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Authors

Bosk, Emily
Anthony, Wen
Folk, Johanna
et al.

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All in the Family: Parental Substance Misuse, Harsh Parenting, and Youth Substance Misuse Among Juvenile Justice-Involved Youth

Emily Adlin Bosk, Ph.D., LMSW[a], **Wen Li, Ph.D., MSW**[a], **Johanna Bailey Folk, Ph.D.**[b], **Abigail Williams-Butler, Ph.D., MSW**[a]

[a]Rutgers University, New Brunswick, New Jersey

[b]University of California, San Francisco, San Francisco, California

Abstract

Purpose: Research consistently connects parental and youth substance misuse, yet less is known about the mechanisms driving this association among justice-involved youth. We examine whether harsh parenting is an explanatory mechanism for the association between parental substance use and parental mental health and youth substance use disorder in a sample of justice-involved youth.

Methods: Data were drawn from the Northwestern Juvenile Project, a large-scale longitudinal survey of mental health and substance misuse in a representative sample of youth in juvenile detention. Harsh parenting, child maltreatment, youth alcohol and cannabis use disorder, and parental substance misuse and mental health were assessed among 1,825 detained youth (35.95% female) at baseline, three-year follow-up, and four-year follow-up.

Results: At baseline, over 80% of youth used alcohol and/or cannabis; at the four-year follow-up, 16.35% and 19.69% of the youth were diagnosed with alcohol and cannabis use disorder, respectively. More than 20% of youth reported their parent misused substances and 6.11% reported a parent had a severe mental health need. Black youth experienced significantly fewer types of harsh parenting compared to White youth. Multivariate path analyses revealed harsh parenting mediated the association between parental substance misuse and mental health on youth alcohol and cannabis use disorder. Harsh parenting that does not rise to the level of child maltreatment mediated the association between parental substance misuse and mental health on youth alcohol use disorder; in contrast, child maltreatment did not mediate these associations. Multigroup analyses revealed the effect of harsh parenting on youth alcohol and cannabis use disorder did not vary across sex or race-ethnic subgroups.

Conclusions: Harsh parenting represents one mechanism for the intergenerational continuity of alcohol and cannabis misuse and should be regularly assessed for and addressed in juvenile justice settings.

Corresponding Author: Emily Adlin Bosk, School of Social Work, Rutgers University, 390 George Street, 714 New Brunswick, New Jersey 08904, emily.bosk@ssw.rutgers.edu, 848-932-8213.

Keywords

parental substance use; parental mental health; harsh parenting; juvenile justice; alcohol use disorder; cannabis use disorder

Introduction[1]

Alcohol and cannabis misuse have serious consequences for health and development which disproportionately impact marginalized and low-income youth. Alcohol misuse is one of the leading causes of death and unintentional injury for adolescents (Hadland et. al., 2019) and Alcohol Use Disorder (AUD) contributes to higher rates of adult morbidity and mortality (SAMSHA, 2017). Alcohol and cannabis misuse are associated with other health risks among youth, including driving under the influence, risky sexual behavior, and suicidality. Alcohol and cannabis use adversely impact development of brain functions associated with attention, memory, decision-making, and reward-seeking, intensifying the risk of developing mental health challenges, substance use disorder, and other delinquent behavior (Meredith & Squeglia, 2020). Justice-involved youth exhibit higher rates of substance use disorders (SUD) than their non-justice involved peers, with almost half of detained youth meeting criteria for at least one SUD (Teplin et. al., 2002). In addition to health consequences, substance use among justice-involved youth is associated with ongoing delinquency and is considered a risk factor for recidivism in the widely used risk-needs-responsivity model (Zapolski et. al., 2019; Chassin et. al., 2016). Although youth substance use disorders have multiple pathways, understanding the role of familial factors is critical to prevention and intervention, both within and outside the legal context.

A robust set of research has linked the intergenerational continuity of substance use through varied mechanisms within the family system such as parental monitoring (Pears et. al. 2007; Chassin et. al., 1993 Latendresse et. al., 2008; Arria et. al., 2016; Bailey et. al., 2009), genetics (Merikangas & Avenevoli, 2000), parental motives for substance use (Rossow et. al., 2016; Van Damme et. al., 2015), and family norms (Zapolski et. al., 2019; Sher et. al., 1991), and then further connects these factors with peer and community influences to shape youth use (Zapolski et. al., 2019; Sharma et. al., 1998). Among non-justice-involved youth, studies investigating the longitudinal associations between parental substance use, parenting behavior, and youth substance use have found that parental substance use is associated both with less parental monitoring, worse relationship quality, lower levels of positive interactions and later youth substance use (Rossow et. al., 2016; Chassin et. al., 1993; Pears et. al., 2007; Handley & Chassin, 2013; Latendresse et. al., 2008). Further, parental substance use substantially raises the risk for all forms of child maltreatment (Walsh et. al., 2002; Kepple, 2018), which is associated with the later development of a substance use disorder for youth (Halpern et. al., 2018).

[1]Abbreviations: AUD: Alcohol Use Disorder; CFI: Comparative Fit Index; CUD: Cannabis Use Disorder; RMSEA: Root Mean Square Error of Approximation; SRMR: Standardized Root Mean Squared Residual; SUD: Substance Use Disorder; TLI: Tucker-Lewis Index.

Justice-involved youth in detention represent one sample where multiple pathways for youth substance use converge. Compared to their peers, justice-involved youth experience elevated rates of SUDs (Teplin et. al., 2002). Given their elevated risk and the large number of studies finding a longitudinal association between parental and youth alcohol use among non-justice involved samples, there is a need to clarify the longitudinal mechanisms underlying these associations. Although substance use among justice-involved youth is similarly linked to adverse health consequences as observed among general population youth (Chassin, 2008; Rowe et. al., 2008), justice-involved youth experience a unique set of adversities and cumulative risks (e.g., high prevalence of childhood trauma compared to non-justice involved peers, ongoing contact with justice system and increased risk for re-offending) that are often significant influences on their behavioral health trajectories (Chassin, 2008; Wiesner et. al., 2005). Parents of justice-involved youth tend to have high rates of alcohol and other substance use disorders and mental health challenges (Lederman et. al., 2004). Justice-involved youth are also more likely to experience child maltreatment than their non-justice-involved peers (King et. al., 2011). Further, harsh parenting is associated with more offending behavior among justice-involved youth (Simmons et. al., 2018). Substance use predicts recidivism above and beyond well-established factors (e.g., aggression, relationships, free time); thus, it is crucial to understand factors increasing risk for substance use among justice-involved youth (Van der Put et. al., 2014). Although similar pathways may underlie the intergenerational transmission of substance use among justice- and non-justice involved youth, this cannot be assumed and focused research is necessary to examine these associations (Zapolski et. al., 2019).

Broadly, harsh parenting can be understood as a continuum of parenting practices characterized by coercive acts and negative emotional expression. While all child maltreatment is inclusive of harsh parenting, not all harsh parenting is considered to be maltreatment (e.g., corporal punishment, being made fun of, embarrassed in front of others). It is unclear how the continuum of harsh parenting functions to influence youth use and SUD, necessitating an investigation of harsh parenting and maltreatment together. At the same time, research suggests independent negative effects for harsh parenting that does not rise to the level of maltreatment. Specifically, harsh physical discipline (e.g., corporal punishment) or harsh verbal interactions (e.g., being criticized and treated unfairly) are associated with the development of youth externalizing and internalizing disorders as well as antisocial behavior in adulthood (Hecker et. al., 2016; Afifi et.al., 2019; Calhoun, 2019). Therefore, there is also a need to better understand how multiple harsh parenting practices may specifically influence substance use and disorders among justice-involved youth, separately from parenting behaviors that include child maltreatment.

To more fully understand transactional associations between parenting and youth risk for a SUD, severe parental mental health needs should also be considered due to the comorbidity of SUD and mental health disorders. Several studies indicate an association between parental psychological distress and youths' development of an SUD (Herman-Stahl, et. al., 2008; Ali et. al., 2016). Investigating these relationships among justice involved youth may further explain the link between harsh parenting and youth SUD outside the intergenerational continuity of norms and behaviors related to SUD among this specialized population.

Finally, these issues need to be examined in the context of the significant racial and ethnic inequities that underlie the juvenile justice system. Racial and ethnic minoritized youth are over-represented in the juvenile justice system relative to the general population (McCoy & Pearson, 2019; Rovner, 2014). Although the explanations for these inequities are widely contested, they point to differential processes for involvement in these systems. For example, substance use is a common pathway for initial and ongoing involvement in the juvenile justice system (Tolou-Shams et al., 2023). Although Black youth are less likely to use or sell drugs than White youth, they are more likely to be arrested due to differential treatment of minoritized youth by the juvenile justice system (Kakade et al., 2012). Overlaying this differential treatment are higher rates of documented substance use among White youth within the justice system compared to Black youth (Chassin, 2008; Welty et. al., 2016). The prominent racial inequalities that are prevalent in youth justice involvement necessitate that research about this population attend to potential differences in the experience of youth from various racial and ethnic backgrounds. Increased attention to systemic racism across ecological domains and within the justice system make clear that attention to these issues are critical. Not only are their race-based differences in justice-system involvement, research among the general population suggests differential experiences with substance use. Specifically, family and peer factors that impact youth substance use may have greater influence among White youth compared to their non-White peers (Zapolski et. al., 2019; Conn & Marks, 2014). The majority of research establishing intergenerational continuity of SUD and maladaptive parenting, however, has been conducted in primarily White samples. As such, there is a need to consider whether race and ethnicity impact these associations, and if so, to what extent.

In a large, representative sample of youth in juvenile detention, the current study investigates whether harsh parenting and child maltreatment mediate the association between severe parental mental health needs and substance misuse and youth substance use disorders. Parental severe mental health needs and substance misuse were hypothesized to directly impact the likelihood that youth were diagnosed with alcohol and cannabis use disorder, as well as to have indirect effects through harsh parenting. Alcohol use disorder (AUD) and cannabis use disorder (CUD) were examined separately because less is known about the mechanisms underlying intergenerational continuity of CUD. No differential effects were hypothesized for each substance. Both harsh parenting and child maltreatment were hypothesized to have direct effects on youth AUD and CUD and partially mediate the associations of parental substance misuse and severe mental health needs with youth AUD and CUD. Partial rather than full mediation was expected due to the complex and multiple factors that underlie youth SUD. Secondary analyses compare the differential direct and mediational effects of harsh parenting that does and does not rise to the level of child maltreatment has on youth alcohol and cannabis use disorders. Finally, multigroup analyses explore whether the effects of parental severe mental health needs and substance misuse, and harsh parenting (harsh parenting that does and does not rise to the level of child maltreatment) on youth AUD and CUD differ across different sex and racial-ethnic groups. The effects of parental substance misuse and severe mental health needs on harsh parenting are not expected to vary based on youth's sex and race/ethnicity and, therefore the

equivalence of these paths or mediational paths across subsamples were not hypothesized or tested.

Our study builds on the important research regarding the parenting mechanisms underlying intergenerational continuity of SUD, making three contributions to the literature. First, we uniquely examine the intergenerational continuity of SUD as it relates to harsh parenting and child maltreatment and youth's later SUD among a justice-involved sample. Second, we investigate these relationships among a racially diverse sample, expanding the generalizability of previous studies. Third, we consider the role that harsh parenting plays as a mediator of parental substance misuse and youth development of a CUD, which has been less examined (Sternberg et. al., 2019).

Method

Sampling and Data Collection Procedure

Secondary data for the current study were drawn from the Northwest Juvenile Project (NJP), a prospective longitudinal study of the mental health and substance use needs and outcomes of youth in juvenile detention. The NJP enrolled 1,829 youth aged 10 to 18 who were arrested and detained between 1995 and 1998 in Cook County, IL, an area that includes Chicago and its suburbs. A stratified random sample of youth were enrolled at intake to the Cook County Juvenile Temporary Detention Center (CCJTDC) in Chicago, Illinois, and followed for 16 years. To ensure adequate representation of subpopulations, the sample was stratified by gender, race/ethnicity (non-Latinx Black, non-Latinx White, or Latinx), age (10–13 years or 14 years and older), and legal status (processed in juvenile or adult court) (Jakubowski et al, 2016).

The NJP includes sample weights for use in statistical analyses so findings reflect the CCJTDC population rather than the stratified sample, which is over-representative of subgroups that are less prevalent in the justice system (e.g., females, younger youth). The CCJTDC population is demographically similar to other U.S. juvenile detention centers in that most youth in detention are youth from racial/ethnic minoritized groups, approximately 90% are male, and the age distribution is typical of juvenile detainees (Lederman et. al., 2004). All study procedures for the current secondary data analysis were approved with exempt status by the supervising University Institutional Review Boards and the research team entered into a data use agreement with ICPSR for permission to use the data. As part of this agreement, the study team had access to a limited dataset, which included publicly available data through ICPSR up to follow-up 4.

The DIS (Diagnostic Interview Schedule) and DISC (Diagnostic Interview Schedule for Children) were completed by trained researchers, most of whom had graduate degrees in psychology or an affiliated field and all had experience interviewing at-risk youth (Jakubowski et. al., 2017). At the baseline assessment, face-to-face structured interviews were conducted at the detention center in a private area within approximately two days of intake. Follow-up interviews were conducted face-to-face wherever the participant was living whether in the community or at any correctional facility in Illinois. Interviews were

conducted by telephone if the participant lived more than two hours away (Jakubowski et. al., 2017).

Sample Characteristics

This secondary data analysis used data from three time-points where the full sample (N = 1,825) was assessed: baseline (1995–1998), three-year follow-up (1998–2001), and four-year follow-up (2000–2006). The average age of participants at baseline was 14.86 years (SD = 1.40, range = 10–18 years). Almost two thirds of the sample was male (64.05%), more than half self-identified as non-Latinx Black (55.07%), 28.71% self-identified as Latinx, and 16.22% self-identified as non-Latinx White.

Variables and Measures

Youth substance use disorder.—Participants were assessed for SUDs using the DISC version 2.3 at baseline and the DISC-IV at the follow-up interviews. Participants who met diagnostic criteria for alcohol abuse or dependence were coded as having AUD [“Yes” (1) and “No” (0)]; and those who met diagnostic criteria for cannabis abuse or dependence were coded as having Cannabis Use Disorder (CUD) [“Yes” (1) and “No” (0)]. Frequency of alcohol and cannabis use in the year prior to baseline was assessed with two questions: “*How many occasions did you drink beer, wine, or liquor in the past year*?” and “*How many occasions did you smoke marijuana in the past year*?” Responses were rated on a 7-point scale ranging from “Never” (0) to “40 and above occasions” (6). Participants’ AUD and CUD assessed at the four-year follow-up interview were used as outcome variables. Participants’ AUD/CUD and frequency of alcohol and cannabis use assessed at the baseline interview were included as covariates in the pathway model.

Parental substance misuse and severe mental health challenges.—Participants reported whether their primary parent (i.e., the adult who had been primarily responsible for the youth’s life) ever had serious problems with alcohol or substances (e.g., “*medical problems, divorce or separation, being fired from work, or being arrested for intoxication/ drunk in public or while drinking*”) and whether their primary parent had ever been hospitalized for mental health problems. Parental substance misuse and severe mental health needs assessed at the baseline interview were used as independent variables.

Harsh parenting practices.—Drawing from literature on delinquency and recidivism (Folk et al., 2016) we used a versatility index (also known as a variety scale) to create a measure for harsh parenting. Versatility indices tend to be more reliable than frequency scales, more strongly correlated with official reports of delinquency than other self-report measures and have more predictive validity than frequency and weighted frequency scales (Hindelang et. al., 1979; Farrington, 1973). In this study, a harsh parenting index was created based on participants’ reports on 16 harsh parenting practices (e.g., grounding, being made fun of or embarrassed in front of others, being yelled at, being pushed, spanked, grabbed, slapped, or shoved, being beaten or kicked, severely injured due to punishment received) at the three-year follow-up interview. Participants were asked about the frequency with which they experienced each harsh parenting practice since the baseline interview. Responses were dichotomized as “Yes” (1) and “No” (0) and a composite score was generated by summing

the 16 questions; higher scores reflect experiencing more types of harsh parenting. The versatility index of harsh parenting focuses on assessing the cumulative harsh parenting exposure, rather than frequency of the behavior, and as such the index is not plagued by methodological issues common to frequency scales (e.g., less serious behaviors tend to occur more frequently and there is no clear way to scale the severity of behaviors). To distinguish between child maltreatment and harsh parenting practices that do not rise to the level of maltreatment, two sub-indices were created: a composite score of 9 items (e.g., being made fun of or embarrassed in front of others, being yelled at, and etc.), reflecting harsh parenting practices that do not rise to the level of maltreatment, and a composite score of 7 items (e.g., being hit with an object, being severely injured due to punishment received, and etc.), reflecting child maltreatment. Harsh parenting assessed at the three-year follow-up interview was used as mediator in the pathway model.

Data Analysis

Two multivariate path analyses were conducted to examine the relationships among parental substance misuse and severe mental health needs, harsh parenting, child maltreatment, and youth AUD and CUD. Participants' age, gender, and race/ethnicity were included as covariates. Youth alcohol and cannabis use, and AUD and CUD at baseline were also controlled for in the model to test whether parental substance misuse, severe mental health challenges, harsh parenting and/or child maltreatment increased the likelihood of youth AUD and CUD at the four-year follow-up. As the variables for youths' AUD and CUD were binary, Mplus version 8 with Weighted Least Squares Means and Variance Adjusted estimator was used to adjust for potential non-normality in the data (Muthen et. al., 2017). Odds ratios (OR) and 95% confidence intervals (CI) were requested for paths from predictors and mediators to youth AUD and CUD. Missing data (range for variables included: 0 – 20.33%) was handled using full information maximum likelihood (FIML; Graham, 2009). Patterns of missingness were explored through bivariate analyses to determine whether demographic variables (which had no missing data) were associated with missingness on variables of interest, and whether variables at baseline predict missingness at follow-ups. After a Bonferonni correction, results suggested Black youth were significantly less likely to have missing data on AUD and CUD at four-year follow-up, and harsh parenting at three-year follow-up, compared to White and Latinx youth. Female youth were significantly less likely to have missing data on parental substance misuse at baseline compared to male youth. No other significant differences in missingness were found. FIML uses all data available for each participant across multiple waves of data to determine the model parameters. FIML is widely accepted (Little, Jorgensen, Lang, & Moore, 2014; Schafer & Graham, 2002), especially in longitudinal research where people sometimes miss an entire wave of data, and provides more reliable results than are found with Listwise deletion (Schafer & Graham, 2002). Bootstraping with 10,000 resamples was used to obtain the 95% CIs for direct and mediational paths. Several goodness-of-fit indices were used to evaluate each model: non-significant $\chi 2$ value, root mean square error of approximation (RMSEA; ≤ 0.06), comparative fit index (CFI; ≥ 0.95), Tucker-Lewis Index (TLI; ≥ 0.95), and standardized root mean squared residual (SRMR; ≤ 0.06) (West et. al., 2012).

Multigroup analyses were conducted to examine differences in pathways linking parental severe mental health needs and substance misuse and harsh parenting (that does not rise to the level of maltreatment vs. child maltreatment) and youth AUD and CUD across sex and racial/ethnic subgroups. For each multigroup analysis, a baseline model was tested first in which all direct and indirect paths were held constant across subgroups. Subsequently, several less restricted models were tested in which a direct path was allowed to vary between subgroups while other paths were held constant (see Table 3). Model fit of the less restricted models were compared against model fit of the baseline model using the χ^2 difference test (Mplus Syntax DIFFTEST). Youth's sex and race/ethnicity were not hypothesized to impact the effects of parental substance misuse and severe mental health needs on harsh parenting. Thus, these direct paths were held constant between subgroups.

Results

Parental and Adolescent Substance Misuse

As shown in Table 1, 80.94% of youth reported using alcohol in the year before baseline, and almost half (45.29%) used alcohol 10+ times. Over 95% of youth reported using cannabis in the year before baseline, and 70.87% used cannabis 10+ times. At baseline, 25.84% of youth met diagnostic criteria for AUD and 43.01% met diagnostic criteria for CUD. The percentages of youth who met diagnostic criteria for AUD and CUD were 16.35% and 19.69%, respectively, at the four-year follow-up assessment. More than 20% of youth reported their parent ever evidenced substance misuse, and 6.11% of youth reported their parent ever experienced a severe mental health problem. Bivariate analyses revealed that males were significantly more likely to have AUD (20.37% vs. 9.35%, $\chi^2 = 33.13$, $p < 0.001$) and CUD (23.43% vs. 13.22%, $\chi^2 = 24.62$, $p < 0.001$) at the four-year follow-up than females. Non-Latinx White youth were significantly more likely to have AUD (24.40% vs. 13.04%, $\chi^2 = 20.95$, $p < 0.001$) and CUD (23.20% vs. 17.48%, $\chi^2 = 6.72$, $p = 0.035$) at the four-year follow-up than non-Latinx Black youth.

Harsh Parenting and Child Maltreatment

Descriptive statistics for all harsh parenting and maltreatment items are displayed in Table 1. A little more than a third of participants reported experiences consistent with harsh parenting. During the three years between baseline and follow-up, 37.87% reported being put down or criticized by their parent, almost 30% (29.55%) reported being made fun of or embarrassed in front of others by their parent and 34.69% reported their parent made them feel like a bad person. Experiences of child maltreatment were less prevalent during this same time period. More than 25% of youth had been hit very hard (25.43%) or hit with an object (20.81%) by their parent; and 10.74% had been beaten or kicked by their parent. Over 6% of youth (6.74%) had been severely injured, and 5.87% reported the punishment received had been reported to an official. Bivariate analyses revealed that males experienced significantly more types of child maltreatment than females ($t = -2.66$, $p = 0.008$); no significant gender difference was observed on harsh parenting that did not rise to the level of maltreatment. In addition, non-Latinx White youth reported experiencing significantly more types of harsh parenting practices that did not rise to the level of maltreatment than their non-Latinx Black peers ($F = 3.79$, $p = 0.023$)

Pathway Models

The model examining harsh parenting as a mediator of the effects of parental severe mental health needs and substance misuse on youth AUD and CUD fit the data adequately: [χ^2 (22) = 43.00, p = 0.005; RMSEA = 0.02 (90% CI: 0.01, 0.03); SRMR = 0.02; CFI = 1.00; TLI = 0.99]. As shown in Figure 2a, parental substance misuse (B = 0.73, 95% CI: 0.34, 1.13) and severe mental health needs (B = 1.31, 95% CI: 0.59, 2.08) predicted more harsh parenting at the three-year follow-up, which in turn, increased the odds of youth having AUD (OR = 1.08, 95% CI: 1.04, 1.13) and CUD (OR = 1.04, 95% CI: 1.00, 1.08) at the four-year follow-up after controlling for baseline youth alcohol/cannabis use and disorder. No significant, direct effect of parental severe mental health needs or substance misuse on youth AUD or CUD was observed. Harsh parenting fully mediated the effects of parental substance misuse and severe mental health needs on youth AUD and CUD at the four-year follow-up (See Table 2a for specific mediational effects and bootstrapping 95% CI).

The model examining the different paths of harsh parenting and child maltreatment mediating the effects of parental severe mental health needs and substance misuse on youth AUD and CUD fit the data adequately: [χ^2 (26) = 56.45, p < 0.001; RMSEA = 0.03 (90% CI: 0.02, 0.03); SRMR = 0.02; CFI = 0.99; TLI = 0.98]. As shown in Figure 2b, parental substance misuse (B = 0.46, 95% CI: 0.16, 0.77) and severe mental health needs (B = 1.15, 95% CI: 0.61, 1.73) predicted more harsh parenting that did not rise to the level of maltreatment, which in turn, increased the likelihood of youth being diagnosed with AUD (OR = 1.08, 95% CI: 1.02, 1.15) at the four-year follow-up. Further, parental substance misuse predicted more child maltreatment experiences (B = 0.23, 95% CI: 0.09, 0.38). Harsh parenting that did not rise to the level of maltreatment fully mediated the effects of parental substance misuse and severe mental health needs on youth AUD. After controlling for the effect of harsh parenting, however, child maltreatment had no significant direct or mediational effect on adolescent AUD or CUD (See Table 2b for specific mediational effects and bootstrapping 95% CI).

As shown in Table 3, all baseline models in multigroup analyses had better model fit than the less restricted models. Results suggested the significant direct effect of harsh parenting on youth AUD and CUD (models 1a, 1b, 3a, 3b in Table 3) and the significant direct effect of harsh parenting that does not rise to the level of maltreatment on youth AUD (models 2a, 4a) did not vary across sex or racial/ethnic groups in our sample. Further, the direct effects of parental substance misuse and mental health needs (models 1c, 1d, 3c, 3d) on youth AUD and CUD, harsh parenting that does not rise to the level of maltreatment on youth CUD (model 2c, 4c), and child maltreatment on youth AUD (models 2b, 4b) and CUD (models 2d, 4d) were not significant for female and male or different racial/ethnic groups in our sample.

Discussion

Results of the current study expand our understanding of the mechanisms by which parental substance misuse leads to the development of youth AUD and CUD among justice-involved youth. Harsh parenting fully mediated the effect of parental substance misuse on youth AUD and CUD. Severe parental mental health needs also predicted harsh parenting, which in turn,

contributed to youth AUD and CUD. Results support previous findings which highlight the intergenerational implications of parental substance misuse for both youth misuse and more negative parent-child relationships (Pears et. al. 2007; Chassin et. al., 1993; Latendresse et. al., 2008; Arria et. al., 2016). Our analysis builds on prior studies by comparing how harsh parenting, as distinct from child maltreatment and on a continuum, directly impacts youth SUD when their parent either misuses substances or has a severe mental health need among justice-involved youth. Further, this study extends the focus on the relationship between harsh parenting (as distinct from parental monitoring or parent-child relational quality) and parental substance misuse from early childhood to adolescence.

Experiences with harsh parenting were common in the current sample of justice-involved youth, while child maltreatment was prevalent, but less common. These findings confirm the prevalence of harsh parenting behaviors distinct from maltreatment among justice-involved youth. It is noteworthy and surprising that when harsh parenting is controlled for, the association between child maltreatment and the likelihood youth are diagnosed with AUD and/or CUD is no longer statistically significant. These findings indicate harsh parenting (specifically that does not rise to the level of maltreatment) acts as a mechanism to explain the intergenerational continuity of substance misuse, even in the context of the marginalized status of justice-involved youth. The negative emotional experiences and relational consequences of harsh parenting may be particularly powerful for shaping self-concept, which in turn, may shape youth use. In addition to the mediational effects, exposure to more types of harsh parenting directly increased the odds of youth being diagnosed with AUD and/or CUD after controlling for their baseline use and disorder. These results confirm the critical role that parenting behaviors play in shaping substance youth trajectories, even in a high-risk sample with multiple other social adversities. Consistent with research on cumulative risk, these findings suggest that there is a dose-dependent effect for exposure to types of harsh parenting and later development of a substance use disorder. Although harsh parenting significantly mediated the association between parental severe mental health needs and substance use and CUD, the direct effects of parental severe mental health needs and substance use on CUD was not significant. The lack of direct effects is inconsistent with the prior literature, which suggest a direct effect between parental substance misuse and youth SUD. While we hypothesized that harsh parenting only partially mediated these effects, their full mediation in the model identifies the significant role harsh parenting plays in linking the intergenerational continuity of SUD and increasing risk of a CUD for youth whose parent had a severe mental health disorder.

We did not observe variation by race or sex among youth on effects of harsh parenting on youth SUDs, suggesting the processes by which harsh parenting may act as a mechanism for youth substance misuse is generalizable across groups. Compared to White youth, Black youth experienced significantly lower levels of harsh parenting. Notably, racial and ethnic differences in harsh parenting and youths' substance misuse and disorders contradict popular discourse about who engages in harsh practices to discipline their children. Racial differences in the child welfare system would, however, suggest the opposite as a recent study found Black youth are over-represented in maltreatment substantiations, which are inclusive of harsh parenting practices (Lanier et. al., 2104). These findings are consistent with newer research that when socio-economic disadvantages are controlled for,

non-White families have lower rates of maltreatment (Putnam-Hornstein & Needell, 2011). These racial differences highlight how perceptions regarding harsh parenting generally, and maltreatment, specifically, may not always reflect reality regarding the narratives of Black justice-involved youth

Limitations

Strengths of the current study (longitudinal design, large unique sample with high rates of intergenerational SUDs) are tempered by several limitations. First, the focus on youth in detention in a single justice system limits generalizability, though provides insight into an understudied and underserved population. Second, information on parental substance misuse and severe mental health needs were reported by youth (rather than parents themselves) and could therefore be subject to recall bias; youth might have had limited knowledge of these issues. We also did not know the parents' sex, race or ethnicity to examine differential associations between parental severe mental health needs and substance misuse on harsh parenting. Third, as this was a secondary data analysis, the measurement of many of the constructs of interest could have been more refined. Though the study provides strengths given its longitudinal nature, the secondary nature of the study was a limitation as we did not have the ability to ask the specific questions we would have preferred to ask regarding our particular research questions.

Data were collected from 1995 to 2006; thus, findings may not reflect the substance use trends of present-day justice-involved youth. Although new methods of substance use (e.g., vaping) and societal norms around use may shift over time, the relationships between parental substance misuse, mental health, and harsh parenting are unlikely to be significantly changed; this remains a question for future research. Reporting directly by parents may be considered in future studies.

Finally, regarding the mediational effects, exposure to more types of harsh parenting directly increased the odds of youth being diagnosed with AUD and/or CUD after controlling for their baseline use and disorder. Although the odds ratios were significant, they were small in magnitude, particularly for CUD, and thus should be interpreted with caution. Given the complex pathways through which youth AUD and CUD develop, the small effects of harsh parenting are still noteworthy. Further research should attempt to replicate these findings, including with youth at different stages of justice involvement.

Conclusion

While increasing attention has been paid to the implications for harsh parenting in early childhood and to the risks a parents' SUD poses for harsh parenting (Flykt et. al., 2012; Edwards et. al., 2009; Rutherford & Potenza, 2018), these findings speak to the need for equal attention and intervention for parents of adolescents. The current findings suggest one way to interrupt the intergenerational consequences of parental SUD would be to integrate family treatment and parenting components into SUD treatment. Currently, treatment for SUD is individually-based and the relationship between use and parenting is either adjunctive or does not occur at all (Bosk et. al., 2019). A few interventions

such as Mothering from the Inside Out (Suchman et. al., 2017), Family-Based Recovery (Hanson et.al., 2015), and Project BRIGHT (Paris et. al., 2017), focus on addressing the unique treatment needs of parents with SUD, but these all focus on the early childhood years. Accordingly, intervention development for integrated SUD and parenting is needed to address the ways relational experiences can be compromised by parental substance misuse and harsh parenting in adolescence. Programs to reduce coercive parenting and patterns of negative emotional interactions with youth may provide both preventative and intervention functions for families where parents have a SUD or mental illness. Parents of adolescents, not just young children, also likely need support in finding alternatives to physical punishment or disciplinary strategies that are not harsh or punitive in nature. In the context of justice-involved youth, integration of families into substance use treatment results in better outcomes (Chassin et. al., 2009), however, this type of treatment is rarely available in detention (Zopalski et. al., 2019). Similarly, few developmentally appropriate programs exist to address substance misuse among justice-involved youth (Henderson et. al., 2007).

The racial and ethnic differences in uses of harsh parenting contradict dominant narratives, as White youth were more likely to have experienced harsh parenting experiences compared to Black youth. Public discussion related to the more frequent and acceptable use of corporal punishment (which is defined as harsh parenting) in Black communities (Patton, 2017) may obscure the ways in which White parents are engaging in harsh parenting that likely requires intervention, but fails to be monitored as closely by professionals compared to the behaviors of Black youth and families. This is another example of the differential treatment of Black youth compared to White youth in the juvenile justice and child welfare systems. These inequities continue to perpetuate disproportionate minority contact and systemically bias the justice system against Black youth. Clinical practice to address parental and youth substance misuse must address the culturally specific needs of youth from minoritized racial and ethnic backgrounds, similar to the need for culturally specific mental health service needs for youth in the juvenile justice system (Corbit, 2005).

Taken together, these findings suggest that SUD and mental health needs of parents must be addressed with consideration of their potential impacts on their children. Increased attention to the way parental substance misuse and mental health disorders increase the risk of harsh parenting would begin to address the gap between our understanding of the mechanisms for youth substance use. Further, there is a need for the development of relational interventions designed specifically for justice-involved youth.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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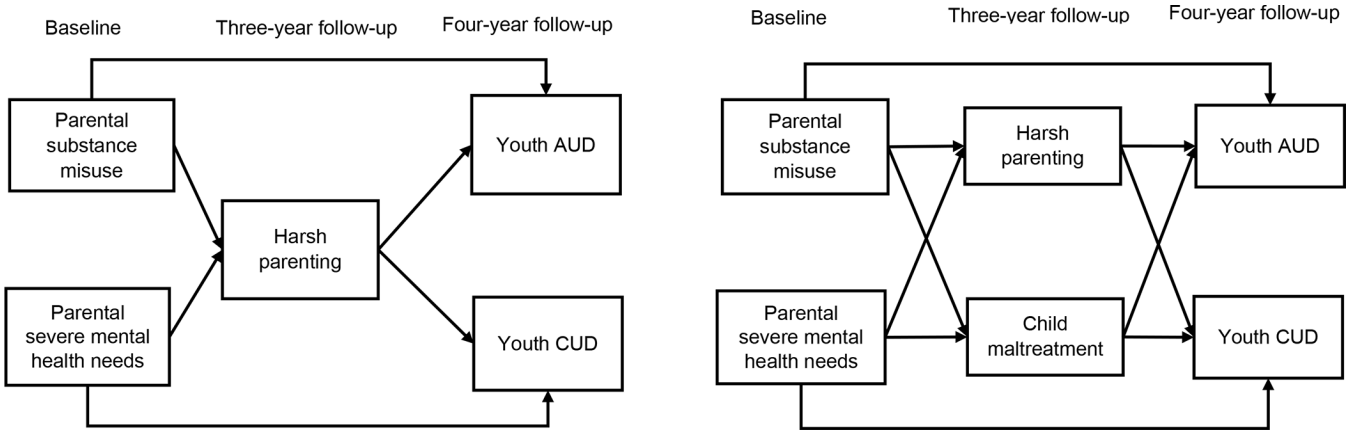

Figure 1.

Conceptual models illustrating the pathways among parental substance misuse and severe mental health needs, harsh parenting (child maltreatment vs. harsh parenting that does not rise to the level of maltreatment), and youth alcohol use disorder (AUD) and cannabis use disorder (CUD) over time.

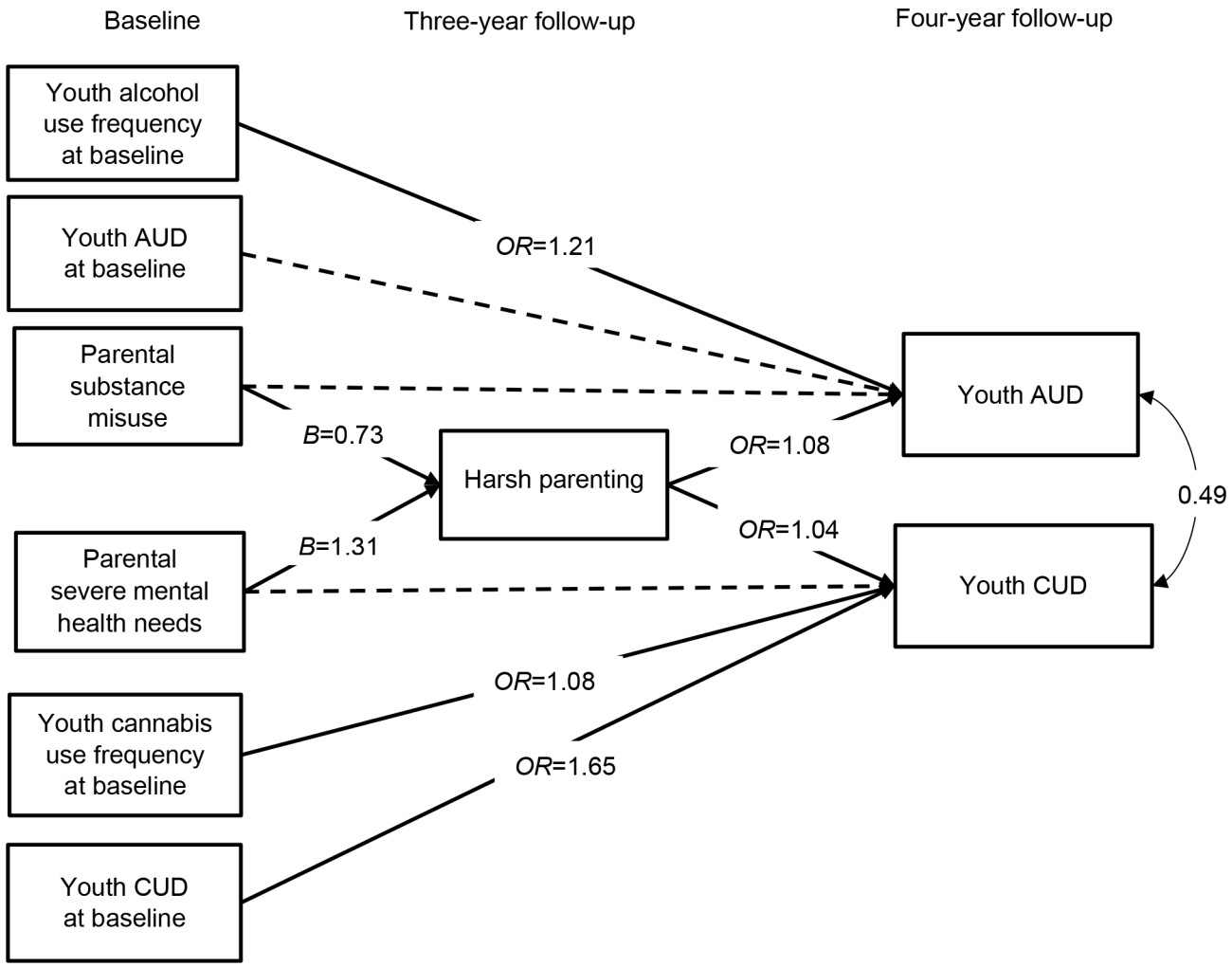

Figure 2a.

Path analysis examining the pathways among parental substance misuse and severe mental health needs, harsh parenting, and youth alcohol/cannabis use disorders. B = unstandardized path coefficient. OR = Odds Ratio. Nonsignificant paths are presented using dotted lines. Youth's age, gender, and racial/ethnicity were used as covariates, but not presented in the figure. Covariances among independent variables were modeled and nonsignificant covariances were removed from the model. See Table 2a for mediational paths and 95% CI for all paths.

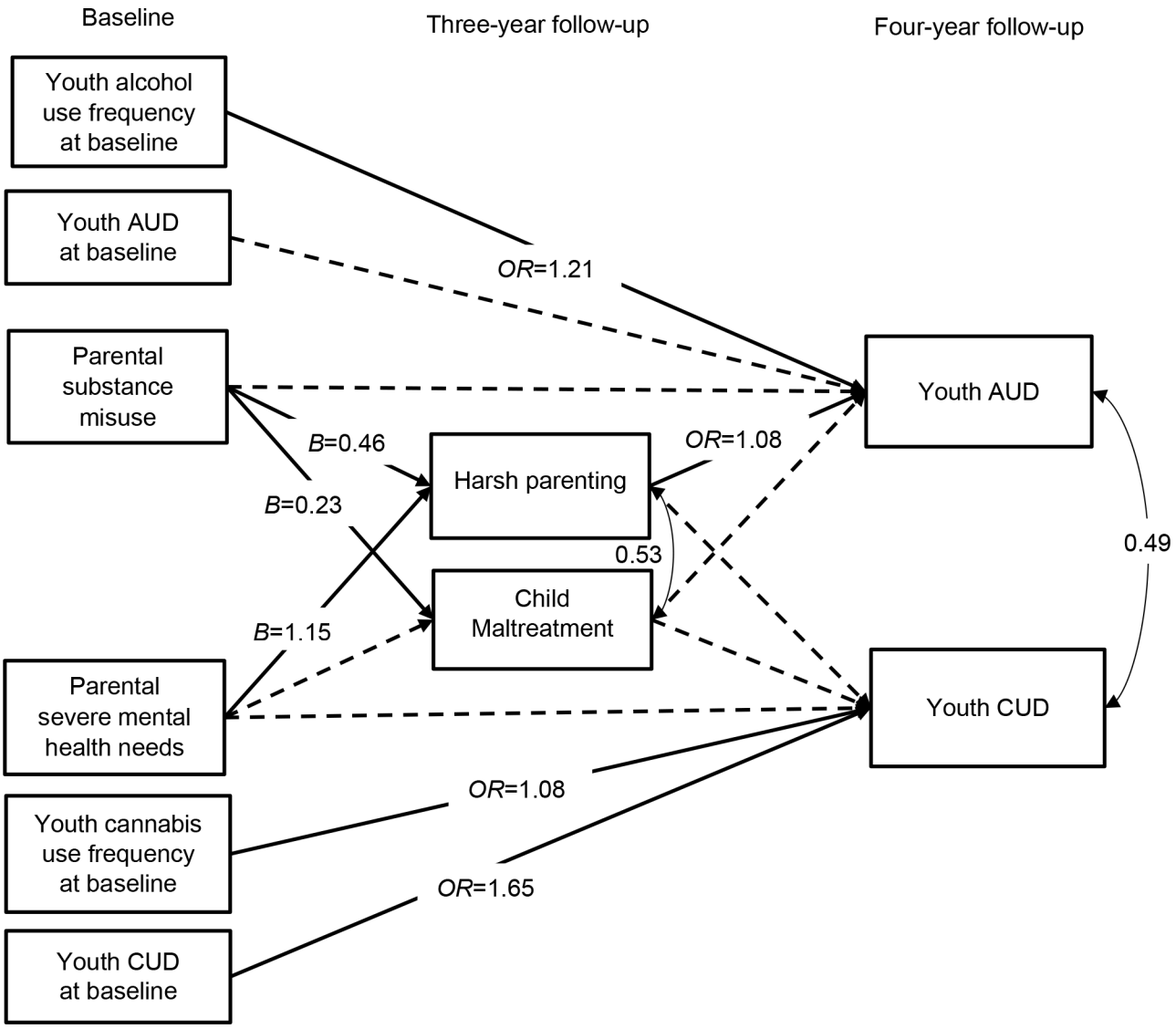

Figure 2-b.

Path analysis examining the pathways among parental substance misuse and severe mental health needs, harsh parenting distinguished from child maltreatment, and youth alcohol/cannabis use disorders. B = unstandardized path coefficient. OR = Odds Ratio. Nonsignificant paths are presented using dotted lines. Youth's age, gender, and racial/ethnicity were used as covariates, but not presented in the figure. Covariances among independent variables were modeled and nonsignificant covariances were removed from the model. See Table 2b for mediational paths and 95% CI for all paths.

Table 1

Sample characteristics, harsh parenting, and youth and parental substance misuse

	% (N)	*M (SD)*
Demographics (Baseline)		
Age		14.86 (1.40)
Gender		
Male	64.05% (1,169)	
Female	35.95% (656)	
Race/Ethnicity		
Non-Latinx Black	55.07% (1,005)	
Non-Latinx White	16.22% (296)	
Latinx	28.71% (524)	
Youth substance misuse		
Frequency of alcohol use in the past year at baseline		
Never	19.06% (346)	
1–2 occasions	14.93% (271)	
3–5 occasions	13.50% (245)	
6–9 occasions	7.22% (131)	
10–19 occasions	11.90% (216)	
20–39 occasions	10.14% (184)	
40+ occasions	23.25% (422)	
Alcohol use disorder (AUD) at baseline	25.84% (464)	
Alcohol use disorder (AUD) at four-year follow-up	16.35% (263)	
Frequency of cannabis use in the past year at baseline		
Never	4.21% (67)	
1–2 occasions	11.13% (177)	
3–5 occasions	8.43% (134)	
6–9 occasions	5.35% (85)	
10–19 occasions	10.25% (163)	
20–39 occasions	9.43% (150)	
40+ occasions	51.19% (814)	
Cannabis use disorder (CUD) at baseline	43.01% (772)	
Cannabis use disorder (CUD) at four-year follow-up	19.69% (317)	
Parental substance misuse	21.39% (361)	
Parental severe mental health needs	6.11% (101)	
Harsh parenting at three-year follow-up		
Composite score of harsh parenting that does not rise to the level of maltreatment (Items 1–9)		3.60 (2.55)
1. Not allowed to watch TV or videos	36.48% (530)	
2. Made do extra chores	40.30% (584)	
3. Grounding	46.99% (678)	

	% (N)	*M (SD)*
4. Put down or criticized	37.87% (548)	
5. Made fun of or embarrassed in front of others	29.55% (429)	
6. Made to feel like a bad person	34.69% (503)	
7. Yelled at	79.20% (1,131)	
8. Pushed, spanked, grabbed, slapped or shoved	31.56% (457)	
9. Hit very hard	25.43% (369)	
Composite score of child maltreatment (Items 10–16)		0.68 (1.12)
10. Hit with an object	20.81% (302)	
11. Beaten or kicked	10.74% (156)	
12. Locked in a room for 5 hours	18.88% (273)	
13. Severely injured due to punishment received	6.74% (98)	
14. Severely punished in other ways	1.65% (24)	
15. Hurt so badly due to punishment that had to go to a hospital	5.85% (85)	
16. Punishment received ever been reported to an official	5.87% (85)	
Composite score of harsh parenting index (Items 1–16)		4.14 (3.32)

Table 2a.

Path analysis on the relationships among parental substance misuse and severe mental health needs, harsh parenting, and youth alcohol and cannabis use disorders (N = 1,825)

	Harsh parenting	**Alcohol use disorder (AUD) R^2=0.15**		**Cannabis use disorder (CUD) R^2=0.09**	
Direct paths	**B (95% CI)**	**B (95% CI)**	**OR (95% CI)**	**B (95% CI)**	**OR (95% CI)**
Age	0.03 (−0.07, 0.14)	0.01 (−0.04, 0.06)	1.02 (0.93, 1.12)	0.01 (−0.04, 0.05)	1.00 (0.92, 1.09)
Gender (Ref: Female)	−0.04 (−0.36, 0.27)	0.51 (0.37, 0.66)	**2.51** (1.87, 3.36)	0.39 (0.26, 0.53)	**1.96** (1.51, 2.54)
Race (Ref: Non-Latinx White)					
Non-Latinx Black	**−0.90** (−1.49, −0.35)	−0.23 (−0.45, −0.03)	**0.62** (0.45, 0.85)	−0.06 (−0.25, 0.13)	0.84 (0.62, 1.16)
Latinx	**−0.69** (−1.32. −0.13)	−0.18 (−0.42, 0.03)	0.70 (0.50, 0.99)	0.03 (−0.18, 0.24)	0.98 (0.70, 1.38)
Parental substance misuse	**0.73** (0.34, 1.13)	0.02 (−0.15, 0.18)	1.11 (0.81, 1.52)	0.07 (−0.08, 0.23)	1.20 (0.90, 1.58)
Parental severe mental health needs	**1.31** (0.59, 2.08)	−0.15 (−0.47, 0.11)	0.83 (0.47, 1.44)	−0.26 (−0.59, 0.01)	0.67 (0.39, 1.14)
Harsh parenting		0.05 (0.03, 0.07)	**1.08** (1.04, 1.13)	0.02 (0.002, 0.04)	1.04 (1.00, 1.08)
Alcohol use at baseline		0.11 (0.07, 0.16)	**1.21** (1.12, 1.30)		
Alcohol use disorder (AUD) at baseline		0.06 (−0.13, 0.25)	1.12 (0.83, 1.51)		
Cannabis use at baseline				0.05 (0.002, 0.09)	**1.08** (1.01, 1.17)
Cannabis use disorder (CUD) at baseline				0.32 (0.16, 0.48)	**1.65** (1.25, 2.18)

Mediational paths	***B** (95% CI)*
Parental substance misuse → Harsh parenting → AUD	**0.036** (0.014, 0.066)
Parental severe mental health needs → Harsh parenting → AUD	**0.066** (0.024, 0.119)
Parental substance misuse → Harsh parenting → CUD	**0.016** (0.001, 0.037)
Parental severe mental health needs → Harsh parenting → CUD	**0.029** (0.002, 0.066)

Table 2b.

Path analysis on the relationships among parental substance misuse and severe mental health needs, harsh parenting that does not rise to the level of maltreatment and child maltreatment, youth alcohol and cannabis use disorders (N = 1,825)

	Harsh parenting	**Child maltreatment**	**Alcohol use disorder (AUD) R^2=0.15**		**Cannabis use disorder (CUD) R^2=0.09**	
Direct paths	**B (95% CI)**	**B (95% CI)**	**B (95% CI)**	**OR (95% CI)**	**B (95% CI)**	**OR (95% CI)**
Age	**−0.09** (−0.18, −0.01)	**0.06** (0.03, 0.10)	0.02 (−0.03, 0.07)	1.02 (0.93, 1.12)	0.01 (−0.04, 0.05)	1.00 (0.92, 1.09)
Gender (Ref: Female)	**−0.26** (−0.51, −0.02)	**0.16** (0.06, 0.26)	0.51 (0.37, 0.67)	**2.50** (1.86, 3.36)	0.38 (0.25, 0.53)	**1.94** (1.49, 2.52)
Race (Ref: Non-Latinx White)						
Non-Latinx Black	**−0.93** (−1.40, −0.53)	−0.12 (−0.34, 0.06)	−0.22 (−0.44, −0.02)	**0.62** (0.45, 0.86)	−0.07 (−0.26, 0.12)	0.84 (0.61, 1.15)
Latinx	**−0.75** (−1.26. −0.31)	−0.05 (−0.27, 0.05)	−0.17 (−0.41, 0.05)	0.71 (0.50, 1.01)	0.03 (−0.19, 0.23)	0.97 (0.69, 1.37)
Parental substance misuse	**0.46** (0.16, 0.77)	**0.23** (0.09, 0.38)	0.02 (−0.15, 0.18)	1.12 (0.81, 1.54)	0.07 (−0.08, 0.23)	1.20 (0.90, 1.59)
Parental severe mental health needs	**1.15** (0.61, 1.73)	0.18 (−0.06, 0.45)	−0.16 (−0.48, 0.11)	0.84 (0.48, 1.48)	−0.25 (−0.58, 0.02)	0.69 (0.40, 1.17)
Harsh parenting			0.05 (0.02, 0.09)	**1.08** (1.02, 1.15)	0.01 (−0.02, 0.04)	1.02 (0.96, 1.08)
Child maltreatment			0.04 (−0.02, 0.11)	1.09 (0.95, 1.26)	0.05 (−0.02, 0.12)	1.08 (0.95, 1.23)
Alcohol use at baseline			0.11 (0.07, 0.16)	**1.21** (1.12, 1.30)		
Alcohol use disorder at baseline			0.06 (−0.13, 0.24)	1.12 (0.83, 1.52)		
Cannabis use at baseline					0.05 (0.002, 0.09)	**1.08** (1.01, 1.17)
Cannabis use disorder at baseline					0.32 (0.16, 0.48)	**1.65** (1.24, 2.18)

Mediational paths	***B** (95% CI)*
Parental substance misuse → Harsh parenting → AUD	**0.024** (0.005, 0.050)
Parental severe mental health needs → Harsh parenting → AUD	**0.060** (0.017, 0.117)
Parental substance misuse → Harsh parenting + Child maltreatment→ AUD	**0.034** (0.011, 0.063)

	Harsh parenting	Child maltreatment	Alcohol use disorder (AUD) R^2=0.15		Cannabis use disorder (CUD) R^2=0.09	
	B (95% CI)	**B (95% CI)**	**B (95% CI)**	**OR (95% CI)**	**B (95% CI)**	**OR (95% CI)**
Direct paths						
Parental severe mental health needs → Harsh parenting + Child maltreatment → AUD					**0.068** (0.022, 0.129)	

Table 3.

Model comparison of the multigroup analyses

Model #	Model description	Model fit index	χ^2 difference test [a]
***1. Multigroup analysis of the model with harsh parenting as one mediator between female and male subgroups*:**			
Baseline	All direct and indirect paths are held constant	χ^2 (53) = 56.356	
a	Harsh parenting → youth AUD varies	χ^2 (52) = 56.247	n.s.
b	Harsh parenting → youth CUD varies	χ^2 (52) = 53.180	n.s.
c	Parental substance misuse and severe mental health needs → youth AUD vary	χ^2 (51) = 56.044	n.s.
d	Parental substance misuse and severe mental health needs → youth CUD vary	χ^2 (51) = 56.099	n.s.
2. Multigroup analysis of the model with harsh parenting and child maltreatment as separate mediators between female and male subgroups:			
Baseline	All direct and indirect paths are held constant	χ^2 (66) = 72.095	
a	Harsh parenting → youth AUD varies	χ^2 (65) = 72.402	n.s.
b	Child maltreatment → youth AUD varies	χ^2 (65) = 72.404	n.s.
c	Harsh parenting → youth CUD varies	χ^2 (65) = 68.269	n.s.
d	Child maltreatment → youth CUD varies	χ^2 (65) = 69.602	n.s.
e	Parental substance misuse and severe mental health needs → youth AUD vary	χ^2 (64) = 71.736	n.s.
f	Parental substance misuse and severe mental health needs → youth CUD vary	χ^2 (64) = 71.754	n.s.
3. Multigroup analysis of the model with harsh parenting as one mediator across racial-ethnic subgroups:			
Baseline	All direct and indirect paths are held constant	χ^2 (84) = 115.276	
a	Harsh parenting → youth AUD varies	χ^2 (82) = 112.908	n.s.
b	Harsh parenting → youth CUD varies	χ^2 (82) = 113.739	n.s.
c	Parental substance misuse and severe mental health needs → youth AUD vary	χ^2 (80) = 110.288	n.s.
d	Parental substance misuse and severe mental health needs → youth CUD vary	χ^2 (80) = 106.875	n.s.
4. Multigroup analysis of the model with harsh parenting and child maltreatment as separate mediators across racial-ethnic subgroups:			
Baseline	All direct and indirect paths are held constant	χ^2 (108) = 152.905	
a	Harsh parenting → youth AUD varies	χ^2 (106) = 150.295	n.s.
b	Child maltreatment → youth AUD varies	χ^2 (106) = 148.406	n.s.
c	Harsh parenting → youth CUD varies	χ^2 (106) = 152.075	n.s.
d	Child maltreatment → youth CUD varies	χ^2 (106) = 152.617	n.s.

Model #	Model description	Model fit index	χ^2 difference test [a]
e	Parental substance misuse and severe mental health needs → youth AUD vary	χ^2 (105) = 149.331	n.s.
f	Parental substance misuse and severe mental health needs → youth CUD vary	χ^2 (105) = 145.915	n.s.

Note:

[a] Nonsignificant (n.s.) χ^2 difference test suggests that the less restricted model does not have a better fit compared to the baseline model, and the baseline model should be retained.