Extracurricular activity participation and educational outcomes among older youth transitioning from foster care

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ABSTRACT

This study examined factors associated with extracurricular participation and whether participation in extracurricular activities is associated with completing high school and attending college among a sample of older youth transitioning from foster care (n = 312). Results indicated that better self-reported grades and greater educational aspirations were associated with extracurricular participation. Participation in extracurricular activities was associated with graduating from high school, but not starting college by age 19. Consistent with provisions of the Preventing Sex trafficking and Strengthening Families Act of 2014, results suggest that efforts that make extracurricular participation a normative aspect of the developmental experience of foster youth are important for their educational well-being.

1. Introduction

On many indicators of educational achievement and advancement, data indicates that youth in foster care experience poorer outcomes than youth in the general population. Studies indicate that the level of academic performance of foster youth as demonstrated by grades tends to be significantly lower than their counterparts who are not in foster care (e.g., Benbenishty, Siegel, & Astor, 2017). In addition, foster youth are more likely than other groups of adolescents to drop out and not graduate from high school (e.g., Barrat & Berliner, 2013). Nationally, data indicates that 84% of foster youth who are age 17 to 18 aspired to go to college, but only 20% of those who completed high school did so (National Working Group on Foster Care and Education [NWGFCE], 2014).

Among diverse samples of youth, extracurricular participation is associated with better educational outcomes and higher levels of academic attainment (e.g., Fredericks & Eccles, 2006). Studies of extracurricular participation among youth in foster care are sparse in the empirical literature. Yet, participation in extracurricular and social activities is considered pertinent for the promotion of normalcy among foster youth (Pokempner, Mordecai, Rosado, & Subrahmanyam, 2015). One of the major provisions of Preventing Sex trafficking and Strengthening Families Act of 2014 is the development of standards for foster care recipients "participation in age or developmentally appropriate extracurricular, enrichment, cultural, and social activities" (Child Welfare Information Gateway, 2016, p. 6). In this study, we examine factors associated with extracurricular participation and whether participation in extracurricular activities among older youth transitioning from foster care is associated with completing high school and starting college.

There is a significant literature regarding the connection between school based extracurricular activity participation (EAP) and positive educational outcomes. Research indicates that participation in extracurricular activities is associated with higher grades or grade point averages (e.g., Knifsend & Graham, 2012; Metzger, Crean, & Forbes-Jones, 2009), lower likelihood of dropping out of high school (e.g., Crispin, 2017), greater academic aspirations (e.g., Darling, 2005), and greater school bonding and connectedness (e.g., Dotterer, McHale, & Crouter, 2007; Linver, Roth, & Brooks-Gunn, 2009). Studies also indicate that extracurricular participation is associated with higher levels of postsecondary educational attainment. Fredricks (2012), in a national longitudinal study of 10th graders, found that greater participation in interscholastic and intramural sports and school-based activities (e.g., school band or chorus, student government) was associated with higher educational status two and four years later. Among a sample of African American and European American youth in the state of Maryland, Fredricks and Eccles (2010) found that increased participation in community- and school-based extracurricular activities assessed in 11th grade was associated with higher educational status two years later.

There is a paucity of published studies that examine extracurricular participation among foster youth and its association to educational outcomes. In a non-probability sample of 216 former foster youth enrolled in college, 65.7% reported having participated in extracurricular activities in high school (Merdinger, Hines, Kathy, & Wyatt, 2005). Notably, at the time of emancipation, 80% had finished high school or completed some college. In a survey of foster parents, Fong, Schwab, and Armour (2006) found that those youth who reportedly maintained the same level of EAP after their placement in the foster home had higher average grades than those whose level of EAP decreased after their foster home placement. Furthermore, those foster youth whose level of reported EAP increased had higher average grades than foster youth whose level of EAP remained the same. Among a sample of maltreated youth, Lemkin, Kistin, Cabral, Aschengrau, and Bair-Merritt (2017) found that those who participated in a school club were 2.5 times more likely to graduate from high school by age 18, whereas other extracurricular activity participation such as being on a sports team or in a performance art group were not significantly associated with high school graduation.

A number of theoretical frameworks propose varying mechanisms as to why and/or how extracurricular participation may serve as a protective mechanism and foster positive outcomes among diverse samples of youth. One framework is positive youth development. This framework proposes that there are assets in every context (Agans et al., 2014). Furthermore, organized activities are considered "nested settings" where the development of youth can be supported and strengthened (Fredericks & Simpkins, 2012, p. 281). The availability of clubs, arts, sports, and other activities can be ecological assets if they foster adult-youth relationships that are positive and sustained, afford opportunities for the building of skills, and increase or facilitate leadership competencies. Youth who participate in one or more school-based activities or "out-of-school time activities" (Agans et al., p. 920) may have particular strengths that align with the activities available in their school and other contexts. As such, these youth may have the opportunity to be active in their own growth and success. Moreover, extracurricular participation can also facilitate positive orientations toward the school environment (Mahoney, Larson, & Eccles, 2005).

Perhaps the most prominent theoretical framework whereby extracurricular participation is proposed as a vital resource is social capital. Based on the work of Coleman (1988), social capital consists of various forms: closely knit ties with a family, group, community, or organization wherein mutually beneficial transactions occur; relationships that coalesce around a core purpose; inhabited spaces or contexts where one's well-being is looked out for; and network associations through which information, goods, and services are shared and exchanged. The social ties and networks engendered by extracurricular participation may reduce disengagement from school as well as buttress youth who are experiencing challenges that can derail their educational progress and aspirations (Marshall et al., 2014). In a convenience sample of college students in Michigan who were formerly in foster care, youth who had the opportunity to participate in extracurricular activities indicated just that; that is, that extracurricular activities fostered their attachment to school and helped them make it through difficult placement experiences (Day, Riebschleger, Dworsky, Damashek, & Fogarty, 2012).

Though certain assets and resources are vital to positive youth development and educational attainment, there are a number of specific characteristics of youth's foster care experience that are consequential to educational outcomes that are important to consider. These include placement history and school changes. Concerning placement history, findings from the Casey National Foster Care Alumni Study showed that the odds of completing high school while in foster care was lowest among those who experienced two or more placements per year (Pecora et al., 2006). Furthermore, analysis of data from the Northwest Foster Care Alumni Study indicates that the optimization of placement history and experiences is associated with more positive educational outcomes (Pecora, 2012).

With regard to school changes, national and multi-states studies indicated that 34% of 17 to 18-year-old foster youth have experienced five or more school changes (NWGFCE, 2014). The association of school changes to educational outcomes among foster youth is not well established. Sullivan, Jones, and Mathiesen (2010), in a cross-sectional sample of foster youth, found that the number of school changes was not associated with academic outcomes such as self-reported grades, but was positively associated with behavior problems. Cleary, however, transience in living situation and school placement can create barriers to academic progress and attainment.

Other factors important to consider are emotional and behavioral disorders as well as ethnicity. Compared to youth and young adults in the general population, foster youth and alumni experience significantly higher rates of many emotional and behavioral disorders (Pecora, White, Jackson, & Wiggins, 2009). For example, foster care alumni have a higher prevalence of the following 12-month mental health diagnoses – post-traumatic stress disorder, major depressive disorder, panic disorder, and generalized anxiety disorder (Pecora et al., 2009). Furthermore, research suggests that certain mood, disruptive behavior, and substance disorders are impediments to school performance and secondary educational attainment (e.g., Breslau, Lane, Sampson, & Kessler, 2008; Esch et al., 2014). Concerning ethnicity, research indicates that extracurricular participation varies by ethnic group membership. For example, findings indicate that the group most likely to participate in extracurricular activities is European-American youth, and the youth least likely to participate are Hispanic-American youth, with African American and Asian-American youth in the middle (e.g., Darling, 2005).

The present study was guided by the following research question: Is participation in extracurricular activities related to graduating from high school with a diploma, completion of high school with a GED, and starting college after accounting for youth background characteristics? Pecora (2012) asserts that foster youth should be encouraged to obtain a high school diploma versus obtaining a GED in that the former has been shown to increase the odds of individuals completing an Associates or Bachelor's degree and is also related to higher incomes. Hence, completion of high school by graduating from high school and receiving a GED were not collapsed into a single indicator in the present study. Based on findings from previous studies on extracurricular participation, the following hypothesis was posited: youth who report participating in extracurricular activities will be more likely to graduate from high school and start college by age 19.

2. Methods

2.1. Sample & procedures

Data comes from the VOYAGES project, a longitudinal study of older foster youth in the care and custody of the Missouri Children's Division (MCD; McMillen, 2010). From catchment areas that included eight counties, youth were drawn from six counties in the St. Louis area supplemented by two counties in Southwest Missouri. Youths had to be turning 17-years old in the following month to be included in the study. Youths were excluded from the study if they met the following criteria: (a) possessed a documented full-scale IQ score below 70, (b) had exited MCD custody, (c) possessed a chronic medical condition that made it difficult to communicate, (d) were placed > 100 miles beyond the borders of any of the eight counties, and (e) were on continual runaway status through 45 days past their 17th birthday.

Upon provision of informed consent by case managers, eligible foster youth were recruited from December 2001 to May 2003. Of the 451 youth contacted, 404 (90%) agreed to participate and completed the baseline interview. Fifty-one percent of baseline participants self-identified as black or African American, 43% as non-Hispanic White, 4% as mixed race, 1% as American Indian, and 1% as other. The present

study focused on the self-identified black or African American (n = 179) and non-Hispanic White (n = 133) foster youth who completed the baseline and final interviews.

Data collection occurred at a total of nine data points, each subsequent interview occurring at approximately three-month intervals. At the time of the final interview, youth were 19 years old. Eighty percent of the baseline sample completed the final interview. Attrition analysis indicated that baseline participants not retained in the final interview tended to be male and those who exited care before age 19, had a history of juvenile detention, and met criteria for post-traumatic stress disorder.

Participants were interviewed by trained full-time professional interviewers. Baseline and final interviews occurred face-to-face at youth's place of residence. Each participant received a $40 stipend for each of these interviews. All study procedures were approved by a university Institutional Review Board.

2.2. Measures

2.2.1. Outcome variables

In the second to final interview, participants were asked if they graduated from high school, received a GED, and started college. From these questions, the following outcomes were derived: graduating from high school with a diploma (*yes* = 1, *no* = 0); receipt of GED (*yes* = 1, *no* = 0); and college entry (*yes* = 1, no = 0).

2.2.2. Predictor variables

Youth background characteristics assessed at baseline were race, gender, mental health status – lifetime and past-year mental disorder, and placement type.

Lifetime and past-year mental disorder was assessed at baseline using the Diagnostic Interview Schedule-Version IV (DIS-IV; Robins, Cottler, Bucholz, & Compton, 1995), a structured diagnostic interview schedule designed to assess the recency, onset, and duration of DSM-IV diagnoses. Lay interviewers administered the DIS-IV face-to-face. DSM-IV diagnoses assessed were Posttraumatic Stress Disorder (PTSD), Major Depressive Disorder, Mania/Hypomania, Attention Deficit Disorder (ADD), Conduct Disorder (CD), and Oppositional Defiant Disorder (ODD). If certain criteria were met, participants were classified as having a given diagnosis. The DIS has demonstrated adequate diagnostic reliability and predictive validity (Rogers, 1995).

Dichotomous measures of placement types were created: (a) non-kin foster home; (b) semi-independent – i.e., living with boyfriend/girlfriend, friend's home or apartment, own apartment; and (c) congregate care – i.e., group home, residential center, drug and alcohol treatment center. The reference category was kinship care (biological parents or relatives).

Indicators of educational achievement and aspirations were assessed at baseline. *Grades* were measured by a single item: "What kind of grades did you average last semester, or the last semester you were in school?" Response options were: *Mostly A's/A Avg* (4); *Mostly B's/B Avg* (3); *Mostly C's/C Avg* (2); *Mostly D's/D Avg* (1); and *Mostly F's/F Avg* (0). Higher scores indicated better self-reported grades.

Educational plans were measured by a single item: "What are your educational plans for after high school?" Educational plans were then scored in the following manner: *no plans* (0); *VOC tech/job training/military training* (1); *2-year PT/FT college* (2); *4-year PT/FT college* (3); and *beyond college* (4). Higher scores indicated greater educational aspirations after high school.

Extracurricular participation was measured at baseline by yes/no questions concerning participation in eight school-based activities in the last year of school: Band, orchestra, other music group; Drama club, school play, or musical; Student government; School sports; Academic clubs (e.g., art, science, math, etc.); Hobby clubs such as photography, chess, etc.; Pep squad, cheerleading, or color guard; and some other activity at school specified by respondent. The primary measure of

interest was participation in any of the extracurricular activities: *yes* (1), *no* (0).

For the purpose of exploration and similar to other studies (e.g., Camacho & Fuligni, 2015; Fredricks & Eccles, 2005), four dichotomous measures based on types of extracurricular participation were created. *School sports* referred to participation in school sports – *yes* (1), *no* (0). *School clubs* referred to participating in one or more of the following activities: student government; pep squad, cheerleading, or color guard; and/or hobby clubs such as photography, chess, etc. – *yes* (1), *no* (0). *Performance art* referred to participation in one or more of the following activities: band, orchestra, other music group; and/or drama club, school play, or musical – *yes* (1), *no* (0). *Academic clubs* referred to participation in academic clubs (e.g., art, science, math, etc.) – *yes* (1), *no* (0).

Derived from a life history calendar completed after the final interview, the following variables were included as predictors: leaving custody prior to 19 years old (*yes* = 1, *no* = 0), and number of different placements between 17 and 19 years of age. Dummy codes were created for number of placements, which ranged from 0 to 20: *medium* (4 to 7), and *high* (8 or more), with *low* (3 or fewer) being the reference category.

In the interviews that occurred between the baseline and final interview (time points 2–8), participants were asked if they had changed schools since the previous interview. A total score was computed. This variable was moderately skewed (skewness = 1.37; range = 0 to 4), with 0 being the mode response (61.2%). Dummy codes were created for number of school changes between 17 and 19 years of age: *1 time*, and *2 or more times,* with *0 times* being the reference category.

2.3. Analysis

Data analysis proceeded in the following steps. First, cross-tabulations and chi-square analyses were computed to examine sample characteristics and extracurricular participation and how they differed by race and/or gender. Second, analyses using multivariate logistic regression were conducted to examine factors associated with extracurricular participation, in general, and participation in specific types of extracurricular activities. Third, multivariate logistic regression analyses were conducted to examine the relation of variables to high school graduation, receipt of GED, and starting college. In the multivariate analyses of educational outcomes, two hierarchical regression models were computed for each variable. In model 1, the following variables were entered: gender, race, past-year mental disorder, lifetime mental disorder, placement type, leaving custody prior to 19, number of placement changes between age 17 to 19, and number of school changes between age 17 to 19. In model 2, participation in extracurricular activities was entered. Missing data analysis indicated that 0.0% to 1.0% of cases had missing data across variables. Listwise deletion was used. All statistical analyses were done using SPSS Version 20.

3. Results

3.1. Descriptive results

As indicated in Table 1, 61% of the sample was female. Over half of participants met criteria for a lifetime mental disorder. A significantly greater proportion of White youth met criteria for a lifetime disorder. With regard to placement type at baseline, the greater proportion of youth was placed in congregate care settings. A significantly greater proportion of White youth were placed with a biological parent and in non-kin care, whereas a significantly greater proportion of African American youth were placed with relatives and congregate care settings. Nearly 50% of youth experienced 3 or fewer placement changes between ages 17 to 19. Most (62.2%) experienced no school changes between their 17th and 19th birthdays. Concerning educational

Table 1
Sample characteristics.

	White (n = 133)	African American (n = 179)	χ^2	Total (n = 312)
	%	%		%
Female	63.9%	58.7%	0.83	60.9%
Past-year mental disorder	38.6%	30.7%	2.12	34.1%
Lifetime mental disorder	68.9%	48.6%	12.84***	57.2%
Placement type			19.36**	
Biological parent	11.3%[a]	5.0%[b]		7.7%
Kinship care (other relative)	14.3%[a]	23.5%[b]		19.6%
Non-kin care	38.3%[a]	20.7%[b]		28.2%
Congregate care	33.1%[a]	46.9%[b]		41.1%
Semi-independent	3.0%	3.9%		3.5%
Left custody prior to 19	68.4%	44.7%	17.34***	54.8%
#Different placements b/w age 17–19			4.85	
3 or fewer	40.6%	53.1%		47.8%
4 to 7	36.1%	29.6%		32.4%
8 or more	23.3%	17.3%		19.9%
#School changes b/w age 17–19			0.31	
0 times	63.8%	61.0%		62.2%
1 times	23.8%	24.9%		24.4%
2 or more times	12.3%	14.1%		13.4%
Educational outcomes				
Graduated high school w/ diploma	33.8%	40.8%	1.57	37.8%
Received GED	15.0%	11.2%	1.02	12.8%
Started college	12.0%	20.7%	4.04*	17.0%

* $p \leq 0.05$ significance level.
** $p \leq 0.01$ significance level.
*** $p \leq 0.001$ significance level.

outcomes, 37.8% of participants reported graduating from high school with a diploma and 12.8% reported receipt of a GED. Compared to their non-Hispanic White counterparts (12%), a significantly greater percentage of African American foster youth (20.7%) reported starting college.

As indicated in Table 2, nearly 61% of youth participated in one or

Table 2
Participation in extracurricular activities among older youth in foster care by race and gender.

Variable[a]	White		African-American		Total (n = 312)
	Male (n = 48)	Female (n = 85)	Male (n = 74)	Female (n = 105)	
	N (%)[a]	N (%)[a]	N (%)[a]	N (%)[a]	N (%)
No activities	24 (50.0%)	34 (40.0%)	25 (33.8%)	42 (40.0%)	125 (40.1%)
One or more activities	24 (50.0%)	51 (60.0%)	49 (66.2%)	63 (60.0%)	187 (59.9%)
School sports	**17 (35.4%)**	**18 (21.2%)**	**36 (48.6%)**	**37 (35.2%)**	108 (34.6%)
School clubs	5 (10.4%)	19 (22.4%)	10 (13.5%)	26 (24.8%)	60 (19.2%)
Performance arts	9 (18.8%)	25 (29.4%)	13 (17.6%)	30 (28.6%)	77 (24.7%)
Academic clubs	5 (10.4%)	12 (14.1%)	6 (8.1%)	16 (15.2%)	39 (12.5%)

Note.
[a] Bold values indicate statistically significant differences ($p \leq 0.01$).

more extracurricular activities. With regard to specific types of extracurricular participation, a significantly greater proportion of African American youth participated in school sports, $\chi^2 = 7.05$ (1, 312), $p = 0.008$. Close to one-fourth of youth participated in school clubs and performance arts, while only 12.5% participated in academic clubs.

Table 3 presents findings of factors associated with extracurricular participation. As shown, the factors most consistently related to extracurricular participation are grades and educational aspirations. Better self-reported grades and greater educational aspirations are associated with extracurricular participation, in general, as well as to specific types of extracurricular activities. In addition, male gender was associated with increased likelihood of participating in school sports and decreased likelihood of participating in school clubs. Findings were also evident for placement type, with youth in living semi-independently more likely to participate in performance arts and academic clubs than their counterparts in kinship foster homes.

3.2. Multivariate results

Table 4 shows the final multivariate logistic regression models for all outcome variables. For graduation from high school, placement in a non-kin foster home, leaving custody prior to age 19, a high number of different placements, and extracurricular participation were significant associated factors. Youth placed in non-kin foster homes were two times more likely to graduate from high school compared to those placed in kinship care. Compared to youth who experienced 3 or fewer placements, those who experienced a high (8 or more) number of placements between their 17 and 19 birthdays were 74% less likely to report graduating from high school. Last, as hypothesized, those who participated in extracurricular activities were two times more likely to graduate from high school with a diploma.

As indicated in Table 4, two factors were significantly associated with receiving a GED: past-year mental disorder and a high number of different placements. Youth with a past-year mental disorder were 71% less likely to receive a GED. Those who experienced a high number of placement between ages 17 to 19 were 2.6 times more likely to receive a GED. Extracurricular participation was unrelated to GED receipt. With regard to starting college, gender, leaving custody prior to age 19, and number of school changes were significant associated factors. Males were less likely to start college by age 19. Leaving custody prior to age 19 was associated with a 40% lower likelihood of starting college. Youth who experienced two or more school changes between age 17 and 19 were 80% less likely to start college. The hypothesis concerning extracurricular participation was not supported for starting college.

3.3. Additional analysis

Follow-up multivariate analyses (not shown) were conducted to examine the association of type of extracurricular activity participation to graduating from high school. After entry of background characteristics in Model 1, each type of extracurricular participation was entered in Model 2. Results indicated one significant association. Youth who participated in school clubs (e.g., student government; pep squad; hobby clubs) were two times more likely to graduate from high school with a diploma (OR = 2.3, $p = 0.005$).

4. Discussion

This study examined the association of extracurricular participation to graduating from high school with a diploma, completion of high school with a GED, and starting college among a sample of older youth transitioning from foster care. Findings indicated that 60% of youth reported participating in one or more extracurricular activities. Data from the United States Census Bureau (2014) indicates that among children six-to-seventeen years of age, 57% participate in at least one extracurricular activity after school. The two factors examined in this

Table 3
Factors associated with extracurricular participation.

Variable	Extracurricular participation	School sports	School clubs	Performance arts	Academic clubs
	Odds ratio	Odds ratio	Odds ratio	Odds ratio	Odds ratio
Background characteristics					
African American	1.32	1.67[+]	1.01	1.09***	1.04
Male gender	1.18	2.16**	0.47*	0.60[+]	0.54
Past-year mental disorder (ref: yes)	0.70	0.86	0.62	0.98	0.35*
Lifetime mental disorder (ref: yes)	1.39	0.84	1.26	1.22	1.70
Placement type (ref: kinship care)					
Non-kin foster home	1.16	1.15	0.92	1.53	1.23
Congregate care	1.06	1.54	0.54	1.51	1.00
Semi-independent	1.84	2.54	1.60	4.92*	5.31*
Left custody prior to 19	1.12	1.00	0.61	0.98	1.59
#Different placements b/w age 17–19 (refer: 3 or fewer)					
Medium (4 to 7)	0.69	0.78	0.69	1.73	0.58
High (8 or more)	1.43	1.37	1.22	2.26*	0.45
#School changes b/w 17–19 (ref: 0 times)					
1 time	1.09	1.14	1.02	0.89	1.18
2 or more times	1.07	0.77	0.58	0.47	0.33
Education factors					
Grades	1.33*	1.30*	1.30[+]	1.37*	1.66**
Educational aspirations	1.46*	1.30*	1.55*	1.00	1.12
Model fit					
− 2LL	393.09	371.66	274.92	323.48	209.73
Nagelkerke's R^2	0.10	0.12	0.15	0.10	0.14
Hosmer–Lemeshow test	13.09, $p = 0.11$	8.83, $p = 0.36$	9.15, $p = 0.33$	6.21, $p = 0.62$	7.60, $p = 0.47$

[+] $p \leq 0.10$ significance level.
* $p \leq 0.05$ significance level.
** $p \leq 0.01$ significance level.
*** $p \leq 0.01$ significance level.

Table 4
Association between extracurricular participation and educational outcomes.

Variable	Graduated high school		Received GED		Started college	
	Odds ratio	95% CI	Odds ratio	95% CI	Odds ratio	95% CI
Background characteristics						
Male gender	0.59[+]	0.35–1.02	1.08	0.52–2.26	0.40**	0.20–0.80
African American	1.27	0.73–2.20	0.73	0.35–1.55	1.68	0.82–3.47
Past-year mental disorder (ref: yes)	1.26	0.62–2.56	0.29*	0.11–0.78	0.91	0.36–2.27
Lifetime mental disorder (ref: yes)	0.81	0.41–1.58	1.40	0.59–3.29	0.96	0.42–2.23
Placement type (ref: kinship care)						
Non-kin foster home	2.14*	1.09–4.21	0.45	0.15–1.37	1.38	0.59–3.24
Congregate care	0.81	0.42–1.58	1.68	0.70–4.04	1.35	0.58–3.11
Semi-independent	0.73	0.14–3.64	1.90	0.31–11.65	1.50	0.23–9.73
Left custody prior to 19	0.54*	0.31–0.93	2.08[+]	0.88–4.87	0.42*	0.21–0.86
#Different placements b/w age 17–19 (refer: 3 or fewer)						
Medium (4 to 7)	0.84	0.47–1.49	1.25	0.51–3.04	1.30	0.64–2.66
High (8 or more)	0.26***	0.11–0.59	2.65*	1.02–6.89	0.41	0.13–1.32
#School changes b/w 17–19 (ref: 0 times)						
1 time	0.75	0.40–1.39	1.10	0.47–2.54	0.54	0.24–1.21
2 or more times	0.64	0.27–1.49	0.45	0.13–1.55	0.16*	0.04–0.76
Extracurricular participation (ref: no)	2.10**	1.24–3.55	0.65	0.32–1.32	1.21	0.63–2.32
Model fit						
−2LL	361.89		212.53		250.77	
Nagelkerke's R^2	0.21		0.15		0.17	
Hosmer–Lemeshow test	6.02, $p = 0.64$		5.51. $p = 0.70$		3.31, $p = 0.91$	

[+] $p \leq 0.10$ significance level.
* $p \leq 0.05$ significance level.
** $p \leq 0.01$ significance level.
*** $p \leq 0.01$ significance level.

study that were related to increased likelihood of extracurricular participation, in general, and to participation in several types of extracurricular activities, specifically, were better grades and greater educational aspirations.

The association of grades to extracurricular participation is consistent with previous studies among other samples of youth (e.g., Fredericks & Eccles, 2006; Hunt, 2005). Extracurricular activities are linked to academic success with non-participants tending to have lower grade point averages (GPA) (Mannion, 2016). It is important to point out that eligibility to participate in certain extracurricular activities such as sports tends to require a certain GPA or level of academic performance, making poorer performing students ineligible. For some students, their extracurricular participation may be one of the primary motivations to "stay on course academically" and to remain engaged

with school (Mannion, 2016). The contribution of youth motivation is also a critical factor as those with greater educational aspirations tend to be involved in extracurricular activities (Holland & Andre, 1987; Mannion, 2016).

Another notable finding pertained to placement type, with a significantly greater likelihood of participation in performance arts and academic clubs by youth who lived semi-independently compared to those in kinship care. Youth in semi-independent living settings may exhibit individual resilient characteristics through which participation in these specific activities reaffirms their sense of being active learning agents. Moreover, it likely reinforces youth assessment of their own talents and abilities (Barber, Stone, Hunt, & Eccles, 2005). For example, positive youth development researchers have found that patterns of academic performance vary not only by type of activity participation among adolescents but by the extent to which adolescents believe specific activity types affirm their social identity (Barber et al., 2005). In this regard, the interaction between individual and social contextual influences that impact foster youth extracurricular participation needs to be better understood, specifically concerning the pathways in which growing up in foster care increase or decrease individual youth motivation to participate in these activities.

The hypothesis that extracurricular participation would be associated with educational outcomes was partially supported. In particular, extracurricular activity participation was associated with graduating from high school with a diploma, but not starting college. With regard to specific types of extracurricular participation, findings also indicated that participation in school clubs was associated with graduating from high school. Participation in school sports, performance arts, and academic clubs were unassociated with graduating from high school. The finding concerning school clubs is consistent with the findings of Lemkin et al. (2017) among maltreated youth.

Findings from this study as it pertains to graduating from high school support those of previous studies that suggest the positive impact of participation in extracurricular activities. Among a sub-sample of foster care alumni served by Casey Family Services, Harris, Jackson, O'Brien, and Pecora (2009) found that a high proportion of African American (84%) and White (86.6%) alumni had completed high school with a high school diploma or GED. One factor proposed to be related to the completion of high school and educational pursuits beyond high school was the agency support received by these former foster youth to participate in extracurricular activities.

As the findings from Okpych and Courtney (2014) suggest, graduating from high school has enormous benefits for older youth transitioning from foster care. School-based extracurricular participation is one factor that may facilitate this. Youth participation in extracurricular activities does not occur in a vacuum, but is instead embedded within the context of normal adolescent development and affords adolescents the opportunity to engage in tasks and refine skills within supportive networks of friends and adults (Feldman & Matjasko, 2005). For many adolescents, especially those who are experiencing challenges with the academic rigors of school, their involvement in extracurricular activities may be the single factor that maintains their connectedness to the school milieu. For youth who experience maltreatment, school clubs appear to be particularly beneficial in this regard (Lemkin et al., 2017). While participation in school sports and performance arts generally require specific talents and abilities, school clubs require a general interest and hence, may increase engagement and foster more supportive relationships.

It is important to note that whatever benefits extracurricular participation may provide to foster youth, in the current study, participation in extracurricular activities was not related to starting college. Starting college may require different types of support and resources than that required for completing high school. As a number of youth in the Day et al. (2012) study indicated, not having someone to guide and support them during the transition to college was a major challenge. Hence, what may be more important than extracurricular participation

is a consistent adult who is there throughout their high school years to help them prepare for and navigate the next educational phase of their lives (Day et al., 2012). Strolin-Goltzman, Woodhouse, Suter, and Werrbach (2016), in their study among a convenience sample of youth in foster care, indicated that "positive adult-youth relationships" was the factor that contributed the most to their educational achievement (p. 34). Adult mentors who provided encouragement and emotional support and who also held them accountable were pertinent to helping youth stay focused and committed to their pursuit of higher education.

With regard to background characteristics in the current study, leaving custody prior to age 19 was associated with decreased likelihood of graduating from high school and starting college by age 19. This is likely due to the lack of consistent supports, financial and relational, that youth experience once they exit the system (Osgood, Foster, & Courtney, 2010). Research indicates that extending the age of foster care eligibility is related to increased likelihood of foster youth finishing at least a year of college (Dworsky & Courtney, 2010). However, the completion of college is another matter. Young adults formerly in foster care are likely to take longer to complete a two- or four-year degree (Dworsky & Courtney, 2010). As such, resources and supports are needed during the course of their college tenure, not just at the beginning.

Placement changes were also related to graduating from high school and receiving a GED. Specifically, the experience of 8 or more placement changes between youth's 17 and 19 birthdays was associated with a lower likelihood of graduating from high school with a diploma, but a greater likelihood of receiving a GED. This is consistent with previous research indicating the deleterious relation between multiple placement changes and educational outcomes. As asserted by Pecora (2012), those factors that contribute to placement disruptions necessitate further study so that they can be addressed in an effective manner. This is important because multiple foster care placements can put into motion other issues that have a negative ripple effect. For example, a change in placement often means a change in school that can result in falling behind academically (Pecora, 2012). Hence, pursuant to the Fostering Connections to Success and Increasing Adoptions Act of 2008, the educational setting that a youth is currently enrolled must be carefully accounted for in placement decisions by institutional agents charged with their care.

With regard to graduating from high school, youth placed in non-kin foster homes at baseline were two times more likely than their counterparts in kinship care to graduate. Empirical findings indicating a relationship between type of foster care placement and measures of educational attainment are not plenteous. In their analysis of adult functioning of former foster care recipients in Baltimore, Benedict, Zuravin, and Stallings (1996) found that being placed with non-relatives compared to kin was unrelated to graduating from high school or completing a GED. Research does indicate, however, that kin caregivers tend to experience greater strain due to the provision of fewer resources, financial difficulties, physical health problems, and congested living situations (e.g., Ehrle & Geen, 2002; Farmer, 2009). Challenges such as these may thwart the ability of caretakers to adequately monitor school performance and promote educational achievement. In a sample of 16 university students who were foster care alumni, Skilbred, Iversen, and Moldestad (2017) reported that a number of alumni indicated that having foster parents who displayed interest in their educational pursuits as well as expressed high expectations with regard to their academic attainment were motivating factors.

With regard to findings on receipt of a GED, one other factor evolved as a significant predictor – past-year mental disorder. Having a past-year mental disorder at baseline was associated with a lower likelihood of receiving a GED by age 19. As previously indicated, having certain emotional and behavioral disorders is associated with poorer school performance and lower academic attainment (e.g., Breslau et al., 2008). Furthermore, youth currently or formerly in foster

care indicate that their school performance is negatively affected by mental health problems (Day et al., 2012). Why past-year mental disorder was not similarly related to high school graduation with a diploma and starting college is somewhat inexplicable.

Last, concerning college entry, findings indicated that the experience of two or more school changes between ages 17 and 19 was associated with a lower likelihood of youth starting college. In general, research has not indicated a relationship between the number of school changes and indicators of educational progress such as GPA or being in the appropriate grade (e.g., Sullivan et al., 2010). Nonetheless, school changes that occur when youth are at an age where they would typically be graduating from high school and starting college may particularly derail the achievement of both by 19 years of age. The Fostering Connections to Success and Increasing Adoptions Act of 2008 addresses the stability of school enrollment by requiring child welfare agencies to maintain enrollment in the same school where children and youth were enrolled when they entered care (Chambers & Palmer, 2011). In the event a school change is determined to be in the best interest of the child or youth, enrollment in the new school must occur expeditiously followed by the prompt transfer of school records. According to Chambers and Palmer (2011), there are a number of challenges to implementation of the Fostering Connections to Success and Increasing Adoptions Act, including lack of specification of who makes the decision when it is appropriate for foster children and youth to change schools or not and what factors should be used to make that determination. A collaborative structure among institutional agents (e.g., family court judges, CASA workers, child welfare workers) is needed to actuate better outcomes (Mochel, 2012).

Adding to the literature on extracurricular participation is critical, but as is true with all research, the current study has limitations that need to be considered. First, the findings are based on a non-representative sample of older foster youth in a Midwestern state. The findings cannot be generalized beyond the study sample. Second, findings are solely based on self-report. Though data based on multiple informants and/or sources (e.g., case files, foster parents/caregivers, etc.) can produce results that are conflicting (Pecora, 2012), the validity of the findings may be optimized. Third, the findings are based on data collected over a decade ago, which may raise questions about the relevance to foster youth today. Research is needed to determine whether the findings generalize to contemporary samples of transitioning foster youth. Fourth, a multiplicity of factors influence whether or not youth participate in extracurricular activities, many of which were not accounted for in this study. These include disciplinary problems, excessive unexcused absences, school size, school location (e.g., urban vs. rural), and lack of skill (Weber & McBee, 1981). The extent to which transportation to-and-from activities is flexible and the level of support and investment by foster parents are factors that are particularly important to consider among foster youth (Cohen, 2015). Lastly, as research has indicated that the duration (e.g., 2 years vs. 1 year) and intensity (e.g., number of hours per week) of extracurricular participation is associated with more favorable educational outcomes (e.g., Gardner, Roth, & Brooks-Gunn, 2008), these factors should be assessed in future studies.

Despite these limitations, our finding on graduating from high school with a diploma are consistent with increasing evidence that extracurricular participation is advantageous to positive educational outcomes at the secondary education level. Institutional agents (e.g., child welfare workers, guardian ad litem, and CASA volunteers) in the lives of foster youth are uniquely situated to encourage and advocate for young people's participation in social and extracurricular activities. However, we realize that efforts to facilitate and increase extracurricular participation among foster youth are not without challenges. For example, the National Conference of State Legislatures (National Conference of State Legislatures [NCSL], 2014) reported that only 14 states had enacted a children's bill of rights mandating the right of foster youth to participate in extracurricular and community activities.

Relatedly, few states have enacted legislation that waive fees for foster care youth participation in school- and community-based activities. The rise in fees associated with participation in extracurricular activities, also known as "pay to play", has become common as many cash strapped public school districts increasingly are charging fees to participate in activities, cost that many mistakenly deem as 'frivolous' (Snellman, Silva, Frederick, & Putnam, 2015). Policy recommendations of former foster youth include an increase in expenditures on extracurricular activities among child welfare agencies (Kelly, 2015).

In conclusion, participation in extracurricular activities has been suggested as a pathway through which vulnerable youths' favorable perceptions of the school milieu may be heightened (Pedersen & Seidman, 2005). As other studies have noted, vulnerable youth such those in foster care may benefit more from participation in structured activities due to the increase likelihood of scarcity of resources and access to appropriate developmental experiences in other aspects of their lives (Mahoney et al., 2005). Furthermore, foster youth's self-selection to participate in specific activities is likely to reflect core beliefs about skills they believe they have a chance to master (Barber et al., 2005). The end result includes reinforcement of their sense of belonging to school and enhancement of their exposure to positive relationships and experiences with peers and adults, which in turn contributes to educational advancement. It is incumbent that stakeholders advocate and lobby for access to those resources and supports that advance both the engagement in extracurricular activities and educational achievement of foster care youth and alumni.

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