From placement to prison revisited: Do mental health services disrupt the delinquency pipeline among Latino, African American and Caucasian youth in the child welfare system?

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Abstract
Racial and ethnic disparities in delinquency among child welfare-involved youth are well documented. However, less is known about the mechanisms through which these disparities occur. This study explores the extent to which sets of variables predict the occurrence of juvenile delinquency and whether race/ethnicity moderates the strength of the relationships between (1) social, emotional, and behavioral (SEB) problems and delinquency and (2) mental health service use and delinquency. We used a nationally representative sample of 727 African American, Caucasian, and Latino youth between the ages of 12–17 who were referred to the child welfare system. Controlling for age, gender, placement instability, maltreatment history, poverty, and urbanicity, linear regression analyses revealed that African American and Latino youth engaged in more delinquent acts than Caucasian youth did. However, service use decreased the likelihood of engaging in more delinquent acts for African Americans. Additional efforts are needed to illuminate and address the contextual and organizational barriers to delivering effective mental health services as a strategy to reduce racial disparities in delinquent behavior.

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Introduction
Point-in-time data indicate that there are roughly 400,000 children and youth placed in foster care in the United States, a third of whom are adolescents ages 12–17 (U.S. Department of Health and Human Services, 2013). Due to their histories of maltreatment, relational disruptions associated with out-of-home placement, and often the ensuing trauma, these young people are at increased risk for experiencing social, emotional, and behavioral (SEB) problems (Maschi, Bradley, & Morgen, 2008; Rubin, O’Reilly, Luan, & Localio, 2007). For example, nearly half of all adolescents investigated as victims of child
abuse and neglect report at least one health problem (Heneghan et al., 2013), and almost half of young adolescents in foster care experience at least one health-risk behavior, such as early sexual activity, depression/suicidality, substance abuse, or delinquency (Leslie et al., 2010). In fact, youth with at least one substantiated report of child abuse or neglect average 47% higher delinquency rates than their non-maltreated peers (Ryan & Testa, 2005). The consequences of delinquent behavior and subsequent justice system involvement can be far-reaching and often deleterious to youth, including difficulties in securing employment, achieving educational goals, and maintaining community-based relationships and social support networks (Hjalmarsson, 2008; Lopes et al., 2012).

There is a substantial body of literature, spanning over three decades, that supports a positive association between the occurrence of child maltreatment and subsequent juvenile delinquency (Jonson-Reid & Barth, 2000; Runyan & Gould, 1985; Ryan, Herz, Hernandez, & Marshall, 2007). However, the strength of the relationship between child welfare and juvenile delinquency outcomes is disparate among subgroups of maltreated youth, and studies have begun to explore moderating factors that may explain the differing associations between child maltreatment and juvenile justice (Goodkind, Shook, Kim, Pohlig, & Herring, 2013). For example, demographic factors, such as gender, race/ethnicity, and age have been identified as risk factors for delinquency, as studies suggest that older youth, minorities, and males are at increased risk for juvenile justice involvement (Chiu, Ryan, & Herz, 2011). In terms of child welfare characteristics, both placement instability (i.e., multiple foster care placements) and type of maltreatment have been associated with juvenile delinquency (Jonson-Reid & Barth, 2000). In addition to individual-level characteristics, environmental factors, such as poverty and urbanicity, have also been related to an increased risk of juvenile delinquency (Rodriguez, 2013).

Although there is a growing body of literature investigating factors that influence delinquency outcomes among foster youth, most of the studies have explored risk factors rather than protective factors. For example, though social, emotional, and behavioral (SEB) problems may increase the risk of juvenile delinquency (Maschi et al., 2008), mental health service use may function protectively (Foster, Qaseem, & Connor, 2004). However, few studies have examined the protective role of mental health service receipt in ameliorating juvenile justice involvement among foster youth. Moreover, there is a dearth of literature investigating the moderating role of race/ethnicity in mental health service use as a protective mechanism to decrease the likelihood of juvenile delinquency. Only one study known to the authors has explored the relationship between delinquency outcomes and mental health service use by racial groups among youth in foster care (i.e., Goodkind et al., 2013), though the study was limited in its measurement by only including mental health service use prior to juvenile justice involvement. The study also utilized a geographically restricted sample, limiting the generalizability of the findings, and only included a sample of African American and Caucasian youth.

Drawing from a national sample of adolescent African American, Caucasian, and Latino foster youth, the present study aims to replicate and extend prior research by exploring the extent to which sets of variables predict the occurrence of juvenile delinquency as well as investigate the extent to which the strength of the relationships between (1) SEB problems and delinquency and (2) mental health use and delinquency differs based on race/ethnicity. Our investigation is guided by three research questions: (1) To what extent do demographic factors, child welfare characteristics, SEB problems, mental health service use, and environmental context influence delinquent outcomes? (2) To what extent does race/ethnicity moderate the relationship between SEB problems and delinquent outcomes, controlling for demographic factors, child welfare characteristics, and environmental context? (3) To what extent does race/ethnicity moderate the relationship between mental health service use and delinquent outcomes, controlling for demographic factors, child welfare characteristics, and environmental context?

**Literature review**

**Juvenile delinquency among foster youth: risk and protective factors**

**Demographic factors**

Gender, race, and age have been identified as risk factors for delinquency among adolescent foster youth, though findings are somewhat mixed. For example, in their 2000 study on the path to adolescent incarceration from child welfare, Jonson-Reid and Barth reveal that, overall, African American youth age 15 and older have the highest rate of entry into juvenile justice following foster care. Another study investigated whether the relationship between substantiated child welfare reports and delinquency varied by race and gender, and findings indicate that older youth, males, and African Americans are at greater risk of juvenile arrest (Chiu et al., 2011). Using data from the Midwest Study, Cusick, Havliecek, and Courtney (2012) corroborate these results, finding that both males and African Americans are at increased risk for arrest. However, another study conducted with 2754 lower to lower-middle SES youth finds that risk of entry into the juvenile justice system increases by age, but only until age 14, after which it declines (Vazsonyi & Chen, 2010). Additionally, no differences in risk of entry exist among African American, American Indian, Asian American, and European American youth, though Hispanic youth are 73% more likely to enter juvenile justice systems. Likewise, a study using a nationally representative sample of early adolescent youth (ages 11–14) with child welfare involvement shows that though older youth and males are more likely to engage in delinquent behavior, race/ethnicity is not a risk factor for delinquency outcomes (Grogan-Kaylor, Ruffolo, Ortega, & Clarke, 2008). The mixed findings from these studies indicate that additional research is needed to better understand moderating factors that may elucidate the relationship...
between demographic factors (e.g., age, gender, race/ethnicity) and delinquency outcomes among adolescent youth in foster care.

**Child welfare characteristics**

Child welfare characteristics (e.g., severity of child maltreatment and placement instability) have also been identified as risk factors for delinquency. Using a California sample of 159,149 administrative records on child abuse reporting, foster care, births, and juvenile corrections, Jonson-Reid and Barth (2000) find that children initially reported for neglect are more likely to be incarcerated than those reported for physical or sexual abuse. Countering these findings, Grogan-Kaylor et al. (2008) conclude that youth who are physically abused are more likely to enter the juvenile justice system as compared to youth who are neglected. Similarly, using child welfare administrative data from Illinois, Ryan and Testa (2005) show that neglect is not related to delinquency. Like demographic factors, these studies point to the need for additional research to understand the factors that influence the relationship between maltreatment and delinquency.

Placement instability, or multiple foster care placements, is also associated with an increased risk for delinquent behavior, and as early as 1985, Runyan and Gould showed that an increased number of foster home placements correlated with an increased number of delinquency convictions. Jonson-Reid and Barth’s (2000) findings corroborate this association. They indicate that youth with multiple placements and multiple spells in foster care have a higher risk of incarceration for a serious violent offense during adolescence. Similarly, using a sample of 772 maltreated youth, DeGue and Widom (2009) find that multiple placements are associated with a greater likelihood of delinquency and juvenile justice involvement. Ryan, Hernandez, and Herz (2007) reveal the same: placement instability is associated with increased risk of subsequent delinquency and crime among 294 male adolescents exiting a large Midwestern foster care agency.

**Environmental context**

Researchers have also examined the impact of community-level factors, such as poverty and urbanicity, on the likelihood of child welfare and juvenile justice systems involvement among disadvantaged youth (Barth, Wildfire, & Green, 2006; Feld, 1991; Roberts, 2008). For example, Barth et al. (2006) find that the strength of the association between poverty and child welfare involvement is higher in urban settings as compared to non-urban settings, where the presence of mental health problems is a stronger predictor of child welfare involvement. A more recent study concludes that juvenile justice-involved youth from geographic areas with concentrated disadvantage are more likely to be incarcerated than those reported for physical or sexual abuse. Countering these findings, Jonson-Reid and Barth’s (2000) findings corroborate this association. They indicate that youth with multiple placements and multiple spells in foster care have a higher risk of incarceration for a serious violent offense during adolescence. Similarly, using a sample of 772 maltreated youth, DeGue and Widom (2009) find that multiple placements are associated with a greater likelihood of delinquency and juvenile justice involvement. Ryan, Hernandez, and Herz (2007) reveal the same: placement instability is associated with increased risk of subsequent delinquency and crime among 294 male adolescents exiting a large Midwestern foster care agency.

**Social, emotional, and behavioral (SEB) problems**

Youth involved with child protective services are at increased risk for experiencing social, emotional, and behavioral (SEB) problems as compared to their non-maltreated peers (Maschi et al., 2008). Foster youth experience high prevalence rates of complex trauma exposure, placing them at increased risk for internalizing behavior problems, posttraumatic stress, and having at least one clinical diagnosis (Greeson et al., 2011), and nearly half of all youth with child welfare involvement exhibit SEB problems that meet the clinical-level threshold according to the Child Behavior Checklist (Hurlburt et al., 2004). SEB problems, including mental health diagnoses, are associated with increased risk of juvenile justice involvement among foster youth and are therefore considered to be a risk factor (Yampolskaya & Chuang, 2012). Of note, Grogan-Kaylor et al. (2008) find that though there is a significant association between some mental health indicators (or SEB problems) and increased delinquent behaviors, there is not a significant association between race/ethnicity and delinquent behaviors, inferring that foster youth across racial/ethnic groups experience similar individual-level behavioral problems. Likewise, Goodkind et al. (2013) assert “racial differences in the justice system involvement of child welfare-involved youth are not merely a function of differences in behavior” (p. 253), suggesting a need for further research exploring system-level racial/ethnic disparities.

**Mental health service use**

It is well documented that there are racial/ethnic disparities in mental health service receipt among foster youth (Garland, Landsverk, & Lau, 2003; Horwitz et al., 2012; Martínez, Gudino, & Lau, 2013; Wells, Hillemeier, Bai, & Belue, 2009), even though improved mental health services may reduce juvenile delinquency outcomes (Foster et al., 2004). Because the presence of SEB and mental health problems is a risk factor for delinquency, disparate mental health service use may explain differential delinquency outcomes among racially/ethnically diverse groups of foster youth. In other words, receipt of mental health services may function protectively for foster youth, though such services may not be equally utilized among racially/ethnically diverse subgroups of foster youth. There is scant literature examining the relationship between receipt of mental health services and juvenile delinquent outcomes among racially/ethnically diverse groups of adolescent foster youth. One recent study among a sample of African American and Caucasian youth involved with child welfare in Allegheny County, Pennsylvania investigated racial and gender differences in the likelihood of juvenile justice involvement based on youth’s child welfare experiences and history of mental health and substance abuse service receipt (Goodkind et al., 2013). Mental health service receipt was measured based on whether youth had ever received mental health services at any point prior to their juvenile justice involvement. Thus, the measure was conceptualized as a risk factor, or a proxy for mental health or behavioral problems...
contributing to increased delinquency. Findings revealed that Caucasian foster youth in out of home placements were more likely to have a history of mental health service receipt, though past mental health service receipt was associated with a greater likelihood of juvenile justice involvement. This study has several limitations, such as a geographically limited sample, the inclusion of only two racial groups, and most notably the measurement of prior mental health service use only. No studies known to the authors have used a national sample to investigate mental health service use as a protective mechanism for ameliorating delinquency outcomes among groups of foster youth with varying racial/ethnic identities.

Present study

The present study elucidates factors that contribute to racial/ethnic disparities in delinquent outcomes among child welfare-involved youth. Piquero (2008) suggests two possible explanations for these differential delinquent outcomes. The first explanation is that differential outcomes are a function of differences in individual-level behavior, or SEB problems, between minority and Caucasian youth. A second explanation is that differential outcomes are a function of disparate treatment of minority youth by systems of care. The primary aim of our investigation is to test the plausibility of these two explanations.

Using data from the National Study of Child and Adolescent Well-Being (NSCAW), a nationally representative, longitudinal survey of children and families who have been the subjects of investigation by Child Protective Services, we control for demographic factors (i.e., age, gender), child welfare characteristics (i.e., placement instability and maltreatment history), and environmental context (i.e., poverty and urbanicity) and hypothesize that: (1) there is a non-significant interaction between race/ethnicity and SEB problems in predicting the occurrence of delinquent behaviors, meaning that the relationship between SEB problems and delinquent behavior among foster youth does not differ based on race/ethnicity when controlling for the confounding variables listed above, and (2) there is a significant interaction between race/ethnicity and mental health service use in predicting delinquent behavior, meaning that the extent to which using mental health services ameliorates delinquent behavior varies by race/ethnicity. The hypotheses from our study are consistent with conclusions drawn from prior research cited above: that is that racially disparate delinquency outcomes are not simply a function of differences in individual behavior (Goodkind et al., 2013; Grogan-Kaylor et al., 2008). In addition to testing the primary hypotheses of this study, we also use NSCAW’s nationally representative sample to measure the relative contribution of sets of variables (e.g., demographic factors, child welfare characteristics, and environmental context) in predicting the occurrence of juvenile delinquent behavior among adolescent foster youth, contributing to the current literature base of mixed findings. Our present study extends prior research in several key ways. First, by utilizing a national sample of foster youth, rather than a geographically limited sample, we increase the likelihood that our findings are generalizable to the population of foster youth in the United States. Second, we include Latino foster youth in our analyses, as prior literature has predominantly focused on African American and Caucasian foster youth only. Third, we measure mental health use as current or recent receipt of services, testing the protective function of service use. Fourth, we include a unique examination of environmental context as a risk factor for delinquent outcomes among foster youth.

Method

Study design and sample

Funded by the Office of Planning, Research and Evaluation, Administration for Children and Families (ACF), and the U.S. Department of Health and Human Services, the National Survey of Child and Adolescent Well-Being (NSCAW) recruited a cluster sample of children between the ages of 0 and 14 (n = 5501) who had contact with the CWS within a 15-month period, between October 1999 and December 2000. Acknowledging the contemporary challenges that emerged from increasing demands and fewer resources within child welfare and changing child welfare practice and policy procedures, the ACF later implemented the NSCAW-II study (see Dolan, Smith, Casanueva, & Ringeisen, 2011 for further information on the NSCAW sampling and methods design). Seventy-six percent of the counties (n = 81) that participated in NSCAW-I (n = 92) also participated in the NSCAW-II study. The NSCAW-II cohort comes from 30 states and includes 5872 children ranging in age from birth to 17.5 years old who were referred to the CWS between February 2008 and April 2009 due to an allegation of child maltreatment. Like the first NSCAW cohort, data on multiple indicators of child and family-level functioning, permanency, well-being, and service receipt were collected from multiple informants at baseline (wave 1) and at 18-month follow-up (wave 2) (Dolan et al., 2011; Dowd et al., 2011). Our selected sample included youth between the ages of 12–17 who were the focus of study in the NSCAW-II cohort at wave 2. Of the 727 participants in our sub-sample, under half were Caucasian (n = 317), 216 identified as African American, and the remaining participants were Latino (n = 194). Across all waves, computer-assisted personal interviewing and audio computer-assisted self-interviewing methods were used to collect data from caregivers and caseworkers.

Measure of outcome/dependent variable

The Self-Report of Delinquency (Elliott & Ageton, 1980) measure was originally designed for use in the National Longitudinal Survey of Youth, a nationally representative sample of 12,686 males and females who were 14–22 years old when first
surveyed in 1979 (U.S. Bureau of Labor Statistics, 2013). The odd-numbered items of the 36 total questions asked youth about the occurrence of specific delinquent acts, such as whether or not they ran away from home, carried a hidden weapon, were drunk in public, damaged property, stole things, set fire to the house or property, were involved in a gang fight, or sold hard drugs. The paired even-numbered items then inquired about the frequency (on a scale of 1 [once] to 5 [5 or more times]) with which they engaged in such activities in the past six months during wave 2 data collection. For the purposes of our analyses, we calculated the frequency of delinquent acts the youth engaged in across all items, and the total score for each participant was included in our analyses as the outcome/dependent variable.

Measures of control and independent variables

Placement instability

Total number of out-of-home living arrangements during waves 1 and 2 for each participant was gathered from case records. This number was used in the analyses as a continuous variable.

Maltreatment history

During wave 2 data collection, caregivers were asked to report occurrences of maltreatment the youth experienced during their lifetime. In our preliminary analyses, we examined the influence of such trauma on delinquency and mental health service use in varied ways. Specifically, we tested the influence of (1) each type of abuse separately, (2) at least one type of maltreatment, and (3) two forms of abuse (physical and sexual, physical and neglect, and neglect and sexual). Regardless, we found a significant bivariate relationship between delinquency and maltreatment, irrespective of how maltreatment was operationalized. For the purposes of our multivariate analyses, however, we chose to rely on a continuous variable to consider the total number of maltreatment types the participants experienced.

SEB problems

The Child Behavior Checklist (CBCL) includes 120 items that asked caregivers of the 17 year olds to rate on a scale from 1 (not true) to 3 (often true) a wide range of social, emotional, and behavioral symptoms (Achenbach, 1991). The participants are identified as needing mental health services and coded as 1, if their CBCL scores fell at or above the clinical cut-point (T ≥ 64) on internalizing, externalizing, or total behavior problems at wave 2. Those with CBCL scores below the clinical cut-point were coded as 0.

Service use

An adapted version of the Child and Adolescent Services Assessment (Burns, Angold, Magnuder-Habib, Costello, & Patrick, 1996) was used to gather information from current caregivers on inpatient or outpatient mental health services the youth utilized for any emotional or behavioral problem during the past 18 months. Inpatient services included hospitalization in a psychiatric hospital or the psychiatric unit of a general hospital, as well as hospitalization in a medical inpatient unit for emotional or behavioral problems. Outpatient services included clinically based specialty mental health services (e.g., community mental health centers, school guidance counselor, and private professional help from social workers, psychiatrists, etc.), in-home counseling services, and therapeutic nursery/day treatment. Mental health service use was dichotomized into one variable, indicating whether the youth utilized mental health services in the past 18 months (1) or not (0).

Environmental context

Consistent with U.S. Census Bureau (2010) definitions, urban areas were defined as counties with greater than 50% of the population living in an urban area. The remaining counties were classified as rural. The dichotomous variable indicates whether children reside within a geographic area that is high in population size and density within their respective county. Poverty was calculated by the RTI as the percentage of children under the age of 18 living below the poverty level within each primary sampling unit (i.e., counties, or contiguous areas of two or more counties).

Socio-demographics

Data on the participants’ age, gender (Male = 1, Female = 0), and race (African American = 1, Other = 0) and ethnicity (Hispanic = 1, Non-Hispanic = 0) were collected during the initial case-identification procedure and were confirmed by caregiver and child welfare caseworker interviews.

Analysis plan

First, descriptive analyses were conducted to summarize study variables. Second, step-wise linear regression analyses were conducted to examine the unique contribution of socio-demographics, individual risk factors, and socio-environmental factors on delinquent outcomes. Specifically, our baseline model (Model 1) included demographic predictors, including age, gender, and race/ethnicity. Model 2 added risk factors, inclusive of placement instability, maltreatment history, and SEB problems. Service use was then added in Model 3. Model 4 included contextual predictors (urbanicity and poverty). Finally, product terms for (1) SEB problem and race/ethnicity, (2) mental health service use and race/ethnicity, and (3) SEB problem, mental health service use, and race/ethnicity were created to test potential interaction effects among the variables. Given the
insignificant effect of 3-way interaction terms \( p > .05 \), only the 2-way interaction terms were included in Model 5 and Model 6, respectively.

Although our data included rich information, 25 percent of the maltreatment history and 9 percent of the placement instability data were missing. To handle missing data, we relied on full information maximum likelihood (FIML), which provides unbiased estimates under the assumption of missing-at-random (Acock, 2005; Enders, 2001). FIML is available in Mplus (Version 6.0; Muthén & Muthén, 2010), which was the data analysis software employed for all analyses. Analysis weights were also applied to obtain unbiased estimates, and to adjust for non-response and under-coverage from implementing a stratified, clustered design in which the youth were selected within primary sampling units as well as their respective county of residence. Thus, results can be extrapolated to Latino, Caucasian, and African American youth referred to the U.S. child welfare system (see Dowd et al., 2011 for further information on weighting procedures).

Results

Descriptive results

Table 1 presents weighed descriptive statistics of study variables for the total population as well as for three racial/ethnic groups. More than half of youth were Caucasian (50.8%). Latinos accounted for 27.7% of the sample, while 21.6% were African American. About 40% were male. Their mean age was 14.5 years; however, Caucasian youth (14.7) were significantly older than African American youth (14.1) \( p < .05 \). On average, youth engaged in 1.5 delinquent acts, and the number of acts committed ranged from 0 to 35. Approximately 35% of youth had SEB problems, but only 26% received mental health services. The vast majority of youth were living in urban areas (75.8%), and African American and Latino were significantly more likely than Caucasian youth to live in urban areas \( p < .05 \). In addition, African Americans (22.7%) were more likely to reside in geographical catchment areas that experienced a higher percentage of poverty as compared to Caucasian (19.8%) and Latino (19.9%) youth \( p < .05 \).

Multivariate results

Table 2 displays the standardized coefficients from the linear regression model. Our main effects model (Model 4) showed that compared to Caucasian youth, African American youth engaged in significantly more delinquent acts, controlling for individual risk factors, service use, and socio-environmental factors \( \beta = 0.10, p < .01 \). Latino youth also engaged in more delinquent acts, although it was marginally significant \( \beta = 0.07, p < .10 \). According to model 4, placement instability was positively associated with a higher number of delinquent acts, albeit the association was only marginally significant \( \beta = 0.07, p < .10 \). As expected, a positive relationship between SEB outcomes and delinquent acts was detected \( \beta = 0.19, p < .01 \). Finally, when compared to Caucasians, our interaction model (Model 6) showed that service use was significantly more likely to decrease the frequency of delinquent acts within the last six months among African Americans \( \beta = -0.08, p < .05 \).

Discussion

We set out to examine prevalence and predictors of delinquent outcomes among child welfare-involved youth in the U.S. Specifically, to address our first question, we identified whether demographic factors, child welfare characteristics, SEB problems, mental health service use, and environmental context influence delinquent outcomes. Our findings show that older youth engaged in more delinquent acts, which supports previous research conducted on adolescents in the overall population (Jonson-Reid & Barth, 2000) and within the child welfare population (Chiu et al., 2011). Results further indicate that Caucasian

<table>
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<tr>
<th>Table 1</th>
<th>Weighted descriptive statistics of study variables.</th>
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<tr>
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<td>Total</td>
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<td>Service use</td>
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<td>Urbanicity*</td>
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*p < .05.

AA = African American.
Table 2
Weighted regression results (N = 727).

<table>
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<tr>
<th></th>
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<td>−4.10***</td>
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<td>0.47†</td>
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<tr>
<td>Maltreatment history</td>
<td>0.45</td>
<td>0.28</td>
<td>0.12</td>
<td>0.48†</td>
<td>0.28</td>
<td>0.13</td>
<td>0.50†</td>
<td>0.30</td>
<td>0.13</td>
<td>0.49†</td>
<td>0.29</td>
<td>0.13</td>
<td>0.47</td>
<td>0.29</td>
<td>0.13</td>
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<tr>
<td>SEB problems</td>
<td>1.11**</td>
<td>0.35</td>
<td>0.17</td>
<td>1.23**</td>
<td>0.39</td>
<td>0.19</td>
<td>1.26**</td>
<td>0.41</td>
<td>0.19</td>
<td>0.89*</td>
<td>0.38</td>
<td>0.13</td>
<td>1.26**</td>
<td>0.41</td>
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<td>0.55</td>
<td>0.06</td>
<td>0.41</td>
<td>0.54</td>
<td>0.06</td>
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<td>0.01</td>
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<td>0.02</td>
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<tr>
<td>SEB × Black</td>
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<td>1.29</td>
<td>0.14</td>
<td>1.63</td>
<td>1.29</td>
<td>0.14</td>
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<td>1.63</td>
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<td>0.14</td>
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<tr>
<td>SEB × Hispanic</td>
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<td>0.03</td>
<td>0.82</td>
<td>0.00</td>
<td>0.03</td>
<td>0.82</td>
<td>0.00</td>
<td>0.03</td>
<td>0.82</td>
<td>0.00</td>
<td>0.03</td>
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</tr>
<tr>
<td>Service × Black</td>
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<td>0.53</td>
<td>−0.08</td>
<td>−0.69</td>
<td>0.78</td>
<td>−0.05</td>
<td>−0.69</td>
<td>0.78</td>
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<td>−0.69</td>
<td>0.78</td>
<td>−0.05</td>
<td>−0.69</td>
<td>0.78</td>
<td>−0.05</td>
</tr>
<tr>
<td>Service × Hispanic</td>
<td>−1.01**</td>
<td>0.53</td>
<td>−0.08</td>
<td>−0.69</td>
<td>0.78</td>
<td>−0.05</td>
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<td>−0.05</td>
<td>−0.69</td>
<td>0.78</td>
<td>−0.05</td>
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</table>

b: Unstandardized coefficients.
B: standardized coefficients.
SE: robust standard errors.

*p < .10  *p < .05  **p < .01  ***p < .001.

Youth are less likely to engage in delinquent behavior than their Latino and African American counterparts, even after controlling for demographic factors, child welfare characteristics, urbanicity, and poverty. This is consistent with the extant literature that found significant variation in juvenile justice involvement based on race/ethnicity (Goodkind et al., 2013; Jonson-Reid, 2002; Lee, Courtney, & Hook, 2012). Although the association was marginally significant, there was still a positive relationship between placement instability and delinquent acts, which was expected as previous studies have found that multiple placements is positively correlated with delinquency convictions (DeGue & Widom, 2009; Jonson-Reid & Barth, 2000; Runyan & Gould, 1985).

In addition, results showed a positive relationship between delinquency and SEB problems. The finding that SEB problems are associated with delinquent behavior is not surprising, given the strong association between mental health problems and juvenile justice involvement (Southerland, Casanueva, & Ringeisen, 2009; Yampolskaya & Chuang, 2012). To address our second question, we then examined the extent to which race/ethnicity moderated the relationship between SEB and delinquent behavior while controlling for confounding variables. We hypothesized that there would be a non-significant interaction between these three variables, indicating that the relationship between SEB problems and delinquency would not differ by race/ethnicity and our findings support this hypothesis. In other words, we found no significant differences in the effect of SEB problems on delinquency based on race/ethnicity.

Based on these results, we can infer that the disproportionate contact that racial/ethnic minority youth in foster care have with the juvenile justice system is not a function of their individual SEB behaviors, but of perhaps some other underlying mechanism in the child welfare and/or juvenile justice system. Goodkind and colleagues allude to this conclusion in their 2008 study and suggest that there may be racial disproportionality in the processes within the systems themselves. Exploring a systems level issue, we examined whether and the extent to which the relationship between mental health service use and delinquent outcomes is moderated by race/ethnicity to address our last question. Our findings showed a negative relationship between mental health service use and delinquent acts for African-Americans. Since this relationship is not causal, it can be interpreted in a few ways. Firstly, the relationship can be interpreted as that for African-Americans, engagement in delinquent acts was significantly reduced when they utilized mental health services. The possibility that service use decreases delinquent acts is not surprising as mental health service use has been shown to be a protective factor against juvenile delinquency (Foster et al., 2004). Another viable interpretation is that as engagement in delinquent acts increases, mental health service use decreases. Perhaps African-American youth who are involved in the juvenile justice system are less likely to utilize mental health service use. This plausibility is supported by Rawal, Romansky, Jenuwine, and Lyons's (2004) study of racial/ethnic differences in mental health need and service use among youth in the juvenile justice system. Their research found that African-American youth had the highest number of mental health needs compared to Latino and Caucasian youth and yet had lower rates of mental health service use than Caucasian youth. Nguyen, Huang, Arganza, and Liao's (2007) shed some light on this possible explanation. They found that African-American youth have a greater likelihood than Caucasian children of being diagnosed with disruptive behavioral problems, despite no indication of racial/ethnic differences according to parent and clinician ratings.
of behavior. The risk of over-diagnosing disruptive behavioral problems is that instead of youth being referred to mental health services when warranted, they may be referred to the juvenile justice system resulting in a lack of mental health services that are needed.

These results from the juvenile justice system echo the abundance of research documenting racial disparities in mental health service use for children in foster care, with African-American and Latino children being less likely to receive mental health services than Caucasian children (Garland et al., 2003; Horwitz et al., 2012; Martinez et al., 2013; Wells et al., 2009). Thus, it is evident that there are disparities in mental health service use for racial/ethnic minority youth in both the child welfare and juvenile justice system, supporting our possible finding of racial disparities at the intersection of these two systems. We believe our findings illustrate Piquero’s (2008) notion of differential selection, which consists of the disparate treatment between racial minorities and Caucasians that can lead to different system outcomes. We wanted to determine whether racial disparities in delinquent outcomes were a function of individual level difference, namely SEB problems, between minority and Caucasian youth, or a function of larger structural inequities. Our results support the latter, given the impact that mental health service receipt may have on reducing delinquent behavior and the potential antecedent of involvement in the juvenile justice system leading to lack of needed mental health services for foster care youth of color.

Implications

Our findings reveal how systems of care, under the best of circumstances, may play a pivotal role in ensuring youth, particularly African American youth, utilize effective mental health services to reduce delinquent behavior. It is reasonable to assert that engagement in delinquent acts increases the odds of juvenile justice involvement. Many of the youth referred to the child welfare system in our sample engaged in more than one delinquent act. Given the protective nature of mental health services in reducing delinquent behavior and the well-documented disparities in mental health service use for children of color in the child welfare system, it is imperative that we strengthen systems processes and capacity to ensure that all children receive the mental health services that they need. It has been argued that the CWS serves as a gateway to services — that once referred to the CWS, caseworkers are charged with the responsibility of screening and assessing youth for SEB problems, and then referring them to services if warranted to mitigate poor developmental outcomes. This screening, assessment, and referral process is frequently referred to as the Gateway Provider Model, where caseworkers act as “brokers” of services (Dorsey, Kerns, Trupin, Conover, & Berliner, 2012). However, child welfare caseworkers are not typically trained in mental health. In fact, many do not even have a background in social work, yet they play a key role in connecting youth to services (Bunger, Stiffman, Foster, & Shi, 2010). Bunger et al. (2010) find that both caseworkers’ connectivity to referral resources in the community and their ability to identify mental health needs are associated with youth’s receipt of mental health services, thus supporting the Gateway Provider Model of service provision in child welfare. For youth in foster care to receive needed mental health services and reduce the odds of delinquent behavior, their caseworkers must be connected to referral resources and be able to effectively identify mental health issues. These concerted efforts may play an instrumental role in reducing the overrepresentation of African American youth in juvenile justice and child welfare systems.

Further exploration into why utilization of mental health service use did not influence delinquent outcomes among Caucasian and Latino youth is warranted. We can only speculate that utilization of mental health services is ineffective in reducing the likelihood of delinquency for some youth. Perhaps the dosage, quality, and effectiveness of mental health services are imperative in reducing delinquent outcomes. Irrespective of the racial differences we detected, there is a need to develop, disseminate, and implement culturally sensitive screening and assessment of child psychopathology in a child welfare services context (Diller, 2014; Garcia et al., 2015; Pecora, Whittaker, Maluccio, & Barth, 2012). The Child Welfare-Mental Health (CW-MH) Best Practice Group, composed of leading child welfare and mental health researchers, policy makers and advocates, proposed a number of recommendations to facilitate this process. These recommendations, later endorsed by the American Psychiatric Association and the Child Welfare League of America include: (1) screening for “emergent risk” within 72 h of entry into foster care to identify youth who are in need of immediate mental health or substance abuse service needs, (2) conducting comprehensive screening within 30 days of entry into foster care, (3) administering an evidence-based mental health assessment within 60 days of receiving a positive mental health screen, and (4) implementing periodic evidence-based screening during each caseworker visit to detect need. Prior to leaving the system, teens should also be screened, and if needed, should continue to receive appropriate interventions (Romanelli et al., 2009). Detecting need of mental health services on a routine basis and building sufficient supports for youth to engage in effective services when warranted may play a significant role in reducing delinquent outcomes.

Incremental initiatives are needed to implement the CW-MH recommendations. Firstly, system leaders and providers in the juvenile justice, child welfare, and mental health sectors of care need to rely on similar valid, reliable, and efficient tools to screen for and assess factors that are likely to increase delinquent behavior. To our knowledge, no standardized tools are systematically and routinely implemented across these different sectors of care. Hence, future efforts must be devoted to developing and testing the validity of screening and assessment tools and providing supports to scale them up as part of routine service delivery.

Secondly, after need is detected, building supports to increase access to and use of evidence-based, culturally appropriate interventions for youth who are dually involved, or at-risk of being dually involved, in the child welfare and juvenile justice systems is imperative. Glisson and Green’s (2006) research suggests that this is most likely to occur when a “constructive” organizational culture (i.e., organizations that promote motivation, support, and individual and interpersonal norms) is
cultivated. Longitudinal studies are needed to determine how and under what conditions the organizational social context influences delivery of novel interventions across different sectors of care, and whether these strategies reduce contact within the child welfare and juvenile justice systems. Specifically, what contextual and organizational barriers do youth in foster care experience in the process of engaging in services to decrease negative SEB and delinquent outcomes? It may be that system leaders and providers alike do not have the knowledge, resources, leadership, or inner or intra-organizational capacity to deliver the most effective, evidence-informed based services and interventions to reduce delinquent acts among youth involved in the foster care system. Identifying barriers will provide imperative information on where and how to allocate resources to maximize positive impact.

From an “individual” lens, protective factors (e.g., family and community connectedness, informal social supports, and innovative systems approaches) that may mediate and/or moderate delinquent outcomes must also be identified. Recent research, for example, highlights the salience of taking into account the degree to which providers engage in cultural exchanges (communication and collaboration about shared practice knowledge and beliefs) with other providers across and within systems of care to facilitate implementation of evidence-based practices that promote resiliency and reduce poor outcomes (Chuang & Wells, 2010; Palinkas et al., 2009). Do agency providers possess the knowledge, skills, and motivation to engage in inter-disciplinary collaboration? To what extent do leaders and staff in child welfare, juvenile justice, and mental health agencies or organizations facilitate a high intensity of exchange and intra-organizational collaboration, and what impact might this have on reducing delinquent acts among youth in foster care?

Limitations

This study is not without limitations. First, our analyses are cross-sectional, which limits our ability to detect cause and effect. Because the temporal precedence of the predictors is uncertain, we are unable to confirm one direction or the other. It is imperative we point out the discrepancy with respect to when the informants were asked to recall certain events. For example, data on the frequency of delinquent acts were derived from asking youth to think retrospectively about their actions within the past 6 months. Caregivers were asked to reflect on whether children utilized services within the past 18 months. Thus, we are not certain whether mental health services were implemented prior to engagement in delinquent acts as a prevention effort, or if they utilized after such acts were committed.

Also of concern is the self-report nature of delinquency. Official estimates (e.g., police and arrest records) are not part of the NSCAW data. According to Elliott and Ageton (1980), higher differences in rates of delinquent acts between Caucasians and African Americans are reported in cases where “official” measures are used compared to when self-report data are used. They argue, self-report measures may not fully capture theoretically important racial differences in delinquent outcomes. Thus, our findings may under-estimate the rate of racial/ethnic disparities in delinquent outcomes.

Thirdly, missing data on how often the youth utilized services, and no data on the quality of mental health services the youth utilized did not give us an opportunity to further explore the context by which services impacted delinquency outcomes. Regardless, we believe that our findings provide a glimpse into how utilizing services to any degree impact delinquency for Caucasian, African American, and Latino youth referred to the CWS.

Fourthly, we must call attention to the fact that our findings are only generalizable to the aforementioned three racial/ethnic groups. With respect to the NSCAW racial/ethnic data, Asian and Native youth and youth categorized as “other” were lumped into one group. We preferred not to analyze the data as if each of the remaining groups is homogenous. Moreover, we had a relatively small size of Latino and African American youth compared to the Caucasian group.

Lastly, we are unsure if older foster youth’s delinquent behavior does or does not lead to eventual arrest or detainment, thus truncating the “pipeline” concept at delinquency from a data perspective. However, theoretically, the “placement to prison pipeline” model is plausible.

Conclusion

Currently, service providers, child advocates, concerned politicians, and disquieted researchers alike are struggling with how best to serve youth in foster care, who often through no fault of their own, are at-risk of experiencing a number of obstacles to utilizing effective services that may prevent poor outcomes and contact with the juvenile justice system. They constitute a burgeoning movement concerned with the mounting cost of “doing nothing” to improve the outlook for this vulnerable population. Although we now understand the hardships these youth experience and have uncovered multiple reasons for such difficulties, an effective response remains elusive. Our study sheds light on a potential reason we have yet to develop even a single “promising practice” that targets the specific risk and protective factors associated with youth in foster care who engage in delinquent acts. Yet, as long as we continue to develop interventions without identifying and addressing these factors, delinquency behavior will ensue, and the placement-to-prison pipeline will persist.

Disclaimer

This document includes data from the National Survey on Child and Adolescent Well-Being, which was developed under contract with the Administration on Children, Youth, and Families, U.S. Department of Health and Human Services (ACYF/
DHHS). The data have been provided by the National Data Archive on Child Abuse and Neglect. The information and opinions expressed herein reflect solely the position of the author(s). Nothing herein should be construed to indicate the support or endorsement of its content by ACYF/DHHS.

References


