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OPPORTUNITIES FOR POSITIVE YOUTH DEVELOPMENT: THE ORGANIZED ACTIVITY PARTICIPATION AND EDUCATIONAL OUTCOMES OF ADOLESCENTS IN ADOPTIVE, FOSTER, AND KINSHIP CARE

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Abstract

Purpose: Children who grow up outside the care of their biological parents – e.g., those in adoptive, foster, or kinship (AFK) care – experience poorer educational outcomes than their peers. However, the protective factors that could mitigate any risks of AFK care have received less attention. One understudied area is the participation of AFK youth in organized activities (e.g., extracurricular or afterschool programs).

Method: Drawing on nationally representative data from the Education Longitudinal Study of 2002 (*n*=16,197), this study used multilevel modeling to (1) examine the association of AFK care status with organized activity participation and with educational outcomes; and (2) examine whether such participation moderates any association between AFK care status and later educational outcomes (GPA, college expectations, college enrollment and college degree). In addition to a binary measure of participation, multiple dimensions of activity participation (i.e., type, breadth, and intensity) were tested as moderators.

Results: Findings show that youth in AFK care reported significantly lower rates of activity participation, as well as poorer education outcomes as compared to other youth. However, there was little evidence of moderation: organized activity participation was associated with improved educational outcomes regardless of care status.

Discussion: The possible benefits of participation for youth in AFK care are similar to those for other youth. Implications for the intersection of child welfare and educational systems are discussed, including the need to ensure developmental opportunities for youth in AFK care.

Keywords: out-of-school time; extracurricular activities; afterschool programs; educational outcomes; nonparental care; child welfare

Postsecondary education is a critical element in the transition into adulthood. College education enriches individuals' employment prospects, financial resources, as well as adult functioning and well-being (Carnevale et al., 2011; Keyes, 1998; Oreopoulos & Petronijevic, 2013). However, many obstacles to education hinder the progress of vulnerable youth, including children living outside the care of their biological parents. In the United States (U.S.), about 3.1% of children under 18 years do not live with a biological parent, but reside with kin or other caregivers (Radel et al., 2016). Likewise, 0.6% of U.S. children are specifically in foster care (Child Trends Databank, 2019). Although these youth comprise a small portion of the juvenile population, youth of color are overrepresented within adoptive, foster, and kinship (AFK) care, as are children from lower-resourced families (Bywaters et al., 2016; Fong, 2017; Landers et al., 2019; U.S. Department of Health and Human Services, 2019). Youth in AFK care likely benefit from higher education (Okpych & Courtney, 2014), but face challenges that limit their educational attainment, which, in turn, exacerbates inequities.

Research indicates that youth who grow up outside the care of biological parents encounter struggles that extend from their caregiver instability (Radel et al., 2016), including difficulties in school. Adoptive, foster, and kinship care represent different care settings for youth, and those subcategories themselves are quite heterogenous. However, there are surprising similarities in the educational outcomes of these groups as compared to youth in parental care (Geiger & Beltran, 2017; Juffer & Ijzendorn, 2012; O'Higgins et al., 2017; Vandivere et al., 2012; Winokur et al., 2018). Thus, we make these distinctions between the categories, when possible, but also were struck by the comparable trends. For example, 60% of general population who enroll in a bachelor's degree program earn one within six years, while 41% of adults 25 to 29 years old hold a four-year degree (McFarland et al. 2019). In contrast, youth growing up in foster care are less likely to obtain a college degree and almost twice as likely to drop out of

college than their peers (Day et al., 2011; Frerer et al., 2013; Gillum et al., 2016). While the majority (86%) of older youth in foster care expect to pursue college education (Courtney et al., 2004, 2014; Kirk et al., 2013), only 2-10% attain a two-year college degree or more by their mid-twenties (Courtney et al., 2011; Courtney et al., 2020; Pecora et al., 2006; Wolanin, 2005). Fewer estimates exist for the educational attainment of youth in kinship care in the U.S., but existing research suggests the rates are similar to youth in foster care (Winokur et al., 2018). Likewise, studies of adoptee youth also find they have lower rates of educational attainment than peers who live with their biological parents (van Ijzendoorn et al., 2005; van Ijzendoorn & Juffer, 2016), though much of this work has been conducted in other countries, such as Sweden and Norway (Dalen et al., 2008; Dalen & Theie, 2012, 2019). Thus, youth who live outside the care of their parents – due to any number of factors – need opportunities that support their educational trajectories.

Given the stark educational disparities between youth in AFK care and their peers, it is important to understand factors that may influence college entry and college completion for this marginalized subgroup. Moreover, further investigation is needed to identify and understand what may potentially reduce or mitigate challenges to educational attainment. To date, longitudinal research on educational experiences for youth living in AFK care is limited. Thus, this paper focuses on the long-term educational outcomes of youth whose primary caregivers are adults that are not their biological parents – specifically those in adoptive, foster, or kinship (AFK) care.

Educational Barriers for Youth in Adoptive, Foster, and Kinship Care

Youth living in AFK care face substantial obstacles in their educational trajectory, including a unique set of challenges less often experienced by other youth. Much research on this topic focuses on foster care youth, specifically, and their challenges often include maltreatment

histories, constraints of the child welfare system, school mobility, special education access, behavioral health needs, legal system involvement, low socioeconomic status, a lack of trauma-sensitive approach, and other life circumstances (Geenen et al., 2015; Howard et al., 2004; Moyer & Goldberg, 2020; Pecora, 2012; Stone et al., 2006; van Ijzendoorn et al., 2005). Even routine processes, such as maintaining and compiling student records or accessing educational supports can be difficult, given the residential instability and school mobility faced by youth in AFK care (Conger & Finkelstein, 2003; Weinberg & Luderer, 2004; Zetlin, 2006). Beyond the structural barriers, youth in AFK care may experience emotional and psychological hardship, such as feelings of anger and hopelessness, given the structural barriers they face in mainstream and special education systems (Morton, 2015).

Educational Supports and Protective Factors for Youth in Adoptive, Foster, and Kinship Care

In addition to the risks and negative outcomes faced by youth in AFK care, some research emphasizes the factors that support the educational resilience of youth in AFK care. For youth in foster care, Pecora (2012) found that permanency and the resulting stability in school placement and mentoring relationships were key to youth success, Though fewer studies examine long-term educational outcomes, social support from adults may be key for youth in foster care (Okpych & Courtney, 2017). O'Higgins et al (2017) highlighted the importance of educational aspirations for youth in foster care as well as kinship care. Similarly, for youth in kinship care, Denby and colleagues (2017) identified active involvement of extended family as a protective factor. For adopted youth, studies in the U.S. and Nordic counties highlight that a lower age of adoption, stronger support from caregivers, and special education services were positively associated with educational outcomes (Dalen et al., 2008; Dalen & Theie, 2019; van Ijzendoorn et al., 2005; van

Ijzendoorn & Juffer, 2016). Several other studies also focus on school and community connectedness as an important factor that promotes positive outcomes among youth in AFK care (Daly et al., 2010; Foster et al., 2017; Lemkin et al., 2018). Thus, youth in AFK care may require not only stability and specialized support, but also reinforcement of college expectations, social support, adult mentors, and connection to school and community.

More research is needed to understand what opportunities may increase these protective factors. Scholars have repeatedly noted the need for greater collaboration between educational and child welfare systems (Conger & Finkelstein, 2003; Morton, 2016; Stone et al., 2006; Zetlin, 2006), although the strategies to do so are less apparent. Other studies have assessed targeted interventions to support the academic achievement of youth in AFK care, which find some improvements in literacy outcomes, but less so in mathematical competency (Forsman & Vinnerljung, 2012). While educational interventions and special education services should be made accessible, holistic approaches that go beyond an academic-focus may also be necessary to support the development of youth in AFK care.

Positive Youth Development for Youth in Adoptive, Foster and Kinship Care

With greater focus on the protective factors and educational interventions that support youth in AFK care, recent interest has grown in alternative lenses through which to view marginalized youth, including positive youth development (PYD). This approach received growing recognition in the 1990s and early 2000s as a resistance to frameworks that emphasized risks and deficits (Barcelona & Quinn, 2011; Benson et al., 2007; Damon, 2004; Lerner et al., 2011). Instead, PYD frameworks focus on the potential of youth, and the assets they need to grow and to thrive (Larson, 2000; Lerner et al., 2009; Lerner et al., 2003). In practice, programs that embody a PYD philosophy have been found to have a variety of positive outcomes for youth

(Catalano et al., 2004; Chung & McBride, 2015; Ciocanel et al., 2016; Durlak et al., 2007; Ferrer-Wreder, 2014; Taylor et al., 2017). Many organized activities, such as extracurricular or afterschool programs, explicitly or implicitly implement PYD practices (Dawes et al., 2017; Deutsch et al., 2017; Pittman, 2017; Roth & Brooks-Gunn, 2003a, 2003b; Smith et al., 2017).

PYD programs and practices draw from a variety of theoretical frameworks, including developmental systems (Ford & Lerner, 1992) and developmental assets theories (Benson et al., 2011; Scales & Leffert, 1999). Developmental systems, and its later incarnation as relational developmental systems, emphasize the interactions of individuals with their social environment, and the role individuals play as producers of their own development (Ford & Lerner, 1992; Lerner et al., 2015). In the case of organized activities, developmental systems theorize that the positive youth-adult relationships, skill-building activities, and leadership opportunities in these programs are key to helping diverse youth thrive (Lerner et al., 2014). Developmental assets theory, similarly, conceptualizes that external assets (including support from parents, communities and school, positive peer relationships, and involvement in organized activities) can support the development of internal assets, such as young people's commitment to learning, values, identity, and social competencies (Scales et al., 2000; Scales & Leffert, 1999). Importantly, developmental assets theory specifically names several organized activities as external assets: sports, clubs, creative arts, and meaningful service to one's community (Agans et al., 2014; Benson et al., 2011; Scales & Leffert, 1999).

Very few studies have explicitly applied PYD approaches and frameworks to study youth in AFK care. For example, in a randomized-control trial study, Taussig and colleagues (2019) found that a PYD program reduced mental health and trauma symptoms in a population of youth in foster care who had experienced maltreatment. Oshri and colleagues (2017) also employed a

PYD approach to examine the social-emotional trajectories of children from families investigated for child maltreatment. Both studies demonstrated the applicability of PYD approaches for youth in AFK care; thus, there is a need and potential to utilize a PYD approach to examine how other activities may benefit youth in AFK care.

Organized Activities and Positive Youth Development

While previous research identified several protective factors and studied PYD programs for youth in AFK care, limited research appears to have examined the potential impact of participation in organized activities during out-of-school time (OST). Organized activities are defined as structured programs that are facilitated or supervised by adults who can provide a supportive or enriching experience outside of the traditional school day and/or curricula (Vandell et al., 2015). These programs include extracurricular activities and afterschool programs, such as sports, school clubs, and performing arts, and they commonly implement PYD approaches (Deutsch et al., 2017; Pittman, 2017; Pittman et al., 2004). In general, studies find consistent associations between organized activity participation and psychosocial and educational outcomes (Farb & Matjasko, 2012; Feldman & Matjasko, 2005; Vandell et al., 2015).

Participation in organized activities is widespread, with about three-quarters of youth regularly participating in at least one type of organized activity per school year (Meier et al., 2018; Moore et al., 2014). However, participation rates are not equal, and disparities persist between racial/ethnic and socioeconomic groups, with white youth and middle-to-upper income youth most likely to participate (Meier et al., 2018; Moore et al., 2014; Snellman et al., 2015). Such disparities are cause for concern: when disadvantaged youth do participate in organized activities, they likely experience equal or stronger benefits as compared to their more advantaged peers (Heath et al., 2018). Sports, in particular, have received attention for their capability to

provide PYD to socially vulnerable youth (Anderson-Butcher & Bates, 2021). However, more research is needed on the organized activity participation of disadvantaged youth, and activities' capability to foster equity (Akiva et al., 2020; Del Razo & Renée, 2013; Fredricks & Simpkins, 2012; Pittman, 2017).

Additionally, scholars have noted methodological shortcomings in the literature and called for more rigorous approaches (Farb & Matjasko, 2012; Vandell et al., 2015). In particular, scholars have called attention to the ways in which organized activity participation is conceptualized and measured (Bohnert et al., 2010). Many past studies used dichotomous measures of participation, but such approaches fail to capture the specific types of organized activities, the breadth of different activities youth may participate in, or the level of intensity of their participation (Bohnert et al., 2010). Recent studies have suggested that these different dimensions of participation have varied and nuanced associations with behavioral and educational outcomes (Aumètre & Poulin, 2016; Busseri et al., 2011; Busseri & Rose-Krasnor, 2009; Matjasko et al., 2019; Neely & Vaquera, 2017). However, little research addresses the different dimensions of participation for marginalized youth – including those in AFK care.

Organized Activities Among Youth in Adoptive, Foster and Kinship care

Despite the body of literature demonstrating the possible benefits of organized activity participation, little research has addressed the participation of youth in AFK care. Multiple scholars have noted the importance of developmentally-appropriate experiences for youth in foster care, including sports and other organized activities (Gilligan, 1999; 2000; 2007; Jacobs et al., 2019; Simmons-Horton, 2017; Vacca, 2008). However, youth in AFK care participate at drastically lower rates than their peers in the care of biological parents (Kwak et al., 2017).

Few studies actually empirically examined the possible outcomes from activity participation for youth in AFK care. Existing studies have produced optimistic but mixed findings regarding psychosocial and behavioral outcomes. For example, Conn and colleagues (2014) used a nationally representative group of youth in foster, kinship, and residential care and found that youth who participated in the organized group activities were less likely to experience social difficulties, feelings of loneliness, and substance use. In one of the few studies assessing nuanced dimensions of participation, West-Bey (2014) examined a nationally representative sample of foster youth, and found that while few youth participated in organized activities, those who had participated reported improved wellbeing and lower levels of dysfunctional behavior, especially among youth who participated at the highest intensity. Moreover, Kwak and colleagues (2018) analyzing a national longitudinal sample of adolescents who had contact with child protective services found that youth who participated in academic clubs reported fewer depressive symptoms, while those participating in music and art reported more trauma symptoms. On the other hand, two studies found that for youth in foster care and/or who have histories of child maltreatment, organized activity participation was actually associated with higher delinquency (Perkins & Jones, 2004), though other factors such as placement type and caregiver relationship may better account for that relationship (Farineau & McWey, 2011). Qualitative case studies of youth in AFK care illuminate some of the potential key mechanisms of organized activity participation, as youth report an increased sense of self-efficacy and long-term resilience (Drapeau et al., 2007), as well as an improved sense of belonging, school connectedness, positive peer relationships, and having adult mentors (Gilligan, 2000;2007).

When looking at educational outcomes, a few existing studies find consistent associations between participation and educational outcomes for AFK youth, but questions remain about

whether such activities are especially beneficial for AFK youth. For example, White and colleagues (2018) showed that organized activity participation among youth aging out of foster care was significantly associated with higher educational expectations, higher grades, and a higher likelihood of high school completion. Kwak and colleagues (2018) also found that youth who participated in sports and academic club activities reported higher school engagement.

Present Study

Thus, several notable gaps appear in the literature. First, while studies suggest positive educational outcomes of participation for AFK youth, it has yet rigorously to be tested whether those associations are stronger for youth in AFK care as compared to the general population. Some scholars have hypothesized that youth in AFK care may be more likely to benefit from organized activity participation than their peers in the general population (Jacobs et al., 2019; Simmons-Horton, 2017), given their educational challenges and disparities in educational attainment. Second, limited research has tested if such associations persist to college enrollment and degree attainment for youth in AFK care. Third, while many studies have used binary measures of participation, fewer studies examined the multiple dimensions of participation (e.g., type, breath, and intensity of participation) among AFK youth.

The current study aims to help fill these gaps in the literature. Specifically, it sought to answer the following three research questions:

1. What is the association of adopted, foster, and kinship (AFK) care with educational outcomes, as compared to youth in parental care?
2. What is the association of AFK care with multiple dimensions of organized activity participation (any participation, type, breadth and intensity), as compared to youth in parental care?

3. Do different dimensions of organized activity participation (any participation, type, breadth, and intensity) moderate any association between AFK care and later education outcomes?

Drawing from the frameworks of developmental systems (Ford & Lerner, 1992), developmental assets (Benson et al., 2011; Scales & Leffert, 1999), and positive youth development (Benson et al., 2007; Damon, 2004; Lerner et al., 2009), this study examines the following hypotheses: 1) AFK care would be associated with poorer educational outcomes; 2) AFK care would be associated with lower rates of organized activity participation; 3) organized activity participation would moderate the association of AFK care with educational outcomes, such that the association between AFK care status and educational outcomes would be weaker with higher levels of activity participation.

Method

Data and Sample

This study used data from the Educational Longitudinal Survey of 2002 (ELS:02) that has been previously described in detail (Ingles et al., 2004, 2005, 2007, 2014). In brief, ELS:02 was conducted by the Institute of Educational Sciences (IES) in the U.S. Department of Education and collected data on a number of areas of youth lives: home, school, and out-of-school experiences. Specifically, ELS:02 recruited a nationally representative sample of 16,127 high school sophomores in 2002 (baseline), and followed up with them two (2004), four (2006), and ten years later (2012). ELS:02 used a complex sampling design and oversampled several underrepresented groups, including Latinx and Asian youth. In the 2002 baseline survey, students were asked about their experiences at school and out-of-school, including participation in school-based organized activities. Additionally, in 2002, a parent/guardian survey was

delivered to each student's household, requesting the parent/guardian who was most familiar with the students' school experience to complete the survey. If the parent/guardian who best knew the child did not live in that household, the receiving parents/guardians were asked to return the survey to researchers, who then tried to locate the appropriate parent/guardian (Ingles et al., 2004).

Measures

Our key study variables included one measure of care status (predictor variable), seven measures of organized activity participation (moderators), and four educational outcomes (dependent variables).

Predictor Variable – Adoptive, Foster or Kinship Care

At Wave I of the survey in 2002, the adults completing the parent/guardian survey were asked to identify their relationship to the student, including a biological parent, adoptive parent, foster parent, or another family member. In addition, the survey asked whether the student lived with a biological parent who was not the responding adult. If the parent/guardian reported having a partner who lived with them, they were asked to provide the relationship of that adult to the student. These items were combined to capture one measure of care status (0=living with one or more biological parents, 1=living with adopted parent(s), foster parent(s), or other relatives).

Moderators – Organized Activity Participation

During the Wave I of the survey, students were asked several questions about their participation in school-based organized activities. Using a list of over 40 activities, students were asked if they had participated or were currently participating in those activities in that academic year. First, we collapsed these responses into a binary measure of any activity participation (0=no, 1=yes). We also created four binary measures of participation in specific activity types:

sports, performing arts, school clubs, or service groups (0=no, 1=yes). Next, each type of activities was summed to create the total number of participating activities as a measure of participation breadth (ranging 0-4), indicating how many different types of activities students reported participating in. Lastly, students were asked how many hours per week they participated in those organized activities, which served as a measure of participation intensity (ranging 0-21 hours per week).

Dependent variables – Educational Outcomes

Four educational outcomes were drawn from the follow-up surveys of Waves II, III, and IV. First, at Wave II in 2004 (two years after the baseline survey), students were asked about educational expectations – how far they expected to go in school. The responses were recoded into a binary measure of whether or not they expected to obtain a four-year college degree or above (0=no, 1=yes). Second, also using the Wave II survey in 2004, a continuous measure of high school GPA was created as reported on the students' high school transcript (ranging 0.0-4.0). Third, at Wave III in 2006 (four years after the baseline survey), participants were asked about whether they were enrolled in any type of postsecondary schooling, which was recoded into a binary measure of enrollment in a four-year college degree program (0=no, 1=yes). Lastly, at Wave IV in 2012 (ten years after the baseline survey), participants were asked about the highest level of education that they had completed, which was recoded into a binary variable representing completion of a four-year college degree or more (0=no, 1=yes).

Control variables

Several covariates were accounted for in the analyses by using measures from the first wave of ELS:02. At the student-level, self-reported demographic characteristics were captured: 1) sex (0=female, 1=male), 2) racial-ethnic identity (White, Black, Latinx, Asian, and mixed or

other race/ethnicity), and 3) educational expectations at the baseline. Additionally, analyses included two measures of student-level contextual factors: 1) a composite variable of seven academic risk factors (ranging 0-7) that measures students' social and educational history (e.g., years held back, the number of school changes, a sibling's school dropout), and 2) a second composite measure of family socioeconomic quartile (1=lowest SES quartile, 4=highest SES quartile). These two variables were previously constructed and used by IES (Ingles et al., 2004). At the school-level, a variable of urbanicity for rural and suburban schools was included, with urban schools used as the reference group.

Analytic Plan

Survey Weights

In the analyses presented in this study, survey weights provided by IES were utilized to adjust for the complex sampling design and produce nationally representative estimates (Asparouhov & Muthén, 2004; Ingles et al., 2004).

Missing Data

To account for missing data, this study utilized full information maximum likelihood (FIML) estimation in Mplus. This approach allows for all cases to be included and contribute information to the creation of a model covariance matrix. FIML offers several advantages over strategies using listwise deletion, as it can accommodate nonnormality and has been demonstrated to produce estimates comparable to multiple imputation (Enders, 2001a; 2001b; Enders & Bandalos, 2001; Larsen, 2011).

Descriptive Statistics

Descriptive statistics were calculated using Stata (StataCorp, 2013) utilizing sample weights. Frequencies were calculated for categorical variables, while mean and standard errors were calculated for continuous variables.

Mean Differences

To assess differences in study variables across care status, bivariate regressions were conducted that regressed study variables onto care status; bivariate regressions produced *t*-statistics for differences between care status. Mean differences in educational outcomes by care status and by two measures of participation (any participation and participation intensity) were extracted from Stata and graphed in Microsoft Excel for visual representation.

Multilevel Regression Analyses

Multilevel regression was conducted using Mplus (Muthén & Muthén, 2014; Muthén et al., 2017). For each measure of activity participation, three sets of step-by-step multilevel regression models were estimated across four education outcomes: (1) AFK care; (2) AFK care and organized activity participation; and (3) AFK care, organized activity participation, and an interaction term between AFK care and participation. To generate interaction terms, each participation measure was multiplied by the measure of AFK care status.

Regression coefficients (*B*) and odds ratios (*OR*) for independent variables were evaluated. In each model, *Bs* and *ORs* correspond to the within-school association between AFK care status or activity participation and the relative education outcome, after accounting for school-level differences in that educational outcome and urbanicity. In all multilevel models, student-level covariates were included at the individual-level; a random intercept by school and urbanicity were included at the school-level. Interclass correlation coefficients (ICC) for each outcome were calculated, corresponding to the amount of variance of outcomes that could be

accounted for at the school-level; r^2 was also calculated, representing the amount of variance in the outcome explained by the model.

Results

Descriptive Statistics

Descriptive statistics of the sample are shown in Table 1. The sample was evenly split between males and females, and over one-half identified as white. Respondents had an average academic risk of 0.99 (SE=1.10), and one-third attended schools in urban communities.

A small proportion of youth (5.13%) reported living in AFK care, consistent with previous research. About four-fifths of participants reported having participated in any organized activities; among those who ever participated in such programs, activity types showed the following distribution: sports (53.3%), performing arts (49.9%), school clubs (28.9%), and service clubs (17.2%). Regarding participation breath and intensity, youth reported, on average, participating in 1.5 (SE=.02) different types of extracurricular programs and spending 4.59 (SE=.08) hours a week for organized activities.

For educational outcomes, 78.3% of the high school sophomores in the study sample reported expecting to complete a college degree or more two years after the baseline survey (2004), while only 48.7% had actually enrolled in a four-year degree program within four years (2006) and only 38.5% obtained a college degree within ten years (2012). The average high school GPA was 2.73 (SE=.84).

Mean Differences

Mean differences by care status are shown in Table 1, and several notable trends were present. Overall, youth in AFK care participated in fewer activities with lower intensity and narrower breadth than their peers in parental care. Youth in AFK care were significantly less

likely to participate in any activity (76.4% vs. 81.1%, $p < .05$), including sports (50.4% vs. 56.6%, $p < .05$), performance (45.6% vs. 51.4, $p < .05$), and service (27.4 vs. 29.8%, $p < .05$). In terms of other dimensions of participation, there was a small but significant difference between youth in AFK care and parental care in breadth (1.35 vs 1.54 types, $p < .001$) and a larger difference in intensity (3.32 vs 4.83 hours per week, $p < .001$).

In terms of educational outcomes, youth in AFK care were significantly less likely than those in parental care to expect to earn a college degree (71.8% vs. 81.7%, $p < .001$) and had lower high school GPAs (2.42 vs. 2.73, $p < .001$) two years after baseline. Youth in AFK care were less likely to enroll in college four years later (29.5% vs. 47.2%, $p < .001$), and only half as likely to obtain a college degree ten years later (18.9% vs. 36.6%, $p < .001$).

Regarding demographic characteristics, youth in AFK care were more likely than those living with biological parents to be Black (23.5% vs. 12.1%, $p < .001$), Asian (15.9% vs. 9.1%, $p < .001$), and other-identified race-ethnicity (7.4% vs. 5.4% $p < .05$), and were less likely to be White (37.3% vs. 59.2%, $p < .001$). They were also more likely to be from the lowest socioeconomic quartile (31.6% vs. 22.6%, $p < .001$) and experience more academic risks (1.51 vs. 0.96, $p < .001$) than their peers in parental care. Mean differences in educational outcomes by both care status and two measures of participation (any participation and intensity) were visualized and are shown in Figures 1-6. In the figures, vertical-striped bars on the left correspond to means and percentages for youth in AFK care, and horizontal-striped bars on the right correspond to means and percentages for youth in parental care. When examining differences by any participation, visual inspection suggested a slightly flatter curve for AFK care as compared to youth in parental care (Figures 1 and 2). However, in examining differences by the more nuanced measure of intensity of participation, curves appear comparatively parallel for

youth in AFK and parental care (Figures 3-6). Like intensity, the curves between youth in AFK care and parental care also appeared similar for participation breadth (results not shown).

Multilevel Regression Models

Results from multilevel regression models (MLM) are shown in Tables 2 through 5. For each education outcome, ICC ranged from .106 to .212, suggesting that 10.6-21.2% of the variation in outcomes could be accounted for at the school-level; MLM was therefore utilized for remaining analyses.

Findings show that students in AFK care had poorer educational outcomes as compared to their peers in parental care, while organized activity participation was associated with improved educational outcomes, after accounting for individual-level covariates and school-level variation. In the models including interaction terms, the measure of AFK care status was generally not significant, while the interaction terms were only significant in models utilizing the any participation measure (Table 2; see details below), suggesting only some evidence of moderation by any activity, but not for the other measures. Sensitivity analyses (not shown) separating youth in adoptive care from those in foster and kinship care showed that these trends were consistent as the combined AFK group, but with decreased statistical power to detect significant differences. Thus, the composite measure of AFK is presented in the results below.

Across the models, several covariates were found to be significantly associated with educational outcomes. Black, Latinx, and other racial/ethnic youth had lower GPAs and lower odds of college degree obtainment than white youth. Higher SES quartiles were associated with stronger educational outcomes, while higher academic risk was associated with poorer educational outcomes (results not shown). At the school level, suburban and rural schools were associated with the higher GPAs, but they were also associated with lower college expectations,

enrollment, and degree completion (results not shown). These findings on covariates were consistent across models and educational outcomes.

The analyses below describe the results on the four measures of organized activity participation (any participation, activity type, participation breadth, and participation intensity) across the four education outcomes: college expectations, GPA, college enrollment, and college degree completion.

Any Activity Participation

Table 2 displays results from multilevel regressions examining any organized activity participation. Three regression models are presented for each education outcome: 1) AFK care, 2) AFK care and any participation, and 3) AFK care, any participation, and an interaction term (AFK x any participation). First, AFK care status was consistently associated with significantly lower educational expectations (*OR*=.66, $p < .05$), lower GPAs (*B*=-0.11, $p < .01$), lower college enrollment (*OR*=.60, $p < .01$), and lower degree attainment (*OR*=.49, $p < .01$). In contrast, participation in any organized activities was associated with higher educational expectations (*OR*=1.94, $p < .001$), higher GPAs (approximately 0.25 points) at the end of high school ($p < .001$), a higher likelihood of college enrollment (*OR*=2.47, $p < .001$), and a higher likelihood of degree attainment (*OR*=1.91, $p < .001$).

When looking at the magnitude of coefficients and odds ratios, the positive associations of any activity participation with educational outcomes were greater or comparable to the negative associations of AFK care status. For example, youth in AFK care (*OR*=.52) were less likely to obtain a college degree by 48%, but those in AFK care who also participated in any activity (*OR*=2.20), such that were 14% more likely to obtain a college degree (.52 x 2.20 = 1.14) than nonparticipants in parental care. When interaction terms were included in each model, the

measure of AFK care status was not significant, while the interaction term between any activity and AFK care were significant for all four outcomes, suggesting possible moderation. However, counter to hypotheses, the values of the *B* and *OR* on the interaction terms suggest that the association between the any participation measure and outcomes was slightly weaker association for youth in AFK care.

Activity Type

Regression models assessing the associations of specific activity type with educational outcomes are shown in Table 3. Results on activity type were consistent with earlier results on any participation, with some additional nuance. Overall, all four types of activities (sports, performance, school clubs, service) were associated with increased educational outcomes. These associations were similar in magnitude across activity type, with service clubs having the largest *Bs* and *OR*s. For example, participation in service clubs was associated with the highest odds of completing a college degree by a factor of *OR*=2.1 ($p < .001$), while the odds were lower for sports (*OR*=1.42, $p < .001$), performance (*OR*=1.33, $p < .001$), and school clubs (*OR*=1.37, $p < .001$).

Examining the relative magnitude of coefficients, the analyses indicate that the negative effect associated with AFK care status was similar in magnitude to the positive effect of activity participation. For example, youth in AFK care (*OR*=.63) who participated only in sports (*OR*=1.41) would be almost as likely to enroll in college (.63 x 1.41= 0.89) as youth in parental care who did not participate in sports. Similarly, youth in AFK care who participated in any two activities were likely to have the higher GPAs, higher college expectations, higher college enrollment and degree obtainment than youth in parental care who had no participation. In contrast to the previous models with any participation, no interaction terms between activity

types and AFK care were significant. This suggests that there were no differences in the associations of specific activity type with educational outcomes between youth in AFK versus parental care.

Participation Breadth

Table 4 displays multilevel regression results examining extracurricular breadth. In the models including both AFK care status and participation breadth, participation in an additional activity was associated with a 45-57% increase in education outcomes: college expectation (*OR*=1.45, $p < .001$), college enrollment (*OR*=1.57, $p < .001$), and college degree attainment (*OR*=1.48, $p < .001$); each additional activity type was also associated with a significant increase in GPA (*B*=.161, $p < .001$). Consistent with previous models, the magnitude of *B*s and *OR*s indicates that the increases in participation breadth were similar to the possible risk of AFK care status, such that youth in AFK care who participated in two or more activities likely had higher expectations, GPAs, college enrollment, and degree obtainment than a nonparticipant in parental care. As with models using specific activity type, no interactions terms between AFK care status and participation breadth were significant. This suggests that the association between participation breadth and educational outcomes were similar for youth in AFK and parental care.

Participation Intensity

Table 5 displays multilevel regression results examining participation intensity. In the models including both AFK and participation intensity, an additional hour spent in activity participation was associated with a 5-7% increase in education outcomes: college expectation (*OR*=1.06, $p < .001$), college enrollment (*OR*=1.07, $p < .001$), degree attainment (*OR*=1.05, $p < .001$), and a small but significant increase in GPA (*B*=.018, $p < .001$). The coefficients suggest a similar possibility of risk mitigation; a young person in AFK care who participated in organized

activities for 5.5 hours per week would likely have a GPA equal to a nonparticipant in parental care. For the later educational outcomes, greater intensity was required to mitigate risk associated with AFK care status. For example, participation of 9.1 hours per week for youth in AFK care would have similar college enrollment to nonparticipants in parental care. As with models on activity type and breadth, most interaction terms were not significant (with the exception of educational expectations). This suggests that participation intensity was equally associated with GPA, college enrollment, and college degree attainment for youth in AFK or parental care.

Discussion

These results provide several incremental contributions to the literature, specifically regarding the organized activity participation of youth in AFK care. However, the limitations of the study must be noted when considering its implications. Several limitations emerge from the nature of secondary data analyses. First, this study drew data from ELS:02, which was advantageous for its nationally representative sample of youth followed for over a decade. However, the characteristics of school and adolescence has changed since 2002, and this likely limits the generalizability of our findings to the current experiences of youth. Nonetheless, a longitudinal sample is necessary to assess the long-term associations of organized activity participation. Second, ELS:02 was not designed to specifically investigate the experiences of youth in AFK care; as a result, the analysis involved the small subsamples of each of these groups. Although our sensitivity analyses indicate that trends were similar across the youth in adoptive, foster, and kinship care after controlling for covariates, this study was unable to parse out important differences in the experiences of these groups. This limitation warrants further investigation by future research including larger sample sizes of these subgroups. Third, this

study was limited to the measures collected in ELS:02. Information from the family was collected only at Wave I, and longitudinal measures on the family context might highlight important influences, especially for AFK care youth. Lastly, ELS:02 was an observational study. While we account for several student-level and school-level confounding factors, causal inference is not possible from these findings.

Accepting these limitations, findings suggest several important trends and raise crucial questions for the fields of youth development, social work, and systems working with marginalized youth. This study is one of the first to use large-scale longitudinal data to document trends, long-term educational outcomes, and potential benefits for AFK youth that may be facilitated by organized activities. In doing so, this study expands two bodies of literature by melding separate and related areas of research: the care status of the marginalized youth, and their positive youth development through organized activities.

First, living in AFK care was significantly associated with poorer educational outcomes measured two, four, and ten years later, as consistent with past research (e.g., Dalen & Theie, 2019; Day et al., 2011; Gillum et al., 2016; O'Higgins et al., 2017; Winokur et al., 2018). The most striking difference was in college degree obtainment, and these findings likely reflect the challenges youth in AFK care face, including a lack of support as they navigate college and enter adulthood. As stronger supports for youth transitioning from foster care have been found to promote college degree obtainment (e.g., Gillum et al., 2016; Pecora, 2012), organized activities may also help youth in general AFK care.

Second, our descriptive findings note clear disparities in activity participation between youth in parental care and AFK care, though our findings are not as extreme as some past research (Kwak et al., 2017). This difference may reflect the age of the data or sampling bias –

i.e., more involved AFK youth may have been more likely to be included in an intensive large-scale national survey as opposed to datasets specific to AFK youth. Nonetheless, youth in AFK care were significantly less likely to participate in organized activities, with fewer activities and for less hours per week. Particularly, the difference in participation intensity by 1.5 hours per week may hold the most practical difference between the groups. Results suggest that AFK youth were only slightly less likely to participate in some type of activity, but they were substantially less likely to participate for the same amount of time per week than those in parental care. Such findings may have been obscured by methods that use simple binary measures of participation. Thus, by employing the multiple dimensions of activity participation, this study highlights that participation intensity might be one critical difference in the participation between youth in AFK care and those in parental care.

Third, and perhaps more importantly, our findings suggest that organized activity participation is likely to be equally as beneficial as for youth in AFK care as for those in parental care. The only models that consistently showed any evidence of moderation were those models using the simple dichotomous measure of any participation, which actually suggested a weaker association for AFK youth. However, when we used measures that capture participation in more nuanced ways – activity type, participation breadth, and participation intensity – there was no compelling evidence of moderation. Given these results, one interpretation may be that the measure of any participation obfuscates the important difference in participation intensity between youth in AFK care and those in parental care. Such an interpretation is consistent with the visual representations of mean differences presented in Figures 1-6, even if those figures do not account for covariates. We may have reached different conclusions had the study only utilized the binary measure of any participation; therefore, future research on the participation of

AFK youth should continue to investigate the multiple dimensions of organized activity participation.

The lack of consistent moderation warrants additional consideration. On one hand, this finding is counter to our hypothesis that AFK youth would experience stronger benefits from participation, given the documented challenges and the lack of supports in their environment. On the other hand, the lack of moderation also suggests that organized activity involvement and measured outcomes hold the same positive associations regardless of youths' parental care status.

Fourth, the magnitude of coefficients suggests that positive association of activity participation may protect against or even compensate for any added risk of being in AFK care. If taken at face value, one possible interpretation of these findings is that if AFK youth could participate in at least one type of activity for five to ten hours per week, that might mitigate some negative effects associated with their care status. That difference may come from much-needed opportunities to build relationships with mentors and peers, to increase school connectedness, or to develop other social-emotional skills. This study cannot specifically speak to such mechanisms; future research should specifically test how organized activities may be supporting youth in AFK care. Nevertheless, while the findings do not imply causality, they are consistent with organized activities serving an equally protective role for youth in parental care as well as those in AFK care.

This line of thinking is important for social work policy and practice. Scholars have argued that youth outside of the care of their parents are often denied normative experiences that might facilitate healthy development, including participation in organized activities during out-of-school time (Gilligan 1999; 2000; 2007; Simmons-Horton, 2017). There likewise can be an

implicit or explicit emphasis on providing youth in AFK care academic-focused interventions (Okpych, 2012; Simmons-Horton, 2017; Zetlin, 2006). This emphasis may be intuitive, given the needs of these students, as well as the lack of scholarship on the participation of youth in AFK care; limited scholarship means a smaller evidence base to justify an expansion of developmental opportunities to youth in AFK care. Nevertheless, a focus on academic interventions may also overlook the importance of social support, connectedness and educational aspirations as protective factors for AFK youth – all of which are associated with both organized activity participation (Farb & Matjasko, 2012; Feldman & Matjasko, 2005; Heath et al., 2018; Vandell et al., 2015) and the educational success of AFK youth (Foster et al., 2017; Lemkin et al., 2018; Morton, 2016; Okpych & Courtney, 2017). To be clear, we would neither claim nor expect that organized activities can address and meet all of the critical and specific needs faced by youth in these systems. These programs should not replace targeted educational supports and interventions for AFK youth. However, the findings here may make a case for youth in AFK care to have the normative developmental opportunities offered by organized activities.

Likewise, this study fits in a larger discussion and more recent shift to incorporate positive youth development (PYD) approaches when working with marginalized youth and those in AFK care. This framing likely reflects an important shift in how youth are viewed and conceptualized, as well as an incremental contribution to the current knowledge base. Historically, most research on marginalized youth, including those involved in the child welfare system, has focused on challenges and deficits of these youth; however, more recent studies have begun employing PYD approaches to help address their practical and clinical needs (e.g., Oshri et al., 2017; Taussig et al., 2019). Our study's orientation is both pragmatic and strengths-

focused: we acknowledge the possible educational risks youth in AFK care may face, and we aim to identify supports that are already in place in many schools and communities.

Lastly, it is important to recognize the implications regarding issues of equity. The study findings call for addressing a difficult reality: while any benefits produced by program participation among youth in AFK care may be equal to those in the general population, access to these programs may not be equal. Although this study is not testing causality, one can argue that any possible "treatment effect" is similar across groups, but the "access to the treatment" is not equal. Parental families may be more aware of and supportive of these opportunities, be more likely to have social capital and resources to facilitate these opportunities, or be more likely to encourage youth participation. Families caring for adoptive, foster, or kinship youth may not have the same knowledge or resources to surround them with supports, while facing constraints brought by SES, racism, and discrimination, as well as the restrictions of child welfare systems – especially kinship and foster care. Nonetheless, findings suggest that once youth in AFK care have access to organized activities, they may have similar benefits. Thus, this study supports the call to increase the developmental opportunities for youth in adoptive, foster, and kinship care through child welfare practice and policy.

Conclusion

This study provides data on the organized activity participation and long-term educational outcomes of a nationally representative sample of youth in the care of their parents and those in adoptive, foster, or kinship care. Taking a PYD approach to youth in AFK care, the findings suggest that while youth in these programs may face unequal access, they likely experience similar benefits. Here, we see a case for expanding developmental opportunities for AFK youth. Social workers and other professionals working with youth in AFK custody should

work to ensure the participation of this marginalized population in organized activities. Doing so is not only one strategy to improve educational and life outcomes, but may advance equity for youth in adopted, foster and kinship care.

Table 1

Descriptive Statistics and Mean Differences Across Care Status

	Overall	Parental Care (95.4%)	Adoptive, Foster or Kinship Care (4.6%)	Significant Differences
Organized Activity Participation (any type)	79.8%	81.1%	76.4%	*
Sports	55.3%	56.6%	50.4%	*
Performance	49.9%	51.4%	45.6%	*
School Clubs	28.9%	29.8%	27.4%	
Service Clubs	17.2%	18.2%	14.2%	*
Participation Breadth (ranging 0-4 types)	1.50 (.02)	1.54 (.02)	1.35 (.05)	***
Participation Intensity (ranging 0-40 hours/week)	4.59 (.08)	4.83 (.09)	3.32 (.24)	***
Educational Expectations (college or more)	79.8%	81.7%	71.8%	***
GPA (0.0-4.0)	2.67 (.02)	2.73 (.02)	2.42 (.04)	***
College Enrollment (4-year degree program)	44.7%	47.2%	29.5%	***
Educational Attainment (4-year degree or more)	34.5%	36.6%	18.9%	***
Sex				
Female	49.4%	50.0%	47.4%	
Male	50.4%	50.0%	52.5%	
Racial/Ethnic Identity				
White	60.2%	62.3%	41.1%	***
Black	14.4%	13.1%	26.0%	***
Latinx	15.9%	15.6%	17.5%	
Asian	4.2%	4.0%	8.3%	***
Other	5.3%	5.0%	7.0%	
Socioeconomic Quartile				
Lower	24.9%	23.9%	34.3%	***
Middle-Lower	25.0%	24.1%	24.6%	
Middle-Upper	25.0%	25.5%	18.4%	**
Upper	25.0%	26.5%	22.8%	
Academic Risk (1-7 risk score)	1.03 (.02)	1.00 (.02)	1.61 (.06)	***
Urbanicity				
Urban	30.2%	29.1%	33.6%	
Suburban	50.3%	50.8%	46.8%	
Rural	19.6%	20.0%	19.6%	

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2.

AFK care and Any Participation: Odds Ratios, Regression Coefficients, and 95% Confidence Intervals from Multilevel Regression

	Expectations			GPA			Enrollment			College Degree		
	OR (95% CI)	OR (95% CI)	OR (95% CI)	B (95% CI)	B (95% CI)	B (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
AFK Care	.66* (.49 - .88)	.71* (.56 – .90)	.93 (.66 – 1.32)	-.11** (-.16 – -.05)	-.11** (-.16 – -.05)	.02 (-.06 – .09)	.63** (.50 – .78)	.63*** (.50 – .78)	.86 (.67 – 1.18)	.49*** (.37 – .64)	.52*** (.42 – .65)	.72* (.55 – .94)
Any Participation	--	1.98*** (1.76 – 2.23)	2.02*** (1.79 – 2.28)	--	.27*** (.24 – .30)	.28*** (.25 – .31)	--	2.59*** (2.28 – 2.)	2.65*** (2.32 – 3.02)	--	2.20*** (1.93 – 2.51)	2.24*** (1.96 – 2.56)
AFK Care x Any Participation	--	--	.68* (.49 – .92)	--	--	-.17*** (-..25 – -.10)	--	--	.63** (.49 – .81)	--	--	.67* (.51 – .87)
Model Fit												
r^2 within	.257***	.254***	.256***	.204***	.208***	.211***	.268***	.271***	.273***	.245***	.257***	.256***
r^2 between	.136**	.118**	.119**	.014	.011	.011	.134***	.100***	.099**	.079*	.094*	.096*
ICC	.106			.178			.212			.162		

Notes. Multilevel regression analyses included student-level factors (sex, racial/ethnic identity, socioeconomic quartile, academic risk, baseline educational expectations), school-level effect of urbanicity, and school-level intercept. '--' indicates the predictor was not included in the respective regression model; ICC: interclass correlation coefficient; * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3.

AFK Care and Activity Type: Odds Ratios, Regression Coefficients and 95% Confidence Intervals from Multilevel Regression

	Expectations			GPA			Enrollment			College Degree		
	OR (95% CI)	OR (95% CI)	OR (95% CI)	B (95% CI)	B (95% CI)	B (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
AFK Care	.66* (.49 - .88)	.72* (.55 – .92)	.94 (.59 – 1.59)	-.11** (-.16 – -.05)	-.10** (-.15 – -.04)	-.03 (-.13 – .06)	.63** (.50 – .78)	.63** (.51 – .80)	.65 (.44 - .95)	.49*** (.37 – .64)	.53*** (.43 – .66)	.62* (.43 – .91)
Sport	--	1.38*** (1.24 – 1.55)	1.38*** (1.28 – 1.63)	--	.08*** (.06 – .10)	.08*** (.06 – .11)	--	1.41*** (1.30 – 1.54)	1.41*** (1.29 – 1.54)	--	1.42*** (1.31 – 1.55)	1.43*** (1.31 – 1.56)
AFK Care x Sport	--	--	1.02 (.51 – 1.72)	--	--	-.04 (-.15 – .07)	--	--	.87 (.55 – 1.38)	--	--	.99 (.64 – 1.54)
Performance	--	1.35*** (1.21 – 1.51)	1.41*** (1.25 – 1.59)	--	.12*** (.10 – .14)	.12*** (.10 – .15)	--	1.53*** (1.39 – 1.69)	1.57*** (1.42 – 1.74)	--	1.33*** (1.21 – 1.46)	1.33*** (1.21 – 1.46)
AFK Care x Perf	--	--	.60 (.23 – .82)	--	--	-.08 (-.20 – .03)	--	--	.84 (.54 – 1.31)	--	--	.86 (.54 – 1.35)
School Clubs	--	1.35*** (1.21 – 1.51)	1.37*** (1.19 – 1.54)	--	.15*** (.12 – .17)	.15*** (.12 – .17)	--	1.40*** (1.30 – 1.53)	1.40*** (1.27 – 1.62)	--	1.37*** (1.26 – 1.50)	1.37*** (1.25 – 1.50)
AFK Care x Clubs	--	--	.73 (.43 – 1.37)	--	--	.02 (-.11 - .15)	--	--	1.34 (.77 – 2.35)	--	--	.91 (.55 – 1.51)
Service Clubs	--	2.96*** (1.96 – 2.69)	2.26*** (1.64 – 2.37)	--	.34*** (.31 – .37)	.35*** (.31 – .38)	--	2.28*** (2.05 – 2.55)	2.29*** (2.04 – 2.56)	--	2.10*** (1.91 – 2.32)	2.12*** (1.92 – 2.33)
AFK Care x Service	--	--	1.16 (.76 – 3.59)	--	--	-.06 (-.23 – .10)	--	--	1.46 (.78 – 2.71)	--	--	.87 (.49 – 1.56)
Model Fit												
r^2 within	.257***	.263***	.263***	.204***	.216***	.217***	.268***	.267***	.271***	.245***	.245***	.246***
r^2 between	.136**	.113	.140**	.014	.012	.012	.134***	.123*	.114	.079*	.079*	.094*
ICC	.106			.178			.212			.162		

Notes. Multilevel regression analyses included student-level factors (sex, racial/ethnic identity, socioeconomic quartile, academic risk, baseline educational expectations), school-level effect of urbanicity, and school-level intercept. '--' indicates the predictor was not included in the respective regression model. ICC: interclass correlation coefficient; * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4.

AFK Care and Participation Breadth: Odds Ratios, Regression Coefficients, and 95% Confidence Intervals from Multilevel Regression

	Expectations			GPA			Enrollment			College Degree		
	OR (95% CI)	OR (95% CI)	OR (95% CI)	B (95% CI)	B (95% CI)	B (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
AFK Care	.66* (.49 - .88)	.72* (.56 –.92)	.89 (.59 – 1.33)	-.11** (-.16 – -.05)	-.09** (-.15 – -.04)	-.04 (-.12 – .04)	.60** (.47 – .77)	.64** (.52 – .79)	.54** (.38 – .77)	.49*** (.37 – .64)	.53*** (.43 – .66)	.58* (.41 – .82)
Participation Breadth	--	1.47*** (1.40 – 1.54)	1.47*** (1.40 – 1.55)	--	.17*** (.16 - .18)	.17*** (.16 - .18)	--	1.56*** (1.50 – 1.63)	1.55*** (1.49 – 1.62)	--	1.50*** (1.44 – 1.56)	1.50*** (1.44 – 1.56)
AFK Care x Breadth	--	--	.84 (.67 – 1.05)	--	--	-.04 (-.09 – .01)	--	--	1.13 (.93 – 1.38)	--	--	.96 (.79 – 1.16)
Model Fit												
r^2 within	.257***	.263***	.264***	.204***	.229***	.230***	.268***	.277***	.278***	.245***	.258***	.258***
r^2 between	.136**	.126**	.126**	.014	.011	.011	.134***	.108***	.108***	.079*	.103*	.105*
ICC	.106			.178			.212			.162		

Notes: Multilevel regression analyses included student-level factors (sex, racial/ethnic identity, socioeconomic quartile, academic risk, baseline educational expectations), school-level effect of urbanicity, and school-level intercept. '--' indicates the predictor was not included in the respective regression model; ICC: interclass correlation coefficient;
* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 5.

AFK Care and Participation Intensity: Odds Ratios, Regression Coefficients, and 95% Confidence Intervals from Multilevel Regression

	Expectations			GPA			Enrollment			College Degree		
	OR (95% CI)	OR (95% CI)	OR (95% CI)	B (95% CI)	B (95% CI)	B (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
AFK Care	.66* (.49 - .88)	.73* (.57 – .93)	.90 (.66 – 1.24)	-.11** (-.16 – -.05)	-.10** (-.15 – -.04)	-.12** (-.18 – -.05)	.60** (.47 – .77)	.65** (.52 - .81)	.65** (.50 – .85)	.49*** (.37 – .64)	.53*** (.43 – .66)	.58** (.44 – .77)
Participation Intensity	--	1.06*** (1.05 – 1.07)	1.06*** (1.05 – 1.07)	--	.018*** (.016 - .020)	.018*** (.016 – .020)	--	1.07*** (1.06 – 1.08)	1.07*** (1.06 – 1.08)	--	1.05*** (1.04 – 1.06)	1.05*** (1.04 – 1.06)
AFK Care x Intensity	--	--	.93** (.89 – .97)	--	--	.006 (-.004–.002)	--	--	1.00 (.96 – 1.04)	--	--	.98 (.94 – 1.02)
Model Fit												
r^2 within	.257***	.258***	.261***	.204***	.207***	.207***	.268***	.268***	.268***	.245***	.250***	.250***
r^2 between	.136**	.111**	.109**	.014	.012	.012	.134***	.099**	.100**	.079*	.103*	.105*
ICC	.106			.178			.212			.162		

Notes. Multilevel regression analyses included student-level factors (sex, racial/ethnic identity, socioeconomic quartile, academic risk, baseline educational expectations), school-level effect of urbanicity, and school-level intercept. '--' indicates the predictor was not included in the respective regression model; ICC: interclass correlation coefficient;
* $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 1.

Differences in GPA by Care Status and Organized Activity Participation

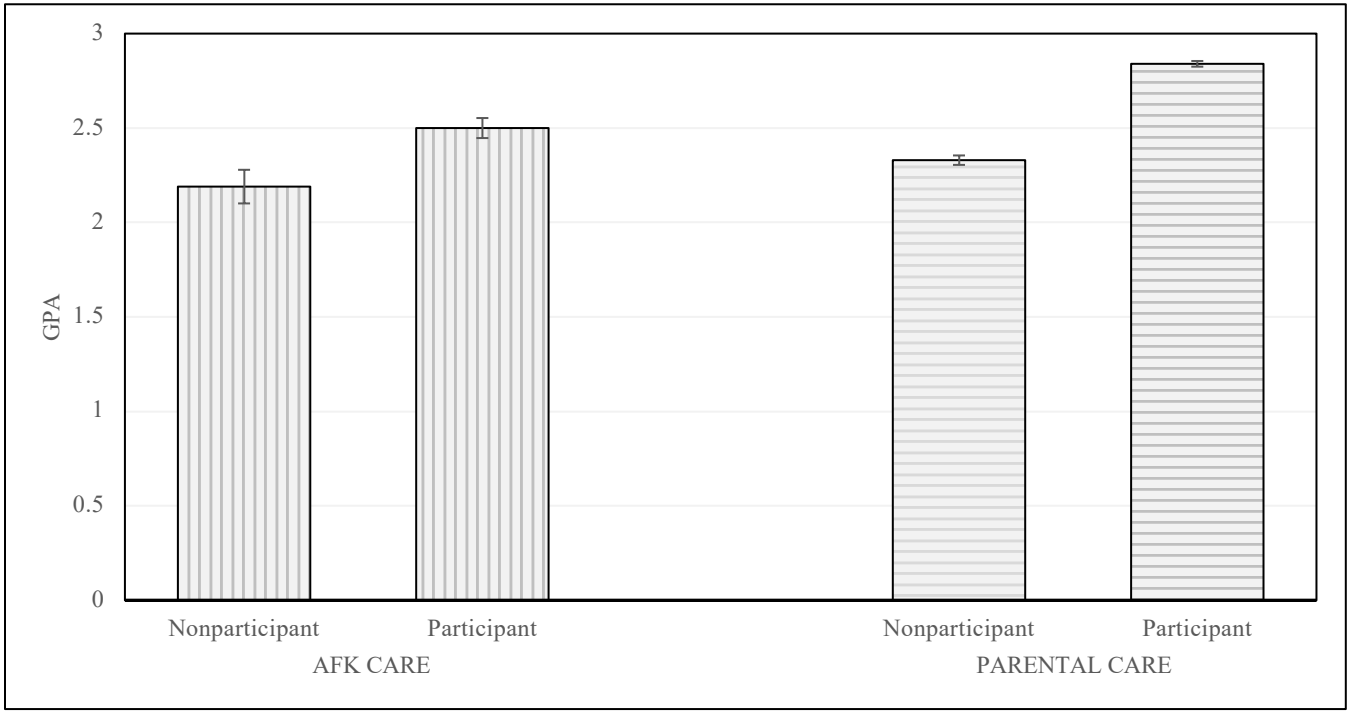


Figure 2.

Differences in Educational Expectations, College Enrollment, and College Degree by Care Status and Organized Activity Participation

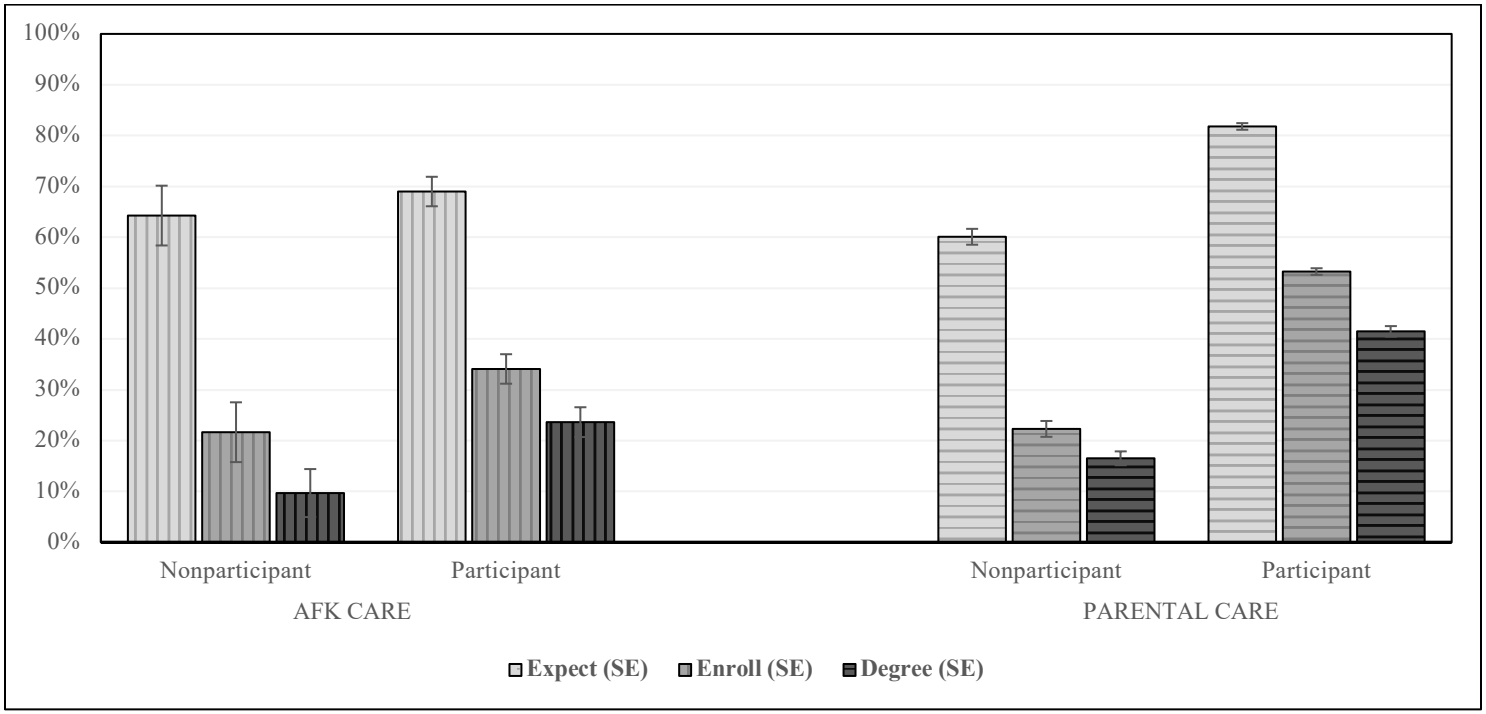


Figure 3.

Differences in GPA by Care Status and Organized Activity Participation Intensity

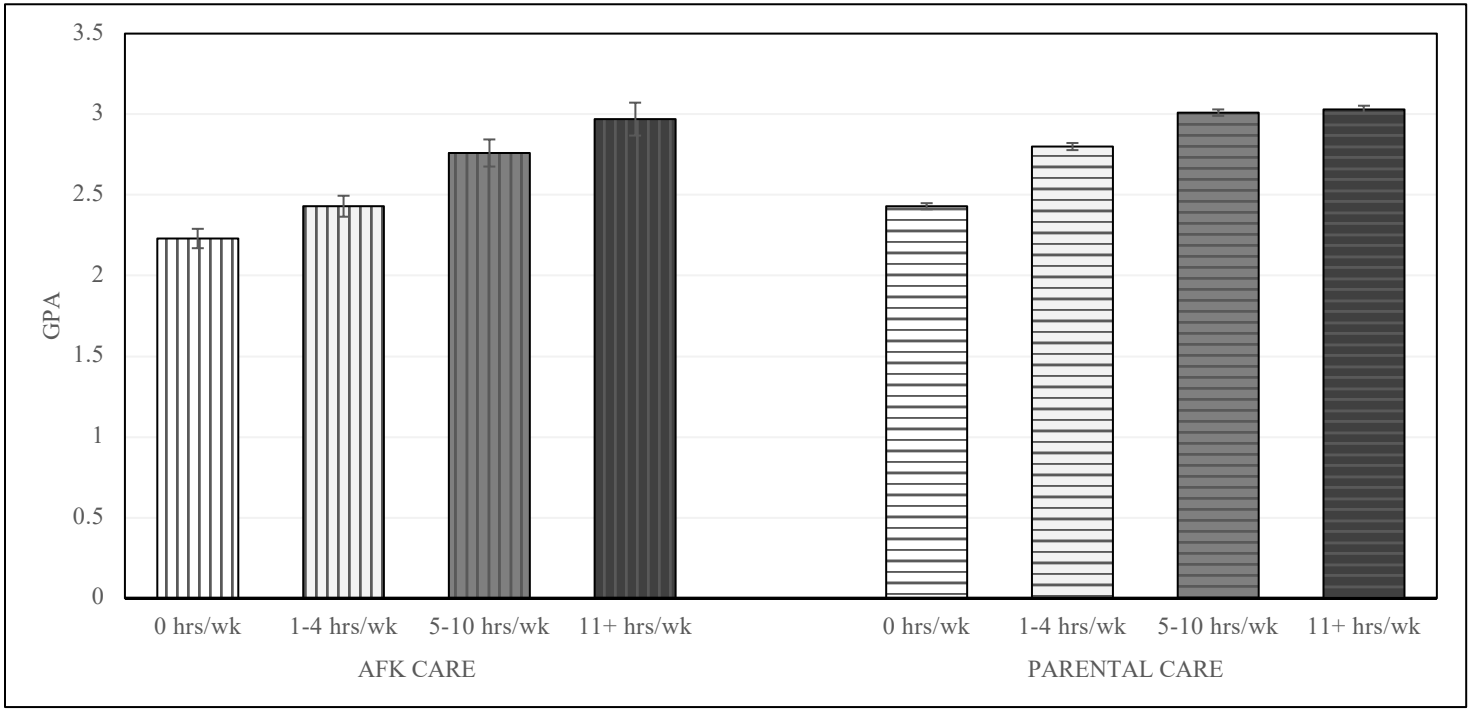


Figure 4.

Differences in Educational Expectations by Care Status and Organized Activity Participation Intensity

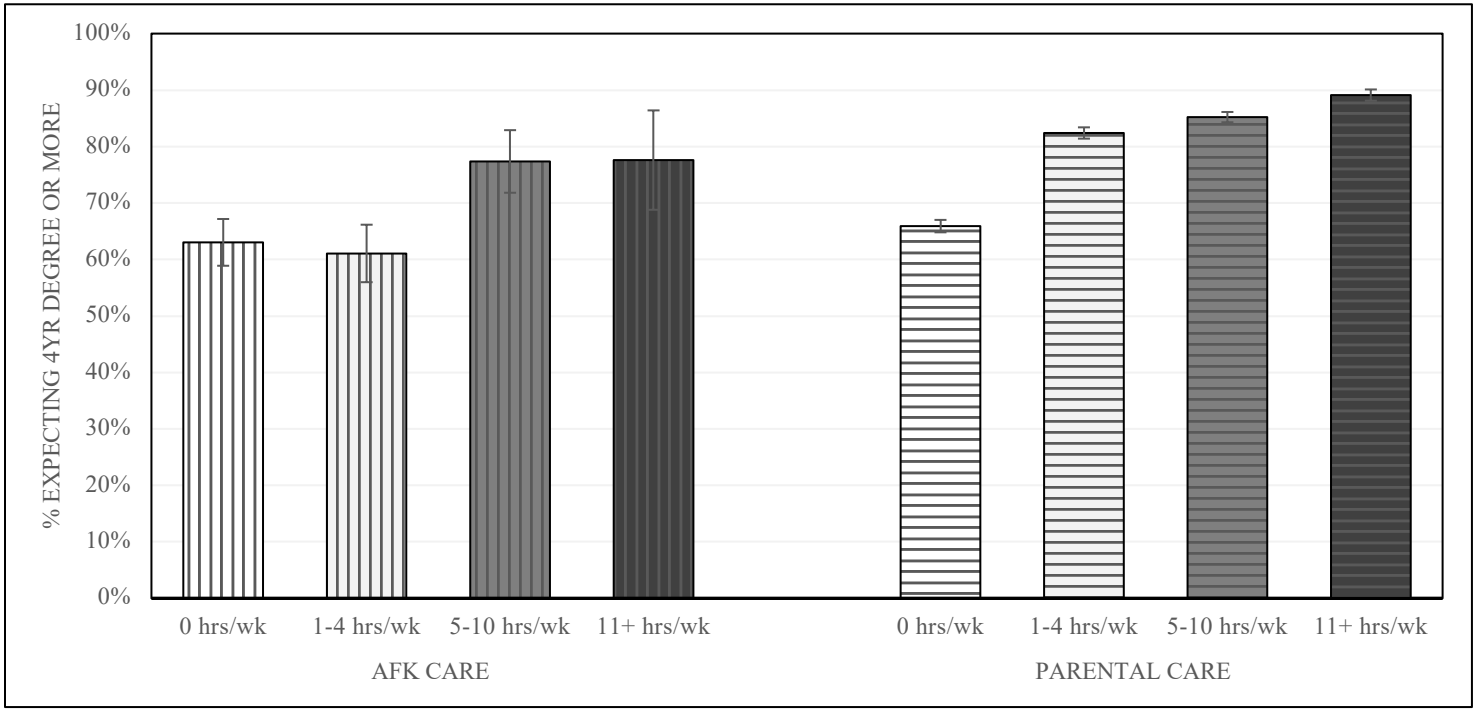


Figure 5.

Differences in College Enrollment by Care Status and Organized Activity Participation Intensity

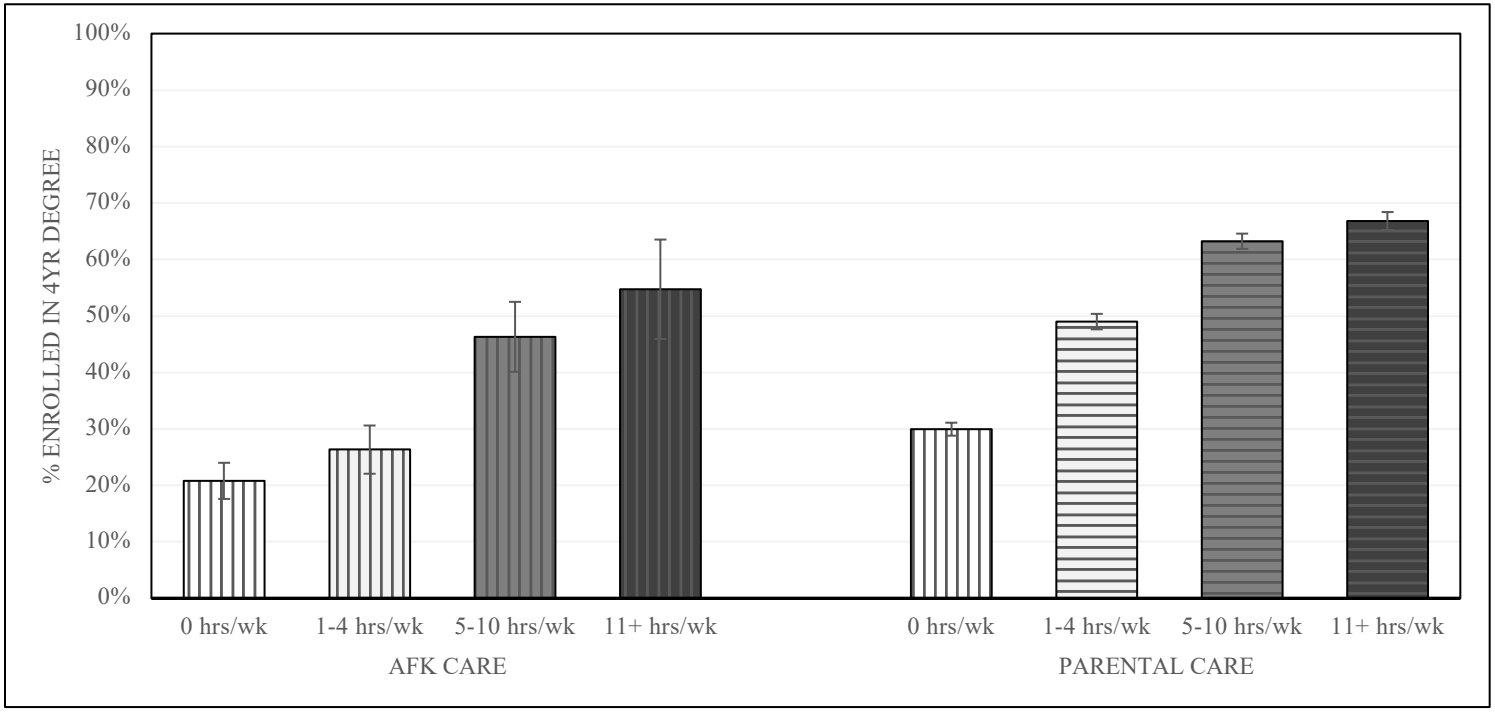
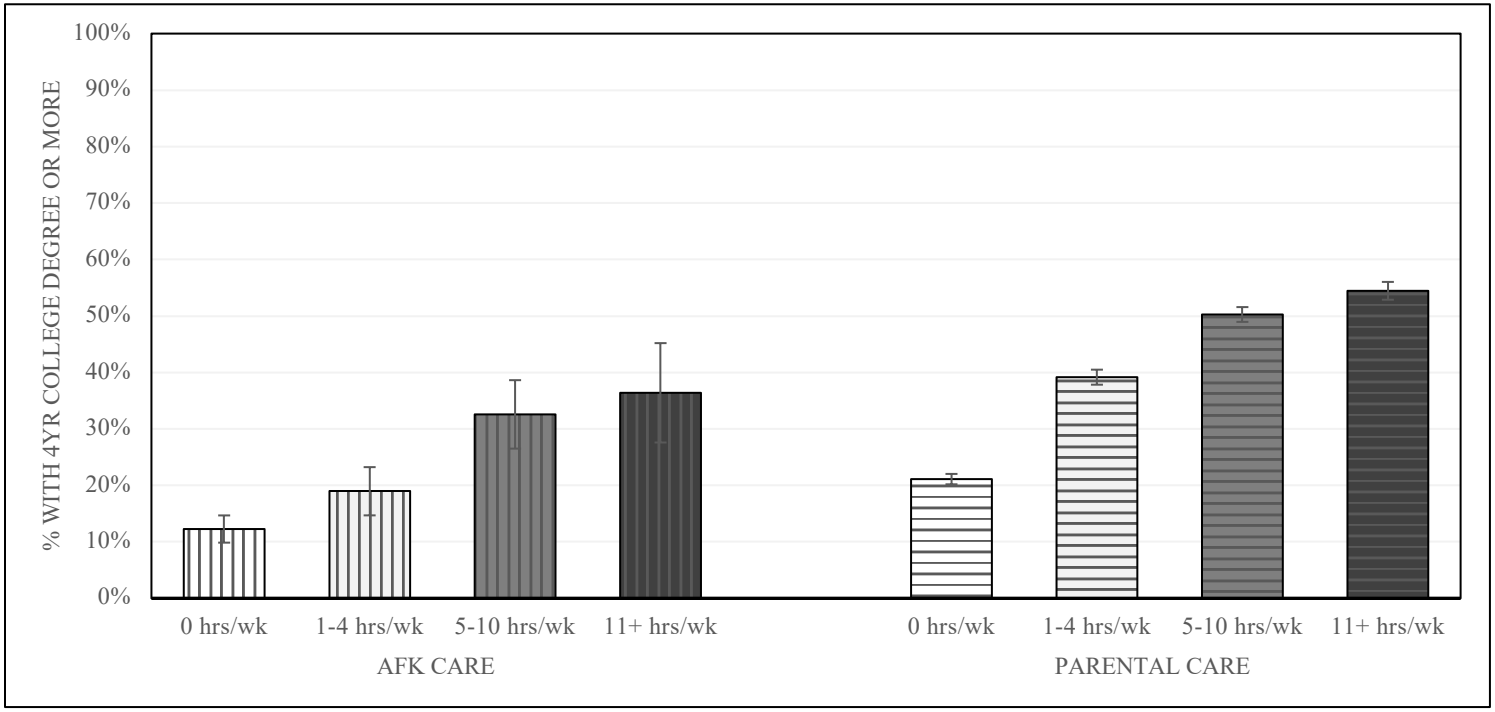


Figure 6.

Differences in College Degree by Care Status and Organized Activity Participation Intensity



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