

Organized Activity Involvement, Depressive Symptoms, and Social Adjustment in Adolescents: Ethnicity and Socioeconomic Status as Moderators

Edin T. Randall · Amy M. Bohnert

Received: 17 February 2009 / Accepted: 13 May 2009 / Published online: 28 May 2009
© Springer Science+Business Media, LLC 2009

Abstract The current cross-sectional study investigated the links between various dimensions of organized activity involvement and depressive symptoms, loneliness, and peer victimization in an ethnically and economically diverse sample of adolescents ($N = 152$; 58% female). Results indicate that adolescents who were involved in organized activities for more years also reported lower levels of loneliness. There was evidence of diminishing returns when adolescents were very highly involved in organized activities; those who were either under- or over-involved reported the highest levels of depressive symptoms. Conversely, findings indicate that adolescents who participated in a narrow or wide range of activity contexts reported the lowest levels of depressive symptoms. In addition, results suggested that the relation between organized activity involvement and adjustment differs among adolescents from diverse ethnic and socioeconomic backgrounds. Findings from the current study also underscore the importance of considering multiple indices of activity involvement when assessing its association with adjustment.

Keywords Organized activities · Adjustment · Socioeconomic status · Ethnicity

Introduction

Adolescence is a critical time for self-development that involves various emotional, physical, cognitive, and social changes. Though many changes that occur during this period are positive, adolescence is also a time of increased psychological vulnerability and social difficulty (Andersen and Teicher 2008). There is compelling evidence that adolescents who are more involved in organized activities experience better emotional and social outcomes, including improved psychological well-being, increased social capital, and expanded peer networks (Bohnert and Garber 2007; Eccles et al. 2003; Busseri et al. 2006; Larson et al. 2006). Less is known, however, about whether adolescents who are more involved in activities experience lower levels of negative social outcomes, such as loneliness and peer victimization. Additionally, few studies have explored whether the benefits of involvement level off or show diminishing returns at a certain degree of involvement (see Fredricks and Eccles 2006a, b; Mahoney et al. 2006 for exceptions). Finally, the proposition that organized activity participation is uniquely associated with adjustment among adolescents of different ethnicities and from diverse socioeconomic backgrounds continues to be understudied. Thus, the current study will use an ethnically and economically diverse sample to: (1) examine linear and curvilinear relations between various indices of organized activity participation (i.e., intensity, breadth, and duration) and depressive symptoms, loneliness, and peer victimization, and (2) determine if linear relations between various indices of activities and adjustment are moderated by adolescents' ethnicity or socioeconomic status. In addition to addressing significant gaps in scientific knowledge, evidence that involvement in organized activities is related to fewer emotional and social adjustment problems may

E. T. Randall (✉) · A. M. Bohnert
Department of Psychology, Loyola University Chicago,
6525 N. Sheridan Rd, Chicago, IL 60626, USA
e-mail: erandal@luc.edu

inform policy decisions regarding the best use of adolescents' discretionary time.

Organized Activity Involvement and Adjustment

The majority of research on organized activity involvement during adolescence has focused on problem behaviors and academic achievement, suggesting that participation is related to decreases in various risky behaviors (e.g., smoking, marijuana use, and delinquent and anti-social behaviors) as well as increased academic motivation and higher GPAs (Eccles and Barber 1999; Mahoney 2000; Mahoney et al. 2003; Youniss et al. 1999). Findings from studies that have explored the relation between organized activity involvement and depressive symptoms have been mixed. Although most studies have been unable to detect relations between organized activity involvement and depressive symptoms (i.e., Barber et al. 2001; Darling 2005; Fletcher et al. 2003), some evidence from both cross-sectional and longitudinal studies points to greater participation being associated with lower levels of internalizing and depressive symptoms (i.e., Bohnert et al. 2008; Fredricks and Eccles 2006b; Mahoney et al. 2002; McHale et al. 2001; Simpkins et al. 2006).

To date, there is little information about whether more activity involvement is associated with fewer negative peer experiences including loneliness and peer victimization. Some studies indicate that youth who are more involved in activities also experience increased social competence, social capital, and peer status and acceptance (Fletcher et al. 2003; Mahoney et al. 2003; Strauss and Pollack 2003; Busseri et al. 2006) as well as decreases in rejection or isolation (Mahoney et al. 2003; Sandstrom and Coie 1999). Although it is possible that these positive social experiences may act as the mechanism by which involvement in organized activities buffers against experiences of loneliness and peer victimization, only one study to date has reported that increased participation is associated with less loneliness (Bohnert et al. 2007). No study, however, has explored links between organized activity involvement and peer victimization. Thus, given that adolescents are at an increased risk for experiencing depressive symptoms, loneliness, and peer victimization (Garber et al. 2002; Horowitz and Garber 2006; Mahon et al. 2006; Storch and Ledley 2005), more research is needed to explore the links between organized activity involvement and these indicators of adjustment. The current cross-sectional study seeks to extend previous work by examining how adolescents' participation in organized activities may be associated with depressive symptoms, loneliness and peer victimization.

Curvilinear Analyses

Prompted by the heightened media attention on the assertion that some youth and adolescents are overly involved in organized activities (e.g., "Over-scheduling Hypothesis" in Mahoney et al. 2006), researchers have begun to investigate curvilinear effects. Though support for the over-scheduling hypothesis is scant, there is some suggestion that the benefits of involvement either level off or even decline at a relatively high degree of participation (Busseri et al. 2006; Fredricks and Eccles 2006b; Marsh 1992; Marsh and Kleitman 2002; Rose-Krasnor et al. 2006). In addition to declines in positive adjustment at high levels of involvement, research has also indicated threshold effects for breadth of involvement, with positive outcomes leveling off for youth involved in five to six different activity contexts (i.e., drama/fine arts, volunteering) (Rose-Krasnor et al. 2006). Given these findings, the current study considered both linear and curvilinear relations when examining the effect organized activity participation has on adjustment in adolescents.

Ethnicity & SES as Moderators of Organized Activity Involvement—Adjustment Relations

Although much of the literature on organized activities is guided by an underlying assumption that participation in organized activities is equally beneficial for all youth, the association between involvement and adolescent adjustment may vary across individuals (Darling 2005). However, most studies to date have not been able to examine ethnicity and socioeconomic status as separate and unique moderators, thus confounding the unique effect of each demographic factor. Using an ethnically and economically diverse sample, the current study considered the unique role ethnicity, family income, and/or parental level of education has in moderating the link between organized activity involvement and adjustment.

Ethnicity

Organized activity participation may be particularly beneficial for youth of certain ethnic backgrounds. For example, it has been found that African American children who spend more time in organized activities were rated as better emotionally adjusted, while European American youth with higher intensities of involvement showed poorer emotional and academic outcomes (Posner and Vandell 1999; Mahoney et al. 2006). Conversely, while breadth of participation was found to be associated with decreased alcohol use among European American adolescents, it was

linked to increases in use among African Americans (Fredricks and Eccles 2006a). Few studies to date have explored the unique effect of organized activity participation on adolescents from other ethnic groups. The current study extends previous work by examining the influence of involvement on adjustment in a diverse sample which includes Latino, Asian American, African American and European American adolescents.

Family Income

Research suggests that when children and adolescents from low-income families and neighborhoods have the opportunity to get involved in organized activities, they benefit (Pedersen and Seidman 2005; Posner and Vandell 1999). In fact, studies that have examined whether income level moderates the relation between involvement and adjustment demonstrate stronger effects for low-income youths (Mahoney 2000; Marsh 1992; Marsh and Kleitman 2002). Other studies, however, have not been able to detect differences in benefit between low- and high-income youth, thus supporting the generalizability of positive effects of organized activity involvement on adjustment in youth (Fredricks and Eccles 2006b; Larson et al. 2006).

Parental Level of Education

Although family income is a commonly used proxy for socioeconomic status, researchers investigating discretionary time use have argued that using parental education level rather than family income as a measure of SES is preferable (Entwisle and Astone 1994; Fredricks and Eccles 2006b; Mahoney et al. 2006; McHale et al. 2001). Previous studies have shown that adolescents with more educated parents are more likely to get involved in activities and have higher rates, greater breadth, and longer duration of activity participation once they get involved (Bartko and Eccles 2003; Fredricks and Eccles 2006a; Markstrom et al. 2005). In addition, studies that have included parental level of education in composite measures of SES have found that SES moderates the relation between organized activity involvement and adjustment (i.e., Marsh 1992; Marsh and Kleitman 2002). No study to date, however, has specifically examined the effect parental level of education has on the relation between organized activity involvement and adjustment among adolescents.

Dimensions of Organized Activity Involvement

Increasingly, researchers have included multiple dimensions of activity involvement and examined how each separately influences adolescent adjustment (see Bohnert et al. 2007; Busseri et al. 2006; Fredricks and Eccles

2006a; Rose-Krasnor et al. 2006). For example, duration of organized activity participation in school clubs was positively related to psychological resilience and decreased alcohol use whereas breadth of participation was related to higher school belonging and psychological resilience but not to decreased alcohol use (Fredricks and Eccles 2006a). Furthermore, though research suggests that high rates of involvement (i.e., intensity) is linked to improved adjustment outcomes (Bohnert et al. 2007; Powell et al. 2002; Simpkins et al. 2006), recent cross-sectional and longitudinal studies have determined that, when intensity is examined in conjunction with breadth, breadth of involvement is more strongly related to positive developmental indices such as risk behavior, well-being, and social relations (Busseri et al. 2006; Rose-Krasnor et al. 2006).

Purpose and Hypotheses of the Current Study

The current study addresses several important gaps in the literature regarding the relation between organized activity involvement and adolescent adjustment. More specifically, the current study used an ethnically and economically diverse sample to (1) examine linear and curvilinear relations between three of the most utilized indices of organized activity participation (i.e., intensity, breadth, and duration) and depressive symptoms, loneliness, and peer victimization as well as to (2) determine if linear relations are moderated by adolescents' ethnicity or SES. Of note, the cross-sectional design does not allow for determining the direction of causality nor whether adjustment may serve as a potential selection mechanism that influences adolescents' involvement in organized activities.

It was expected that the relations between organized activity involvement and adjustment will differ based on the activity index and outcome assessed as well as by adolescents' ethnicity and SES. Namely, it was hypothesized that (1) duration and breadth of involvement would be linearly (negatively) related to all adjustment outcomes (2) intensity of involvement would be curvilinearly related (U-shaped curve) to depressive symptoms, (3) African American and Latino adolescents would benefit the most from organized activity involvement, and (4) low-income adolescents would benefit more from participation than high-income adolescents.

Method

Participants

Participants included 152, 9th and 10th grade students ($M = 14.95$ years; $SD = .65$) from an urban, selective-enrollment magnet high school. Fifty-eight percent of the

sample ($n = 88$) was female. Twenty-six percent ($n = 40$) reported being African American, 13% Asian American ($n = 19$), 30% European American ($n = 46$), 26% Latino ($n = 39$), and 5% Other ($n = 8$). Over one-fourth of the parents received a high school degree or less, 43% of the sample had some college education or received a Bachelors degree, and 28% completed some graduate school or received a graduate degree. Regarding family income, 15% reported earning under \$30,000 per year, 40% earned between \$30,000 and \$69,999, 25% earned between \$70,000 and \$110,000, and 20% earned over \$111,000 per year.

Participants whose parents did not return the demographic questionnaire ($n = 52$) were excluded only from moderation analyses. Analysis of variance analyses (ANOVAs) indicated adolescents with parent demographic data (i.e., family income, parental level of education) did not differ significantly from those who were missing parent demographic data in terms of organized activity involvement, adjustment, or other demographic variables such as age and ethnicity. In addition, using the Power Analysis and Sample Software (PASS) (Hintze 2006), it was determined that a sample size of 100 achieved sufficient power in our moderational analyses.

Procedure

Students were recruited from an urban, selective enrollment magnet high school. In order to be eligible, students must be a city resident, have a high GPA, and perform well on standardized tests and an admission exam. At the beginning of the fall semester, a research assistant visited all 9th and 10th grade gym classes at the school, provided information about the study, and distributed assent forms. Students' questions were answered at this time, and they were reminded that participation was voluntary, that their responses would in no way influence their grades, and that they could withdraw at any time. Participants who provided assent and received parental consent for participation completed questionnaire packets about adjustment and activity involvement at the end of the fall semester. In addition, a demographic questionnaire was mailed to the parent or guardian. Follow-up phone calls were conducted with parents who did not return the demographic questionnaire via mail.

Measures

Demographics

Parents completed a demographic form which included information about family level of income, parent's highest level of education, parent's employment status, and adolescents' date of birth, gender, and ethnicity. Parents reported their highest level of education using nine, pre-coded

responses ranging from 1 (*some grade school*) to 9 (*received a graduate/professional degree*), and indicated the family's total yearly income by choosing from one of seven pre-coded responses (i.e., 1 = *under \$10,000*, 2 = *\$10,000–\$29,999*, 3 = *\$30,000–\$49,000*, 4 = *\$50,000–\$69,000*, 5 = *\$70,000–\$89,000*, 6 = *\$90,000–\$110,000*, and 7 = *over \$110,000*). Ethnicity was coded using five mutually exclusive categories (1 = *African American*, 2 = *Asian American*, 3 = *European American*, 4 = *Latino*, and 5 = *Other*).

Organized Activities

The Organized Activity Impact Form (OAIF) asks the respondent to list up to four organized activities that he/she was involved in during the past school semester, and provide information about intensity, duration, and breadth of activity involvement. For each listed activity, adolescents identify how many hours per week they are involved (i.e., intensity) and how many years they have participated (i.e., duration). For intensity, a total score was created by summing the number of hours reported across all activities. Duration was calculated by totaling the number of years participated in all activities and then dividing the sum by the number of activities listed. To determine breadth, all activities listed on the OAIF were collapsed into seven mutually exclusive, exhaustive, and pre-determined categories based on activity categories used in prior studies (see Eccles and Barber 1999) as well as on the type of activities available at the school. Activity contexts included sports (e.g., individual, team, competitive, and recreational), performance/fine arts (e.g., dance, orchestra, drama), prosocial (e.g., volunteer organizations), religious (e.g., church groups), academic clubs (e.g., debate, honors society), school involvement (e.g., pep club, cheerleading), and culture/identity (e.g., Asian American Culture club, Latino Unidos, Pride club). Each participant's breadth score was determined by summing the total number of different activity contexts in which adolescents participated (range 0–4).

Depressive Symptoms

The Child Depression Inventory (CDI) (Kovacs 1981) is a widely used scale that assesses depressive symptoms. The instrument includes 27 items assessing cognitive and behavioral depressive symptoms, and the respondent rates his/her level of depressive symptoms in the last 2 weeks on a 0–2 scale (i.e., 0 = *I am sad once in a while*; 1 = *I am sad many times*; 2 = *I am sad all the time*). Higher scores indicate more depressive symptoms. The CDI exhibits good psychometric properties (Garber 1984; Saylor et al. 1984), and the alpha coefficient for the CDI for the sample was .80. Further, the alpha coefficients for African American ($\alpha = .81$), Asian American ($\alpha = .72$), European

American ($\alpha = .82$), and Latino adolescents ($\alpha = .80$) suggest good psychometric properties of the CDI across ethnicities.

Loneliness

The Loneliness Scale (LS) (Asher and Wheeler 1985) is a 24-item survey that probes an adolescent's feelings regarding his or her state of loneliness. Adolescents rate on a 5-point scale from 1 (*not true at all*) to 5 (*always true*) how much they feel the statements are true. Higher scores indicate more loneliness. The LS has demonstrated adequate reliability and validity (Asher and Wheeler 1985; Crick and Ladd 1993), and the alpha coefficient was .89 for the current sample. The alpha coefficients for African American ($\alpha = .87$), Asian American ($\alpha = .90$), European American ($\alpha = .87$), and Latino adolescents ($\alpha = .90$) suggest good psychometric properties of the LSA across ethnicities.

Peer Victimization

The Revised Peer Experiences Questionnaire (RPEQ) (Prinstein et al. 2001) is an 18-item survey that asks adolescents about overt and relational forms of aggression that he or she has experienced personally over the last 9 months. Adolescents must rate on a 5 point scale ranging from 1 (*never*) to 5 (*a few times a week*) how often they have experienced the events. Higher scores indicate more peer victimization. The RPEQ has demonstrated good validity and reliability (Prinstein et al. 2001), and the alpha coefficient was .76 for the sample. The alpha coefficients for African American ($\alpha = .72$), Asian American ($\alpha = .79$), European American ($\alpha = .78$), and Latino adolescents ($\alpha = .76$) suggest good psychometric properties of the RPEQ across ethnicities.

Results

Data Preparation and Analytic Plan

Initially, all activity indices were standardized ($M = 0$; $SD = 1$) as recommended for curvilinear analyses (Aiken and West 1991; Marsh 1992; Marsh and Kleitman 2002) and also used in all other analyses to be parsimonious. Two adolescents who reported participating in organized activities for 33 or more hours per week (3 or more SD above the mean) were identified as outliers, and were thus omitted from analyses involving intensity of activity involvement. Examination of study variables revealed that they were normally distributed, thus requiring no transformations.

Multiple regression was then used to assess the linear and curvilinear relations between each organized activity involvement index and adjustment outcomes. In these analyses, all three involvement indices (intensity, breadth, and duration) were included in Step 1 of each regression model. In order to assess possible nonlinear effects, quadratic (squared) terms for intensity, breadth, and duration were added in Step 2. All terms were computed based on standardized scores and thus the unstandardized regression coefficients are interpretable as standardized effects.

Prior to conducting moderation analyses for ethnicity, the 4-level ethnicity variable was dummy-coded with European Americans as the comparison group. Participants who indicated the *Other* ethnicity category ($n = 8$) were excluded from analyses. Significant interactions were interpreted using the procedures outlined by Aiken and West (1991). More specifically, relations between the activity index and the adjustment outcome at each level of ethnicity were compared. Thus, multiple sets of regression equations differing with regard to which level of the ethnicity variable served as the comparison group were computed to analyze the interaction. The regression coefficients for the lower order effect of the continuous predictor variable (i.e., activity index) were then compared across regression equations and assessed for significance.

In Step 1 of each regression model testing for moderation by ethnicity, the adjustment variable (e.g., depressive symptoms) was regressed onto both family income and parental level of education to control for the possibility that indicators of socioeconomic status may confound the effect ethnicity has on adjustment (APA Task Force on Socioeconomic Status 2007). In Step 2, the activity index (i.e., intensity) was entered. In Step 3, the main effect of ethnicity was entered followed by two-way interaction terms in Step 4.

For regression models testing for moderation by SES (i.e., income, parental level of education), the adjustment variable was regressed onto ethnicity in Step 1. All activity indices were entered in Step 2. In Step 3, the main effect of SES (i.e., income) was entered, followed by two-way interaction terms in Step 4. Using procedures outlined by Holmbeck (2002), post hoc probing of all significant moderational effects was conducted using a final model which included the covariates, all significant main effects, and the significant interaction terms.

Descriptive Analyses and Correlations

Means, standard deviations, ranges, and correlations for study variables are presented in Table 1. On average, adolescents were involved in organized activities for about 9 h per week ($M = 9.41$, $SD = 6.99$), and approximately two different activity contexts ($M = 1.91$, $SD = 1.08$). They reported being involved in organized activities for an

Table 1 Descriptive information and correlations among predictor and outcome variables (excluding ethnicity)

Variables	1	2	3	4	5	6	7	8
1. Depressive symptoms	–							
2. Loneliness	.49**	–						
3. Peer victimization	.27**	.42**	–					
4. Intensity	.02	–.10	.02	–				
5. Duration	–.07	–.17*	–.02	.59**	–			
6. Breadth	–.05	–.10	–.10	.42**	.24**	–		
7. Parental level of education ^a	.05	–.07	.06	.29**	.42**	.31**	–	
8. Annual income ^a	–.16	–.13	.06	.13	.19*	.14	.53**	–
Mean	7.14	28.07	35.48	9.41	2.45	1.91	6.25	4.45
Standard deviation	5.11	7.90	6.90	6.99	1.95	1.08	2.03	1.78
Range	23.00	38.00	37.00	30.00	10.00	4.00	7.00	6.00

^a Spearman rank–order correlations

* $p < .05$; ** $p < .01$; *** $p < .001$

average of about 2½ years ($M = 2.45$, $SD = 1.98$). Correlational analyses indicated numerous significant relations between study variables (see Table 1). More specifically, significant positive relations were found among all adjustment outcomes. ANOVAs indicated ethnic differences in terms of activity involvement and adjustment. Results indicated that breadth and duration of involvement differed according to ethnicity, $F(3, 152) = 3.74$, $p < .05$ and $F(3, 152) = 3.34$, $p < .05$, respectively. More specifically, post hoc probing revealed that European Americans participated in a wider range of activities than African Americans ($p < .05$), and participated in organized activities for more years than Latinos ($p < .05$). European Americans participated in an average of 2.08 activity contexts ($SD = 1.03$) and for a total of about 2.95 years ($SD = 2.12$) while African American adolescents were involved in an average of 1.40 activity contexts ($SD = 1.09$) and Latino

adolescents participated in organized activities for 1.78 years on average ($SD = 1.62$).

Organized Activity Involvement—Adjustment Relations (Linear and Curvilinear Effects)

As shown in Table 2, results indicated that there was only one significant linear relation between organized activity involvement and adjustment; duration of involvement was negatively related to levels of loneliness, with longer participation linked to lower levels of loneliness. Further, this effect remained significant when levels of reported depressive symptoms were controlled for ($p = .05$). In addition, two curvilinear effects were found for depressive symptoms. First, spending a relatively low and high number of hours per week in organized activities was associated with higher levels of depressive symptoms (U-shaped). As

Table 2 Organized activity involvement as a predictor variable (linear and curvilinear effects)

Predictor	Depressive symptoms		Loneliness		Peer victimization	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Intercept	7.22	7.14	28.02	26.89	35.48	35.65
Intensity	0.51	–0.68	0.68	–0.58	0.93	0.20
Breadth	–0.25	0.76	–1.08	–0.15	–1.11	–1.20 ^{ms}
Duration	–0.55	–0.84	–1.74*	–2.10	–0.52	0.77
Intensity ²		1.01*		1.16 ^{ms}		0.45
Breadth ²		–1.09*		–0.31		0.08
Duration ²		0.10		0.32 ^{ms}		–0.71
Adj R^2	–.01	.03	.04	.05	.00	.00
ΔR^2	.01	.06*	.06*	.03	.02	.02

Regression coefficients are shown by criterion (column variable). Step 1 indicates linear relations between activity indices and outcomes and Step 2 indicates curvilinear relations between activity indices and outcomes

^{ms} $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

shown in Fig. 1, adolescents who spent a relatively moderate amount of time in organized activities (about 10 h per week in the current study) exhibited the lowest levels of depressive symptoms. Second, a negative curvilinear relation between breadth and depressive symptoms was detected (∩-shaped). As shown in Fig. 2, participating in a

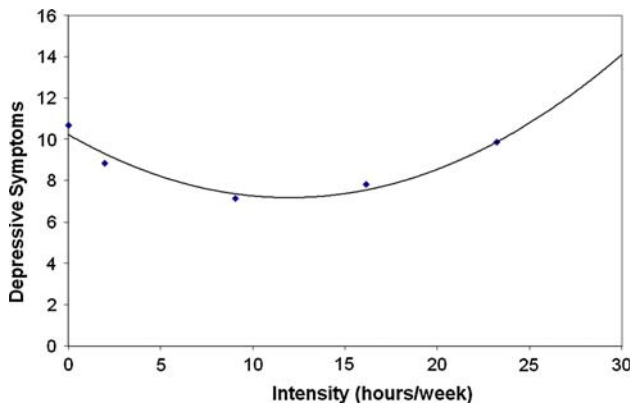


Fig. 1 Curvilinear relation between intensity of organized activity involvement and depressive symptoms

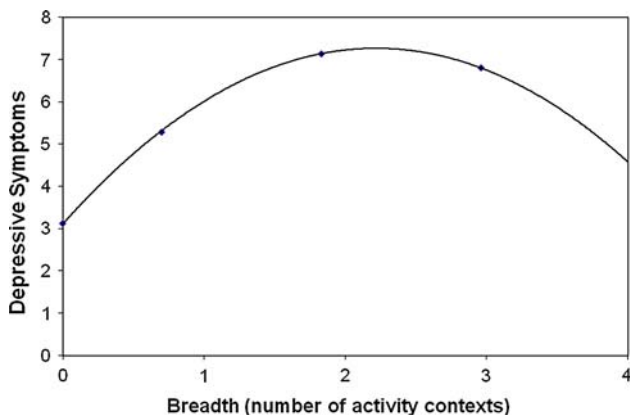


Fig. 2 Curvilinear relation between breadth of organized activity involvement and depressive symptoms

narrower or wider range of organized activity contexts was related to lower levels of depressive symptoms. All indices of organized activity involvement were found to be unrelated to peer victimization.

Ethnicity & SES as Moderators of Organized Activity Involvement—Adjustment Relations

Results indicated that ethnicity moderated the relation between intensity of involvement and loneliness (see Table 3). Follow-up analyses revealed that intensity of involvement significantly predicted levels of loneliness only for African Americans ($b = -4.40, p < .01$). More specifically, the more hours per week African American adolescents spent in organized activities, the lower their reported levels of loneliness (see Fig. 3). Ethnicity also moderated the relation between duration of organized activity involvement and peer victimization (see Table 4). Follow-up analyses revealed that duration of involvement was significantly associated with peer victimization for African Americans ($b = -.34, p < .05$) and Asian Americans ($b = .97, p < .01$), was marginally significant for Latinos ($b = -.45, p = .11$), and was not significant for European Americans ($b = -.11, p = .50$). More specifically, as shown in Fig. 4, results indicated that the more years African American adolescents spent in organized activities, the lower their reported levels of peer victimization. Conversely, among Asian Americans, the more years on average that they spent in organized activities, the higher their levels of reported peer victimization.

Furthermore, income significantly moderated the relation between the intensity of organized activity involvement and loneliness ($b = 2.58, p < .01$). However, post hoc probing of moderational effects indicated that participating in more hours of organized activities per week was not significantly associated with loneliness for adolescents from low income ($b = .26, p = .19$) or high income families ($b = .30, p = .17$). Additionally, parental level of

Table 3 Intensity of organized activity involvement and loneliness moderated by ethnicity

Step	Predictors	B	SE B	β	Adjusted R^2	R^2 Change
1	Parental level of education	-.23	.90	-.03	-.01	.01
	Family income	-.73	.93	-.09		
2	Intensity	-1.39	.95	-.15	.00	.02
3	Ethnicity (Afr. Amer)	-1.60	2.02	-.07	.00	.03
	Ethnicity (As. American)	.18	2.92	.00		
	Ethnicity (Latino)	-3.29	2.33	-.18		
4	Afr. Amer \times intensity	-6.09	2.13	-.42	.06	.09*
	As. Amer \times intensity	.34	3.46	.01		
	Latino \times intensity	-3.48	2.63	-.16		

^{ms} $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

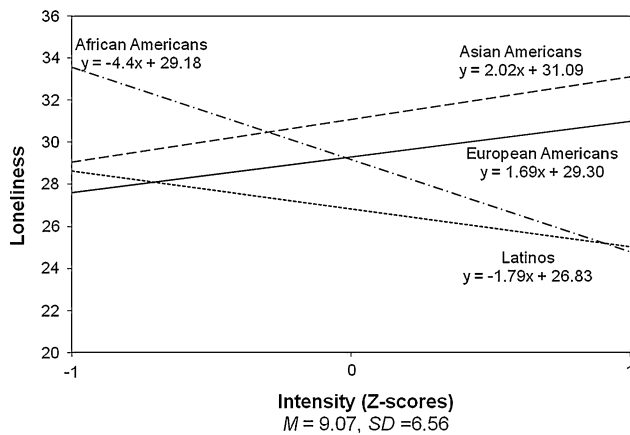


Fig. 3 Regression lines for relations between intensity of organized activity involvement and loneliness moderated by ethnicity. *M* Mean; *SD* standard deviation. *Note:* Intensity scores ranged from 0 to 26 h/week

education was not a significant moderator of activity involvement and adjustment.

Discussion

There is considerable evidence that organized activities serve as important contexts for youth development (e.g., Mahoney et al. 2005). Interestingly, despite the lack of research, findings in the current study indicated that participation is strongly associated with levels of loneliness in adolescents. As hypothesized, results suggest that adolescents who spend more years in organized activities (i.e., duration) also experience lower levels of loneliness. Year-to-year participation in organized activities has been shown to improve adjustment among youth as evidenced by increases in interpersonal competence, improved academic performance, and positive psychological adjustment (Fredricks and Eccles 2006a; Mahoney et al. 2003; Zaff et al. 2003). Considering that organized activities have been identified as salient venues for developing social skills, meeting new friends, and interacting with extra-familial

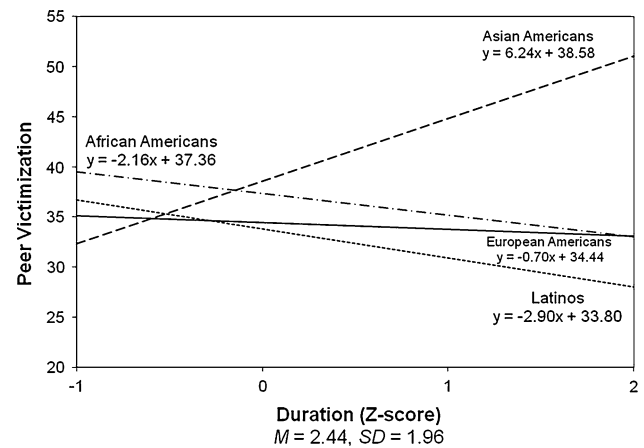


Fig. 4 Regression lines for relations between duration of organized activity involvement and peer victimization moderated by ethnicity. *M* Mean; *SD* standard deviation. *Note:* Duration scores ranged from 0 to 10 years

adults (Dworkin et al. 2003; Kinney 1993), it follows then that adolescents who spend more years in organized activities have more time to form supportive relationships with the adults and peers and thus experience less loneliness. Alternatively, given that our study was cross-sectional in nature, it is also possible that youth who are less lonely are also more likely to initially become involved and then continue to engage in year-to-year participation in organized activities.

Of particular interest was the fact that the link between organized activity involvement and loneliness was stronger for certain ethnic groups. More specifically, African American adolescents who spent more hours per week in activities also reported experiencing lower levels of loneliness. This finding is consistent with the work of Mahoney et al. (2006) suggesting that increasingly intense involvement in organized activities may differentially impact the extent to which African American versus European American adolescents are able to foster and maintain connections with their families (i.e., family meals and family discussions). For European American youth, the frequency of family meals and discussion with parents

Table 4 Duration of organized activity involvement and peer victimization moderated by ethnicity

Step	Predictors	<i>B</i>	<i>SE B</i>	β	Adjusted R^2	R^2 Change
1	Parental level of education	.32	.78	.05	-.02	.00
	Family income	.00	.81	.00		
2	Duration	-1.03	.69	-.16	-.01	.02
	Ethnicity (Afr. Amer)	2.62	1.71	-.11	.01	.05
	Ethnicity (As. Amer)	3.22	2.47	.18		
3	Ethnicity (Latino)	-.47	1.99	-.03		
	Afr. Amer \times duration	-1.47	1.42	-.14	.11	.12**
	As. Amer \times duration	3.45	1.25	.30		
4	Latino \times duration	-2.121	2.05	-.12		

^{ms} $p < .10$; * $p < .05$;
** $p < .01$; *** $p < .001$

increased up to and then leveled off at 5–10 h per week of activity participation. However, for African American adolescents, the frequency of family meals increased through 20 or more hours per week of activities and discussion with parents continued to increase until it began to decrease at 20 h per week. Thus, we propose that African American youth in the current sample reported lower levels of loneliness with increasing levels of participation because they were able to continue fostering close relationships with parents even while they were intensely involved in organized activities.

Current findings also indicated that African American youth who participated in more years of organized activities also reported experiencing less peer victimization. Although it was expected that spending more years participating in organized activities would be linked to lower levels of reported peer victimization, it is less clear why this is particularly true for African American adolescents. Work by Hanish and Guerra (2000) exploring the roles of ethnicity and school context in predicting peer victimization suggests that African American youth who attend ethnically integrated schools such as the school in the current study are at a slightly lower risk for peer victimization. Perhaps more years of participation in organized activities within a supportive and ethnically diverse context influenced the lower rates of reported peer victimization among African Americans in the current sample.

Interestingly, results indicated that for Asian American adolescents, more years of participation was associated with *higher* levels of peer victimization. Although no known study to date has specifically explored the unique impact organized activity involvement has on Asian American youth, prior research may help explain this unexpected finding. Time-use studies have indicated that Asian Americans are more likely than other minority students to spend after-school hours in lessons (e.g., language, art, music, and dance) or in academic-related activities (Kao et al. 1996; Peng and Wright 1994). In addition, research suggests that Asian American parents, as compared to those of other ethnicities (i.e., European American, Latino, and African American), hold higher educational expectations for their children and emphasize involvement in more educational activities (i.e., academic lessons, museum visits) (Peng and Wright 1994). Thus, it is possible that Asian American youth tend to spend more years participating in activities that are considered to be less socially accepted by the “popular” crowd, thus putting them at an increased risk for social difficulties such as being victimized or isolated by their peers (Barber et al. 2001; Schwartz et al. 2006).

Findings from the current study also support prior work indicating not only that separate indices of activity involvement are linked to various outcomes, but also that certain indices tend to be related to more indicators of

adjustment than others (Fredricks and Eccles 2006b). In addition, intensity and breadth of involvement demonstrated only curvilinear effects on depressive symptoms. Thus, mixed findings across prior research regarding the link between organized activity involvement and depressive symptoms may be attributed to the fact that only linear analyses were conducted.

The positive curvilinear relation between intensity of involvement and depressive symptoms supports for the notion of threshold effects/diminishing returns associated with high intensity of involvement (e.g., Busseri et al. 2006; Fredricks and Eccles 2006a; Mahoney et al. 2006; Marsh 1992; Marsh and Kleitman 2002; Rose-Krasnor et al. 2006). More specifically, adolescents who were over-involved (e.g., participated in activities for more than 10 h per week) reported increasing levels of depressive symptoms. Even more compelling, rather than the benefits leveling off at relatively high amounts of participation, results indicated that adolescents who were extremely involved in organized activities (i.e., 20 h or more per week) reported *more* depressive symptoms than those who did not participate at all. However, while it is tempting to ‘scapegoat’ over-involvement in organized activities as the primary factor underlying these negative adjustment outcomes, longitudinal studies indicate that some adolescents may experience an external push towards ‘resume building’ and that this overemphasis on accomplishment over character puts adolescents at risk for depression, anxiety, and substance use (Luthar and Becker 2002; Luthar et al. 2006). Thus, it may be that it is not over-involvement in organized activities per se that puts adolescents at risk for elevated depressive symptoms, but rather the high levels of parental pressure that they experience related to their participation.

Contrary to expectations, findings from the current study also demonstrated that adolescents participating in a relatively narrow or wide range of activity contexts reported the lowest levels of depressive symptoms, while involvement in a moderate range of activities was linked to higher levels of symptoms. In other words, adolescents who participated in approximately two activity contexts reported the highest level of depressive symptoms. Although this finding runs counter to Lerner et al. (2001) suggestion that moderate breadth may be optimal, previous research has indicated the developmental benefits of both focused involvement in a few activities (Jacobs et al. 2005) as well as participation in a wide variety of activity contexts (Bartko and Eccles 2003; Busseri et al. 2006; Fredricks and Eccles 2006b). Participation in one activity context likely facilitates the development of skill mastery in that area and has been shown to positively predict levels of adolescent self-perceived competence in that particular domain (Jacobs et al. 2005). However, greater breadth of involvement has been linked to indicators of positive adjustment

such as more positive well-being and stronger interpersonal bonds (Rose-Krasnor et al. 2006).

Limitations

The results need to be interpreted in light of some methodological issues. The data is cross-sectional and relations between adolescent adjustment and involvement in organized activities cannot be interpreted in terms of causation. For example, although more years of participation may *cause* adolescents to experience less loneliness, it is also possible that loneliness serves as a selection mechanism. That is, adolescents who are less lonely are more likely to become involved and then maintain participation in organized activities. Furthermore, the study also used only self-report measures and the possible range of breadth reported by the adolescents was limited to four activities. In addition, the sample is unique in ways that could limit generalizability to adolescents at large. Adolescents in the current study come from highly competitive, urban magnet high school and it is likely that the adolescents were a self-selected group of highly motivated students. Of note, the selected high school places a particular emphasis on organized activity involvement, providing its students with up to 100 various clubs and sports to choose from; adolescents from the current study were more involved in organized activities than most American children and adolescents (i.e., 5 h per week) (Mahoney et al. 2006). The sample was also unique in its ethnic and socioeconomic diversity, with a significant number of high-income, minority students as well as low-income, European American students. Last, mean levels of adjustment variables were low, which may have limited the degree to which activities were associated with adjustment outcomes. Related, although a significant negative curvilinear relation was found between breadth and depressive symptoms, the difference between levels of depressive symptoms at low versus high breadth levels was minimal.

Future Directions and Conclusions

Although the present study has extended the literature in many ways, it has also raised numerous questions. To begin, longitudinal research that controls for selection effects (i.e., prior adjustment) and utilizes an experimental study design that manipulates aspects of activity involvement are needed to determine whether involvement in activities promotes better outcomes. In addition, more work needs to be done to expand our knowledge about how various indices of organized activity involvement uniquely impact a wider range of adjustment outcomes. Furthermore, results indicate that researchers should more readily explore the relations between organized activity

involvement and negative social experiences. It is also evident that future work must consider how participation in organized activities differentially influences adjustment among youth and adolescents of different ethnicities, and explore whether these relations may be best explained by a third variable, such as marital status or familial stress. Last, given that there was a trend suggesting that more intense involvement was associated with lower levels of loneliness for low-income adolescents but higher levels of loneliness among high-income adolescents, future researchers should explore why participating in extremely high levels of activity negatively impacts adolescents' adjustment, especially among high-income youth.

In sum, this work provides further evidence of relations between organized activities and emotional and social outcomes among adolescents. By assuming a more nuanced approach toward examining the influence organized activity involvement has on adolescent adjustment, the current study detected relations that would have otherwise been overlooked. More specifically, findings demonstrated that various dimensions of involvement have unique effects on adjustment and highlighted that participation in organized activities is strongly linked to levels of loneliness experienced by adolescents. Furthermore, the study highlights the importance of considering curvilinear effects when assessing the link between involvement and depressive symptoms. The current study also emphasizes the growing need to explore how organized activity involvement may differentially impact adolescents of varying ethnic and socioeconomic backgrounds. Most importantly, these findings provide information that is relevant for legislators and policy makers who are considering initiatives aimed at influencing the way adolescents spend their discretionary time.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage Publications, Inc.
- Andersen, S. L., & Teicher, M. H. (2008). Stress, sensitive periods and maturation events in adolescent depression. *Trends in Neurosciences*, 31(4), 183–191. doi:10.1016/j.tins.2008.01.004.
- Asher, S. R., & Wheeler, V. A. (1985). Children's loneliness: A comparison of rejected and neglected peer status. *Journal of Consulting and Clinical Psychology*, 52, 500–505. doi:10.1037/0022-006X.53.4.500.
- American Psychological Association, Task Force on Socioeconomic Status. (2007). *Report of the APA task force on socioeconomic status*. Washington, DC: American Psychological Association.
- Barber, B. L., Eccles, J. S., & Stone, M. R. (2001). Whatever happened to the jock, the brain, and the princess? Young adult pathways linked to adolescent activity involvement and social identity. *Journal of Adolescent Research*, 16, 429–455. doi:10.1177/0743558401165002.

- Bartko, W. T., & Eccles, J. S. (2003). Adolescent participation in structured and unstructured activities: A person-oriented analysis. *Journal of Youth and Adolescence*, 32, 233–241. doi:10.1023/A:1023056425648.
- Bohnert, A. M., Aikins, J. W., & Edidin, J. (2007). The role of organized activities in facilitating social adaptation across the transition to college. *Journal of Adolescent Research*, 22, 1–20. doi:10.1177/0743558406297940.
- Bohnert, A. M., & Garber, J. (2007). Prospective relations between organized activity participation and psychopathology during adolescence. *Journal of Abnormal Child Psychology*, 35, 1021–1033. doi:10.1007/s10802-007-9152-1.
- Bohnert, A. M., Kane, P., & Garber, J. (2008). Organized activity participation and internalizing and externalizing symptoms: Reciprocal relations during adolescence. *Journal of Youth and Adolescence*, 37, 239–250. doi:10.1007/s10964-007-9195-1.
- Busseri, M. A., Rose-Krasnor, L., Willoughby, T., & Chalmers, H. (2006). A longitudinal examination of breadth and intensity of youth activity involvement and successful development. *Developmental Psychology*, 42, 1313–1326. doi:10.1037/0012-1649.42.6.1313.
- Crick, N. R., & Ladd, G. (1993). Children's perceptions of their peer experiences: Attributions, loneliness, social anxiety, and social avoidance. *Developmental Psychology*, 29, 244–254. doi:10.1037/0012-1649.29.2.244.
- Darling, N. (2005). Participation in extracurricular activities and adolescent adjustment: Cross-sectional and longitudinal findings. *Journal of Youth and Adolescence*, 34, 493–505. doi:10.1007/s10964-005-7266-8.
- Dworkin, J. B., Larson, R., & Hansen, D. (2003). Adolescents' accounts of growth experiences in youth activities. *Journal of Youth and Adolescence*, 32, 17–26. doi:10.1023/A:102107622321.
- Eccles, J. S., & Barber, B. L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research*, 14, 10–43. doi:10.1177/0743558499141003.
- Eccles, J. S., Barber, B. L., Stone, M., & Hunt, J. (2003). Extracurricular activities and adolescent development. *The Journal of Social Issues*, 59, 865–889. doi:10.1046/j.0022-4537.2003.00095.x.
- Entwisle, D. R., & Astone, N. M. (1994). Some practical guidelines for measuring youth's race/ethnicity and socioeconomic status. *Child Development*, 65, 1521–1540. doi:10.2307/1131278.
- Fletcher, A. C., Nickerson, P., & Wright, K. L. (2003). Structured leisure activities in middle childhood: Links to well-being. *Journal of Community Psychology*, 31, 641–659. doi:10.1002/jcop.10075.
- Fredricks, J. A., & Eccles, J. S. (2006a). Extracurricular involvement and adolescent adjustment: Impact of duration, number of activities, and breadth of participation. *Applied Developmental Science*, 10, 132–146. doi:10.1207/s1532480xads1003_3.
- Fredricks, J. A., & Eccles, J. S. (2006b). Is extracurricular participation associated with beneficial outcomes? Concurrent and longitudinal relations. *Developmental Psychology*, 42, 698–713. doi:10.1037/0012-1649.42.4.698.
- Garber, J. (1984). The developmental progression of depression in female children. In D. Cicchetti & K. Schneider-Rosen (Eds.), *New directions for child development* (pp. 25–58). San Francisco: Jossey-Bass.
- Garber, J., Keiley, M. K., & Martin, N. C. (2002). Developmental trajectories of adolescents' depressive symptoms: Predictors of change. *Journal of Consulting and Clinical Psychology*, 70, 79–95. doi:10.1037/0022-006X.70.1.79.
- Hanish, L. D., & Guerra, N. G. (2000). Predictors of peer victimization among urban youth. *Social Development*, 9, 521–543. doi:10.1111/1467-9507.00141.
- Hintze, J. (2006). *NCSS, PASS, and GESS: Statistical and power analysis software*. Kayesville, UT: Number Cruncher Statistical Systems.
- Holmbeck, G. N. (2002). Post-hoc probing of significant moderational and mediational effects in studies of pediatric populations. *Journal of Pediatric Psychology*, 27, 87–96. doi:10.1093/jpepsy/27.1.87.
- Horowitz, J. L., & Garber, J. (2006). The prevention of depressive symptoms in children and adolescents: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, 74, 401–415. doi:10.1037/0022-006X.74.3.401.
- Jacobs, J. E., Vernon, M. K., & Eccles, J. (2005). Activity choices in middle childhood: The roles of gender, self-beliefs, and parents' influence. In J. L. Mahoney & R. W. Larson (Eds.), *Organized activities as contexts of development: Extracurricular activities, after-school and community programs* (pp. 235–254). Mahwah, NJ: Erlbaum.
- Kao, G., Tienda, M., & Schneider, B. (1996). Racial and ethnic variation in academic performance. In A. M. Pallas (Ed.), *Research in sociology of education and socialization* (pp. 263–297). Greenwich, CT: JAI Press.
- Kinney, D. A. (1993). From nerds to normals: The recovery of identity among adolescents from middle school to high school. *Sociology of Education*, 66, 21–40. doi:10.2307/2112783.
- Kovacs, M. (1981). Rating scales to assess depression in school-aged children. *Acta Paedopsychiatrica*, 46, 305–315.
- Larson, R. W., Hansen, D. M., & Moneta, G. (2006). Differing profiles of developmental experiences across types of organized youth activities. *Developmental Psychology*, 42, 849–863. doi:10.1037/0012-1649.42.5.849.
- Lerner, R. M., Freund, A. M., De Stefanis, I., & Habermas, T. H. (2001). Understanding developmental regulation in adolescence: The use of the selection, optimization, and compensation model. *Human Development*, 44, 29–50. doi:10.1159/000057039.
- Luthar, S. S., & Becker, B. E. (2002). Privileged but pressured? A study of affluent youth. *Child Development*, 73, 1593–1610. doi:10.1111/1467-8624.00492.
- Luthar, S. S., Shoum, K. A., & Brown, P. J. (2006). Extracurricular involvement among affluent youth: A scapegoat for "ubiquitous achievement pressures"? *Developmental Psychology*, 42, 583–597. doi:10.1037/0012-1649.42.3.583.
- Mahon, N. E., Yarcheski, A., Yarcheski, T. J., Cannella, B. L., & Hanks, M. M. (2006). A meta-analytic study of predictors for loneliness during adolescence. *Nursing Research*, 55, 308–315. doi:10.1097/00006199-200609000-00003.
- Mahoney, J. L. (2000). School extracurricular activity participation as a moderator in the development of antisocial patterns. *Child Development*, 71, 502–516. doi:10.1111/1467-8624.00160.
- Mahoney, J. L., Cairns, B. D., & Farmer, T. W. (2003). Promoting interpersonal competence and educational success through extracurricular activity participation. *Journal of Educational Psychology*, 95, 409–418. doi:10.1037/0022-0663.95.2.409.
- Mahoney, J. L., Harris, A. L., & Eccles, J. S. (2006). *Organized activity participation, positive youth development, and the over-scheduling hypothesis* (Social Policy Report No. 4). Ann Arbor, MI: Society for Research in Child Development.
- Mahoney, J. L., Larson, R. W., Eccles, J. S., & Lord, H. (2005). Organized activities as developmental contexts for children and adolescents. In J. L. Mahoney, R. W. Larson, & J. S. Eccles (Eds.), *Organized activities as contexts of development: Extracurricular activities, after-school and community programs* (pp. 3–22). Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Mahoney, J. L., Schweder, A. E., & Stattin, H. (2002). Structured after-school activities as a moderator of depressed mood for adolescents with detached relations to their parents. *Journal of Community Psychology*, 30, 69–86. doi:10.1002/jcop.1051.

- Markstrom, C. A., Li, X., Blackshire, S. L., & Wilfong, J. J. (2005). Ego strength development of adolescents involved in adult-sponsored structured activities. *Journal of Youth and Adolescence*, *34*, 85–95. doi:10.1007/s10964-005-3208-8.
- Marsh, H. W. (1992). Extracurricular activities: Beneficial extension of the traditional curriculum or subversion of academic goals? *Journal of Educational Psychology*, *84*, 553–562. doi:10.1037/0022-0663.84.4.553.
- Marsh, H. W., & Kleitman, S. (2002). Extracurricular school activities: The good, the bad, and the nonlinear. *Educational Review*, *72*, 464–514.
- McHale, S. M., Crouter, A. C., & Tucker, C. J. (2001). Free-time activities in middle childhood: Links with adjustment in early adolescence. *Child Development*, *72*, 1764–1778. doi:10.1111/1467-8624.00377.
- Pedersen, S., & Seidman, E. (2005). Contexts and correlates of out-of-school activity participation among low-income urban adolescents. In J. L. Mahoney, R. Larson, & J. S. Eccles (Eds.), *Organized activities as contexts of development: Extracurricular activities, after-school and community programs* (pp. 85–109). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Peng, S. S., & Wright, D. (1994). Explanation of academic achievement of Asian American students. *The Journal of Educational Research*, *87*, 346–352.
- Posner, J. K., & Vandell, D. L. (1999). After-school activities and the development of low-income urban children: A longitudinal study. *Developmental Psychology*, *35*, 868–879. doi:10.1037/0012-1649.35.3.868.
- Powell, D. R., Peet, S. H., & Peet, C. E. (2002). Low-income children's academic achievement and participation in out-of-school activities in 1st grade. *Journal of Research in Childhood Education*, *16*, 202–211.
- Prinstein, M. J., Boergers, J., & Vernberg, E. M. (2001). Overt and relational aggression in adolescents: Social-psychological adjustment of aggressors and victims. *Journal of Clinical Child Psychology*, *30*, 479–491. doi:10.1207/S15374424JCCP3004_05.
- Rose-Krasnor, L., Busseri, M. A., Willoughby, T., & Chalmers, H. (2006). Breadth and intensity of youth activity involvement as contexts for positive development. *Journal of Youth and Adolescence*, *35*, 385–399. doi:10.1007/s10964-006-9037-6.
- Sandstrom, M. J., & Coie, J. D. (1999). A developmental perspective on peer rejection: Mechanisms of stability and change. *Child Development*, *70*, 955–966. doi:10.1111/1467-8624.00069.
- Saylor, C. F., Finch, A. J., Spirito, A., & Bennet, B. (1984). The children's depression inventory: A systematic evaluation of psychometric properties. *Journal of Consulting and Clinical Psychology*, *52*, 955–967. doi:10.1037/0022-006X.52.6.955.
- Schwartz, D., Gorman, A. H., Nakamoto, J., & McKay, T. (2006). Popularity, social acceptance, and aggression in adolescent peer groups: Links with academic performance and school attendance. *Developmental Psychology*, *42*, 1116–1127. doi:10.1037/0012-1649.42.6.1116.
- Simpkins, S. D., Fredricks, J. A., Davis-Kean, P. E., & Eccles, J. S. (2006). Healthy mind, healthy habits: The influence of activity involvement in middle childhood. In A. C. Huston & M. N. Ripke (Eds.), *Developmental contexts in middle childhood: Bridges to adolescence and adulthood* (pp. 283–302). New York, NY: Cambridge University Press.
- Storch, E. A., & Ledley, D. (2005). Peer victimization and psychosocial adjustment in children: Current knowledge and future directions. *Clinical Pediatrics*, *44*, 29–38. doi:10.1177/000992280504400103.
- Strauss, R. S., & Pollack, H. A. (2003). Social marginalization of overweight children. *Archives of Pediatrics and Adolescent Medicine*, *157*, 746–752. doi:10.1001/archpedi.157.8.746.
- Youniss, J., McLellan, J. A., Su, Y., & Yates, M. (1999). The role of community service in identity development: Normative, unconventional, and deviant orientations. *Journal of Adolescent Research*, *14*, 248–261. doi:10.1177/0743558499142006.
- Zaff, J. F., Moore, K. A., Papillo, A. R., & Williams, S. (2003). Implication of extracurricular activity participation during adolescence on positive outcomes. *Journal of Adolescent Research*, *18*, 599–630. doi:10.1177/0743558403254779.

Author Biographies

Edin T. Randall, MA is a graduate student at Loyola University Chicago. Her research interests include the influence organized activity involvement has on adjustment, especially among adolescents of varying ethnic and socioeconomic backgrounds. She received her M.A. at Loyola University Chicago and is currently working towards her Ph.D.

Amy M. Bohnert, PhD is an Assistant Professor of Psychology at Loyola University Chicago. She earned her Ph.D. at the Pennsylvania State University. Her research focuses on predictors and outcomes of involvement in various after-school contexts, especially organized extracurricular activities.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.