a child's social group (4 items; e.g., close friends and visitors). Children answer questions using a 5-point Likert scale with 1 indicating only Spanish, 3 indicating both Spanish and English equally, and 5 indicating only English. The reliability of the overall scale for the current sample was .93. The SASH-Y has been found to be significantly related to generational status,  $r = .65$ , age of arrival in the United States,  $r = -.69$ , and length of residence in the United States,  $r = .70$  (Marin et al. 1987).

#### *Data Analyses*

Major analyses were conducted utilizing data from students' after-school teachers only. Reports from students' regular school-day teachers were not reported in major analyses for two reasons: (1) a higher rate of missing data (i.e.,  $n = 106$  compared to 118) and (2) the strategy of categorizing participants into groups by high/low attendance and high/low baseline problems yielded categories in which there were no participants. Specifically, there were

no participants in the low attenders/high problems cell for both teachers' reports of concentration and emotion regulation. This resulted in the inability to model the interaction term for both concentration and emotion regulation analyses.

Hypotheses using after-school teacher reports of youth concentration and emotion regulation skills were tested with two multi-level linear regression analyses using SAS Proc Mixed. Multi-level analyses allow for the regression of dependent variables onto continuous and/or categorical independent variables while adjusting for random effect variables. The first model regressed T2 Latino youth concentration skills onto youth acculturation, age, gender, T1 concentration skills, attendance, and T1 concentration by attendance interaction, while adjusting for the random effect of program site. The second model regressed T2 youth emotion regulation skills onto acculturation, age, gender, T1 emotion regulation, attendance, and T1 emotion regulation by attendance interaction, while adjusting for the random effect of program site.

## Results

**Descriptive Statistics** G-10 means and standard deviations for emotion regulation ( $M = 2.57$ ,  $SD = .74$ ) and concentration ( $M = 2.47$ ,  $SD = .77$ ) were somewhat elevated at baseline. This is in comparison to normative sample means and standard deviations of these summary scores reported in the Fast Track Study (Conduct Problems Prevention Research Group (CPPRG) 1991): emotion regulation ( $M = 2.03$ ,  $SD = 1.20$ ) and concentration ( $M = 1.98$ ,  $SD = 1.23$ ). Although the two study populations demonstrate demographic differences, the comparison of group means provides some indication of relative risk at baseline. Table 3 illustrates correlations among all continuous variables included in the analyses. T1 acculturation was positively correlated with age such that older participants were more acculturated. Age was negatively correlated with attendance such that older participants attended less. Finally positive correlations were found among T1 and T2 concentration and emotion regulation skills.

**T2 Concentration and Emotion Regulation** Regression results for both concentration and emotion regulation outcomes are shown in Table 4. Because the multi-level models in the current analyses include categorical data, Table 4 includes unstandardized betas ( $b$ ), standard errors (SE), and associated  $p$ -values for both models. Of the covariates, only gender was related to T2 concentration problems. These findings indicate that boys demonstrated greater concentration problems at T2 than did girls. There were also main effects for both T1 concentration problems and attendance on T2 concentration, indicating that

children who had concentration problems at T1 had greater concentration problems at T2 ( $M = 2.72$ ,  $SD = .13$ ) than did those youth without concentration problems at T1 ( $M = 1.97$ ,  $SD = .11$ ), and that children who were regular attenders in the G-10 program demonstrated fewer concentration problems at T2 ( $M = 2.21$ ,  $SD = .09$ ) than those who were low attenders ( $M = 2.48$ ,  $SD = .14$ ). Figure 1 illustrates a significant T1 concentration problem by attendance interaction. Here, regular and low attenders without T1 concentration problems demonstrated little difference in T2 concentration problems. However, regular attenders with T1 concentration problems demonstrated significantly fewer T2 concentration problems than did low attenders with T1 concentration problems.

Of the covariates, only gender was related to T2 emotion regulation problems which indicated that boys demonstrated greater regulation problems at T2. There was also a main effect for T1 emotion regulation problems indicating that children who had regulation problems at T1 had greater regulation problems at T2 ( $M = 2.59$ ,  $SD = .14$ ) than did those youth without regulation problems at T1 ( $M = 1.74$ ,  $SD = .10$ ). Group differences by attendance only approached significance for T2 regulation problems. However, Fig. 1 illustrates a significant T1 regulation problem by attendance interaction such that regular attenders without T1 regulation problems demonstrated greater regulation problems at T2 than did low attenders without T1 regulation problems, whereas regular attenders with regulation problems at T1 demonstrated fewer regulation problems at T2 than did low attenders with T1 regulation problems.

## Discussion

This paper presents findings from two pilot studies examining ASP involvement and aspects of Latino positive youth development. Although the research design utilized in both studies precludes any causal inference, the two studies provide encouraging albeit preliminary findings that participation in ASPs may be related to aspects of positive development in Latino youth. Therefore, it appears that ASPs may fit into a positive youth development framework as an important context in which Latino youth can acquire important skills that promote well-being. This paper also highlights a variety of issues that can be examined in future, large-scale investigations into this subject. Taken together, these studies illustrate the breadth of potential program activities, varying degrees of program structure, measurement strategies, and outcome variables of interest that may be applicable to a diverse sample of participants (i.e., urban adolescents vs. rural school-age youth).



**Table 3** Descriptive statistics and correlations between study 2 variables ( $n = 118$ )

	Variable						
	1	2	3	4	5	6	7
1. Acculturation	–	.20*	–.12	–.14	.10	–.10	.13
2. Age (months)		–	–.71***	.04	.03	.01	–.17
3. Attendance			–	–.02	–.15	.02	.07
4. T1 concentration				–	.62***	.85***	.51***
5. T2 concentration					–	.49***	.66***
6. T1 emotion regulation						–	.53***
7. T2 emotion regulation							–
Mean	2.54	109.24	71.79	2.47	2.21	2.55	2.01
SD	.56	18.31	19.76	.77	.58	.74	.72

\*  $p < .05$ ; \*\*\*  $p < .001$ **Table 4** Predictors of T2 concentration and emotion regulation problems ( $n = 118$ )

Variable at T1	T2 concentration problems		T2 emotion regulation problems	
	<i>b</i>	SE	<i>b</i>	SE
Gender	.34***	.08	.53***	.11
Acculturation	.04	.07	.10	.10
Age	.00	.00	–.01	.00
T1 problems	.43***	.10	.49***	.14
Attendance	–.59*	.19	–.46 <sup>†</sup>	.26
T1 problems $\times$ attendance	–.64**	.23	–.72*	.32

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ; <sup>†</sup>  $p < .10$ 

Note: Adjusted for the random effect of program site

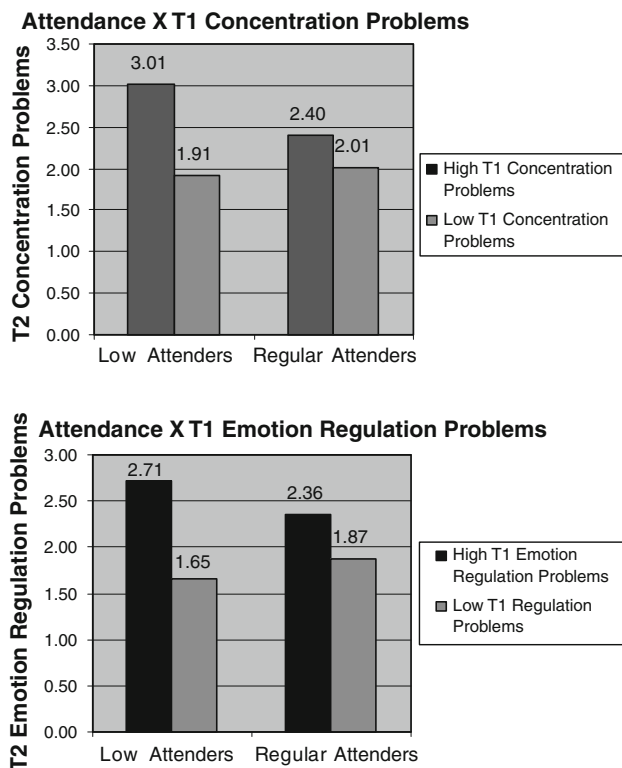
Gender coded 1 = girls, 2 = boys

Study 1 demonstrated that intensity of participation (i.e., hours per week) in an ASP that included mentoring, life skills and self-development workshops, sports and recreation, and vocational training, as well as adolescents' perceptions of this program's quality, were associated with improvements in self-worth over the course of the study. Most notably, youth who participated in the ASP more frequently and perceived that the ASP was a safe and nurturing environment were more likely to report increased self-worth over the study period. These results suggest that participation in ASPs may provide urban Latino adolescents with opportunities for positive development. In addition, the findings suggest the value of assessing youth perceptions of the programs in which they are participating (Eccles and Gootman 2002).

Study 1 also demonstrated that after accounting for family socialization influences, adolescents' perceptions of program ethnic socialization were associated with a more developed ethnic identity. However, neither intensity nor quality of programming was related to ethnic identity. Thus, it appears that along with parents, ASPs have the potential to serve as an additive socializing influence in the

development of ethnic identity. In ASPs, Latino adolescents may have a unique opportunity to explore different aspects of their lives with other adolescents whom they can identify, and share similar backgrounds and life circumstances, making it an environment that is rich for exploration of their ethnic identity.

In Study 2, rural Latino youth who were regular ASP attenders and less skilled at T1 appeared to benefit the most from ASP participation. This is consistent with prior research on non-Latino populations documenting that ASP involvement may benefit "at-risk" youth (Bohnert et al. 2007; Mahoney and Cairns 1997; Mahoney 2000). These results also highlight the danger of not taking into account baseline individual differences among ASP program participants. Specifically, when analyzed as a whole, G-10 participation was not related to significant growth in emotion regulatory skills. However, when taking into account the attendance by baseline emotion regulation problem interaction the data indicated that regular attendance in the G-10 program was significantly beneficial for those youth with baseline emotion regulatory problems. Thus, future studies should attend to individual differences



**Fig. 1** Study 2, T2 mean concentration and concentration and emotion regulation problems. *Note:* Means are adjusted for gender, acculturation, age, baseline problems, and attendance

in baseline functioning because it may assist in explaining apparent null program findings.

One potential explanation for the positive results found Study 2 is that the PATHS curriculum was included as a central component of the G-10 program. If replicated in future studies, this would suggest that ASPs implementing “evidence based” programs have great potential to enhance positive development in Latino youth, whether those programs are drop-in programs as in Study 1 or more frequently attended programs as in Study 2 (Durlak and Weissberg 2007). There are, however, challenges to implementing evidence-based programs in the after-school context. First, if there is variation in age within after-school groups it may be difficult to adapt the lessons to make them developmentally appropriate for every young person. Second, the lessons from the evidence-based program, such as PATHS, may not be designed specifically for Latino youth. Thus, adaptations will need to be made to suit the developmental and cultural needs of Latino participants. Third, culturally appropriate programming will differ among sub-groups of Latino populations (e.g. Mexican-Americans, Puerto Ricans, Central Americans, and South Americans living in the United States). Researchers and program providers need to take sub-cultural differences

into account since these groups may differ with respect to cultural ideals related to emotional and cognitive development, and perhaps even more so with respect to self-worth and ethnic identity.

Although distinctions have been made among sub-groups of Latino youth, and some differences have been noted in various outcomes (Umaña-Taylor and Fine 2001), we could not address sub-group differences in program effect due to the small sample sizes in both studies, and the homogeneity of the Latino population included in Study 2 (i.e., Mexican-American). However, additional research among sub-populations of Latino youth is essential to support these findings. The broader implication is that neither Latino youth nor the programs that serve them are homogeneous, and that future research efforts should attend to this issue when attempting to determine both the generalizability and conversely the differences among program outcomes.

Although the two ASPs varied in terms of program activities, structure, setting, and participant characteristics, both studies demonstrated that greater frequency of program attendance was related to positive youth outcomes. In combination, these finding suggests that youth may benefit both psychologically and cognitively from increased ASP attendance. Future research should address the mechanisms by which ASP attendance may promote Latino positive youth development. Potential explanations include increased adult supervision, opportunities to form relationships with non-deviant peers, and reinforcement of personal identities (Barber et al. 2005; Eccles and Barber 1999; Mahoney and Stattin 2000). Future research should also investigate concepts related to those in the current studies such as alternative measures of attendance (e.g. optimal or sustained), as well as parent engagement and participation (Harvard Family Research Project 2008; Riggs and Medina 2005).

One finding that was not replicated across studies was that high-risk youth in Study 1 were no more likely to benefit from ASP involvement than their typically developing peers. This lack of a moderating effect, however, must be interpreted with caution given the small sample size and associated lack of statistical power. Additionally, the 9-week interval of Study 1 may not have been long enough to contribute to difference in the outcomes based on T1 functioning. Finally, since participants in Study 2 were referred based on academic and social problems, there may have been sufficient variance in problem behavior to allow for significant attendance by problem behavior interactions. In contrast, the voluntary recruitment method employed in Study 1 may have contributed to less variance and a lack of a detectable moderating effect.

Although participant age and gender were accounted for in both studies, it was beyond the scope of the current studies to assess age and gender by attendance interactions

in predicting youth development. Although age and gender have been shown to influence program attendance, research is mixed as to which gender or age groups benefit most from high rates of after-school attendance (Riggs and Greenberg 2004a). Furthermore, in studies that have found differences in program attendance effects by age, it is unclear whether such findings are in fact due to the age of the participants or whether they are due to artifacts related to selective enrollment of children at different ages (Vandell and Posner 1999). Regardless, since age and gender will likely influence patterns of ASP attendance, more research is necessary in this area, particularly as it relates to Latino youth.

### Limitations and Future Directions

Current findings should be considered in light of limitations in study design, many of which are inherent to small-scale pilot research (Sussman 2001). First, both studies were characterized by having small sample sizes. Among the issues associated with small sample sizes is decreased power to detect significant program effects. By including larger sample sizes, future work will be able to enhance sample representativeness and generalizability, which is necessary to determine whether ASP participation is equally beneficial for males and females, or for various subgroups of Latinos (e.g., Puerto Ricans, Mexicans). Future studies attempting to replicate these findings on a larger scale should also address the processes (i.e., mediators) through which these demographic variables influence change.

A second limitation of both studies is the single-group, pretest–posttest design. As a result other explanations for relations between program participation and positive youth development cannot entirely be ruled out. For example, change over time may be due to typical youth development. In absence of control groups, both studies utilized attendance rates as an indicator of program intensity or dosage. Future studies should also attempt to control for other variables that may be related to program attendance including socio-economic status differences in family structure, parental working conditions/schedules, educational levels, and community-level variables.

A third limitation in both studies is the lack of multiple informants. Therefore, we can not rule out response bias as an influence on study findings. This is a considerable issue in Study 2 where students' after-school teachers' ratings may be biased by student attendance rates. Although we were unable to model interaction terms with participants' regular school day teachers, it was possible to investigate direct relations between regular day school teacher reports of T1 problems and attendance on T2 problems. Here, consistent with after-school teacher ratings, T1 regular

school day teacher ratings of concentration and emotion regulation problems were positively associated with T2 ratings of problems. Also consistent with after-school teacher reports, attendance was significantly related to regular day school teachers' reports of concentration problems, but not emotion regulation problems. The consistency in these findings between regular school day teachers and after-school teachers supports the validity of after-school teacher reports.

The after-school context is only one of several that can influence various aspects of youth development. Thus, to promote positive youth development, future comprehensive approaches will require program implementation into multiple social contexts. Although it is encouraging that ASP participation in both studies was related to enhanced positive youth development after only relatively brief periods of time, caution must be exercised in touting these associations since (a) these positive results may not be typically found in ASPs of such a short duration and (b) should not be construed by practitioners and policy-makers that ASPs are either a "silver bullet" or a "quick fix" to addressing the multiple needs of young people.

In light of these limitations, it should be noted that precious little research has been conducted with populations of Latino youth in after-school programs. The design and findings from these pilot studies demonstrate the potential benefit of after-school programming for Latino youth, and more importantly illustrate the range of research questions and strategies that can be used in future large-scale after-school investigations for this increasing population of young people.

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