The Effects of Adolescents' Extra-Curricular Activities on Young Adult Success

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Increasingly, American children are being raised in single-parent families; this reflects a rise in U.S. divorce rates as well as the increasing birth rate of non-married mothers (Dawson, 1999). It is estimated that close to half of all recent first marriages will end in divorce (Castro and Bumpass, 1989; Cherlin, et al., 1991). According to the 2000 census, single-parent households account for 28% of all households containing children, furthermore, 50% to 60% of all children will spend some time living in a single-parent arrangement, most commonly with their mother (Simmons and O'Neil, 2001). This trend has serious implications for this population in regards to frequency and availability of parental supervision and support. This can contribute to less frequent participation in school related activities, reduced educational outcomes, negative health and emotional outcomes, and deviance, "It is conventional wisdom that children in single-parent families have less parental supervision than their counterparts in two-parent households" (Zick and Allen, 1996, p. 65).

In addition to single-parent families, children reared in step-families have outcomes that are typically worse than their two-biological parent counterparts. Commonly, this is attributed to reduced supervision as the step-parent competes with the

child for the attention of the biological parent while providing little additional supervision (Sandefur et. al, 1992). The importance of adult supervision and positive influence during adolescence has been well documented and points to the obvious disadvantage an adolescent faces when reared in a non-traditional structure (McLanahan and Sundefur, 1994). With the prevalence of divorce and alternative family structures in the U.S., it is vital to future adolescents that a more thorough understanding of the dynamics of adolescence is achieved:

> Transitions to single-parent, stepparent, and non-parental living arrangements have been linked to lower academic performance and behavior problems, a lower probability of high school completion, earlier movement toward residential independence, earlier marriage and cohabitation and an increased likelihood of adolescent childbearing (Aquilino, 1996, p. 294).

Even when the effects of family socioeconomic status are controlled, negative outcomes have been attributed to single parents' reduced involvement and less stringent supervision of children (Aquilino, 1996; McLanahan, 1997). Generally, being reared in a non-traditional family decreases a child's opportunities for success.

Previous studies have investigated and documented the role of extracurricular activities and their protective benefits for participants well into young adulthood (Eccles, et al., 2003; Landers and Landers, 1978). For example, young adults who participated in extracurricular activities as adolescents have higher than anticipated educational outcomes and have lower than expected illicit substance and alcohol use. (Eccles, et al., 2003). However, much is still unknown regarding how and why adolescents decide to participate or not participate in extracurricular activities. A deeper understanding of the roles that families play in adolescents' decisions to participation in extracurricular

activities is beneficial to understanding how adolescents can be encouraged to participate in the future.

The importance of adult supervision and support during adolescence has been well documented and points to the obvious disadvantage an adolescent faces when reared in a non-traditional structure. With the prevalence of divorce and alternative family structures in the U.S., it is vital to the future of these adolescents that a more thorough understanding of the mediating factors is achieved. These activities have the potential to serve as a surrogate parent to those adolescents residing in non-traditional families. Extracurricular activities give adolescents the opportunity to connect with caring non-familial adults (Eccles, et. al, 2003). Increasing involvement in these activities could act as a counterbalance to the documented disadvantages an adolescent faces when residing in a home without both biological parents.

This study employs a life-course approach to investigate the role of family structure and participation in school based extracurricular activities on early adult outcomes (education, civic involvement, and drug use). We examine the interaction between family structure and participation. We hypothesize that the positive influence of participation in extra-curricular activities is stronger for children raised in non-traditional families. We believe that the contract the extra-curricular activities provides with positive adult role models will be more important for children who live with only one parent, or a parent and a step-parent than for children who live with both biological parents. Additionally, this study explores the influence of race, gender, and socioeconomic status on adolescent extracurricular activity participation and the subsequent young adult outcomes. We also hypothesize an interaction between family

SES and participation in extra-curricular activities, arguing that children from lower SES families will profit more by participation in activities with respect to achieving success as a young adult.

METHODS

The National Longitudinal Study of Adolescent Health (Add Health) is employed to predict the likelihood of high school graduation for adolescents residing in less than traditional family settings. The Add Health data are excellent because it is large scale, longitudinal and contains measurements of our key concepts. Add Health surveyed over 20,000 7-12 graders surveyed in 1994-95 in the in-home survey (Wave 1), and approximately 15,000 also re-interviewed in 2001-2002 when the respondents were young adults (Wave 3). We will measure family structure, family SES, gender, race, and participation in school activities in Wave I to predict educational attainment, civic involvement, and substance abuse at Wave III.

Add Health explores five vital contexts: families, peer groups or social networks, dyadic relationships, schools, and neighborhoods and communities. Of particular interest is the investigation of the moderating effects of parental socioeconomic status, parental expectations and involvement, and extracurricular activity involvement on young adult outcomes. Add Health lends itself well to such an investigation. The design of Add Health posits three primary sources influencing adolescent health. These sources consist of social environments, health related behaviors, and strengths and vulnerabilities. An adolescent's social context impacts the experiences and opportunities throughout the life course. The study design of Add Health allows for the exploration of aspects of the

adolescent experience and includes data pertaining to family structure, socioeconomic status, aspects of parenting and school-based extracurricular participation.

Add Health data are longitudinal in nature, and were collected in three waves. The initial collection of data occurred between September 1995 and April 1995 and is referred to as Wave I. The Wave I data were collected through six different survey instruments. These include an in-school questionnaire, an in-home-questionnaire, the Add Health Picture Vocabulary Test, Spatial data, a school administrator questionnaire, and a parent questionnaire. This study utilizes data from both the in-school questionnaire and the in-home questionnaire as well as data from the parent questionnaire.

The data for Wave III were collected between the period of August 2001 and April 2002. The third collection wave occurred approximately six years after the initial collection. The Wave III in-home survey was administered to all Wave I respondents who could be tracked and interviewed. The Wave III questionnaire investigates relevant young adult topics such as educational attainment, employment history, and substance abuse allowing for an investigation of the effects of events and choices occurring in adolescence on young adulthood.

It is supposed that extracurricular activity participation has a protective effect for adolescents residing in a less than traditional family structure. Logistic regression is the selected method for predicting the effects of family structure, socioeconomic status, aspects of parenting, and school-based extracurricular participation on the likelihood of high school graduation. To address the issue of causality, independent and control variables collected at Wave I are incorporated into the analysis to determine their effect on high school graduation at Wave III. To adjust for the multifaceted sample design,

analytic weights are incorporated into the analysis. SAS is the primary tool for data analysis and is selected for its ability to handle multifaceted data. In accounting for sample design, the proc survey function allows for the incorporation of weights, clustering, and strata variable. This prevents the biasing of estimates and standard errors in the analysis.

Hypotheses

It is hypothesized that there is a positive influence of participation in extra-curricular activities. However, we also hypothesize a non-linear effect of activities. We believe that increases on activities at low levels of the activities scale are more important than increases at the high end.   We further hypothesize that the influence is stronger for children raised in non-traditional families. We believe that the contact the extra-curricular activities provides with positive adult role models will be more important for children who live with only one parent, or a parent and a step-parent than for children who live with both biological parents.

<div align="center">MEASURES</div>

<u>Dependent Variables</u>

High School Graduation. High school graduation is a binary outcome variable measured at Wave III. The respondent indicated whether or not he or she had received a high school degree. Respondents who have not graduated from high school are coded 0 (non-graduates) and high school graduates are coded 1.

Civic Involvement.   Data assessing civic involvement are taken from the in-home questionnaire administered during Wave III. Adolescents are asked to indicate for which, if any, civic activities they have participated within the last twelve months. The activities

include: volunteer or community service, donated blood, registered to vote, and voted in the last presidential election. The responses to these questionnaire items are coded one for yes (indicating participation) and zero for no participation. Civic involvement is assessed by combining questionnaire items regarding activity participation of the young adult to form composite involvement scores. Composites activity scores range from zero to four. Zero is indicative of no civic involvement and a score of four is the maximum amount of involvement possible.

Drug use. Drug use is an ordinal variable measured at Wave III. The respondent's behavior concerning illicit drug usage over the past twelve months is determined. Drug usage investigated includes marijuana, cocaine, methamphetamine, inhalants, LSD, PCP, ecstasy, mushrooms, speed, ice, heroin, or pills (without a doctor's consent). Those respondents who have not used drugs in the past 12 months are coded 0 and subsequently considered non-users. If the respondent has used drugs in the last twelve months, but not in the previous thirty days they are considered occasional users or experimenters and are coded 1. Finally, respondents who have used drugs in both the past twelve months and the previous thirty days are typed as regular users and coded 2.

Independent Variables

Family Structure. The family structure variable comes from the family situation at wave 1. A series of dummy variables were created with the reference (omitted) group being the two biological (or adopted) family structure. The dummy variables were *single mom, single dad,* and *step-parent.* Step-parent households included those living with either the mother and step-father or the father and step-mother. Children living with one parent and the parent's cohabiting partner were coded as living with single parents,

because of the instability of the cohabitation situation. Children living with neither parent, such as children living with grandparents, in foster care or on their own were removed from the analysis as many of our focal variables concerned parental influence.

Parental Education. The parental education variable comes from Wave I of the parent questionnaire. Parental education is computed by taking the maximum value of the respondent's resident mother's or resident father's highest educational attainment. If respondents lived with only one parent then that parent's education value was used.   The educational values range from one to four. Those responding that they had no degree or only a high school degree were coded one. Those respondents whose highest educational attainment was some college were coded two.   Respondents who had a college degree are coded three and those respondents with education beyond four years of college are coded four.

Occupational Prestige. Occupational prestige is taken from Wave I of the parent questionnaire. The occupational prestige variable is derived by taking the maximum value of the resident mother's or father's occupational prestige. In single parent homes, the occupational prestige of the single parent was used. To compute occupational prestige respondents who indicate they are unemployed or working in service or blue collar jobs are coded are the reference group. Those who work in technical or clerical positions are coded one for the technical dummy variable. The respondents with professional or managerial employment are coded 1 for the professional dummy variable.

Parental Control. The variable parental control is created with data extracted from Wave I of the in-home questionnaire. Adolescents are asked a series of questions regarding whether or not their parents let them make decisions regarding: time to be

home on weekend nights; the people they hang around with; what to wear; how much television to watch; what is watched on television; what time to go to bed on weeknights; and what to eat. The responses to these questions are coded one for yes, adolescent decides on own, and zero for no, adolescent not allowed to make the decision. Responses are then scaled to form composite scores. Adolescents with scores ranging from five to seven are typed as having parents who exercise less control and are coded 0.   Those adolescents with scores ranging from zero to four are considered to have parents who exercise more control and are coded one.

Parent's School Involvement. Parental school involvement is computed by taken the maximum value of either the adolescent's mother or father's school involvement score, with children living with only one parent having that parent's score assigned to the school involvement variable.   Mother and father's school involvement are composite scores derived from the Wave I in-home questionnaire. Adolescents were asked if in the past four weeks they have done the following with their mother: talked about school work or grades; worked on a school project; or talked about other things you are doing in school. The questions are repeated for the adolescent's father. The involvement items are coded one for yes and zero for no. The items are combined to form composite scores for both the mother and father. Composite scores range from zero to three. Those scoring zero and one are typed as low involved parents and those with scores of two and three are considered high involved parents. Low involved parents are the reference category for the dummy variable and high involved parents are coded one.

Parent's College Expectation. Parent's college expectation is taken from the Wave I in-home questionnaire. Adolescent's are asked how disappointed would their

mother be if you did not graduate from college. The questions are repeated for the adolescent's father. Responses range from one to five and a response of one indicates the lowest disappointment level and low expectation. A response of five is indicative of the highest disappointment and thus a high expectation for college attendance. The variable is recoded into a dummy variable with scores ranging from one to three are assigned a zero and are the reference group and scores of four or greater are coded one. The reference group is considered low parental college expectation and a score of one is labeled as high parental college expectation. The maximum value of either the adolescent's mother's or father's college expectation is employed in the analysis and single parent families have the only parent's college expectation score used.

Extracurricular Activity Participation. Data on extracurricular activity participation are taken from the in-school questionnaire administered during Wave I. Adolescents are asked to indicate for which, if any, extracurricular activities they participate. The activities include: French club, German club, Spanish club, Latin club, book club, computer club, debate team, drama club, Future Farmers of America, history club, math club, science club, band, cheerleading or dance team, chorus or choir, orchestra, other club or organization, baseball or softball, basketball, football, soccer, ice hockey, swimming, tennis, track, volleyball, wrestling, other sports, newspaper, honor society, student council, yearbook, and newspaper. The responses to these questionnaire items are coded one for yes (indicating participation) and zero for no participation. Extracurricular activity participation is assessed by combining questionnaire items regarding activity participation of the adolescent to form composite activity scores. Composites activity scores range from zero to thirty three. Zero is indicative of no

extracurricular activities and a score of thirty three is the maximum amount of participation possible.

Extracurricular Activity Participation Squared. To test for a potential non-linear relationship of extracurricular activity on high school graduation, extracurricular activity participation is squared and included in the models.

Interaction Variables. Three interaction variables are included in the final models. The interactions include: one biological parent/one step-parent family structures by extracurricular activity participation, single mother family structures by extracurricular activity participation, and single father family structures by extracurricular activities.

RESULTS

<u>Descriptive Statistics</u>

A table showing the means and proportions (for categorical variables) for all of our independent and dependent variables, separately for each family structure will be included. Survey design techniques will be used to correct the standard errors.

<u>High school graduation.</u>

Model one gives the odds ratios of graduating from high school by Wave III for our control variables, sex and race/ethnicity. Consistent with the literature females are more likely to graduate than males and Asians are more likely and Hispanics are less likely to graduate from high school than Whites. Model 2 adds one of our focal variables, family structure. Not surprisingly, children from two biological parent families are more likely to graduate from high school than children from all other family structures. Children from single father families are 45% less likely, children from single

mother families are 40% less likely, and children from step-families are 23% less likely to graduate from high school than children from two biological parent families.

In Model 3 we add the family SES variables parental education and parental occupational prestige. Children from families where at least one parent has a college degree or more are more likely to graduate from high school than children from families in which no parent has a college degree.   Similarly, children with one parent who is professional are more likely to graduate from high school than those children from families in which no parent had a professional or technical job. Controlling for family SES, we still find that children from two biological parent households are significantly more likely to graduate from high school than children from step-parent, or single parent households.

In Model 4 parental socialization variables are added. Children whose parents exerted more control are less likely to graduate from high school, while children whose parents were more involved with the school and who had higher expectations for college were more likely to graduate from high school. These results are consistent with the literature which suggests that authoritative parenting leads to more successful outcomes for children than authoritarian parenting.

Model 5 adds a measure of the overall extra-curricular activity of the student and the overall activity squared. There is a strong positive linear component with a significant negative curvilinearity. This indicates that there is a greater positive effect for each additional activity at the lower end of activities and less of a payoff for additional activities at the high end of activities.   Participation in extracurricular activities

significantly increases the odds of graduating from high school, even controlling for family structure, family SES and parental school involvement.

Model 6 adds the interaction of family structure and activities. The only family type which receives a significantly different payoff for extra-curricular activities from the effect for two biological parent families is single father families. Children from single father families receive significantly less payoff than children from two-parent families. This is counter to our hypothesis, because we hypothesized that participation in activities would help moderate the negative effect of coming from a non-traditional family structure. Perhaps children with high participation in activities from single-father households are in activities because their father has long work hours and encourages participation in activities so that the adolescent does not have excessive unsupervised time. In this case, the effect of more time in activities could be negative because it may not be that the adolescent is choosing to be in activities and may therefore not be personally invested enough in the activities for them to be beneficial. .

Civic Participation.

(The final version of the paper will have an analysis of the effects of family structure and extra-curricular activities on civic participation. This analysis is parallel to the analysis in the above section.)

Drug Use

(The final version of the paper will include an analysis parallel to the preceding analysis, but for the outcome of young adult drug use. We are choosing three very different outcomes in order to compare the importance of extracurricular activities in difference spheres of young adulthood. Further, we are interested in whether

participation in these activities is a more powerful mediator of the effects of family structure for some outcomes than others).

Conclusions

The conclusions will summarize and compare the results across all of the aspects of young adult life listed above. Strengths and limitations of the study will be given also with directions for future research.

Table 1. Logistic Regression Model for Variables Predicting High School Graduation in Adolescents at Wave 3

Logistic Regression Model for Variables Predicting High School Graduation in Adolescents at Wave 3

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
W1 Characteristics												
Female	1.226	**	1.241	**	1.317	**	1.302	***	1.244	**	1.25	**
Male	Ref		Ref		Ref		Ref		Ref		Ref	
Hispanic	0.531	***	0.537	***	0.722	**	0.723	*	0.775		0.774	
Black	0.757		0.854		1.013		1.014		1.035		1.041	
Asian	1.871	*	1.776	*	1.801	*	1.713		1.699		1.696	
Other	1.194		1.235		1.348		1.339		1.378		1.382	
White	Ref		Ref		Ref		Ref		Ref		Ref	
W1 Family Structure												
One Biological/One Step Parent			0.767	*	0.777	*	0.788		0.786	*	0.915	*
Single Mother			0.603	***	0.688	***	0.665	***	0.669	***	0.702	***
Single Father			0.548	**	0.67	*	0.646	*	0.63	*	1.013	
Two Biological Parents			Ref		Ref		Ref		Ref		Ref	
W1 Parent's Education (Max)												
Beyond four-year college					1.511	***	1.465	**	1.385	**	1.380	**
College degree					1.198	**	1.187	*	1.185	*	1.188	*
Some college or other training beyond high school					0.95		0.954		0.968		0.963	
High school or equivalent and less than HS					Ref		Ref		Ref		Ref	
W1 Parent's Occupational Prestige (Max)												
Professional or managerial.					1.434	***	1.401	***	1.375	***	1.369	***
Technical or clerical.					1.115		1.114		1.107		1.108	
Service, blue collar, unemployed and other					Ref		Ref		Ref		Ref	
W1 Parental Control												
More Control							0.795	**	0.79	**	0.794	**
Less Control							Ref		Ref		Ref	
W1 Parent's School Involvement (Max)												
High Involvement							1.125	**	1.096	*	1.095	*
Low Involvement							Ref		Ref		Ref	
W1 Parent's Expectation for College (Max)												
High							1.111	*	1.094		1.093	
Low							Ref		Ref		Ref	
W1 Extracurricular Activity Participation												
Overall Activity									1.25	***	1.297	***
Overall Activity Squared									0.991	***	0.99	***
W1 Interactions												
One Biological/One Step Parent* Activity											0.918	
Single Mother*Activity											0.971	
Single Father*Activity											0.782	**
Two Biological Parents											Ref	