JUVENILE JUSTICE- AND DUAL SYSTEM-INVOLVED YOUTH: THE ROLE OF PRIMARY CAREGIVER MONITORING HABITS ON ADOLESCENT OFFENDING

By

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ABSTRACT

JUVENILE JUSTICE- AND DUAL SYSTEM-INVOLVED YOUTH: THE ROLE OF PRIMARY CAREGIVER MONITORING HABITS ON ADOLESCENT OFFENDING

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Adolescence is a period in which youths experience rapid physical, psychological, emotional and social changes and a desire to be autonomous and engage in adult-like behaviors. The desire for independence among adolescents can create a challenge for parents to effectively monitor their children's behavior. Although delinquency peaks adolescence, parental monitoring habits have been found to decrease juvenile offending. However, adolescents who experience child welfare system contact are at an increased risk for engaging in juvenile delinquency, particularly when the child welfare system contact occurred during adolescence. Using a secondary dataset including 532 male first-time juvenile offenders from Orange County, California, the present study assessed whether parental or primary caregivers' effort, knowledge, and monitoring remain protective factors against juvenile delinquency regardless of child welfare system contact, and whether, among dual system youth with contact with both systems, the timing of child welfare system contact moderates the relation between primary caregiver effort, knowledge, and monitoring and juvenile delinquency. Results indicated that knowledge and monitoring were protective against adolescent offending regardless of whether a youth had prior involvement in the child welfare system, but that effort was positively associated with offending. Results also suggested that the timing of child welfare system contact was not significantly related to adolescent offending. Implications for parenting and juvenile justice system practice are discussed.

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Introduction

As children enter adolescence, they begin to experience numerous physical, psychological, emotional, and social developmental changes (Adams & Berzonsky, 2008; Christie & Viner, 2005; Lionetti et al., 2019; Steinberg & Silk, 2002). Due to increased time spent with friends, engagement in extracurricular activities, development of vocational skills, and a decreased reliance on assistance from parents, adolescents begin to gain physical, emotional, and financial independence and autonomy from their parents (Christie & Viner, 2005; Lionetti et al., 2019; Steinberg & Silk, 2002; Zimmer-Gembeck & Collins, 2008). Many of these adolescent changes are also associated with engaging in delinquent behaviors, which increase during adolescence and peak during late adolescence-early adulthood (Barbot & Hunter, 2012; Hirschi & Gottfredson, 1983). This pattern of offending is known as the age-crime curve (Farrington, 1986).

Moffitt (1993) suggests that the age-crime curve can be partially explained by the "maturity gap," a disparity between an adolescent's biological and social maturation. The maturity gap may explain why some youth (adolescent-limited offenders) engage in delinquency. As adolescents develop physically, their appearance nears that of adults but they remain unable to exercise the social benefits of adulthood. As a result, youths begin engaging in adult-like behaviors (which may include crime) in an effort to demonstrate their social maturity and break through the barriers to adulthood (Moffitt, 1993). The developmental period of adolescence increases a youth's propensity to engage in delinquent behaviors, potentially due to the awareness of their maturity gap, while at the same time youths are actively separating themselves physically from their parents. This separation between parent and child limits parents' ability to effectively supervise and monitor their children.

During childhood, parents are able to supervise their child's activities and prevent them from engaging in unwanted behaviors because they maintain a physical proximity to their children. As children gain independence during adolescence, parents must adjust their methods of supervision and monitoring to match their child's new lifestyle. To protect their children and prevent them from engaging in inappropriate and antisocial behaviors, parents of adolescents must begin using more indirect forms of monitoring to gain information about their child's activities (Kerr et al., 2010; Lionetti et al., 2019; Parke & Buriel, 2007; Racz & McMahon, 2011). Such indirect forms of monitoring might include asking the youth about his or her activities, talking to their friends or friends' parents, imposing curfews, and creating household rules requiring youths to disclose where they are going, when, and with whom (Dishion & McMahon, 1998; Kerr et al., 2010). These actions are examples of parental (or primary caregiver) monitoring habits, which researchers have found to be effective in preventing delinquent behavior among youths (see reviews by Crouter & Head, 2002; Dishion & McMahon, 1998; Racz & McMahon, 2011).

In 2018, child welfare agencies across the country received approximately 4.3 million referrals for maltreatment involving approximately 7.8 million children; 2.4 million of those referrals, involving approximately 3.5 million children, met the threshold for some form of official response (Children's Bureau, 2020). In other words, approximately 3.5 million children had some form of contact with a child welfare agency in 2018. Youth with child welfare system (CWS) contact have unique experiences and characteristics, both personal and familial, which warrant attention from researchers interested in parenting practices. For example, these youths receive individualized services based on their familial needs (e.g., counseling and therapy) while enduring the consequences of maltreatment and CWS contact such as complex traumas,

increased risks for internalizing and externalizing behaviors, and engaging in juvenile delinquency (Children's Bureau, 2013; Thornberry et al., 2001). As youths navigate adolescence with the added experiences of maltreatment and/or CWS contact, they may require additional support and assistance from their parents or primary caregivers that other youths do not require.

Parental monitoring habit research has rarely focused on populations with distinct characteristics such as unique childhood or adolescent experiences (see Racz & McMahon, 2011). To our knowledge, no parental monitoring habit research has focused on youths with child welfare system contact or contact with both the juvenile justice and child welfare systems (i.e., dual system youth; see Herz et al., 2019). Through a developmental lens, the present study assessed the potential protective nature of parental or primary caregiver monitoring habits on juvenile offending among a sample of juvenile justice-involved and dual system-involved youth while considering whether, for dual system youth, CWS contact occurred during childhood or adolescence.

Literature Review

Parental Monitoring Habits: Defining the Terms

Adolescent development and delinquency researchers have defined, conceptualized, and measured parental monitoring habits in numerous ways over the past decades. Thus, drawing conclusions regarding the effects of parental monitoring habits on outcome measures is difficult. In past research, parental monitoring has been broadly defined as sets of active parenting behaviors involving awareness, attention, tracking, and supervision of a child's activities, whereabouts, and peer relationships (Dishion & McMahon, 1998; Lippold et al., 2014).

In 2000, two seminal articles were published arguing for a reinterpretation of parental monitoring measures due to a disconnect between conceptualization and measurement. Kerr and Stattin (2000) and Stattin and Kerr (2000) argued that because previous measures of parental "monitoring" most often ask study participants to report how much parents *know* about their child's whereabouts, activities, and friendships without asking *how* parents acquire their knowledge, these conceptualizations are true measures of parental knowledge rather than parental monitoring. After the publication of these two articles, definitions of parental monitoring and knowledge became more explicit in their operationalization, but the terminology and measurement of these constructs still varies significantly.

In 2011, Racz and McMahon reviewed 47 studies examining parental knowledge and monitoring Twenty-six of those studies examined parental knowledge (of which about half used the terminology "parental monitoring"), while only seven directly examined parental monitoring. Only nine of the studies examined parental monitoring and knowledge as separate constructs. There is currently no consensus on the proper conceptualization of parental monitoring habits or on which terms accurately describe the constructs of interest (Crouter & Head, 2002).

"Parental effort" has been used to describe efforts or attempts to solicit information from youths and track their whereabouts, activities, and friendships (Lippold et al., 2014). This conceptualization is similar to Stattin and Kerr's "parental solicitation," which describes those behaviors that solicit information from the adolescent about whereabouts, activities, and friendships, such as asking the youth, the youth's friends, or friends' parents (Stattin & Kerr, 2000). This is also similar to conceptualizations by Fletcher and colleagues (2004), who use the term "parental monitoring" to describe the extent to which parents try to obtain information, regardless of their actual knowledge of the youth's whereabouts, activities, and peer relationships.

"Parental knowledge" describes the extent to which parents are aware of and how much the parents really know about the child's whereabouts, activities, and peer relationships (Fletcher et al., 2004; Laird et al., 2003; Stattin & Kerr, 2000). This conceptualization is consistent throughout parental knowledge literature, though it is often labeled "parental monitoring." Finally, previous research has applied the term "parental control" to those behaviors the present study considered to be "monitoring," such as parental rules and restrictions regarding the youth's whereabouts, activities, and friendships and the extent to which decisions are made by parent figures rather than the youths themselves (Fletcher et al., 2004; Stattin and Kerr, 2000).

In the present study, primary caregiver "monitoring habits" is an umbrella term encompassing three independent constructs: effort, knowledge, and monitoring. The present study measured effort, knowledge, and monitoring to assess how much parents or primary caregivers (1) *try* to know about their child's whereabouts, activities, and friendships; (2) *really* know about their child's whereabouts, activities, and friendships; and (3) the extent to which they implement household rules restricting youths' movements and activities, respectively.

Because many studies only measure parental knowledge (see Crouter & Head, 2002 for a review), it is important that current parental monitoring habit research is deliberate in its measurement and includes separate and distinct measures of effort, knowledge, and monitoring.

Parental Monitoring and Adolescent Behavior

Across definitions and measurement of parental monitoring, monitoring habits are consistently related to adolescent behavior. Of the three parental monitoring habits discussed in the present study, parental effort has been the least researched as a construct independent from parental knowledge. However, specific measures of "active parent effort to monitor youth" have been found to be associated with lower delinquency and substance abuse (Lippold et al., 2014).

Measures of parental knowledge have yielded consistent results. Low parental knowledge is associated with higher rates of involvement in delinquent activity in both cross-sectional analyses (Fletcher et al., 2004; Kerr et al., 2010; Stattin & Kerr, 2000) and longitudinal analyses (Laird et al., 2003; Crouter & Head, 2002). Parental knowledge has also been linked to increased engagement in other antisocial and problem behaviors, such as smoking, drug use, and risky sexual behavior (Borawski et al., 2003; Stattin & Kerr, 2000; Steinberg et al., 1994; Crouter & Head, 2002). Steinberg and colleagues (1994) found that youth who report lower levels of parental knowledge (defined as parental monitoring) are more likely to begin using drugs within a one-year follow-up period than those youths whose parents had more knowledge of their whereabouts, activities, and peer relationships. Using a sample of low-income minority youth, Li and colleagues (2000) found that lower levels of parental knowledge (defined as parental monitoring) correspond to an increased risk of engaging in drug trafficking and drug use, both cross-sectionally and longitudinally.

Parental monitoring research displays similar results to parental knowledge research with respect to adolescent behavioral outcomes. Low levels of parental monitoring are associated with early alcohol and substance use, smoking, and antisocial and delinquent behavior (Fletcher et al., 2004; Dishion & McMahon, 1998). Using a measure of negotiated unsupervised time with peers that is not dissimilar to parental monitoring, Borawski and colleagues (2003) found that increased unsupervised time with peers (i.e., lower parental monitoring) was associated with an increase in sexual activity and use of tobacco, alcohol, and marijuana.

In all, parental monitoring habits are consistently found to be associated with lower antisocial behaviors and delinquency among adolescents. However, studies of parental monitoring habits have not assessed effort, knowledge, and monitoring with samples of youth at high risk for engaging in delinquency. The present study addressed this gap in the literature by testing the utility of parental effort, knowledge, and monitoring on adolescent offending among a sample of adolescents with increased risks for engaging in adolescent offending: juvenile justice-involved and dual system-involved youth.

The Child Welfare System and its Impact on Adolescents

In 2018, an estimated 3.5 million children experienced some form of contact with child welfare systems across the United States, whether it be an investigation into maltreatment or an alternative response (Children's Bureau, 2020). When responding to allegations of maltreatment, most child welfare agencies use similar processes. First, referrals for alleged maltreatment are screened in (and from then on called a report) to receive an investigation or alternative response if they meet the agency's criteria for response. Once screened in for a response, an investigation into the report is conducted to determine whether the child experienced maltreatment or is at risk

of being maltreated. Investigations result in a disposition, such as whether the report of maltreatment was found to be substantiated or unsubstantiated (Children's Bureau, 2020).

Child welfare agencies also provide prevention and postresponse services to families, including housing and food assistance, childcare, parenting education, therapy, and family safety planning (Children's Bureau, 2013). Additionally, if it is determined that court authority is required to protect the child, agencies may initiate court actions such as supervision by a juvenile dependency or family court, or criminal charges against the parents. Children may be removed from the home and placed in kinship care, foster care, or a group or residential home if it is determined that the children are not safe in the care of their parents (Children's Bureau, 2013).

Youths with these experiences are at an increased risk for engaging in delinquency and coming into contact with the juvenile justice system when compared to youths who have never experienced maltreatment or CWS contact (see review by Vidal et al., 2019; Grogan-Kaylor et al., 2007, Herz et al., 2010; Jonson-Reid & Barth, 2000). The risk of delinquency associated with experiencing maltreatment and CWS contact warrant further attention in parental monitoring habit research, which can identify the ways in which monitoring habits could reduce the risk of engaging in delinquent behavior among this population.

Dual System Youth

Adolescents who experience maltreatment and CWS contact are not guaranteed to become delinquent, but these experiences do increase a youth's likelihood of engaging in delinquency and coming into contact with the juvenile justice system (e.g., via arrest; Vidal et al., 2019; Grogan-Kaylor et al., 2007, Herz et al., 2010; Jonson-Reid & Barth, 2000). Because youth with experiences of maltreatment and CWS contact are overrepresented in the juvenile

justice system (Vidal et al., 2019; Goodkind et al., 2013), researchers have proposed specific terminology to describe youth who experience maltreatment and engage in juvenile delinquency.

Herz and colleagues (2019) propose five different terms to describe these youth. *Crossover youth* describes those youth who experience maltreatment and engage in juvenile delinquency but who may not have contact with either the juvenile justice or child welfare system. *Dual system youth* applies to crossover youth who have contact with both systems in some way (e.g., formal and/or informal contact) regardless of whether the systems contact occurs independently or simultaneously. *Dual contact youth* applies to dual system youth who have some form of contact with both systems independently, while *dually-involved youth* applies to dual system youth who have some form of contact with both systems simultaneously. Finally, *dually-adjudicated youth* is a subgroup of dually-involved youth who simultaneously have formal contact with each system, such as a substantiated child welfare case and an adjudication in the juvenile justice system. The researchers also distinguish between two different pathways between the two systems: the *juvenile justice pathway* applies when contact with the juvenile justice system occurs prior to contact with the child welfare system, while the *child welfare pathway* applies when youth have contact with the child welfare system prior to contact with the juvenile justice system (Herz et al., 2019).

There is large variation in estimates of youth who crossover from the child welfare system to the juvenile justice system, potentially due to the methods of identifying these youth and variations in the terminology used in research. While reviewing prevalence estimates of youth with some method of transition from child welfare to juvenile justice, Vidal and colleagues (2019) identified studies indicating rates of crossover ranging from 2%-42%. The present study used a sample that includes both youth with juvenile justice system contact (JJ) only and dual

system (DS) youth on the child welfare system pathway, allowing for the investigation of the impacts of CWS contact on adolescent offending in a sample of juvenile offenders.

Once a child welfare system-involved youth comes into additional contact with the juvenile justice system, they are labeled as delinquent and are heavily scrutinized by juvenile justice actors such as intake workers and probation officers. DS youth may face increased risk of arrest and even more scrutiny than JJ youth, as DS youth are monitored by two systems (i.e., probation officers and child welfare caseworkers; Ryan et al., 2013). Additionally, there is a disconnect between the juvenile justice and child welfare systems, in which information sharing is lacking (e.g., the juvenile justice system may not know whether a youth has had child welfare system contact), treatment plans may be contradictory (e.g., a youth may be ordered to see two different therapists with opposing techniques and goals), and conflicting agency missions may result in gaps in services provided to DS youth (Ryan et al., 2013). DS youths have complex and intersecting needs that the juvenile justice and child welfare systems may not be able to address without collaboration, such as those associated with adolescent development and/or with maltreatment and CWS contact (Vidal et al., 2019).

The Timing of Child Welfare System Contact and Adolescent Offending

Research suggests that youth whose experiences with maltreatment and the child welfare system occurred during or persisted into adolescence are at a greater risk of engaging in delinquency and becoming involved with the juvenile justice system than those whose maltreatment and CWS contact occurred solely during childhood (Goodkind et al., 2013; Jonson-Reid & Barth, 2000). Using data from the Rochester Youth Development Study, Thornberry and colleagues (2001) examined how the timing of a substantiated maltreatment case (i.e., CWS contact) affects several adolescent outcomes. The researchers categorized substantiated

maltreated youth into four categories: early childhood-only maltreatment; late childhood-only maltreatment; adolescence-only maltreatment; and persistent maltreatment (before and after 12 years). The researchers found that youth who experienced substantiated maltreatment only in early or late childhood had similar rates of delinquency to those who had no substantiated maltreatment, but that youth whose substantiated maltreatment occurred during or persisted into adolescence were more likely to engage in delinquency (Thornberry et al., 2001).

In another study, researchers identified six maltreatment trajectories using data from a sample of 5,849 youth who experienced a substantiated case of maltreatment (i.e., CWS contact): early childhood limited-acute victimization; primary school transition-chronic victimization; primary school transition-low victimization; secondary school transition-chronic victimization; secondary school transition-low victimization; and adolescent limited-acute victimization (Stewart et al., 2005). Similar to Thornberry and colleagues (2001), Stewart and colleagues (2005) found that those youth on trajectories in which substantiated maltreatment began during or persisted into adolescence had a higher risk of offending than youth on trajectories in which substantiated maltreatment occurred only during childhood (Stewart et al., 2005).

Researchers suggest two possibilities for why youth whose maltreatment and CWS contact only occurred during childhood have better adolescent outcomes: the consequences of childhood maltreatment and CWS contact may diminish by the time children reach adolescence; or the long-term effects of maltreatment and CWS contact can be circumvented by effective interventions such as proper placements, services and resources, or close monitoring of the family (Thornberry et al., 2001). Additionally, because adolescence is a period marking significant developmental changes in the lives of youths and increased engagement in

delinquency, it is not surprising that experiencing maltreatment and CWS contact in adolescence further increases a youth's likelihood of engaging in delinquency.

To ensure consideration of the compounded experiences of adolescent developmental changes and newfound independence, increased risks for engaging in delinquency, and maltreatment and CWS experiences, the present study included a measure of the timing of each DS youth's contact with the child welfare system (e.g., childhood or adolescence). Including such a measure allowed for the assessment of how a DS youth's child welfare system contact in adolescence affects the potential protective nature of parental monitoring habits against juvenile delinquency.

Previous research has assessed the relationships between parental monitoring habits and delinquency, but to our knowledge no research has assessed the relation between monitoring habits and delinquency in a sample including DS youth. The present study included both juvenile justice system only involved youth and dual system youth on the child welfare system pathway to assess the relationships between parental monitoring habits and adolescent offending while considering the timing of a youth's CWS contact. This sample of adolescents are at high risk for engaging in delinquency due to their unique compounded experiences with adolescent developmental changes, the maturity gap, increased autonomy from parents, juvenile justice and child welfare system contact, and the associated consequences.

The Present Study

The present study assessed the protective nature of parental monitoring habits against juvenile delinquency among adolescents with juvenile justice system contact (JJ) only and adolescents with dual system (DS) contact. The present study builds on previous research and bridges the gap between parental monitoring, juvenile justice and delinquency, and maltreatment and child welfare system research while taking into consideration the timing of the youth's experiences with the child welfare system. The present study examined the utility of monitoring habits among a unique sample to determine whether these habits remain protective factors for adolescents at high risk for juvenile offending, or whether the risks corresponding with CWS contact cannot be compensated for by these parenting behaviors.

Research Questions and Hypotheses

Research Question 1: Controlling for dual system contact, do primary caregiver effort, knowledge, and monitoring protect juvenile offenders from engaging in delinquency and, if so, which primary caregiver monitoring habit is most protective against juvenile delinquency?

Hypothesis 1: Primary caregiver effort, knowledge, and monitoring are protective factors against juvenile delinquency regardless of whether a juvenile offender has also been involved with the child welfare system, and primary caregiver monitoring is most protective against juvenile delinquency.

Previous research has exhibited the potential protective nature of parental monitoring habits such as effort, knowledge and monitoring against juvenile delinquency, though this has not been tested among samples including dual system youth. As DS youth have unique sets of experiences and characteristics, it is important to extend the current literature by examining whether primary caregiver monitoring habits remain protective factors among this population. It

was hypothesized that these habits will remain protective factors against juvenile delinquency regardless of whether a youth has been involved with the child welfare system. Furthermore, it was hypothesized that primary caregiver monitoring is more protective against juvenile delinquency than primary caregiver effort and knowledge, because primary caregiver monitoring consists of active efforts to limit unwanted adolescent behaviors by implementing household rules and restrictions.

Research Question 2: Among dual system youth only, does the timing of child welfare system contact moderate the relation between primary caregiver effort, knowledge, or monitoring and delinquency?

Hypothesis 2: The timing of child welfare system contact moderates the relation between primary caregiver effort, knowledge, and monitoring, respectively, and delinquency.

Previous research has exhibited the importance of timing of CWS contact on adolescent delinquent behaviors, in that youth whose CWS contact occurred during or persisted into adolescence are at an increased risk for juvenile delinquency when compared to youths whose CWS contact occurred only during childhood. It was hypothesized that dual system youth who report higher levels of primary caregiver effort, knowledge, and monitoring will engage in less delinquency when their most recent child welfare system contact occurred during childhood than those youths whose most recent contact occurred during adolescence.

Methods

Participants

The present study utilized secondary data from the Crossroads Study, a longitudinal study of 1,216 male first-time juvenile offenders between the ages of 13 and 17. Study participants were recruited from three geographically and culturally distinct sites located in Orange County, CA (*N*=532); Jefferson Parish, LA (*N*=151); and Philadelphia, PA (*N*=533). The sample includes youth under juvenile court jurisdiction in 2011 who were arrested for low-level non-felony offenses such as vandalism, theft, possession of marijuana, and assault and battery. Official child welfare system records were collected from the Orange County Social Services Agency for those study participants who had contact with the child welfare system prior to their baseline interviews. Official child welfare system records were not obtained from Jefferson Parish, LA or Philadelphia, PA. Therefore, the present study included only participants from the Orange County, CA site (*N*=532). 14.29% of the Orange County, CA participants had prior child welfare system contact (*N*=76).

Procedures

Prior to all interviews, parental consent and youth assent was obtained for all study participants (see Fine et al., 2016). The Institutional Review Board (IRB) approved the study procedures at three institutions located near the study sites where data collection procedures occurred: University of California, Irvine; University of New Orleans; and Temple University. Each participant in the present study was interviewed within six weeks of the youth's disposition hearing for their qualifying arrest. Study researchers conducted face-to-face interviews with participants lasting approximately two to three hours in length. A Certificate of Confidentiality issued by the Department of Justice protects participants' confidentiality and exempts

participants' identity and responses from court orders, subpoenas, and other types of involuntary disclosures. Study participants were informed of the confidential nature of the study and the Certificate of Confidentiality prior to the interview. Participants were also reminded of confidentiality before being asked about sensitive information, such as criminal offending. Interview responses were documented using a secure computer-administered program.

Measures

Primary Caregiver Monitoring Habits

Primary caregiver monitoring habits were measured using a 14-item instrument to assess the degree to which primary caregivers try to know and really know about various youth whereabouts, activities, and peer relationships, as well as their implementation of household rules restricting youth activities. The instrument was adapted from Steinberg, Dornbusch, and Darling (1992). While much of the previous research uses the term "parental," this research used "primary caregiver" due to the language used in the interviews with participants (i.e., the participants were asked about their primary caregivers' habits rather than their parents'). Primary caregiver monitoring habits scales are located in the Appendix.

Primary Caregiver Effort. Youth were asked to what degree their primary caregiver *tries* to know about their activities and behaviors, including who the youth spend time with, how they spend their money, and where they go at night. Caregiver effort was measured on a 4-point Likert scale from "doesn't try at all" to "tries extremely hard." Responses to the five items were averaged to indicate each youth's primary caregivers' effort, ranging from one to four, with higher values corresponding to higher levels of effort. This measure displayed good reliability (α=.763).

Primary Caregiver Knowledge. Youth were asked to identify the degree to which their primary caregiver *really* knows about the same activities and behaviors they were asked about in regard to caregiver effort. Caregiver knowledge was measured on a 4-point Likert scale from "doesn't know at all" to "knows everything." Responses to the five items were averaged to indicate each youth's primary caregivers' knowledge, ranging from one to four, with higher values corresponding to higher levels of knowledge. This measure displayed good reliability (α=.842).

Primary Caregiver Monitoring. Youth were asked to what degree their primary caregiver implements household rules, such as curfews, to assess the caregiver's monitoring habits. Caregiver monitoring was measured on a 4-point Likert scale from "never" to "always." Responses to the four items were averaged to indicate each youth's primary caregivers' monitoring, ranging from one to four, with higher values corresponding to higher levels of monitoring. This measure displayed excellent reliability (α=.984).

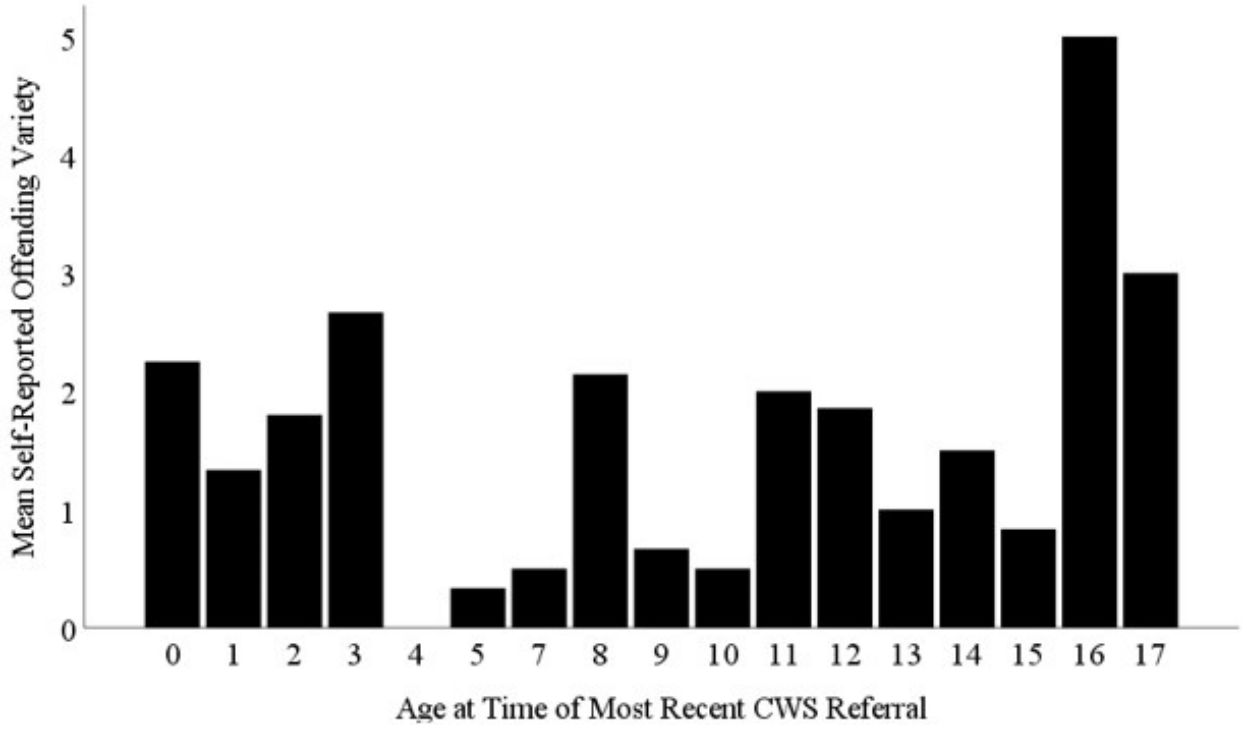
Covariates

Dual System Contact. Official child welfare system records from Orange County, CA reported which youth had been referred to the child welfare system prior to their first arrest, how many times, when each referral occurred, and the outcome of each referral. A binary variable was created to indicate whether each youth had any referral to the child welfare system (regardless of how many, when, and the outcomes) prior to their initial arrest, resulting in dual system contact (0=No; 1=Yes).

Timing of Child Welfare System Contact. Youth age at the time of their most recent child welfare system contact was calculated using the date of the most recent CWS referral as reported by official child welfare system records and the youth's date of birth as reported to the

Crossroads interviewer. The date of the most recent referral was used to indicate whether a youth's contact occurred only during childhood *or* occurred during or persisted into adolescence. Previous research indicates that the development of male secondary sex characteristics (an indication of entering adolescence; Christie & Viner, 2005) occurs between the ages of 10-12 on average (Herman-Giddens et al., 2012). This research suggests that males may enter adolescence at any point during a three-year time window. Thus, arbitrarily assigning an age marker indicating childhood or adolescence would likely be inaccurate in this study. A bar graph representing self-reported offending variety by each youth's age at the time of their most recent CWS referral is presented in Figure 1. The bar graph indicates an increase in the mean of self-reported offending variety between the ages of 10 and 11. Therefore, a binary variable was created to indicate whether each youth's most recent contact occurred between ages 0-10 (childhood), or between ages 11-17 (adolescence; 0=Childhood, 1=Adolescence).

Figure 1. Mean Self-Reported Offending Variety by Youth's Age at the Time of their Most Recent Child Welfare System Referral



Age. As evidenced by the age-crime curve, delinquent offending increases during adolescence and peaks during late adolescence-early adulthood (Farrington, 1986). The present study controlled for age. Youth self-reported their age at the time of the baseline interview.

Race/Ethnicity. Minority youth are overrepresented in the juvenile justice system (Hockenberry, 2019) and the child welfare system (Children's Bureau, 2016). The present study also controlled for race and ethnicity. Youth self-reported their race or ethnicity (White, Black, Hispanic, Native American, Other). Due to the low representation of Whites, Blacks, Native Americans, and other races/ethnicities in the sample, the present study coded race/ethnicity into a binary variable (0=Other; 1=Hispanic).

Family Crime. Because family offending is a consistent predictor of adolescent offending (Farrington et al., 2001), the present study controlled for family criminality. Youth were asked to self-report whether anyone in their family had ever committed a crime (0=No; 1=Yes).

Age at First Offense. The age at which an individual begins offending is also a predictor of adolescent offending, in which youth who begin to offend at an earlier age (i.e., early-onset offenders) later report higher levels of offending (Farrington et al., 1990). The present study controlled for the age at which each youth began to offend. Youth self-reported their age at the time of their first offense.

Self-Reported Offending Variety.

To measure adolescent offending, youth were asked to self-report their involvement in 24 illegal activities in the six months prior to their initial interview, including a variety of illegal activities ranging from shoplifting, destruction of property, selling drugs, assault, rape, to killing someone. Variety scores were calculated to measure the total number of different illegal

activities the youth engaged in. The variety scores indicate the seriousness of illegal activity, from zero to 24. The instrument was adapted from Huizinga, Esbensen, and Weihar (1991). The self-reported offending (SRO) variety scale is located in the Appendix.

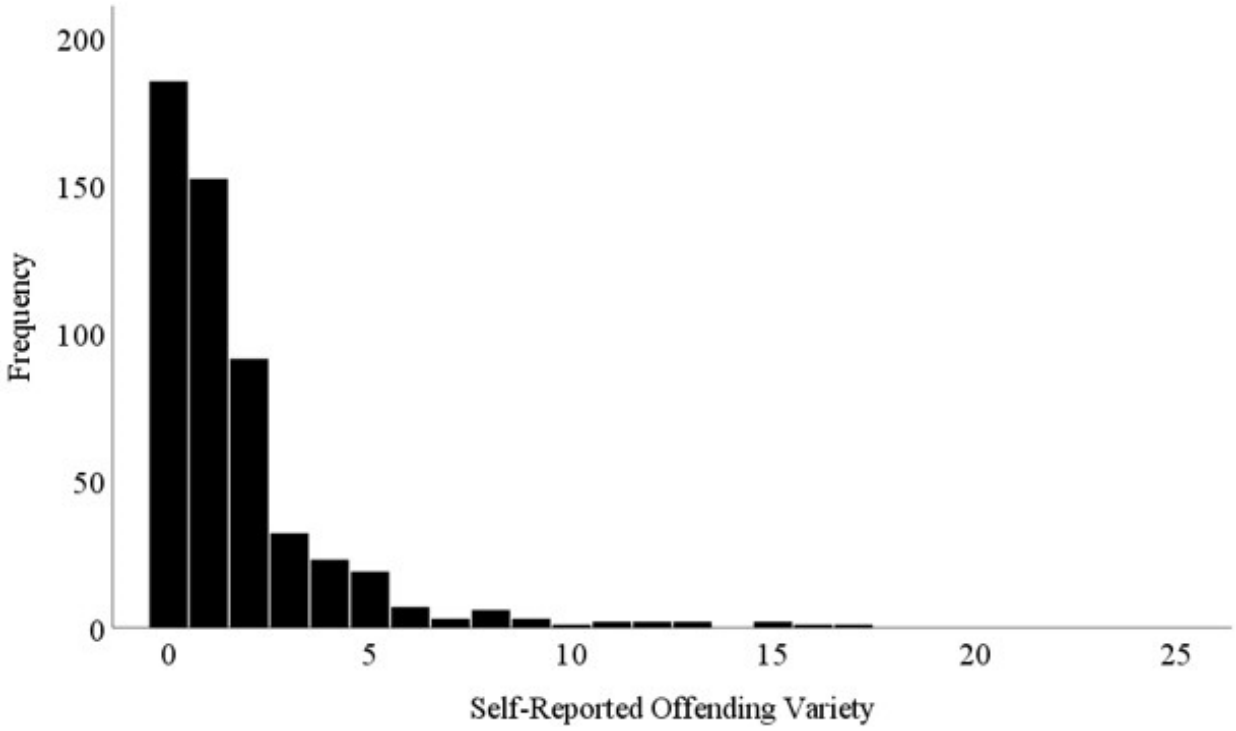
Analytic Plan

First, descriptive information is presented for all variables of interest in both the full sample of juvenile justice-involved youth and subsample of dual system youth only. Bivariate analyses were then conducted to better understand the associations between all variables of interest and collinearity statistics were analyzed.

Research Question 1

When a variable is measured in counts, is positively skewed, and has many (but not excess) zeroes, an ordinary least squares (OLS) regression is not an appropriate method to analyze the data. Instead, a Poisson regression or negative binomial regression is more appropriate (Atkins & Gallop, 2007). Results of a likelihood ratio test comparing the fit of a Poisson regression to a negative binomial regression indicated that a negative binomial test is appropriate for the present study (LR $\chi^2 = 96.595$, $p < .001$). Therefore, using the full sample of youth from Orange County, California, a stepwise negative binomial regression analysis was conducted due to positively skewed and overdispersed ($\mu = 1.69$; $\sigma^2 = 2.42$) count data in the dependent variable, SRO variety. A histogram of the frequencies of the dependent variable in the full sample is presented in Figure 2.

Figure 2. Histogram of Self-Reported Offending Variety



The first model in the stepwise analysis included dual system contact, age, race/ethnicity, family crime, and age at first offense as covariates and SRO variety as the dependent variable. This model allowed the researcher to identify the baseline relationships between the covariates and the dependent variable. The second model in the analysis also included the independent measures of primary caregiver effort, knowledge, and monitoring. Cases with any missing values were excluded from the models. The stepwise analysis allowed the researcher to identify four things: (1) the relation between the covariates (particularly dual system contact) and SRO variety; (2) how the relations between the covariates and the dependent variable change with the addition of the parental monitoring habit variables; (3) whether primary caregiver monitoring habits are protective against SRO variety; and (4) which of the three primary caregiver monitoring habits are most and least protective against SRO variety.

Research Question 2

Using the subsample of 76 dual system youth, three separate negative binomial regression analyses were conducted predicting SRO variety as a function of their primary caregivers' effort, knowledge, and monitoring and the timing of child welfare system contact. The independent variable of the first model was primary caregiver effort, the second model primary caregiver knowledge, and the third model primary caregiver monitoring. The covariates and dependent variable remained the same across models: timing of CWS contact, age, race/ethnicity, family crime, and age at first offense as covariates and SRO variety as the dependent variable. Interaction terms, created by multiplying primary caregiver effort with timing of contact, primary caregiver knowledge with timing of contact, and primary caregiver monitoring with timing of contact, respectively, were used to examine the moderating effect of timing on SRO variety. No model contained all three measures of primary caregiver monitoring habits to avoid creating a model too complex for the data. Cases with any missing values were excluded from the models.

Results

Descriptive Statistics

Full Sample

Study participants were 78.4% Hispanic, 17.5% White, 0.9% Black, and 3.2% another race/ethnicity, with a mean age of 15.49 (*SD*=1.22). Over half (54.5%) of participants reported that a family member had previously committed a crime, and participants reported a mean age at first offense of 11.44 (*SD*=2.91). Mean levels of primary caregiver effort, knowledge, and monitoring were 2.89 (*SD*=.58), 2.70 (*SD*=.69), and 3.10 (*SD*=.70), respectively. SRO variety ranged from 0 to 17 offenses committed in the previous six months with a mean of 1.69 (*SD*=2.42; see Table 1 for complete descriptive information).

Dual System Youth Sample

Dual system (DS) youth accounted for 14.29% (*N*=76) of the participants from the full sample. Half (50.7%) of DS participants experienced their most recent contact with the child welfare system during adolescence. The DS participants were 81.6% Hispanic, 13.2% White, and 5.3% another race/ethnicity, with a mean age of 15.49. 56.6% of DS participants reported that a family member had previously committed a crime, and DS participants reported a mean age at first offense of 10.84 (*SD*=3.36). Mean levels of primary caregiver effort, knowledge, and monitoring were 2.75 (*SD*=.57), 2.65 (*SD*=.68), and 3.07 (*SD*=.67), respectively. SRO variety ranged from 0 to 8 in the previous six months with a mean of 1.58 (*SD*=2.05; see Table 1).

Table 1. Descriptive Statistics

	All Youth (*N*=532)			Dual System Youth (*N*=76)		
Variable	*N*(%)	Mean(SD)	Range	*N*(%)	Mean(SD)	Range
SRO Variety		1.69(2.42)	0-17		1.58(2.05)	0-8
PC Effort		2.89(.58)	1-4		2.75(.57)	1-4

Table 1. (cont'd)

PC Knowledge		2.70(.69)	1-4		2.65(.68)	1.2-4
PC Monitoring		3.10(.70)	1-4		3.07(.67)	1.75-4
Age		15.49(1.22)	13-17		15.49(1.21)	13-17
Race						
Hispanic	417(78.4%)			62(81.6%)		
Other	115(21.6%)			14(18.4%)		
Family Crime						
No Family Crime	242(45.5%)			33(43.4%)		
Family Crime	290(54.5%)			43(56.6%)		
Age at First Offense		11.44(2.91)	2-17		10.84(3.36)	3-16
Timing of CWS Contact						
Childhood (0-10)	-			37(49.3%)		
Adolescence (11-17)	-			38(50.7%)		

Bivariate Analyses

Pearson correlations were conducted to examine the statistical association between all variables of interest. Results indicated significant negative correlations between SRO variety and primary caregiver effort, knowledge, and monitoring, though the correlation between SRO variety and primary caregiver effort is small. SRO variety was also significantly associated with age and family crime in a positive direction, and significantly associated with age at first offense in a negative direction, but not with race/ethnicity, dual system contact, or adolescent contact. Pearson correlations are presented in Table 2. Due to the moderate-high correlations between primary caregiver effort, knowledge, and monitoring, collinearity statistics of all variables of interest were assessed. Results indicated no multicollinearity among the primary caregiver monitoring habits, as VIF is close to 1 (Chen, 2008). Collinearity statistics are presented in Table 2.

Table 2. Correlations and Collinearity Statistics Between all Variables of Interest

	1.	2.	3.	4.	5.	6.	7.	8.	9.	VIF
1. SRO Variety										-
2. PC Effort	-.092*									1.455
3. PC Knowledge	-.384**	.496**								1.666
4. PC Monitoring	-.303**	.430**	.517**							1.466
5. Age	.124**	-.019	-.144**	-.077						1.068
6. Hispanic	-.046	.069	-.039	-.069	-.085*					1.034
7. Family Crime	.182**	-.037	-.160**	-.085	.085	-.067				1.059
8. Age at First Offense	-.205**	.084	.162**	.183**	.088*	-.010	-.181**			1.101
9. DS Contact	-.019	-.099*	-.029	-.020	-.001	.032	.017	-.086		1.024
10. Adolescent Contact	.053	-.102	.039	-.007	.116	-.322**	.097	.006	-†	-†

* $p < .05$ ** $p < .01$ † Cannot be computed; Adolescent Contact is constant

Research Question 1

The first aim of the study was to assess whether primary caregiver effort, knowledge, and monitoring protect juvenile offenders from engaging in delinquency when controlling for dual system contact. Results from the stepwise multivariate negative binomial regression analysis are presented in Table 4. Both models were statistically significant at the $p < .01$ level. Neither DS contact nor race/ethnicity were associated with SRO variety in either model. Results from Model 1 indicated that when controlling for all other variables in the model, age and family crime were positively associated with SRO variety, while age at first offense was negatively associated. Specifically, for every one year increase in age, the rate of SRO variety was expected to increase by a factor of 1.123. Youths with family members who have committed a crime were expected to have 1.482 times the rate of SRO variety compared to youths without any offenders in their family. Additionally, for every one year increase in age at first offense, the rate of SRO variety was expected to decrease by a factor of 0.925. In other words, youths who began offending at an older age reported lower SRO variety than youths who began offending at a younger age.

Results from Model 2 reveal that age and family crime were no longer associated with SRO variety when primary caregiver effort, knowledge, and monitoring are added to the model. Similar to Model 1, age at first offense was negatively associated with SRO variety (IRR = 0.958). Interestingly, for every one unit increase in primary caregiver effort, SRO variety was expected to increase by a factor of 1.367. Every one unit increase in primary caregiver knowledge and monitoring was associated with expected decreases in SRO variety by factors of 0.542 and 0.776, respectively. In other words, results indicated that higher levels of primary caregiver effort were associated with *increased* offending, while higher levels of primary caregiver knowledge and monitoring were associated with *decreased* offending. Additionally,

the results revealed that primary caregiver knowledge was the monitoring habit most strongly predictive of SRO variety (IRR = 0.542).

Table 3. Stepwise Multivariate Negative Binomial Regression Analysis Predicting Self-Reported Offending Variety

	Model 1			
	B (*SE*)	95% CI	χ^2	Incidence Rate Ratio
DS Contact	-0.171 (0.163)	-0.491, 0.148	1.104	.843
Age	0.116* (0.049)	0.019, 0.212	5.548	1.123
Hispanic	-0.113 (0.137)	-0.381, 0.155	0.683	.893
Family Crime	0.393** (0.118)	0.162, 0.624	11.134	1.482
Age at First Offense	-0.078** (0.019)	-0.116, -0.041	16.736	.925
LR χ^2=43.490**	*N*=500			
	Model 2			
	B (*SE*)	95% CI	χ^2	Incidence Rate Ratio
DS Contact	-0.139 (1.173)	-0.478, 0.200	0.643	.870
Age	0.053 (1.052)	-1.149, 0.155	1.048	1.055
Hispanic	-0.173 (0.148)	-0.464, 0.177	1.366	.841
Family Crime	0.193 (0.125)	-0.053, 0.439	2.368	1.213
Age at First Offense	-0.043* (0.021)	-0.084, -0.002	4.272	.958
PC Effort	0.313* (0.129)	0.061, 0.565	5.917	1.367
PC Knowledge	-0.612** (0.109)	-0.825, -0.400	31.815	.542
PC Monitoring	-0.254* (0.104)	-0.457, -0.050	5.984	.776
LR χ^2=96.595**	*N*=472			
* $p < .05$	** $p < .01$			

Research Question 2

The second aim of the study was to assess whether the timing of child welfare system contact moderates the relation between primary caregiver effort, knowledge, or monitoring and SRO variety among dual system youth. Prior to conducting the multivariate moderation analysis

required to address the second research question, multivariate negative binomial regression analyses were conducted assessing the relation between adolescent contact, primary caregiver effort, primary caregiver knowledge, and primary caregiver monitoring, respectively, and SRO variety, while controlling for all other variables of interest. Results from the analyses are presented in Table 5. Models 1 and 2 were not statistically significant, while Models 3 and 4 were statistically significant at the $p < .01$ level.

Results from the analyses indicated no significant relationship between adolescent contact or primary caregiver effort and SRO variety, respectively. However, there were significant relationships between primary caregiver knowledge and monitoring and SRO variety, respectively (see Table 5). Because there was no statistically significant main effect between the moderator variable (adolescent contact) and the dependent variable (SRO variety), the moderation analysis was not conducted.

Table 4. Multivariate Negative Binomial Regression Analysis Predicting Self-Reported Offending Variety

		Model 1		
	B (*SE*)	95% CI	χ^2	Incidence Rate Ratio
Adolescent Contact	.185 (.330)	-.462, .833	.314	1.203
Age	.254 (.142)	-.025, .534	3.182	1.290
Hispanic	-.013 (.439)	-.873, .847	.001	.987
Family Crime	.613 (.341)	-.055, 1.280	3.231	1.845
Age at First Offense	-.067 (.046)	-.158, .023	2.128	.935
LR χ^2=8.765	*N*=72			
		Model 2		
	B (*SE*)	95% CI	χ^2	Incidence Rate Ratio
PC Effort	-.394 (.307)	-.997, .208	1.646	.369
Age	.251 (.139)	-.022, .524	3.244	.978
Hispanic	.098 (.445)	-.773, .970	.049	.462

Table 4. (cont'd)

Family Crime	.682 (.349)	-.003, 1.366	3.811	.997
Age at First Offense	-.067 (.046)	-.158, .023	2.131	.854
LR χ^2=9.868	*N*=73			
		Model 3		
	B (*SE*)	95% CI	χ^2	Incidence Rate Ratio
PC Knowledge	-.722** (.238)	-1.188, -.256	9.209	.486
Age	.127 (.148)	-.164, .418	.732	1.135
Hispanic	-.130 (.419)	-.950, .691	.096	.878
Family Crime	.560 (.346)	-.118, 1.237	2.618	1.750
Age at First Offense	-.030 (.049)	-.125, .065	.379	.971
LR χ^2=17.836**	*N*=73			
		Model 4		
	B (*SE*)	95% CI	χ^2	Incidence Rate Ratio
PC Monitoring	-.740** (.240)	-1.211, -.269	9.474	.477
Age	.238 (.144)	-.045, .521	2.712	1.268
Hispanic	.139 (.466)	-.774, 1.052	.089	1.149
Family Crime	.765* (.359)	.062, 1.468	4.552	2.149
Age at First Offense	-.046 (.050)	-.144, .052	.838	.955
LR χ^2=17.683**	*N*=69			
* $p < .05$	** $p < .01$			

Discussion

The present study tested whether primary caregiver effort, knowledge, and monitoring are protective factors against juvenile delinquency among a sample of male first-time juvenile offenders when controlling for dual system contact, and whether the timing of a youth's contact with the child welfare system moderates the relations between primary caregiver effort, knowledge, or monitoring and delinquency. This study is unique in that it assessed the relationship between these parental or primary caregiver monitoring habits and offending with a sample of adolescents at high risk for engaging in juvenile delinquency: juvenile justice-involved youth and dual system-involved youth. This study bridges the gap between parental monitoring habit research, juvenile justice and delinquency research, and maltreatment and child welfare system research for the first time.

The first hypothesis was that primary caregiver effort, knowledge, and monitoring are protective factors against adolescent offending regardless of whether an offender has dual system contact and that primary caregiver monitoring is most protective against juvenile delinquency. Counter to this hypothesis, higher levels of primary caregiver effort were found to be associated with *higher* self-reported offending variety when controlling for all other factors. This finding is contrary to a vast majority of the literature on parental monitoring habits. However, one study has found that higher levels of parental effort (defined as parental monitoring) were associated with increased substance use among high school students (Fletcher et al., 2004).

There are two possible explanations for why increased effort was associated with increased adolescent offending. First, it is possible that youths respond negatively to their parents' or primary caregiver's excessive effort. Youths may engage in more delinquency when they perceive their parents or primary caregivers as trying *too* hard to know about their

whereabouts, activities, and friendships; adolescents may perceive this as authoritarian, intrusive, overprotective, and/or a glaring example of their maturity gap (Steinberg & Silk, 2005). In response, youths may "act out" in an attempt to exhibit their maturity and independence from their parents. Second, it is also possible that parents respond to their child's increased offending by increasing their own effort to gain knowledge about their child's whereabouts, activities, and peer relationships. The time order of the relationship may be opposite than was hypothesized: increased parental or primary caregiver effort may be a reaction to adolescent offending rather than adolescent offending as a reaction to increased effort.

The results supported the hypothesis that higher levels of primary caregiver knowledge and monitoring are associated with lower levels of self-reported offending variety. Considering the conclusions of the vast majority of parental knowledge and monitoring literature (e.g., Laird et al., 2007; Willoughby & Hamza, 2011), this finding is not surprising. When parents or primary caregivers impose rules and restrictions on their child's behavior and thereby increase their monitoring and awareness of their children's whereabouts, activities, and peer relationships, youths have fewer opportunities to engage in antisocial or delinquent behaviors (Fletcher et al., 2004). Specifically, study findings indicated that knowledge is more protective against juvenile delinquency than monitoring, contrary to the hypothesis that primary caregiver monitoring is most protective against adolescent offending. It is possible that adolescents cease their delinquent behavior when they are aware that their parents are more knowledgeable about their activities, whereabouts, and friendships (Laird et al., 2003). On the other hand, it is also possible that adolescents who are less resistant to allowing their parents to obtain knowledge of their activities, whereabouts, and peer relationships and/or are more open with their parents have little to hide and are simply engaging in less delinquent behavior.

Unexpectedly, results from the present study indicated that child welfare system contact has no significant effect on self-reported offending variety; dual system youth did not report committing significantly more or less crimes than juvenile justice system only involved youth. This result is contrary to the bulk of delinquency and child welfare research that consistently finds an association between child welfare system contact and delinquency (e.g., Huang et al., 2012; McCord et al., 2000; Ryan et al., 2013; Thornberry et al., 2004). Most importantly, this result suggests that in a sample of male first-time juvenile offenders, parental or primary caregiver knowledge and monitoring are protective against adolescent offending regardless of whether a youth has previous involvement with the child welfare system. This finding implies that parents, and even those involved in the child welfare system, can reduce their child's likelihood of engaging in delinquency by improving their knowledge and monitoring of their child's whereabouts, activities, and peer relationships.

Also surprising is the result suggesting that among dual system youth, the timing of child welfare system involvement (i.e., childhood or adolescence) was not related to self-reported offending variety. This result is also contrary to the maltreatment and child welfare literature that indicates that youth who experience maltreatment and child welfare system contact during adolescence are at an increased risk for delinquency compared to youth whose experiences only occurred during childhood (Stewart et al., 2005; Thornberry et al., 2001; Thornberry et al., 2010). However, it could be that, due to the small number of adolescents in the sample with prior contact with the child welfare system, the study was underpowered to detect an effect.

In all, the results from the present study suggest that parental knowledge and monitoring are effective strategies in limiting adolescent delinquent behavior among male first-time juvenile offenders. This is true regardless of whether the adolescent has experienced prior contact with

the child welfare system. In other words, results suggest that parents and primary caregivers involved in the child welfare system have the ability to limit their child's likelihood of engaging in juvenile delinquency by increasing their knowledge and monitoring of their child and their child's habits.

Limitations and Future Directions

The present study is not without limitations. First, due to data limitations such as the lack of official child welfare system records at the Jefferson Parish, LA and Philadelphia, PA sites, the study included only data from the Orange County, CA site. As states and counties have different juvenile justice and child welfare systems and laws (Edwards, 2016), all of which could affect adolescents in different ways, the results of the present study may not be generalizable outside of Orange County, California. Furthermore, the lack of official child welfare system records from two of three study sites also limits the number of dual system youth in the sample to only 76. The effects of dual system contact may have been masked in the analyses of the first research question because the comparison group, juvenile justice system only youth, was six times larger than the dual system youth group. Additionally, the analysis for the second research question included only those 76 dual system youth. It is possible that the sample size was too small for an analysis to return a statistically significant result.

Similarly, dual system contact was measured in a binary variable indicating whether each youth had *any* referrals to the child welfare system prior to their initial arrest. While the aim of the present study was to analyze whether the risks corresponding from any child welfare system contact (e.g., a referral) could be compensated for by parental monitoring habits, dual system contact did not reflect how many times a youth had been referred to the child welfare system, when each referral occurred, for what each referral was for (i.e., type of maltreatment or abuse),

who the alleged perpetrator was, or the outcome of each referral. Due to the small number of dual system youths in the sample (*N*=76), the present study was limited in its ability to further consider the characteristics and experiences of the youth. Future research should ensure to use multiple sites in their studies to increase the generalizability of results, to ensure an adequate sample size to detect effects, and to better consider the child welfare system experiences of each dual system youth.

Second, the present sample is overwhelmingly Hispanic/Latinx and included only males. Due to these limitations, this study compared all other races/ethnicities to Hispanic/Latinx youth. It is possible that important race/ethnicity effects were masked due to the lack of other races/ethnicities within the sample. Minority youth and females are typically overrepresented in crossover and dual system populations (Ryan et al., 2007; Ryan & Herz, 2008, Vidal et al., 2017) and, as youth with a history of child welfare system contact, minority youth are punished more harshly by the juvenile justice system than white dual system youth (Herz et al., 2010; Jonson-Reid, 2002; Ryan & Herz, 2008). Because minorities and females have these unique representations as dual system youth, future research should ensure to use more racially and ethnically diverse samples that include both males and females.

Third, the present study is cross-sectional and does not allow for a determination of time order. As a result, it is difficult to ascertain whether adolescents react to increased primary caregiver effort by increasing their offending, or whether primary caregivers react to adolescent offending by increasing their effort. As either pathway is possible, it is important to be cautious in drawing conclusions regarding the relationship between parental or primary caregiver effort and adolescent offending. Future studies should utilize longitudinal data to establish whether

adolescents respond negatively to their parents' or primary caregivers' effort or whether parents or primary caregivers react to their child's negative behaviors with increased effort.

Fourth, the measures of primary caregiver effort, knowledge, and monitoring used in this study were measured using youth self-reports, or youth perceptions, of their primary caregivers' monitoring habits. These measures were used because adolescents may be more influenced by their own perceptions than those of others (Laird et al., 2003). However, future research could also include parental or primary caregiver reports of effort, knowledge, and monitoring, as well. Including both youth and parental perceptions would allow researchers to not only compare how youth perceptions differ from their parents' perceptions, but also to identify whether youth or parental perceptions are more predictive of adolescent offending.

Implications

The present study holds important implications for both science and practice. This study adds to the current body of literature by empirically testing how primary caregiver monitoring habits effect adolescent self-reported offending variety in a sample that includes both juvenile justice-involved youth and dual system-involved youth for the first time. The inclusion of adolescents with prior child welfare system contact is a new component in the parental monitoring literature; the conclusion that parents and primary caregivers can reduce their child welfare-involved child's juvenile offending via increased knowledge and monitoring it new. Because so little parental monitoring habit literature focuses on populations at high risk for engaging in adolescent offending (for a review, see Racz & McMahon, 2011), the present study could encourage parental monitoring habit researchers to include high risk samples, such as adolescents with child welfare or dual system contact, in future parental monitoring habit studies. The present study also uses clear and distinct measures of effort, knowledge, and monitoring. As

much of the past parental monitoring habit research has used disconnected definitions and conceptualizations of parental monitoring habits (see Crouter & Head, 2002; Racz & McMahon, 2011; Stattin & Kerr, 2000), a new study using clear definitions and conceptualizations may be helpful for future parental monitoring habit researchers.

The present study also has several implications for juvenile justice systems and collaborative systems. First, as many youth dispositions include court orders to attend parenting classes (see Brank et al., 2005), the study findings suggest that including parental monitoring habit educational classes with these youth dispositions may limit adolescent engagement in future delinquency. These classes could present parents with empirical research indicating that parental monitoring habits are effective in reducing adolescent offending, could educate parents on appropriate techniques to increase knowledge and monitoring, and could teach parents appropriate active effort strategies void of extreme measures that may increase the likelihood of adolescent offending.

Additionally, many jurisdictions have implemented or are attempting to implement models of practice that increase collaboration between juvenile justice and child welfare systems to address the needs and improve the outcomes of dual system youth (e.g., via the Crossover Youth Practice Model; Center for Juvenile Justice Reform, 2015; Siegel & Lord, 2009). Because experiences of maltreatment and child welfare system contact are so often associated with delinquency and juvenile justice system contact, delinquency prevention strategies should be a joint effort between both systems. By jointly providing parental monitoring habit education, collaborative efforts by juvenile justice and child welfare actors would also provide a dual focus on recidivism prevention and family preservation. For example, parental monitoring habit classes could include lessons regarding how these habits decrease offending and limit future contact

with the juvenile justice system and increase the ability of parents to appropriately and effectively parent their children based on the child welfare system's family preservation requirements.

Most importantly, the findings from the present study should reassure parents and primary caregivers that their monitoring habits truly matter and do protect their children from engaging in delinquency. Parents may feel that their children do not care about what they think or say (e.g., due to the increased influence of peers on adolescents; Steinberg & Silk, 2005), but empirical evidence to the contrary may be encouraging. This could be especially important for parents involved in the child welfare system, as results suggest that these parents still have the ability to make a change in their children's lives and effectively reduce their likelihood of engaging in delinquency.

APPENDIX

Table 5. Primary Caregiver Effort				
	Doesn't try at all	Tries a little bit	Tries a lot	Tries extremely hard
How much does [primary caregiver name] try to know who you spend time with?	(1)	(2)	(3)	(4)
How much does [primary caregiver name] try to know how you spend your free time?	(1)	(2)	(3)	(4)
How much does [primary caregiver name] try to know how you spend your money?	(1)	(2)	(3)	(4)
How much does [primary caregiver name] try to know about where you go right when school or work is over for the day?	(1)	(2)	(3)	(4)
How much does [primary caregiver name] try to know about where you go at night?	(1)	(2)	(3)	(4)

Table 6. Primary Caregiver Knowledge				
	Doesn't know at all	Knows a little bit	Knows a lot	Knows everything
How much does [primary caregiver name] really know who you spend time with?	(1)	(2)	(3)	(4)
How much does [primary caregiver name] really know how you spend your free time?	(1)	(2)	(3)	(4)
How much does [primary caregiver name really know how you spend your money?	(1)	(2)	(3)	(4)
How much does [primary caregiver name] really know about where you go right when school or work is over for the day?	(1)	(2)	(3)	(4)
How much does [primary caregiver name] really know about where you go at night?	(1)	(2)	(3)	(4)

Table 7. Primary Caregiver Monitoring				
	Never	Sometimes	Usually	Always
How often do you have a set time to be home on school or work nights?	(1)	(2)	(3)	(4)
How often do you have a set time to be home on weekend nights?	(1)	(2)	(3)	(4)
How often does [primary caregiver name] know what time you will be home when you've gone out?	(1)	(2)	(3)	(4)
If [primary caregiver name] is not at home, how often do you leave a note, call, or communicate with [primary caregiver name] in some way about where you are going?	(1)	(2)	(3)	(4)

Table 8. Self-Reported Offending Variety		
	Yes	No
Property damage?	(1)	(2)
Purposely setting fires?	(1)	(2)
Breaking and entering?	(1)	(2)
Shoplifting?	(1)	(2)
Stolen goods?	(1)	(2)
Check or credit card fraud?	(1)	(2)
Auto theft?	(1)	(2)
Selling marijuana?	(1)	(2)
Selling illicit drugs?	(1)	(2)
Carjacking?	(1)	(2)
Driving under the influence?	(1)	(2)
Paying for sex?	(1)	(2)
Rape someone?	(1)	(2)
Kill someone?	(1)	(2)
Shot someone?	(1)	(2)

Table 8. (cont'd)

Shot at someone?	(1)	(2)
Armed robbery?	(1)	(2)
Robbery?	(1)	(2)
Assault?	(1)	(2)
Fighting?	(1)	(2)
Gang violence?	(1)	(2)
Carry a gun?	(1)	(2)
Break into a car?	(1)	(2)
Joyriding?	(1)	(2)

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