



Contact with Foster Care and the Juvenile Delinquency Court: A Prospective Examination from Birth through Age 18

Andrea Lane Eastman¹ · Keunhye Park² · Denise Herz³ · Carly B. Dierkhising³ · Jacquelyn McCroskey¹ · Lillie Guo¹

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Abstract

Purpose Research has demonstrated a link between out-of-home foster care and subsequent juvenile justice involvement. Understanding factors that may contribute to dual system involvement for young people who entered foster care is essential for disrupting this relationship.

Method We used population-based linked administrative records to examine the prevalence of juvenile delinquency court petitions among individuals placed in out-of-home foster care in Los Angeles County from birth to age 18. By integrating records from child welfare and probation, this analysis of individuals born between 1998 and 2001 and who lived in the county's out-of-home foster care system ($N=29,434$) showed that 2,554 (8.7%) had encountered a juvenile delinquency court petition prior to turning 18.

Results Regression results showed an increased rate of dual system involvement among young people in foster care who experienced unstable living conditions, periods of absence from care, commercial sexual exploitation, or group homes. Instability in living situations (staying in care for more than a year, with three or more homes or placements; $RR = 1.31$; $CI = 1.16, 1.48$) and history of group home care ($RR = 1.43$; $CI = 1.25, 1.64$) were significantly associated with a heightened rate of dual system involvement. As shown in the gender-stratified models, the magnitude of associations between dual system involvement and foster care experiences differed by gender.

Discussion The current study aligns with prior studies showing a relationship between residential instability and group homes to subsequent delinquency court involvement. Findings set a baseline so future work can explore if policies aiming to reduce reliance on group care are associated with changes in the likelihood of dual system involvement.

Keywords Foster care placement · Juvenile delinquency petitions · Child welfare · Juvenile probation · Dual system involvement

Young people who experience dual system involvement are those who come into contact with both the child welfare and juvenile justice systems (Cutuli et al., 2016; Herz et al., 2019; Huang et al., 2015). Research has documented that

many young people with juvenile justice system involvement have previous or concurrent involvement with the child welfare system. Multiple studies provided evidence that among young people with juvenile justice system involvement, approximately two thirds have been involved with the child welfare system (Halemba & Siegel, 2011; Herz et al., 2019, 2021). In comparison, studies reported 7%–30% of young people involved with the child welfare system subsequently experienced juvenile justice system involvement (Bogie et al., 2011; Cho et al., 2019; Cutuli et al., 2016; Ryan et al., 2007). This difference speaks to the relative size of each system. For context, during fiscal year 2021, child welfare agencies across the nation screened in more than 2 million referrals, reflecting the extent of child welfare involvement (U.S. Department of Health and

✉ Andrea Lane Eastman
andrea.eastman@usc.edu

¹ Children's Data Network, Suzanne Dworak-Peck School of Social Work, University of Southern California, 1150 South Olive Street, Suite 1400, Los Angeles, CA 90015, USA

² School of Social Work, College of Social Science, Michigan State University, East Lansing, MI, USA

³ School of Criminal Justice & Criminalistics, California State University, Los Angeles, CA 90032, USA

Human Services, 2023). In contrast, courts with juvenile jurisdiction handled approximately 508,400 delinquency cases in 2020, indicating the scale of the juvenile justice system (Office of Juvenile Justice and Delinquency Prevention, 2023). These findings also illuminate the connection between child welfare experiences and delinquency court involvement.

Although estimates of dual system involvement provide an overall prevalence rate, a clearer picture emerges when other factors are considered. For example, studies showed that greater child welfare system involvement, as evidenced by factors like more reports of maltreatment or out-of-home placements, is associated with an increased likelihood of serious juvenile justice system involvement (Herz et al., 2019; Huang et al., 2012; Kolivoski et al., 2014, 2017). An increased likelihood of dual system involvement has been documented among young people who experience out-of-home placements (Kolivoski et al., 2014, 2017; Malvaso et al., 2019; Ryan et al., 2007; Ryan & Testa, 2005). Although research has demonstrated a link between out-of-home foster care placement and subsequent juvenile justice involvement, it has fallen short of understanding the factors that drive this relationship. Consequently, understanding factors associated with dual system involvement among young people who were placed in foster care is essential for disrupting this relationship.

Findings from previous research on the maltreatment–delinquency relationship offer a starting point to further explore the relationship between experiences while living in foster care and the likelihood of juvenile justice system involvement. Several factors that may help explain this relationship include: (a) leaving foster care without permission (i.e., absence from care); (b) commercial sexual exploitation; (c) residential instability in out-of-home foster care; and (d) developmental timing of foster care. This study explored the role of these factors, contributing to a better understanding regarding the relationship between out-of-home foster care and dual system involvement.

Experiences in Foster Care

Absence from Care

Temporary absence from care (i.e., leaving out-of-home foster care without permission, missing from care, or running away) is not considered a crime; however, minors (i.e., young people under age 18) are required to return to their foster care residence, as enforced by child welfare workers or law enforcement. Research has shown that being absent from care is prevalent among young people involved in both the child welfare and juvenile justice systems. Specifically,

an estimated two thirds of young people with dual system involvement have a history of being absent from foster care (Prince et al., 2019). Sarri and colleagues (2016) found that young people who were placed in foster care and had a history of absence from care experienced contact with the justice system twice as often as those without such a history.

Although the reasons a young person may be reported as absent from care vary widely, they commonly include the desire to contact and connect with families and friends, feeling unsafe or uncared for in the home, and seeking autonomy and freedom (Child Welfare Information Gateway, 2020). Studies have documented factors associated with being absent from care, including individual characteristics and living situations in foster care. Girls and Black young people were more likely than boys or White young people to be absent from care (Chor et al., 2021; Courtney & Zinn, 2009; Sarri et al., 2016; Wulczyn, 2020). Additionally, research indicated that young people who entered foster care during adolescence were more likely to be absent from care compared to those who entered care at an earlier age (Chor et al., 2021) and that adolescents aged 12 or older were more likely to experience such an episode than children younger than 12 (Sarri et al., 2016). Regarding foster care experiences, research has documented a relationship among living in group home settings, absences from care, and involvement in the justice system (Dierkhising et al., 2020, 2022; Prince et al., 2019; Ryan et al., 2008; Wulczyn, 2020).

Commercial Sexual Exploitation

Despite federal law stating that the commercial sexual exploitation of children and young people is a severe form of human trafficking that does not require proof of force, fraud, or coercion (Victims of Trafficking and Violence Protection Act, 2000), several states still criminalize young people for their exploitation (e.g., arrest for prostitution) or circumstances related to their experiences of commercial sexual exploitation (e.g., substance use, absence from care). Twenty states have enacted immunity laws that decriminalized prostitution-related offenses for minors; 29 states have diversion laws for prostitution-related offenses for minors that strive to reroute young people to services or expunge their cases, though they are still served in the juvenile justice system; and 18 states practice both immunity and diversion (Williams, 2017). Thus, young people experiencing commercial sexual exploitation often become involved in both the child welfare and juvenile justice systems (Dierkhising et al., 2023).

As of 2022, 36 states have changed their statutory language to explicitly include commercial sexual exploitation or sex trafficking as a form of child abuse (Child

Welfare Information Gateway, 2022). Young people who are involved with the child welfare system have been found to have an increased likelihood of commercial sexual exploitation, with one study estimating that 3%–15% of the child welfare population may have experienced commercial sexual exploitation (Tueller et al., 2023) and another study suggesting that nearly 27% is at risk of experiencing commercial sexual exploitation (Panlilo et al., 2022). Despite increased recognition of commercial sexual exploitation as a form of child abuse, children and young people experiencing commercial sexual exploitation often experience involvement in the juvenile justice system (Dierkhising et al., 2023). For instance, a study comparing the rates and nature of juvenile justice system contact between girls who had or had not experienced commercial sexual exploitation found that those with commercial sexual exploitation histories were more likely to have contact with the justice system more frequently (as measured by arrests, petitions sustained, entry to detention) than girls without commercial sexual exploitation histories (Dierkhising et al., 2023). In another study of girls residing in a group home program for young people at risk of commercial sexual exploitation, nearly half of participants with a commercial sexual exploitation history also had contact with the juvenile justice system (Hickle & Roe-Sepowitz, 2018).

Residential Instability

Studies have shown that young people in foster care encounter substantial challenges in achieving stable living arrangements and residential permanence (Metcalf et al., 2022; Rubin et al., 2006). Factors associated with residential instability encompass both young peoples' demographic characteristics and foster care placement characteristics (e.g., group home care, longer stays in care; Chateauf et al., 2022; Konjin et al., 2020; Montserrat et al., 2020; Platt & Gephart, 2022). Instability in foster care is linked to undesirable outcomes, such as changes in schools, disruptions in education, and mental health issues (Chateauf et al., 2022; Leone & Weinberg, 2012; Liming et al., 2021; Woodall et al., 2023; Zima et al., 2000), which interferes with the crucial emotional and social development necessary for healthy growth in youth (Stott & Gustavsson, 2010).

Demographic Characteristics

Gender

Studies have yielded mixed findings regarding gender-specific differences in justice system involvement among young people with dual system involvement. For example,

Jonson-Reid (2002) found that the rate of juvenile incarceration for girls increased in accordance with the level of child welfare involvement (e.g., investigation, open case, foster care), whereas the rate for boys remained relatively similar across levels of child welfare involvement. In contrast, DeGue and Spatz Widom (2009) found the opposite when exploring the risk of adult arrest among young people with a history of child maltreatment.

Traditionally, research on justice system involvement has primarily focused on male samples due to their overrepresentation in the legal system. However, national statistics from the Office of Juvenile Justice and Delinquency Prevention show that girls account for nearly a third of juvenile arrests (Puzzanchera, 2020). Although studies have documented that boys who have experienced child maltreatment or child welfare system involvement are more likely to have involvement with the juvenile justice system compared to girls (Malvaso et al., 2017; Ryan & Testa, 2005; Vidal et al., 2017), a recent study found that among all young people in Los Angeles (LA) County probation with a first petition, a notable proportion of those with dual system involvement were female, indicating a substantial presence of girls in the population experiencing dual system involvement (Herz et al., 2021). As previously noted, these findings highlight the challenges in capturing an accurate picture of gender differences based on male-focused samples and limitations in conducting gender-specific research, particularly among girls, emphasizing the need for further investigation.

Race and Ethnicity

Throughout history, communities of color have experienced systemic neglect and unequal treatment tied to heightened rates of involvement with systems, including child welfare and justice systems (Alexander, 2011). Racial disproportionality has been documented among young people both living in foster care (Wildeman & Emanuel, 2014) and involved with the juvenile justice system (Abrams et al., 2021). Synthetic cohort life tables and data from the Adoption and Foster Care Analysis and Reporting System show that up to 5.9% of U.S. children have entered out-of-home foster care at some point between birth to age 18 (Wildeman & Emanuel, 2014). Notably, Native American children (up to 15.4%) and Black children (up to 11.5%) face a significantly increased likelihood of entering foster care.

This disproportionality persists in the juvenile legal system, where a substantial population of Black young people are overrepresented across stages. For example, estimates from the United States show that Black young people accounted for approximately one third of juvenile arrests in 2019 (Puzzanchera, 2020). Similarly, juvenile courts handled about 750,000 new cases in 2018, with Black young

people representing 35% of total cases despite comprising only 15% of the child population (Abrams et al., 2021; Sickmund et al., 2020).

Racial disproportionality, in particular, has been shown to intersect with and amplify gender differences, creating complex dynamics that exacerbate these challenges. For instance, Herz and colleagues (2021) shed light on gender-related patterns of racial disproportionality. This research, conducted in LA County, demonstrated that Black girls who faced a delinquency court petition exhibited a significantly higher rate of child welfare involvement than any other group of young people. This finding underscores the complex relationship among race, gender, and dual system involvement.

Developmental Timing of Child Welfare Involvement

Increasingly, research has shown that the developmental timing of child welfare system involvement mediates the relationship between maltreatment and delinquency or dual system involvement. Studies have explored whether the age at which a child first becomes involved in the child welfare system is associated with their likelihood of dual system involvement. Bright and Jonson-Reid (2008) found that as the age of first reported maltreatment increased, the likelihood of a juvenile court petition also increased. Another study examining children with an open child welfare case (Goodkind et al., 2020) showed that having an open case in the child welfare system after age 14 increased the likelihood of entering the juvenile justice system, which mediated the association between age at first child welfare system contact and jail involvement as an adult. Additionally, prior research focusing on living situations in foster care consistently demonstrated the significance of age. DeGue and Spatz Widom (2008) found that entering foster care before age 1 was associated with a decreased risk of arrest as both a juvenile and an adult, whereas experiencing foster care by age 7 or older was associated with an increased rate of arrest as both a juvenile and an adult. A study by Cutuli and colleagues (2016) showed that children who entered foster care at age 9 or older were more likely to have subsequent justice system involvement than children who first experienced out of home care earlier in life. This highlights the importance of understanding the relationship between the developmental timing of child welfare system involvement and subsequent dual system involvement.

Thornberry and colleagues (2010) explored the theory of developmental timing as it relates to system involvement, showing that young people who experienced maltreatment from childhood into adolescence (i.e., persistent maltreatment) and during adolescence only (i.e., adolescent-limited maltreatment) were more likely to engage in delinquency

compared to those experiencing maltreatment during childhood only. More recently, Malvaso and colleagues (2017) also found the developmental stages at the time of maltreatment mattered, with childhood-limited maltreatment being associated with a reduced likelihood of convictions and both adolescent-limited maltreatment and persistent maltreatment being associated with a greater likelihood of later convictions.

Herz and colleagues (2023) also demonstrated the importance of the developmental timing of maltreatment and dual system involvement when they used sequence analyses to empirically identify pathways of dual system involvement in a cohort of young people who had child welfare involvement and a delinquency court petition at some point in their lives in LA County. Analyses produced five pathways distinguished by the level of child welfare involvement combined with the developmental stages in which involvement occurred. A comparison of juvenile justice experiences across pathways showed that young people with child welfare involvement during adolescence only or across childhood and adolescence were more likely to have more placements while in foster care, experience more serious juvenile justice involvement, and have subsequent recidivism.

Present Study

This study sought to extend our understanding of factors that influence dual system involvement among young people who experience out-of-home foster care, using linked data from child welfare and probation departments in LA County. Studies that have focused on dual system involvement among young people in foster care often were focused on concurrent involvement in both systems (e.g., Cutuli et al., 2016) or did not examine lifetime child welfare experiences (e.g., Bogie et al., 2011; Cho et al., 2019). The present study examined the prevalence of juvenile court petitions in a population of young people who entered foster care between birth and age 18. Specifically, this longitudinal study explored the following questions:

1. What is the overall prevalence of dual system involvement among individuals who were born between 1998 and 2001 and lived in foster care in LA County between birth and age 18?
2. How does the prevalence of dual system involvement vary based on demographic characteristics among young people in foster care?
3. To what extent are experiences in foster care (e.g., timing, type, or instability of residence) associated with the likelihood of dual system involvement?

Method

Data

Data from California's Child Welfare Services/Case Management System were used to first identify all young people born between 1998 and 2001 who lived in foster care in LA County between birth and their 18th birthday. Next, these records were probabilistically linked to LA County probation records from 2012 to 2019 using machine learning software, ChoiceMaker. This process yielded a match for young people aged 14 to 18 (applicable age for juvenile court jurisdiction oversight in California) to examine juvenile justice involvement as measured by a juvenile delinquency court petition.

Variables

Dual System Involvement

Based on linked data, the outcome was measured based on whether young people had an official delinquency petition in juvenile court by their 18th birthday (yes or no), capturing the status of (a) living in foster care only or (b) dual system involvement.

The study included several independent variables for demographics and experiences in foster care. Demographic characteristics included two measures, gender and race and ethnicity, as recorded by child welfare caseworkers and entered in statewide administrative records.

Gender

Gender was coded as male or female; because other gender categories were rarely coded, such information is too small to share given data-security permissions.

Race and Ethnicity

This variable was categorized as Hispanic, non-Hispanic Black, non-Hispanic White, and other or missing. These categories are not ideal because they do not represent how individuals self-identify but instead are based on documentation by caseworkers in established categories. To maintain data anonymity and adhere to data-sharing agreements, stratification into additional race and ethnicity subcategories was not possible. The largest racial or ethnic group in LA is Hispanic; other races and ethnicities were compared with the largest group for all analyses. This decision allowed for a contextually relevant interpretation of the findings within the demographic landscape of the county.

Characteristics of living situations in foster care included residential stability, foster care residence, developmental timing of placements, experience with commercial sexual exploitation, and absence from care.

Residential Stability

The cumulative length of time in care and number of residential transitions were captured through three categories indicating if young people stayed in care across foster care episodes for: (a) less than a year by age 18; (b) longer than a year, with one or two transitions; and (c) longer than a year, with three or more transitions.

Type of Foster Care Residence

This indicator was captured through five binary variables (yes or no) indicating whether a young person had ever lived in the following living arrangements: relative foster homes, nonrelative foster homes, foster family agencies, group homes, and guardianship or preadoption residential settings. County agencies in California use foster family agencies for children with intensive care needs as an alternative to group homes. These agencies operate under the umbrella of a non-profit agency that is responsible for recruiting, certifying, supporting, and training foster parents and finding suitable temporary or permanent residences for children requiring more intensive care.

Developmental Timing of Foster Care

This variable captures the age of the child when they lived in out-of-home foster care in the county, supervised by the LA Department of Children and Family Services. The developmental timing of foster care was coded based on the classification developed by Thornberry and colleagues (2010) and applied by Herz and colleagues (under review) using three categories: (a) childhood only (i.e., foster care between birth and age 10 only); (b) adolescent only (foster care between ages 11 and 18 only); or (c) persistent (foster care in both childhood and adolescence).

Commercial Sexual Exploitation

Commercial sexual exploitation was coded dichotomously and measured based on the presence of any maltreatment investigation related to commercial sexual exploitation occurring between ages 0 and 18 years (yes or no), as documented in state administrative child welfare records.

Absent from Care

This was coded as a dichotomous variable (yes or no) derived from a structured field based on a caseworker's documentation that a young person had been absent from care by age 18.

Analysis

Chi-square tests compared demographic characteristics and experiences in foster care between young people with a juvenile delinquency court petition (dual system involvement) and those without (foster care involvement only). To prevent Type I errors and ensure a more conservative approach to evaluating statistical significance, a Bonferroni-adjusted alpha level of $p < .005$ was employed and results were reported if they were significant at a .001 level. Additionally, we computed effect sizes using Cramér's *V* to better characterize the strength of relationships of statistically significant results. Cramér's *V* is a measure of the association and effect size based on chi-square and ensures that the significance of the results is not overstated due to the size of the population.

Next, generalized linear models were used to estimate risk ratios (RRs) to examine the association between each variable and the likelihood of dual system involvement among young people who were placed in foster care. We used a modified Poisson regression technique, with a Poisson distribution and log link, and included a robust standard error adjustment to address potential overestimation of confidence intervals (UCLA Statistical Consulting Group, n.d.). Model fit was measured with the Akaike information criterion and Bayesian information criterion. For example, in the model of the full population, the Akaike information criterion was 0.53 and the Bayesian information criterion was $-292,236.9$, suggesting a balance between fit and complexity.

The analysis was conducted for the entire population and stratified by gender. This decision was informed by prior research that highlighted gender-specific distinctions in these relationships and the results of a likelihood ratio test. A likelihood ratio test was conducted to determine whether the relationship between the independent variables and dual system involvement differed significantly between boys and girls. Interaction terms accounting for gender-specific differences were included in the model and the likelihood ratio test demonstrated that the addition of interaction terms significantly improved the model fit.

To further assess the relationships among variables, a correlation matrix was generated. The matrix revealed modest correlations between variables, with a moderate association between absence from care and the likelihood of a juvenile

court petition. To address this, the final model underwent robustness testing by including and excluding the variable absent from care to assess if it affected the model results. The results remained robust, reinforcing the reliability and consistency of the model. Additionally, variance inflation factor analysis was conducted to assess multicollinearity among independent variables in the generalized linear models. The values were low, ranging from 1.01 to 1.43, indicating that multicollinearity was not a significant concern in the final model.

Findings, reported using RRs, show the relationship between variables and the likelihood of a juvenile court delinquency petition while accounting for other factors. All analyses were completed using Stata-MP (version 17.0).

Results

In response to our first research question, we found that among all young people born between 1998 and 2001 who experienced out-of-home care in LA County foster care at any point between birth and age 18 ($N=29,434$), 8.7% experienced a juvenile court delinquency petition by their 18th birthday. This prevalence of dual system involvement varied significantly for groups of young people by demographic characteristics and experiences while living in out-of-home foster care.

Bivariate Analysis

Table 1 responds to our second research question regarding variation in the prevalence and differences between young people who were placed in foster care only and those who had dual system involvement. Although foster care involvement was about equal for boys and girls, boys were significantly more likely than girls to experience dual system involvement, $\chi^2(1)=226.19$, $p < .001$, $V=0.09$. Among different racial and ethnic categories, there was a 1.5% decrease in Hispanic representation when comparing young people who experienced foster care only to those with dual system involvement, a 5.2% reduction in White representation, and a 6.4% decrease in other racial and ethnic groups in the population with foster care experience. In contrast, the proportion of Black young people increased by 13.2%. These changes were statistically significant, $\chi^2(3)=1,800.00$, $p < .001$, $V=0.18$.

Rates of dual system involvement were higher among young people who had longer-lasting and more unstable experiences while living in foster care. Distinct patterns emerged when considering the timing of foster care placements. Nearly two thirds of young people in foster care were only placed in foster care during childhood. In contrast, a

Table 1 Characteristics of young people with foster care or dual system involvement ($N=29,434$)

	Full population ($N=29,434$)	Foster care only ($n=26,880$)	Dual system involvement ($n=2,554$)	χ^2	<i>df</i>	V
	Column %	Column %	Column %			
Gender				226.19*	1	0.09
Girls	50.6	51.9	36.4			
Boys	49.4	48.0	63.6			
Race and ethnicity				1,800.00*	3	0.18
Hispanic	60.7	60.7	59.2			
Non-Hispanic Black	15.0	14.4	27.6			
Non-Hispanic White	12.9	13.1	7.9			
Other	11.4	11.7	5.3			
Developmental timing				678.23*	2	0.11
Childhood only (ages 0–10)	61.7	63.9	38.3			
Adolescence only (ages 11–18)	23.1	22.0	34.5			
Both	15.3	14.2	27.3			
Residential stability				555.65*	2	0.10
≤ 1 year	36.1	36.2	35.4			
> 1 year and 1–2 residences	22.4	24.0	5.6			
> 1 year and > 2 residences	41.5	39.8	58.9			
Absent from care	4.8	3.4	19.4	1,300.00*	1	0.21
Commercial sexual exploitation	2.7	2.0	9.8	529.85*	1	0.13
Type of foster care residence						
Relative foster home	60.8	60.8	60.6	0.02	1	0.00
Nonrelative foster home	21.8	21.5	25.7	22.40*	1	0.03
Foster family agency	62.7	62.6	64.0	1.87	1	0.01
Group home	13.5	10.3	41.5	655.95*	1	0.15
Guardian or preadoption	27.7	28.8	12.6	287.30*	1	0.10

* $p < .001$

significantly greater proportion of young people who had dual system involvement were placed in foster care during childhood and adolescence, $\chi^2(2)=678.23$, $p < .001$, $V=0.11$. Although not included in the tables, we found that young people with only foster care involvement were 5.8 years old on average at the time of their first entry in a foster care residence, whereas young people with dual system involvement were 7.6 years old on average. Among young people who were in foster care only, 36.2% had spent less than a year in care, whereas 24.0% had spent more than 1 year in care with few residential transitions. In contrast, among young people who experienced dual system involvement, 58.9% had spent more than 1 year with two or more residential transitions. Only 3.4% of young people in foster care only had been reported as being absent from care, whereas a significantly higher proportion, 19.4%, of those with dual system involvement had experienced absences from care, $\chi^2(1)=1,300.00$, $p < .001$, $V=0.21$. Similarly, 2.0% of young people who were in foster care only experienced commercial sexual exploitation, whereas a significantly higher percentage, 9.8%, of those with dual system involvement had such an experience documented, $\chi^2(1)=529.85$, $p < .001$, $V=0.13$. Rates of dual system

involvement were higher among those who had lived in nonrelative foster homes, $\chi^2(1)=22.40$, $p < .001$, $V=0.03$, or group homes, $\chi^2(1)=655.95$, $p < .001$, $V=0.15$, yet lower among young people who had lived in guardianship or preadoption residential settings than those who did not, $\chi^2(1)=287.30$, $p < .001$, $V=0.10$. Although not shown in Table 1, we found that 31.6% of young people who had lived in a group home and 37.0% of young people who had experienced commercial sexual exploitation were reported as being absent from care at least once.

Regression Analysis

Next, we conducted generalized linear models to examine the predicted probability of dual system involvement and compared the magnitude of associations between girls and boys, accounting for covariates, in response to our third research question. Table 2 presents results regarding the full population, girls, and boys. Regarding young people placed in out-of-home foster care overall, boys were more than twice as likely as girls to experience dual system involvement. Compared to Hispanic young people, Black young people were more likely and White young people were less

Table 2 Predicted probabilities of dual system involvement ($N=29,434$)

	Overall ($N=29,434$)		Girls ($n=13,601$)		Boys ($n=13,279$)	
	<i>RR</i>	<i>99%CI</i>	<i>RR</i>	<i>99% CI</i>	<i>RR</i>	<i>99%CI</i>
Gender (ref: girls)						
Boys	2.17*	(1.92, 2.42)				
Race and ethnicity (ref: Hispanic)						
Non-Hispanic Black	1.56*	(1.37, 1.75)	1.68*	(1.46, 1.92)	1.49*	(1.35, 1.65)
Non-Hispanic White	0.68*	(0.50, 0.87)	0.83	(0.66, 1.05)	0.60*	(0.50, 0.72)
Other	0.74	(0.50, 0.87)	0.81	(0.58, 1.12)	0.70	(0.48, 1.01)
Developmental timing (ref: childhood only [0–11])						
Adolescence only (12–18)	1.36*	(1.20, 1.55)	1.37*	(1.11, 1.68)	1.36*	(1.20, 1.56)
Childhood and adolescence	1.66*	(1.45, 1.87)	1.73*	(1.36, 2.20)	1.62*	(1.41, 1.87)
Residential stability (ref: ≤ 1 year)						
> 1 year and 1–2 residences	0.40*	(0.25, 0.55)	0.32*	(0.23, 0.45)	0.45*	(0.39, 0.53)
> 1 year and > 2 residences	1.31*	(1.16, 1.48)	1.22	(0.97, 1.53)	1.38*	(1.23, 1.55)
Absence from care	2.24*	(1.93, 2.59)	2.10*	(1.76, 2.52)	2.33*	(1.99, 2.73)
Commercial sexual exploitation	2.01*	(1.69, 2.39)	2.24*	(1.83, 2.74)	1.54	(1.23, 1.93)
Type of foster care residence						
Relative foster home	0.88	(0.79, 0.98)	0.87	(0.77, 0.98)	0.89	(0.81, 0.97)
Nonrelative foster home	0.89	(0.79, 0.98)	0.87	(0.76, 1.00)	0.89	(0.80, 1.00)
Foster family agency	0.96	(-0.86, 1.07)	0.98	(0.35, 2.74)	0.95	(0.86, 1.05)
Group home	1.43*	(1.25, 1.64)	1.40	(1.13, 1.73)	1.45*	(1.28, 1.65)
Guardian or preadoption	0.52*	(0.45, 0.61)	0.49*	(0.20, 1.21)	0.53*	(0.45, 0.62)

* $p < .001$

likely to experience dual system involvement ($RR=1.56$; $99\% CI=1.37, 1.75$). When compared to young people who lived in foster care during childhood only, young people who lived in foster care as adolescents ($RR=1.36$; $99\% CI=1.32, 4.04$) or during childhood and adolescence ($RR=1.66$; $CI=1.45, 1.87$) were more likely to experience dual system involvement. Regarding foster care experiences, instability in living situations (staying in care for more than a year, with three or more residential transitions; $RR=1.31$; $CI=1.16, 1.48$) and a history of group home care ($RR=1.43$; $CI=1.25, 1.64$) were significantly associated with a heightened rate of dual system involvement. Additionally, being absent from care ($RR=2.24$; $CI=1.93, 2.59$) and experiencing commercial sexual exploitation ($RR=2.01$; $CI=1.69, 2.39$) were associated with the greatest likelihood of dual system involvement among the independent variables.

As shown in the gender-stratified models, our comparison of estimated RR s by gender suggests that the magnitude of associations of dual system involvement with race and ethnicity and some foster care experiences differed for boys than girls. Compared to Hispanic boys, Black boys had a significantly higher likelihood of dual system involvement ($RR=1.49$; $CI=1.35, 1.65$). This suggests that Black boys were 1.49 times as likely to experience dual system involvement. Compared to Hispanic girls, Black girls had a significantly higher predicted probability of dual system involvement ($RR=1.68$; $CI=1.46, 1.92$). The relationship

between residential instability in foster care (as evidenced by longer stays with three or more residences) and dual system involvement was stronger for boys ($RR=1.38$; $CI=1.23, 1.55$) than girls ($RR=1.22$; $CI=0.97, 1.53$). Finally, the results show a greater association between experiences of commercial sexual exploitation and dual system involvement for girls ($RR=2.24$; $CI=1.83, 2.74$) than boys ($RR=1.54$; $CI=1.23, 1.93$), whereas the association between being absent from care and dual system involvement was greater for boys ($RR=2.33$; $CI=1.99, 2.73$) than girls ($RR=2.10$; $1.76, 2.52$).

Discussion

This study documented the prevalence of dual system involvement among young people born between 1998 and 2001 who were in out-of-home foster care residences in LA County. Young people who experienced dual system involvement significantly differed from those who only experienced out-of-home foster care in terms of their demographics and by experiences in foster care. Several noteworthy findings emerged.

First, concerning demographic characteristics, we found that boys and Black young people of both genders experienced elevated rates of lifetime dual system involvement. This finding is consistent with prior research documenting that Black boys are disproportionately affected by dual system involvement (Bogie et al., 2011; Cho et al., 2019; Cutuli

et al., 2016; Herz et al., 2019). The overrepresentation of Black individuals among those with dual system involvement reflects the issues of longstanding racism and neglect of marginalized communities as well as implicit and explicit biases. Research has demonstrated that Black children and young people are seen as older than their non-Black peers, more culpable for their actions in a criminal justice context, and less innocent (Goff et al., 2014). Further, research has suggested Black girls can be oversexualized, making them more susceptible to the sexual violence-to-prison pipeline (Ocen, 2015; Saar et al., 2019). It is crucial to document disproportionality in systems to evaluate the effectiveness of policies that aim to address racial disproportionality. A commonly recommended practice in the juvenile delinquency court systems is implementing diversion policies and programs (Mendel, 2022)—simply diverting as many young people as possible away from the system can reduce disproportionality.

Second, our findings also show that young people who experienced dual system involvement had unique experiences in comparison to those who were only involved with foster care, as evidenced by greater instability in foster care residences, longer stays in care, and more absences from care. This is in line with findings from previous studies showing the relationship between residential instability and offending behavior and justice system involvement (DeGue & Spatz Widom, 2009; Goodkind et al., 2013; Malvaso et al., 2019; Yampolskaya & Chuang, 2012). Young people in the child welfare system, particularly those residing in group home environments, may be subject to higher levels of surveillance than those living with their families (Goodkind et al., 2020). This heightened supervision may help explain the relationship between being absent from care and juvenile delinquency court involvement, extending beyond externalizing behaviors or behavioral health concerns. Developmentally normal behaviors, such as walking to a store or trying to see family, could be penalized due to policies or regulations in group home settings (e.g., a curfew). Examining specific system-level processes and practices contributing to the relationship between absences from care and involvement with the justice system involvement can inform policymaking and practice efforts to reduce dual system involvement.

Results set a baseline for the rate of dual system involvement among young people living in foster care prior to the enactment of federal policies that aim to reduce reliance on the use of group homes (Covington et al., 2023; Ryan, 2008). Group homes are reserved for young people who require intensive levels of care or supervision, such as those with behavioral health concerns. Stays in group homes have been linked to increases in being absent from care (Latzman et al., 2019), longer stays in foster care (Children's Bureau, 2015),

and contact with the juvenile justice system (Goodkind et al., 2013; Ryan et al., 2008). For example, Ryan and colleagues (2008) found that young people with at least one stay in a group home were 2.4 times more likely to be arrested than those without group home experiences. In addition, research has documented that group homes are most likely to be used for older adolescents and Black young people (Covington et al., 2023), suggesting that group homes may exacerbate existing racial disproportionality in juvenile justice system involvement (Goodkind et al., 2013; Malvaso et al., 2019; Ryan, 2008, 2012).

At the same time, federal efforts aimed at limiting the use of group homes have reduced the availability of residences for young people in foster care, leading to inappropriate stays in child welfare offices, emergency rooms, hotels, and homeless shelters (Hughes et al., 2023). Given that the current study provides further evidence of a relationship between residing in group homes and an increased likelihood of subsequent delinquency court involvement, future research should explore if efforts to reform or reduce the use of group homes are associated with changes in the prevalence of dual system involvement. There may be a need to explore what more needs to be done to create alternatives to group homes and improve services or policies at group homes to effectively prevent subsequent juvenile delinquency court involvement.

Relatedly, we found evidence that developmental timing plays a role in dual system involvement. Specifically, those who experienced out-of-home care during adolescence only or across both childhood and adolescence were more likely to experience dual system involvement than those who experienced out-of-home care during childhood only. This finding could simply be due to the fact that a young person who had contact during childhood no longer lives in LA County and experienced juvenile delinquency court involvement in another region. However, the results also show a greater likelihood of dual system involvement among young people who were in foster care during in childhood and adolescence, in comparison to in adolescence only. These results call for more research on how the developmental timing of child welfare system involvement might explain variations in the likelihood of juvenile delinquency court involvement. As Herz and colleagues (2023) found, developmental timing may be a core aspect of dual system pathways and could offer important opportunities for disrupting delinquency trajectories.

Finally, we found that experiencing commercial sexual exploitation significantly increased the likelihood of dual system involvement, particularly among girls, despite efforts to provide services through child welfare rather than juvenile delinquency court. Research has shown that young people involved in the child welfare system with histories

of commercial sexual exploitation were more likely to have juvenile justice system involvement and had complex backgrounds of frequent stays in group homes, episodes of being absent from care, and instability in living situations while in care (e.g., Hickle & Roe-Sepowitz, 2018; Pullmann et al., 2020). However, examining the rates of dual system involvement among young people who have experienced commercial sexual exploitation and periods of absence from care poses a potential challenge related to endogeneity. Both commercial sexual exploitation and absences from care may attract attention from the legal system. This bidirectional relationship makes it more difficult to determine the direction of the relationship and warrants further investigation.

That said, the finding that a greater proportion of young people with dual system involvement have experienced commercial sexual exploitation compared with young people with foster care only involvement highlights the potential for punitive responses to commercial sexual exploitation. Prior research has called for adopting a flexible and trauma-informed approach that recognizes young people's behaviors as symptoms of severe trauma (Hickle & Roe-Sepowitz, 2018). The results of past research regarding young people who have experienced commercial sexual exploitation point to the importance of training specialized staff in out-of-home care and probation departments, building capacity for various living options, offering multidisciplinary teams, providing trauma-informed care, and increasing connections with caring adults (Dierkhising & Ackerman-Brimberg, 2020; Dierkhising et al., 2020). The findings of the current research expand prior work by focusing on girls and boys separately and offer a more nuanced account of dual system involvement. Further research is needed to rigorously examine the role of gender in the associations among being absent from care, commercial sexual exploitation, and dual system involvement.

Finally, our findings show that the relationship between commercial sexual exploitation and juvenile delinquency court involvement was greater for girls than boys, whereas the relationship between an absence from care and juvenile delinquency court was greater for boys than girls. There is an established link among being absent from care, instability in living situations, and experiences of commercial sexual exploitation (Dierkhising et al., 2020, 2022). California state law now require child welfare to serve minors who experience commercial sexual exploitation (Senate Bill 855, 2014) and future efforts should explore if legal changes and new policies yielded reductions in the rate of dual system involvement among young people who experienced commercial sexual exploitation. In addition, findings might point to the under identification of boys who experience commercial sexual exploitation, given recent national data that revealed that the prevalence and frequency of

commercial sexual exploitation was higher among boys than girls (Barnert et al., 2022).

Limitations

This study provided valuable insights into factors associated with the likelihood of dual system involvement among young people who experienced foster care. However, the findings should be considered in light of a few limitations. Although administrative records provide valuable information, they are collected in the process of delivering services rather than for research purposes and may not capture the complex interactions that may lead individuals to experience contact with juvenile delinquency court.

Further, the prevalence of dual system involvement is an undercount due to a lack of information on potential child welfare and juvenile delinquency court petitions occurring outside of LA County. Individuals who lived in foster care in LA County may have experienced juvenile delinquency court system involvement in other counties, states, or countries. To obtain a more accurate picture of dual system involvement, future research should seek to include national or statewide data.

Additionally, the current study captured only young people who experienced county juvenile court petitions. Bookings and arrests that do not yield a petition (e.g., diversion programs) or contact with juvenile halls or state detention facilities are unknown and were not reflected in our results. Consequently, this limited our ability to identify the full spectrum of juvenile justice system involvement. Future research should attempt to encompass different levels of system involvement.

In addition, the findings are specific to LA County and may not be generalizable to other regions that differ regarding demographics, practices, and policies related to child welfare and juvenile justice systems. Findings related to experiences of commercial sexual exploitation are also underestimated given that this was not explicitly defined as a form of child abuse in California until the implementation of Senate Bill 855 (2014). Although commercial sexual exploitation has been listed as a maltreatment type in the California Child Welfare Services/Case Management System since its creation in 1998, data may be more accurate after 2016.

Importantly, our study did not include data on gender-expansive populations. Unfortunately, available data on these young people are scarce and not reliably collected in existing databases. It is essential to be inclusive and recognize the unique challenges and vulnerabilities faced by gender-diverse individuals involved with the child welfare and juvenile delinquency court systems. To overcome this limitation, future research should prioritize efforts to collect

and analyze data focused on gender-expansive populations. Addressing these limitations may provide a deeper understanding of dual system involvement among young people living in foster care and inform the development of more effective policies and interventions to prevent dual system involvement.

Conclusion

This study followed the trajectories of birth cohorts from 1998 to 2001 in LA County, documenting the prevalence of juvenile delinquency court involvement among individuals who had lived in foster care between birth and age 18. By linking administrative child welfare and juvenile delinquency court records, our analysis revealed that in the population of individuals who lived in foster care in the county, 8.7% encountered a juvenile court petition by their 18th birthday, representing 2,554 young people during an 8-year period.

This research offers insights into the complexities of dual system involvement, emphasizing gender differences, the presence of racial disproportionality, the role of the developmental timing of foster care, the influence of experiences in foster care, and the repercussions of experiencing commercial sexual exploitation. The interconnected nature of foster care experiences and juvenile delinquency court involvement underscores the need for collaborative efforts between child welfare and probation. Ensuring the well-being and positive trajectories of young individuals who enter foster care requires a holistic and collaborative approach to address the challenges they may encounter.

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Declarations

Compliance with Ethical Standards The current study was conducted in accordance with the ethical standards of the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

Ethics Approval Data were available through university–agency data-sharing agreements with the California Department of Social Services and the Los Angeles County Probation Department. This study was approved by state and university committees for the protection of human subjects, and a petition for research was approved by the Juvenile Dependency Court of the Los Angeles County Superior Court.

Consent to Participate A waiver of informed consent was obtained so that the researchers could use administrative records to document juvenile court petitions among young people with CPS involvement.

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