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Authors

Hoskins, David
Marshall, Brandon DL
Koinis-Mitchell, Daphne
et al.

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Latinx Youth in First Contact with the Justice System: Trauma and Associated Behavioral Health Needs

David Hoskins, PsyD, M.A.S.[1], **Brandon DL Marshall, PhD**[2], **Daphne Koinis-Mitchell, PhD**[3,4], **Katharine Galbraith, BA**[5], and **Marina Tolou-Shams, PhD**[6,7]

[1]UCSF Benioff Children's Hospital, Center for Vulnerable Child; Oakland, CA, USA

[2]Department of Epidemiology, Brown University School of Public Health; Providence, RI USA

[3]Department of Psychiatry and Human Behavior, Warren Alpert Medical School of Brown University

[4]Department of Psychiatry, Rhode Island Hospital

[5]Department of Psychology, University of Southern California

[6]Department of Psychiatry and Weill institute for Neurosciences, University of California San Francisco

[7]Division of Infant, Child, and Adolescent Psychiatry, Zuckerberg San Francisco General Hospital

Abstract

This study examines the prevalence of trauma exposure and its association with psychiatric symptoms, substance use, and sexual activity among First-Time Offending, Court-Involved Non-Incarcerated (FTO-CINI) Latinx youth. Latinx youth (N=181), ages 12-18, were recruited from a family court in the Northeastern region of the United States as part of a longitudinal cohort study of 423 FTO-CINI youth. Baseline data on trauma exposure and symptoms, psychiatric symptoms, substance use (alcohol/marijuana), and sexual activity among the Latinx sample were analyzed by age, gender, and offense type (status versus delinquent). Almost three-quarters of Latinx FTO-CINI youth reported lifetime trauma exposure. Almost half of Latinx youth reported lifetime marijuana use, 30% reported lifetime alcohol use, and 33% reported lifetime sexual activity. Females reported higher rates of internalizing symptoms and greater affect dysregulation. Trauma-exposed youth were more likely than their non-exposed peers to have reported more externalizing symptoms; trauma-exposed females compared to trauma-exposed males reported more severe internalizing symptoms. Latinx FTO-CINI females may have different behavioral health needs than their male counterparts. Court-based screening and assessment practices should attend to the specific behavioral needs of this unique, underserved population.

Keywords

PTSD; Sexual Behavior; Substance Abuse; Trauma; Ethnic Minority Youth

*Corresponding author: David Hoskins, PsyD, M.A.S., UCSF Benioff Children's Hospital Oakland, Center for Vulnerable Child, 727 52nd Street, Oakland CA 94609; dhoskinns@mail.cho.org.

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Latinx Youth in First Contact with the Justice System: Trauma and Associated Behavioral Health Needs According to the Pew Hispanic Research Center (2015), the Latinx[1] population totaled 56.5 million people in the United States (U.S.)[1]. They are considered one of the fastest growing ethnic group in the U.S., and approximately one-third of this population is under 18[2]. Over the years, Latinx youth have become one of the most overrepresented ethnic and racial groups in the justice system[3]. Researchers have documented reasons for their disproportionate contact, which include discriminatory practices, school zero tolerance policies (i.e., predefined disciplinary action in response to a violation of school rules with no regard for the seriousness of offense), fewer specialty services prior to contact with the Juvenile Justice System (JJS) (e.g., psychiatric services)[4], and disparate representation of youth from the lower social class[5,6].

Psychiatric Needs and Behavioral Health Disparities

Justice-involved Latinx youth have some of the highest-risk behavioral health profiles when compared to the general adolescent population and justice-involved youth of other racial/ethnic groups[3,7]. Generational differences between rates of JJS involvement among foreign born and U.S. born individuals have been identified. Both Miller[8] and Tapia[9] showed, in a nationally representative sample, that foreign-born Latinx youth (6.9%) have lower rates of JJS involvement than their U.S.-born counterparts (12.6%). Tapia also demonstrated that, between 1998 and 2008, the arrest gap between U.S.-born Latinxs and foreign-born Latinx youth widened significantly, with the rate for U.S.-born Latinxs more than double that of foreign-born Latinxs by 2008. These statistics are especially concerning in light of the fact that U.S. born Latinx youth now make up the majority of the Latinx youth population in the U.S. Bui[10] also examined generational status with delinquency measured by three subscales, which were substance use, property delinquency, and violent delinquency. Bui found that first-generation students were less likely than their second-generation and third-plus-generation counterparts to report all three subscales of delinquency and explained these differences in part by conflict with parents and trouble in school, which varied across generational status. Acculturation was not measured in the Bui study; however, the authors attributed the worse family conflict and school conflict to increasing differences in acculturation between the caregiver and youth. Thus, it is crucial to understand the multiple contextual factors associated with increased behavioral health needs in this high-risk population.

In general, substance use is one of the most salient predictors of justice involvement and recidivism[11,12], and psychiatric symptoms and HIV/STI risk behaviors often co-occur with substance use[13,14]. Among justice-involved youth, Latinx youth have been shown to have higher rates of substance use disorders in comparison to White and African American youth[3]. McClelland and colleagues identified that detained Latinx youth self-reported lifetime substance use rates of 90.2% for males and 93.1% for females[7]. Detained Latinx youth also report a high prevalence of lifetime sexual activity (85.8% of males and 82.9%

[1]Latinx is used throughout this paper to avoid gender binaries and to be inclusive of gender fluid Latinx youth. Latinx will be used to encompass a heterogeneous population that differs in terms of race, social class, country of origin, and gender identity to name a few (Velez, 2016).

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females)[15]. Lastly, detained Latinx youth have been documented to have the highest rates of anxiety disorders and Posttraumatic Stress Disorder (PTSD) in comparison to White and Black detained youth[13,16]. Thus, common assessment practices that effectively identify psychiatric and substance use comorbidity and link youth to the appropriate services at very first contact with the justice system are sorely needed, particularly for Latinx youth.

Gender Differences.

Female Latinx youth are one of the fastest growing segments of the juvenile justice, with one-fourth (27%) of all Latinx arrests being female[17]. Very few studies have examined Latinx females and their involvement with the JJS. Lopez and Nuño[18] have written on how Latinx females in the justice system represent a large and heterogeneous population, and because of this, drawing parallels across studies is challenging. Of the few studies that have examined justice involved females by ethnicity and race, Latinx females have shown more severe rates of self-reported physical abuse along with subsequent PTSD. Latinx females are more likely to be referred to the JJS in general and to be referred for being “out of control” and at younger ages compared with both White and Black females[4,18,19]. In a small study of justice involved Latinx females, Johnston and colleagues[20] found a lack of attention towards safe sex practices and sexual health, noting that 50% reported a past STI diagnosis and only 33% reported condom use at last sexual encounter. Further research is needed to understand how the behavioral health needs of Latinx youth may differ by gender and what factors may be important to consider in the development of gender-responsive assessment and intervention for justice-involved Latinx females.

Trauma Exposure Among Latinx Youth

Trauma exposure, with and without subsequent PTSD symptoms, is pervasive and yet poorly identified among justice involved Latinx youth, which places justice involved youth at risk for recidivism[21–23]. Researchers have documented unique stressors that place the Latinx community at heightened risk for trauma exposure, such as risky migration experiences when attempting to cross into the U.S.[24], living in neighborhoods with high rates of community violence[25], and higher rates of physical and sexual abuse when compared to other ethnic and racial groups[26,27]. Potential trauma exposure needs to be considered during the assessment and treatment process when working with justice involved Latinx youth.

The Substance Abuse and Mental Health Services treatment improvement protocol noted that trauma exposure may be the common environmental factor that links both psychiatric symptoms and substance use[28]. Community-based providers for justice involved youth are gradually increasing their capacity to treat co-occurring psychiatric symptoms and substance use in this population[29]; however, it is still commonplace for justice-involved youth to receive non empirically-supported treatments and/or treatments that have an evidence base but are not implemented with fidelity[30]. Further, Chassin[31] noted the importance of addressing differing patterns of substance use in relation to the individual’s unmet needs, such as type of psychiatric disorder (e.g., internalizing versus externalizing) for justice-involved youth. Interventions and assessments for this population need to consider the specific needs of this group, and potential likelihood of substance use and other co-occurring

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psychiatric symptoms. Trauma exposed substance users with different co-occurring patterns may have different substance use treatment needs[32].

Further, poor rehabilitative outcomes of incarcerated Latinx youth have been noted[5,33]. For example, Abram and colleagues[4] found that Latinx youth in detention centers with two or more psychiatric disorders (i.e., internalizing, substance use, and behavioral disorders) at baseline were more likely to have a disorder at 4 ½ years of follow-up compared with Latinx youth with only a single psychiatric disorder. Following detainment, Latinx samples have shown higher rates of psychiatric difficulties and substance use[4,34] in comparison to non-Latinx White and Black counterparts. Identifying the behavioral health needs of Latinx youth who are in first-time contact with the courts and justice system may help to inform how assessment and intervention services can be tailored for this population at the earliest point in the justice system trajectory thereby potentially offsetting these poor long-term outcomes.

Purpose of the Study

This paper presents baseline data from Project EPICC (Epidemiological Project Involving Children in the Court), a two-year longitudinal study of First-Time Offending (FTO), Court-Involved Non-Incarcerated (CINI) who were enrolled within a month of initial juvenile court contact. Among the subsample of 181 Latinx first-time offending youth, this study aimed to identify baseline rates of trauma exposure, psychiatric symptoms, substance use, and sexual activity and to determine the association between psychiatric symptoms, substance use, and sexual activity in relation to trauma exposure. It was hypothesized that 1) those who endorsed trauma exposure would report higher rates of other psychiatric symptoms, substance use and sexual activity, 2) females with trauma exposure would report higher rates of psychiatric symptoms, substance use and sexual activity than males with trauma exposure, and 3) trauma exposure would moderate the association between psychiatric symptoms (internalizing and externalizing) and risk behavior outcomes, such that the effect of psychiatric symptoms on rates of substance use and sexual activity would be greater among Latinx FTO-CINI youth with trauma exposure than among those without trauma exposure.

Methods

Sampling and recruitment procedures

Participants.—Latinx youth (N = 181) comprised a subset of the overall FTO-CINI youth sample (N = 423), who were enrolled from June 2014 to April 2016 into the Epidemiological Project for Children of the Court (EPICC) project. For the full Project EPICC study, all FTO-CINI youth, ages 12 to 18, were approached for the study if the juvenile had either a status or delinquent petition through a Family Court in the Northeastern region of the U.S. Status offense type was defined as individuals who had committed an offense that would not be considered illegal if an adult committed the same offense (e.g., truancy, alcohol use, curfew). Delinquent offenders were youth whose offense was considered illegal regardless of age (e.g., breaking and entering, assault). One hundred ninety-four status offenders and 207 delinquent offenders were enrolled in the study.

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Exclusion criteria.—Study exclusion criteria included youth who were: repeat offenders, outside of the specified age range (i.e., 12 to 18 years of age) upon court intake appointment, or those who they or their caregiver had a cognitive impairment that would preclude their ability to complete appropriate informed assent and consent or assessment.

Sampling and Recruitment.—All caregivers of FTO-CINI youth, following the initial court appointment, were notified about the research study by a flyer. Eligible participants were then approached in the court after receiving the flyer. Those families that were interested in participating were screened for eligibility at the court; both assent and consent were obtained at an appropriate location chosen by the caregiver and youth (e.g., home, community space). All recruitment and study procedures were approved by the Principal Investigator's (senior author) university and collaborating sites' Institutional Review Board (and Office for Human Research Protections). For the overall sample, 423 caregiver-youth dyads were enrolled: 194 youth (46%) had a first-time status offense (FTO-status) and 229 youth (54%) had a first-time delinquent offense (FTO-delinquent). Of the Latinx subsample (n = 181; 42.8% of the overall sample): 69 youth (38%) were FTO-status and 112 youth (62%) were FTO-delinquent. FTO-CINI females with a delinquent FTO were oversampled to have sufficient power to conduct baseline male-female comparisons. See Table 1 for complete demographic information.

Assessment Procedures.—Assessments were administered to youth, utilizing audio-assisted computerized assessment (ACASI). Romer et al.[35] reported that ACASI administration has been shown to increase reliability, is easy to administer, and is both cost and time effective. Parents/caregivers completed study assessments (in addition to the youth) as part of the larger study. The focus of the paper was to elicit baseline rates of youth psychiatric and behavioral health needs; thus, youth self-report was used for all measures with the exception of externalizing behaviors, which was provided by the caregiver consistent with the literature demonstrating that caregivers are more accurate reporters of a youth's externalizing symptoms or behavioral difficulties[36,37]

Measures

Demographics.—Youth reported their age, gender (male, female, or other), and ethnic origin (e.g., Puerto Rico, Dominican Republic, or other Latin American Country); caregivers reported the youth's place of birth (i.e., foreign born versus mainland U.S. born). They also reported (yes/no) whether they received public assistance, their current education level, if they had been expelled, and if they had ever been given an Individualized Education Plan.

Acculturation Scale – Short Version (ACC).—The ACC is a seven-item measure for youth that measures their level of acculturation. The five-point scale (1 = "Spanish only" to 5 = "English only") is summed and divided by seven and provides a range from 1 to 5. Higher scores indicate greater acculturation. A previous study of Latinx participants, ages 19 to 21, showed good reliability .82[38]. Our study yielded an alpha of .87.

Affect Dysregulation Scale (ADS).—The ADS is a six-item measure that is designed to measure youth's affect dysregulation. The four-point scale (1 = "not at all" to 4 = "often") is

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summed and provides a range from 6 to 24 with higher scores indicating greater affect dysregulation as previously validated by Brown and colleagues[39] with youth in psychiatric care (alpha = .79). Our study yielded an alpha of .88.

BASC-2.—The Behavior Assessment System for Children, 2nd edition (BASC-2) is designed for youth ages 2 to 25[36]. The BASC-2 consists of 176 items that comprise 16 primary scales; these are combined into five composite scales, two of which were utilized for this study (Internalizing and Externalizing symptoms). The Internalizing symptoms subscale combines depression, somatization, and anxiety symptoms and is reported by the youth; the Externalizing symptoms subscale combines hyperactivity, aggression, conduct problems, and disruptive behaviors, which are reported by the caregivers. The structural validity of the Self-Report (SRP) composite scales was supported by factor analyses showing strong factor loadings of scales to composites[40]. The Parent Report (PRS) use a 4-point response format (N for Never, S for Sometimes, O for Often, or A for Almost Always). The SRP uses a 2-point response format (*T* for *True* or *F* for *False*) and a 4-point response format (*N* for *Never, S* for *Sometimes, O* for *Often,* or *A* for *Almost Always*). A *T*- score delegates the distance of a raw score from the norm-group mean. The range of scores is from 20 to 120; below 30 is very low, 31-40 is low, 41-59 is average, 60-69 is at-risk, and 70 and above is clinically significant. Both the BASC-2 youth report and parent report provide validity scales, which are reported as “1 = acceptable”, “2 = caution low caution”, and “3 = extreme caution.” There were a total of 15 participants (8%) in the extreme caution range on the externalizing symptoms scale and 36 participants (20%) in the extreme caution range on the internalizing scale. All bivariate analyses were run with and without participants whose BASC validity scale scores (at least one) were in the extreme caution range. If the result was no longer statistically significant after excluding those whose responses were flagged as “extreme caution,” both results were reported. At the multivariate level, models were run without controlling for those participants in the extreme caution and then controlling for participants who scored in the extreme caution scores. This was done by flagging participants who scored in the extreme caution range through the creation of an “extreme caution” dummy variable. If the results were no longer statistically significant in the model when controlling for extreme caution range scores, the more conservative result was provided (i.e., the result that was no longer statistically significant). We used an alpha level of .05 and included the p-value for each analysis in the tables and results section.

The National Stressful Events Survey PTSD Short Scale (NSESSS).—The NSESSS[41] is a nine-item scale for adolescents, assessing for severity of posttraumatic stress within the past seven days (e.g., “being ‘super alert,’ on guard, or constantly on the lookout for danger”). The NSESSS scores each item on a five-point scale (i.e., 0, not at all; 1, a little bit; 2, moderately; 3, quite a bit; 4, extremely), higher scores indicated greater severity. We also used the NSESSS to measure trauma exposure as a dichotomous variable (yes/no). Respondents received the original initial NSESSS instructions: “people sometimes have problems after extremely stressful events or experiences. How much have you been bothered during the past seven days by each of the following problems that occurred or became worse after and extremely stressful event/experience.” Our study then added an additional response item to each of the nine questions, “I have never experienced a stressful event.” If they

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answered "I have never experienced a stressful event" to *any* of the nine symptom questions, they were considered to have never experienced any trauma in their lifetime. LeBeau and colleagues[41] found α = .90 for the overall scale. Our study yielded an alpha of .94.

Substance use and sexual activity (Youth self-report).—The Adolescent Risk Behavior Assessment (ARBA)[42] is designed specifically for use with adolescents to assess their self-reported sexual activity, alcohol and marijuana use behaviors. A skip structure was used so that adolescents who denied engaging in a behavior were not asked for further details regarding that activity. Adolescents were asked about lifetime and recent (past 120 days) frequency of oral, anal, or vaginal sex; number of lifetime sexual partners and whether they used a condom at last sexual encounter, and the number of lifetime partners. The ARBA also assessed frequency of adolescents' alcohol and marijuana use. Participants reported whether they had ever used alcohol or marijuana (lifetime), if they used in the past 120 days (recent), and the number of days they used in the past 120 and 30 days (recent frequency).

Statistical analyses

First, demographic characteristics of the sample were summarized using means and standard deviations for continuous measures and frequency counts or percentages for categorical variables. Next, bivariate analyses used chi-square and *t*-tests to examine psychiatric, substance use, and sexual activity differences by gender and offense type; logistic regression was used to examine differences by age. In order to assess whether Latinx youth with trauma exposure compared to Latinx youth with no trauma exposure would report higher rates of psychiatric symptoms (internalizing and externalizing symptoms subscales), substance use and sexual activity, the unadjusted relationships were examined (t-tests for continuous and chi-square for dichotomous variables) and age-adjusted relationships using linear and logistic regression as appropriate. Trauma exposed, Latinx females were examined to assess whether they reported higher rates of psychiatric symptoms, substance use, and sexual activity compared to trauma exposed, Latinx males. Again, the unadjusted relationships were examined (t-tests for continuous and chi-square for dichotomous variables) and age-adjusted relationships using linear and logistic regression as appropriate. Finally, the interaction of trauma exposure with internalizing and externalizing symptoms was assessed in logistic regression models predicting substance use and sexual activity, controlling for age. Given the large range on the BASC-2 scale (i.e., 20-120) of internalizing and externalizing symptoms, internalizing and externalizing symptoms were re-scaled by a factor of 10 to show a more meaningful interpretation of the odds ratio[41]. All analyses were conducted in STATA 15.1.

Results

Participant Demographics

Youth.—The study sample consisted of 181 Latinx youth. Average age was 14.61 (*SD* = 1.5), years and 55% were male. Fifty-two percent self-identified as Puerto Rican and 31% self-identified as Dominican. The majority of our sample of Latinx youth were born in the mainland U.S. (92%). The average level of acculturation was 4.22 (*SD* = 0.74); males (M = 4.33, *SD* = 0.68) reported greater acculturation than females (*M* = 4.06, *SD* = 0.80); *t*(170) =

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2.32, $p = 0.02$. Eighty-five percent of the participants received public assistance. The majority were delinquent offenders (62%) and more delinquent offenders had been expelled from school compared to status offenders (see Table 1 for participant demographics).

Trauma, Psychiatric Symptoms, and Substance Use Rates

Of the 181 Latinx youth, 73% ($N = 132$) endorsed ever experiencing trauma. On the NSESSS, for those with a traumatic experience, they reported a mean symptom score of 1.09 (SD = 1.06). Status offenders ($M = 1.31$, $SD = 1.15$) reported more severe PTSD symptoms compared to delinquent offenders ($M = .97$, $SD = 1$); $t(130) = 1.81$, $p = .07$. FTO-CINI Latinx youth reported a mean ADS of 12.5 ($SD = 4.14$). Females ($M = 14.01$, $SD = 3.95$) reported more affect dysregulation than males [$M = 11.17$, $SD = 3.70$, $t(164) = -4.76$, $p < .001$], See Table 2 for bivariate analyses of behavioral health outcomes by offense status and gender.

Trauma Exposure.—Latinx youth with trauma exposure ($M = 59.42$, $SD = 15.52$) endorsed more externalizing symptoms compared to those with no trauma exposure ($M = 53.83$, $SD = 13.36$); $t(177) = -2.19$, $p = .03$. In the adjusted model, trauma exposure was associated with an average 6.63 point higher report of externalizing symptoms (95% Cl: 1.64, 11.62, p = 0.009). A greater proportion of Latinx youth who reported a traumatic experience also endorsed ever being sexually active (38%) compared to those who reported no traumatic experience and being sexually active (20%), χ^2 (1, N = 181) = 4.92, $p = 0.03$. In the age-adjusted model, the trend for sexual activity in trauma exposed compared to non-trauma exposed was similar, though no longer statistically significant (OR=1.95, p = 0.11). This suggests possible partial-confounding by age in the bivariate model. Table 3 presents proportions and means as well as odds ratios comparing trauma exposed Latinx youth to non-trauma exposed youth on the behavioral health outcomes.

A larger proportion of females compared to males reported ever being traumatized (females = 76%; males = 70%), although this was not statistically significant ($\chi^2(1) = 0.79$, $p = 0.38$). Latinx females with trauma exposure ($M = 55.15$, $SD = 14.07$) endorsed more internalizing symptoms compared to Latinx males with trauma exposure ($M = 49.57$, $SD = 13.01$) ; $t(124) = -2.32$, $p = .02$. In the age-adjusted analysis, compared to trauma-exposed males, trauma-exposure among females was associated with an average 5.60-point higher report of internalizing symptoms (95% CI 0.80, 10.40, p = 0.02). There were similar trends for both alcohol and marijuana use. A larger proportion of trauma exposed Latinx females compared to Latinx males reported lifetime alcohol use (males = 27% vs. females = 40%) and lifetime marijuana use (males = 40% vs. females = 53%); but, neither lifetime alcohol use (p = 0.12) nor lifetime marijuana use (p = 0.13) differences were statistically significant for females versus males, including when analyses were adjusted for age (all p >.05).

Externalizing.—On the BASC-2 subscale, Latinx youth had higher rates of externalizing symptoms ($M = 57.95$, $SD = 15.15$) than internalizing symptoms ($M = 52.72$, $SD = 15.26$). The estimated effect per 1-year increase in age was associated with a −1.84 decrease in externalizing symptoms (95% CI: −3.30, −.37, $p = .01$). There were no statistically significant differences of externalizing symptoms by gender or offense type. Latinx youth

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who endorsed ever being sexually active (M = 61.05, SD = 16.93) reported a higher mean of externalizing symptoms in the "at risk" range versus those who reported never being sexually active (M = 56.39, SD = 13.99); $t(177) = -1.96$, $p = .05$. Latinx youth who endorsed lifetime alcohol use (M = 62.76, SD = 17.65) reported a higher mean of externalizing symptoms in the "at risk" range versus those who reported no lifetime alcohol use (M = 55.87, SD = 13.49); $t(177) = -2.85$, $p = .005$. Latinx youth who endorsed lifetime marijuana use (M = 61.38, SD = 16.40) reported a higher average of externalizing symptoms in the "at risk" range versus those who reported no lifetime marijuana use (M = 55.30, SD = 13.61); $t(177) = -2.71$, $p = .01$. When re-running analyses excluding those youth whose validity scores fell in the "extreme caution" range (N = 15), there were no longer statistically significant differences by lifetime sexual activity status [lifetime sex (M = 58.28, SD = 14.38) versus non (M = 54.89, SD = 12.80)] in externalizing symptoms, $t(162) = -1.53$, $p = .13$.

Internalizing.—Females reported more internalizing symptoms (M = 56.68, SD = 15.11) than males (M = 48.65, SD = 13.48); $t(161) = -3.65$ $p < 0.001$. There were no statistically significant differences of internalizing symptoms by substance use, sexual activity, age, or offense type.

Sexual Activity.—Thirty-three percent (N = 60) of the 181 Latinx youth endorsed lifetime sexual activity. Older age was associated with greater lifetime sexual activity compared to younger youth (OR = 1.77 per year, $p < .001$). Among the 55 Latinx youth who reported lifetime alcohol use, the proportion reporting ever being sexually active was higher (52%) than among the 126 Latinx youth who reported no lifetime alcohol use (48% ever sexually active, χ^2 (1, N = 181) = 19.21, $p < .001$). Of the 79 Latinx youth that reported lifetime marijuana use, a larger proportion reported ever being sexually active (77%) compared to those who reported no lifetime marijuana use (23% ever sexually active), χ^2 (1, N = 181) = 39.19, $p < .001$). More delinquent offenders reported ever being sexually active than status offenders [delinquent = 72%; status = 28%), ($\chi^2(1) = 3.65$, $p = 0.056$). No statistically significant associations were found for gender.

Alcohol Use.—Thirty percent (N = 55) of the 181 Latinx youth endorsed lifetime alcohol use. Older age was associated with greater endorsement of lifetime alcohol use (OR = 1.44, p = 0.002). A large majority of Latinx youth who reported lifetime alcohol use (87%) also reported lifetime marijuana use χ^2 (1, N = 181) = 61.14, $p < .001$). No statistically significant associations were found for gender or offense type.

Marijuana Use.—Forty-four percent (N = 79) of the 181 Latinx youth reported lifetime marijuana use and older age was associated with greater endorsement of lifetime use (OR = 1.92 per year, p < 0.001). More delinquent offenders reported lifetime marijuana use than status offenders [delinquent = 53%; status = 31%), χ^2 (1, N = 181) = 7.91, $p < .001$]. No statistically significant associations were found for gender.

Interaction Effects.—The interaction of trauma exposure and psychiatric symptoms (internalizing and externalizing symptom subscales) on substance use and sexual risk outcomes were examined to understand more about how trauma exposure might be a

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common environmental factor that moderates the association of psychiatric symptoms on substance use and sexual risk. All models controlled for age, but did not control for gender nor offense type as there were no statistically significant differences at the bivariate level. Separate models were tested examining outcomes of lifetime sexual activity, alcohol use and marijuana use. For sexual activity, the effect of externalizing symptoms on having ever engaged in sexual activity differed for those who endorsed trauma exposure versus those who did not endorse trauma exposure (interaction = 2.01 per 10-point increase in externalizing symptoms, p = 0.05). For those with a history of trauma exposure, externalizing symptoms increased the odds of ever being sexually active (a 10-point increase in externalizing symptoms increased the odds of lifetime sexual activity by a factor of 1.62, p= .001) whereas for those with no trauma exposure, as externalizing symptoms increased, the odds of ever been sexually active decreased (OR = .80 per 10-point increase in externalizing symptoms), although this was not statistically significant (p=.50).

Likewise, in regard to alcohol use, the effect of externalizing symptoms on lifetime alcohol use differed in comparison to youth who were trauma exposed and those who weren't trauma exposed (interaction = 2.19 per 10-point increase in externalizing symptoms, p = .025). For those with a history of trauma exposure, a 10-point increase in externalizing symptoms increased the odds of lifetime alcohol use by a factor of 1.74, p < .001 and for those with no history of trauma exposure, as externalizing symptoms increased, the odds of lifetime alcohol use decreased (OR = .80 per 10-point increase in externalizing symptoms score), although this was not statistically significant (p=.47).

Lastly there was no statistically significant interaction effect of trauma exposure and externalizing symptoms on marijuana use and none of the interactions between internalizing symptoms and trauma exposure on substance use and sexual activity were statistically significant.

Discussion

This is one of the first studies of Latinx youth at initial exposure to justice contact examining the prevalence and associations of trauma exposure, psychiatric symptoms, substance use (alcohol and marijuana use) and sexual risk behaviors. Lifetime trauma exposure was present among approximately three-quarters of the sample. Thus, traumatic experience among Latinx youth who are not presumed to be as "entrenched" in the justice system as detained youth are high. Despite younger age (14.6 years), close to half of the sample had already used marijuana at least once in their lifetime. FTO-CINI Latinx females appear to have higher rates of internalizing symptoms and affect dysregulation that may confer additional risk. In addition, trauma exposure appears to have a differential association with psychiatric symptoms and substance use for trauma-exposed Latinx females versus their male counterparts.

Elevated rates of reported trauma exposure among this sample of Latinx youth at first contact with the justice system are consistent with findings from prior studies involving detained youth populations[13]. Roughly 73% of this Latinx FTO-CINI sample reported exposure to at least one traumatic event, suggesting that trauma exposure among Latinx

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FTO-CINI youth falls somewhere between that of general Latinx adolescent populations (60%)[42] and detained (90.8% and 81.6% of Latinx males and females, respectively)[13] Latinx adolescent populations. Consistent with our hypothesis, in our FTO-CINI Latinx youth sample, trauma exposure was associated with elevated rates of psychiatric symptoms, substance use, and sexual activity. Indeed, our data are consistent with previous findings indicating that trauma is highly comorbid with other psychiatric symptoms in general adolescent[42] and juvenile offending populations[13]. Elevated rates of comorbid psychiatric symptoms in this sample suggest that there is high need for appropriate and comprehensive psychiatric care and substance use treatment for Latinx youth at first contact with the JJS. Public health efforts to intervene (through screening, assessment and service linkage) at this early point in the justice trajectory need to be tailored to meet the unique needs of Latinx youth. Early and improved identification of mental health and substance use needs at this point could potentially disrupt continued cycles of court system involvement and recidivism. Many courts do not systematically screen for trauma exposure at intake. However, high rates of trauma exposure and its association with psychiatric symptoms, substance use, and sexual activity among this FTO-CINI youth sample suggest that court systems should screen for—at the very least—trauma exposure at first contact. Screening for trauma may improve assessment practices, referral to treatment, and uptake of treatment for individuals experiencing symptoms of PTSD, which could thereby enhance treatment outcomes for this population.

Approximately 33% of Latinx FTO-CINI youth endorsed lifetime sexual activity. Delinquent offenders were more likely to report lifetime sexual activity compared with status offenders. Rates of lifetime sexual activity (33%) among this Latinx FTO-CINI sample were lower than previous studies examining lifetime sexual activity among detained Latinx samples (85.8% of male Latinx youth, and 82.9% female Latinx youth)[15], and general adolescent populations (39%)[45]. Rates of reported lifetime sexual activity among this Latinx FTO-CINI sample are perhaps lower than that of both detained and general adolescent study populations because our sample mean age was 14.6 years (i.e., younger than other study samples reporting on sexual activity), and our sample included CINI youth at very first contact with the system. Prolonged justice involvement and incarceration has been found to disrupt social and interpersonal relationships, and following incarceration, youth have been documented to engage in high rates of multiple HIV/STI risk behaviors such as unprotected sexual intercourse, multiple partners, and sex for money[46–48]. Nevertheless, as one third of this sample reported lifetime sexual activity and 43% did not use a condom at last encounter, our findings indicate that HIV/STI risk reduction assessment and interventions for Latinx youth at first contact with the JJS are warranted. Furthermore, our study findings suggest that differences between both types of offenders and types of sexual activity (i.e., sexual intercourse, oral sex, and anal sex) should be considered for these youth.

Female Latinx FTO-CINI youth endorsed more internalizing symptoms and greater affect dysregulation than male Latinx FTO-CINI youth; this supports findings from previous studies indicating gender differences in psychiatric needs among justice involved youth[16]. In addition, trauma exposed Latinx females endorsed more internalizing symptoms than their trauma exposed male counterparts. There were no statistically significant gender differences,

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however, in reports of externalizing symptoms or behaviors. It is unclear whether females actually experience more internalizing symptoms and greater affect dysregulation or, if differences may represent an underreporting of these particular internalizing symptoms by males due to perceived cultural and gender stigma. In either case, assessments and interventions for females in first contact with the justice system should also incorporate screening for psychiatric distress (internalizing symptoms) and emotion dysregulation. Affect management interventions that aim to teach skills for monitoring and regulating affect and emotion (as a putative mechanism of change) may be particularly effective in improving behavioral health treatment outcomes for justice-involved females[49]. Female Latinx youth are on the rise in the juvenile justice[17] and yet, gender-responsive resources and treatment for females in the JJS are lacking[50]. Our findings add to the growing body of literature suggesting that evidence-based gender-responsive assessment and intervention approaches for justice-involved females are appropriate and needed.

Findings of trauma exposure by gender are noteworthy. Trauma exposed Latinx females had more severe internalizing symptoms in comparison to trauma exposed Latinx males. Trauma exposed Latinx females, while not statistically significant possibly due to small sample size, had more lifetime alcohol and marijuana use than trauma exposed Latinx males. As such, it is possible that rates of internalizing symptoms and substance use are co-occurring for trauma exposed Latinx females because they are more frequently engaging in self-medicating behaviors, such as alcohol and marijuana use, that may temporarily relieve internalizing symptoms, such as anxiety, negative cognitions and low mood[49].

Of all three risk behaviors (alcohol use, marijuana use, and sexual activity), marijuana use was the most prevalent amongst this sample. Similar to our findings on trauma exposure, FTO-CINI Latinx youth have rates of lifetime marijuana use that fall somewhere between that of general community Latinx (14% of eighth graders, 37.8% of tenth graders, and 40.7% of twelfth graders)[50] and detained Latinx (90.2% of males and 93.1% of females)[7] youth samples. Of concern are also the high rates of co-occurring alcohol and marijuana use. The early onset of marijuana use and comorbid alcohol use among this FTO-CINI Latinx youth population suggests that despite these youth being quite young at point of first court contact, a substantial proportion already endorsed lifetime use. Disrupting substance use patterns at a young age is critical to preventing a series of potential negative outcomes for these youth, including impaired cognitive functioning and increased likelihood of reoffending[53–57]

Our findings on the unique psychiatric and behavioral health needs of FTO-CINI Latinx youth have important implications for public health and public policy interventions. For youth with trauma exposure, there needs to be tailored assessment and intervention that identifies trauma exposure, and addresses the interaction of externalizing behaviors on substance use and sexual risk for Latinx youth[58]. Recent findings from meta-analytic studies provide evidence that culturally-tailored treatment interventions for specific cultural groups were four times more effective than when they target one ethnic/racial group (e.g. Latinx) compared to interventions that were provided to groups of clients from varying cultural backgrounds[59,60]. Our study sample was fairly US acculturated with male youth reporting greater acculturation than the females. Future studies should therefore focus on

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disentangling the role of acculturation in behavioral risk, strength and needs for Latinx youth, including emphasis on gender differences—to further inform the development of culturally attuned behavioral health interventions for this group of youth.

Limitations and Future Research.

Despite this study's contribution to the field, limitations must also be addressed. First, the reliability of the data is subject to the limitations of self-reporting. Data collected via self-report are often liable to underreporting of sensitive or risk behaviors such as drug use or sexual activity; however, ACASI is a demonstrated reliable method of collecting accurate and reliable data regarding sensitive topics. Furthermore, rates of reported risk behaviors in this study sample were high, suggesting that youth were forthcoming in providing data on sensitive topics and underreporting was unlikely. Second, current analyses were cross-sectional and thus cannot infer causality; given that these data are from a longitudinal cohort study, future analyses will be able to explore longitudinal associations and trajectories of Latinx youth risk and outcomes. Third, much of the trauma literature suggests that youth from low socioeconomic backgrounds endure multiple and various types of trauma experiences[61]. Available study data included only whether a trauma was experienced and thus, we were not able to examine type or chronicity of trauma exposure. Nevertheless, this study is among the first to assess the impact of trauma exposure on psychiatric symptoms, substance use and sexual activity for this vulnerable subpopulation of first-time offending youth and provides first-time data outlining the importance of enhancing identification of trauma exposure and symptoms for FTO-CINI Latinx youth.

The high rates of co-occurring behavioral health needs among this sample suggest that future research should attend to examining the longitudinal patterns of trauma exposure, psychiatric symptoms and co-occurring risk behaviors among Latinx youth to robustly inform primary and secondary prevention interventions, particularly to reduce risk for recidivism. Differences in psychiatric symptoms between male and female FTO-CINI Latinx youth in this sample suggest that future research should consider examining findings by gender and/or conducting within-gender examination of behavioral health risk, strengths and needs. Lastly, there is no research that targets treatment interventions for trauma exposed Latinx youth at very first contact. Therefore, the field would greatly benefit from research that develops and tests implementation of interventions that target trauma exposure and symptoms for Latinx youth at point of very first contact with the court.

Conclusions.

There is a need to improve assessment and linkage at very first contact and provide appropriate treatment of psychiatric symptoms (e.g. treatment that is culturally relevant for Latinx youth, addresses psychiatric comorbidity) and intervention for Latinx youth co-occurring risk behaviors, such as substance use and sexual activity. Our findings provide an initial snapshot of how researchers, clinicians, relevant juvenile justice systems and behavioral health providers may begin to consider how to address the behavioral health needs of male and female first time offending Latinx youth.

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Summary

Identifying the behavioral health needs of Latinx youth at first contact with the courts and justice system may help to inform how assessment and intervention services can be tailored for this population at the earliest point in the justice system trajectory, thereby potentially offsetting poor long-term outcomes that result from continued involvement in the juvenile justice system. This study aimed to identify baseline rates of trauma exposure, psychiatric symptoms, substance use, and sexual activity and to determine the association between psychiatric symptoms, substance use, and sexual activity in relation to trauma exposure among First-Time Offending, Court-Involved Non-Incarcerated (FTO-CINI) Latinx youth.

Latinx youth (N=181), ages 12-18 (Mean = 14.6), were recruited from a family court in the Northeastern region of the United States as part of a longitudinal cohort study of 423 FTO-CINI youth. Baseline data on trauma exposure and symptoms, psychiatric symptoms, substance use (alcohol/marijuana), and sexual activity among the Latinx sample were analyzed by age, gender, and offense type (status versus delinquent). Unadjusted and age-adjusted relationships examined 1) Latinx youth with trauma exposure compared to those with no trauma exposure and 2) trauma exposed males versus trauma exposed females, in terms of psychiatric symptoms (internalizing and externalizing symptoms subscales), substance use and sexual activity. Finally, the interaction of trauma exposure with internalizing and externalizing symptoms was assessed in logistic regression models predicting substance use and sexual activity, controlling for age.

Almost three-quarters of Latinx FTO-CINI youth reported lifetime trauma exposure. Almost half of Latinx youth reported lifetime marijuana use, 30% reported lifetime alcohol use, and 33% reported lifetime sexual activity. In the age-adjusted model, youth with trauma exposure reported higher levels of externalizing symptoms (on average, 6.63 points higher) compared to youth without trauma exposure (95% CI: 1.64, 11.62, p = 0.009). In the age-adjusted analysis, compared to trauma-exposed males, trauma-exposure among females reported higher levels of internalizing symptoms, with internalizing symptom scores approximately 5.60-points higher than that of males (95% CI 0.80, 10.40, p = 0.02). For sexual activity, the effect of externalizing symptoms on having ever engaged in sexual activity differed for participants who did and did not endorse trauma exposure (interaction = 2.01 per 10-point increase in externalizing symptoms, p = 0.05). For those with a history of trauma exposure, externalizing symptoms increased the odds of ever being sexually active (a 10-point increase in externalizing symptoms increased the odds of lifetime sexual activity by a factor of 1.62, $p = .001$) whereas for those without trauma exposure, as externalizing symptoms increased, the odds of ever been sexually active decreased (OR = .80 per 10-point increase in externalizing symptoms, p=.50). Likewise, in regard to alcohol use, the effect of externalizing symptoms on lifetime alcohol use differed for those who endorsed trauma exposure compared to those that endorsed no trauma exposure (interaction = 2.19 per 10-point increase in externalizing symptoms, p = .025). For those with a history of trauma exposure, a 10-point increase in externalizing symptoms increased the odds of lifetime alcohol use by a factor of 1.74, $p < .001$ and for those with no history of trauma exposure, as externalizing symptoms increased, the odds of lifetime alcohol use decreased (OR = .80 per 10-point increase in externalizing symptoms score, p=.47).

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Trauma exposure is high among Latinx youth coming into first contact with the justice system. Latinx FTO-CINI females may have different behavioral health needs than their male counterparts. Court-based screening and assessment practices should attend to the specific behavioral needs of this unique, underserved population.

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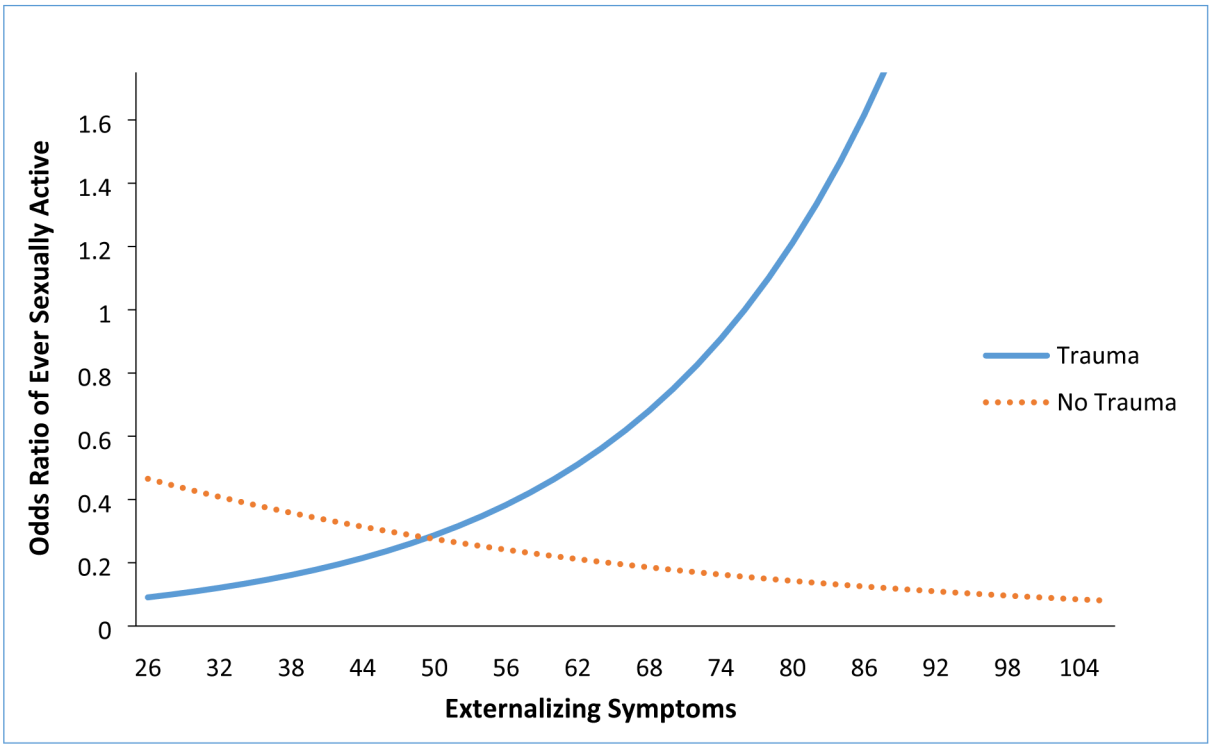

Figure 1.
Externalizing Symptoms and Lifetime Sexual Activity by Trauma Exposure

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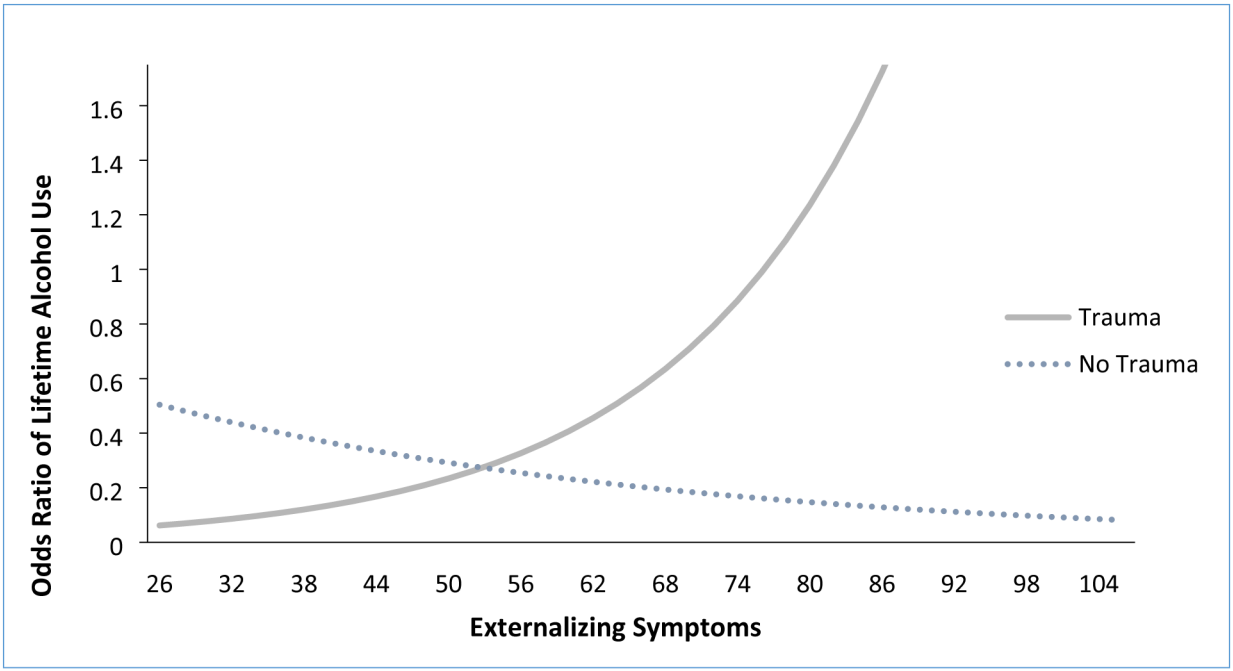

Figure 2.
Externalizing Symptoms and Lifetime Alcohol Use by Trauma Exposure

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Table 1.

Demographics of FTO-CINI Latinx Youth

Characteristic	Total N= 181 Mean (SD) or N (%)	Status n= 69 Mean (SD) or N (%)	Delinquent n= 112 Mean (SD) or N (%)	P-Value	Male n= 100 Mean (SD) or N (%)	Female n= 79 Mean (SD) or N (%)	P-Value
Juvenile							
Age	14.61 (1.5)	14.46 (1.59)	14.71 (1.45)	0.28	14.62 (1.51)	14.49 (1.56)	0.72
Gender							
Male	100 (55%)	40 (58%)	60 (55%)	0.65			
Female	79 (44%)	29 (42%)	50 (45%)				
Latinx Origin							
Puerto Rican	93 (52%)	40 (68%)	53 (60%)	0.33	54 (62%)	39 (64%)	0.82
Dominican	55 (31%)	19 (32%)	36 (40%)		33 (40%)	22 (36%)	
Place of Birth							
Foreign Born	15 (8%)	6 (9%)	9 (8%)	0.85	8 (8%)	7 (9%)	0.82
U.S Born (Mainland)	165 (92%)	62 (91%)	103 (92%)		92 (92%)	71 (91%)	
Level of Acculturation	4.22 (0.74)	4.29 (0.09)	4.17 (0.07)	0.31	4.33 (0.68)	4.06 (0.80)	0.02
Receive Public Assistance	153 (85%)	62 (90%)	91 (81%)	0.29	86 (86%)	66 (84%)	0.89
Education Level							
Sixth to Eighth grade	66 (36%)	30 (43%)	36 (33%)	0.07	35 (35%)	30 (39%)	0.61
Ninth to Twelfth grade	113 (62%)	39 (57%)	74 (67%)		65 (65%)	47 (61%)	
Ever Been Expelled	42 (23%)	10 (14%)	32 (29%)	0.03	23 (23%)	19 (24%)	0.87
Ever had Individualized Education Plan	64 (36%)	21 (30%)	43 (38%)	0.19	40 (40%)	23 (29%)	0.12

Notes:

^ Two individuals did not identify a gender and as such, percentages may not equal 100.

a: Chi-square statistic is reported for dichotomous data, t-test is reported for continuous data.

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Table 2.

Bivariate Analyses of Behavioral Health Needs by Court Status and Gender

	Total n=181 Mean (SD) or N (%)	Status n= 69 Mean (SD) or N (%)	Delinquent n= 112 Mean (SD) or N (%)	P-Value	Male n= 100 Mean (SD) or N (%)	Female n= 79 Mean (SD) or N (%)	P-Value
Psychiatric Symptoms							
Trauma Exposure	132/181 (73%)	46/69 (35%)	86/112 (65%)	0.14	70/100 (54%)	60/79 (46%)	0.38
NSESSS score	1.09 (1.06)	1.31 (1.15)	.97 (1)	0.07	.98 (.98)	1.13 (1.09)	0.42
Affect Dysregulation	12.5 (4.14)	12.44 (4.41)	12.53 (4)	0.89	11.17 (3.7)	14.01 (3.95)	<0.001
BASC							
Externalizing	57.95 (15.15)	55.75 (14.30)	59.3 (15.55)	0.13	58.56 (16.04)	56.82 (14)	0.45
Internalizing	52.72 (15.26)	54.11 (16.2)	51.89 (14.69)	0.36	48.65 (13.48)	56.68 (15.11)	<0.001
Sexual risk behaviors							
Sexually active, ever[^]	60/181 (33%)	17 (25%)	43 (72%)	0.06	34 (36%)	26 (33%)	0.88
Sexually active,[^] past 4 months	47/60 (78%)	13/17 (76%)	34/43 (79%)	0.83	28/34 (82%)	19/26 (73%)	0.39
Condom used at last sex	33/58 (57%)	10/17 (59%)	23/41 (56%)	0.85	19/32 (59%)	14/26 (54%)	0.67
Number of sex partners, lifetime	4.6 (6.05)	4.93 (5.15)	6.78 (16.06)	0.67	5.31 (7.31)	3.81 (4.22)	0.22
Substance use risk behaviors							
Alcohol use, ever	55/181 (30%)	16 (23%)	39 (35%)	0.10	27 (27%)	27 (34%)	0.30
Alcohol use, past 4 months	37/55 (67%)	12/16 (75%)	25/39 (64%)	0.43	16/27 (59%)	20/27 (74%)	0.25
Number of days drinking, last 4 months	5.53 (7.03)	4 (5.69)	6.29 (7.61)	0.36	5.88 (7.4)	5.11 (7.05)	0.76
Number of days drinking, last 30 days	3.44 (6.26)	2.33 (4.31)	3.84 (6.96)	0.50	2.19 (3.99)	4.05 (7.58)	0.38
Marijuana use, ever	79/181 (44%)	21 (31%)	58 (53%)	0.005	41 (41%)	37 (47%)	0.43
Marijuana use, past 4 months	58/79 (73%)	15/21 (71%)	43/58 (74%)	0.81	28/41 (68%)	29/37 (78%)	0.32
Number of days marijuana use, past 4 months	34.29 (44.76)	46.17 (51.45)	30.64 (42.56)	0.30	33.64 (43.95)	31.75 (43.92)	0.88
Number of days marijuana use, past 30 day	9.41 (10.39)	9.85 (13.27)	9.13 (9.27)	0.83	8.54 (10.15)	9.39 (10.26)	0.77

Note:

[^] Vaginal, oral, or anal;

a: Chi-square statistic is reported for dichotomous data, t-test is reported for continuous data.

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Table 3.

Trauma Exposed versus Non-Trauma Exposed Latinx Youth

	Trauma Exposed n= 132 Mean (SD) or N (%)	Non-Trauma Exposed n= 49 Mean (SD) or N (%)	P-Value	Coef/OR[b] (95% CI)	P-Value
Externalizing	59.42 (15.52)	53.83 (13.36)	0.03	6.63 (1.64, 11.62)	0.009
Internalizing	52.80 (14.50)	52.49 (17.54)	0.91	0.53 (−4.78, 5.83)	0.85
Sexually active, ever[^]	50/132(38%)	10/49 (20%)	0.03	1.95 (0.86, 4.43)	0.11
Alcohol use, ever	44/132 (33%)	11/49 (22%)	0.16	1.48 (0.67, 3.24)	0.33
Marijuana use, ever	61/132 (46%)	18/49 (37%)	0.25	1.14 (0.54, 2.38)	0.73

Note:

[^]Vaginal, oral, or anal;

a: Chi-square statistic is reported for dichotomous data, t-test is reported for continuous data;

b: all odds ratios adjusted for age.

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Table 4.

Trauma Exposed Males versus Females

	Trauma Exposed Males n= 70 Mean (SD) or N (%)	Trauma Exposed Females n= 60 Mean (SD) or N (%)	P-Value	Coef/OR[b] (95% CI)	P-Value
Psychiatric Symptoms					
Externalizing	60.91 (16.52)	57.28 (14.26)	0.19	−3.36 (−8.64, 1.92)	0.21
Internalizing	49.57 (13.01)	55.15 (14.07)	0.02	5.60 (0.80, 10.40)	0.02
Sexually active, ever[^]	26/70 (37%)	24/60 (40%)	0.74	1.08 (0.51, 2.32)	0.84
Alcohol use, ever	19/70 (27%)	24/60 (40%)	0.12	1.78 (0.84, 3.77)	0.14
Marijuana use, ever	28/70 (40%)	32/60 (53%)	0.13	1.77 (0.83, 3.76)	0.14

Note:

[^] Vaginal, oral, or anal;

a: Chi-square statistic is reported for dichotomous data, t-test is reported for continuous data.

b: all odds ratios adjusted for age.