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EARLY IDENTIFICATION OF SUICIDE RISK FACTORS AMONG JUSTICE-INVOLVED YOUTH

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Abstract

Suicidal thoughts and behaviors among juvenile justice populations are elevated. However, the characteristics of justice-involved youth who consider and attempt suicide are not well understood. This study examined suicidal ideation and attempt with first-time, preadjudicated diverted youth, and the relationship with commonly associated risk factors. The sample included 135 youth (50% male, M_{age} = 14.48) that provided complete responses to self-reported lifetime suicidal ideation and attempt items. Analyses examined relationships between suicidal ideation/attempt and mental health, child welfare involvement, delinquency, self-cutting, and substance use. First time, preadjudicated diverted youth reported high rates of lifetime suicidal ideation (27%) and attempt (17%). Suicidal ideation and attempt were associated with sexually minoritized status

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and self-cutting, while child welfare involvement was only associated with suicidal ideation. This high-risk population would benefit from refined suicide screening and prevention services not always available to justice-involved youth living in the community.

Keywords

suicidal ideation; suicide attempt; juvenile justice; substance use

As the second leading cause of death among youth and young adults 10 to 24 years old, suicide is a serious public health concern (Centers for Disease Control and Prevention [CDC], 2014, 2015). Between 2008 and 2015, rates of youth presenting at emergency rooms for suicidal ideation (SI) and suicide attempts (SA) increased by more than 175% (Plemmons et al., 2018). Anonymous youth surveys show that 12% of youth have seriously considered suicide and 4% attempted suicide in their lifetime (The National Comorbidity Survey—Adolescent Supplement [NCS-A]; Nock et al., 2013). Rates of SI and SA in the general adolescent population are at their highest in the past decade (CDC, 2017), and studies consistently find that rates of SI and suicidal behaviors are greater among youth involved in the juvenile justice (JJ) system (Gray et al., 2002; Hayes, 2009; Scott et al., 2015; Stokes et al., 2015). Prior research examining SI and suicidal behaviors across points of contact with the JJ system revealed high rates of lifetime SI, ranging from 14% to 36% (Abrantes et al., 2005; Archer et al., 2004; Bhatta et al., 2014), and lifetime SA ranging from 11% to 26.8% among youth assessed from intake to detention. Examining suicide risk among youth who are coming into contact with the court system for the first time offers a critical opportunity to inform the field on when and how to assess and intervene upon a significant public health issue for high-risk youth in the community.

Justice-involved youth living in the community are defined as having open legal charges (preadjudication diverted youth) or be under the supervision of the court after a finding (postadjudication youth on probation or parole) but who continue to live or returned to live with a legal guardian. Findings from the few studies that have examined the characteristics of these youth have shown that rates of lifetime SI and SA are slightly lower among justice-involved youth living in the community (13%–14%), but still comparable to detainee samples (Kemp et al., 2016; Wasserman & McReynolds, 2006). For instance, comprehensive evaluations of court-involved youth report prevalence of SI and SA of up to 14% (Kemp et al., 2016), which is consistent with rates (10%–25%) in other populations of justice-involved youth (Abram et al., 2008; Bhatta et al., 2014; Freedenthal et al., 2007; Morris et al., 1995).

Numerous studies have shown that psychiatric disorders, particularly internalizing disorders such as depression and anxiety, trauma exposure including physical and sexual abuse, and substance use and substance use disorders, are indelible risk factors for increased suicide risk among adolescents (Bahk et al., 2017; Breslau et al., 2003; CDC, 2020; Dube et al., 2001; Giaconda et al., 2003). Commonly comorbid, these factors can decrease inhibitions and increase the likelihood of significant psychological distress and impulsivity, which have been associated with SI/SA in adolescents (Galaif et al., 2007; Putnins, 1995; Rosenberg et al., 2005; Wu et al., 2004). Youth at each point of contact with the justice system, including

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youth at first court contact, face a greater burden of risk factors associated with SI and suicidal behaviors (Abram et al., 2008; Dube et al., 2001; Stokes et al., 2015).

Notably, almost one-third of first-time justice-involved youth are diagnosed with a psychiatric disorder and half endorse active substance use (Tolou-Shams et al., 2020), in comparison to 20% and 4% of youth in the general population, respectively (Merikangas et al., 2010; Substance Abuse and Mental Health Services Administration, 2020). With internalizing symptoms of depression, the most common predictors of SI and SA in JJ populations (Abram et al., 2008; Bhatta et al., 2014; Stokes et al., 2015), it is concerning that justice-involved youth report depressive symptoms at a much higher rate (17%–26%) than those in the general population (10%; Teplin et al., 2002). Externalizing symptoms (e.g., aggression) and trauma exposure (Dierkhising et al., 2013; King et al., 2011) are also associated with SI and SA, and are reported at higher rates among justice-involved youth at first court contact (Tolou-Shams et al., 2020).

Recent data note a sharp upward trend in suicide rates among Black youth in the community (Bridge et al., 2018). Racial and ethnic minority youth are overrepresented in the JJ system with Black youth comprising 16% of general adolescents but representing 35% of delinquency and 23% of status offense petitions (Hockenberry & Puzzanchera, 2020; Sickmund et al., 2020). Several JJ studies, including one examining justice-involved youth in the community, found no significant differences in reported SI or SAs by gender, race, or ethnicity (Chapman & Ford, 2008; Esposito & Clum, 2002; Kemp et al., 2016; Penn et al., 2003; Stokes et al., 2015). Yet, recent data show that rates of SA have significantly increased among Black youth in the general population, particularly among Black girls, whereas rates have remained relatively stable among White youth and decreased among Hispanic, Asian American, and Pacific Islander youth (Lindsey et al., 2019). It is crucial to determine how this disparity manifests among JJ youth, given the overrepresentation of Black youth in the JJ system and increasing suicide rates among Black youth.

More research is necessary to better inform interventions for justice-involved youth living in the community, who encompass nearly 80% of youth that are arrested but never detained or incarcerated (Hockenberry & Puzzanchera, 2014) and are at increased risk for suicide. This study aims to fill gaps in the literature by examining the prevalence and characteristics associated with lifetime SI and SA among 135 preadjudicated diverted youth justice-involved for the first time. We examined the frequency of lifetime SI and SA among this sample and determined whether SI or SA differed significantly according to demographics (i.e., race, ethnicity, gender, or child welfare involvement). We also assessed the relationship of lifetime SI and SA with behavioral health issues, such as mental health symptoms, substance use, and delinquency and hypothesized that youth with lifetime SI and SA would have higher rates of mental health needs and risk behaviors than youth who did not report lifetime SI and SA.

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MATERIALS AND METHODS

SITE OF STUDY

Participants were enrolled as part of the Epidemiological Project Involving Children in the Court (Project EPICC), a longitudinal cohort study that enrolled 423 first-time preadjudicated court-involved youth between 2014 and 2016, from a juvenile intake department in the Northeast. The Principal Investigator's university and affiliated institutional review boards approved all research procedures.

PARTICIPANT POPULATION

Eligible youth included those 12 to 18 years old, with no prior juvenile court involvement, and living with a legal guardian for at least 6 months prior to recruitment. All families with upcoming intake appointments or specialty court (truancy and/or drug) hearings received a study information letter along with standard court documents. Research staff approached families for recruitment prior to their court appointments, described the project, and retrieved consent to contact forms from interested families who met eligibility. Parental consent and adolescent assent were obtained at the start of the baseline appointment, which occurred within 1 month of the initial court intake appointment. For a more detailed description of the recruitment method and participant population, please refer to Tolou-Shams and colleagues (2020).

Of the 135 participants in the analytic sample (see below), there were 67 males (50%) with an overall mean age of 14.48 (SD = 1.62). Sixty-five (48%) were White, non-Latinx, 21 (16%) multiracial, 11 (8%) African American/Black, and 35 (26%) identified as other racial groups. A total of 57 (42%) identified as Latinx.

PROCEDURE

Data collection took place within the family home, research office, or other community location with sufficient privacy. Surveys were completed via audio computer-assisted self-interview (ACASI), which allowed both caregiver and adolescent to answer questions confidentially. ACASI procedures previously demonstrated increased reliability, especially with sensitive information (Romer et al., 1997). Data for this study were collected at baseline and 4-month follow-up, with the exception of lifetime SI and SA data, which were only collected at the 4-month follow-up using an anonymous data collection protocol. Of the 308 (77%) who completed the 4-month follow-up, 135 (44%) completed the SI and SA questions.

Specifically, at the 4-month appointment, adolescent participants, with permission from their caregiver, were offered the option to anonymously complete surveys regarding suicide and trauma history. These surveys were completed in paper and pencil with no identifying information included. Youth were given an envelope, each of which were assigned a random unique identifier code, and were asked to place their surveys into the envelope sealing them to ensure that no one, including research staff, could view their responses. The research assistant entered the unique identifier into the ACASI so that these data could be linked anonymously with all other data collected. Sealed envelopes with anonymous data were

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then passed on to a research staff member who had no involvement in the primary study data collection and who entered the data into a separate database for eventual linkage and analysis.

MEASURES

Demographic Information—Demographic information was collected at baseline. Participants reported age, race (American Indian, Asian, Black/African/Haitian, Native Hawaiian, White, Mixed or Multiracial), ethnicity (Hispanic/Latinx), gender, and sexual orientation (i.e., heterosexual, homosexual, bisexual, or questioning). Participants self-reported race and ethnicity in separate items and therefore, a participant could self-identify as both American Indian, Asian, Black/African/Haitian, Native Hawaiian, White, Mixed or Multiracial and non-Latinx/Latinx. Sexual orientation was dichotomized to sexual minority (y/n) with affirmative responses to homosexual, bisexual, or questioning defined as a sexual minority. Lifetime and recent (past 4 months) child welfare involvement was also assessed. Research assistants collected data on the initial index offense (i.e., status or delinquent) at the time of recruitment.

Suicidal Ideation and Attempt—Lifetime SI was anonymously assessed via two questions: “Have you ever seriously thought about killing yourself?” and “Have you ever made a plan about how you would kill yourself?” Lifetime SA was assessed by a single item: “Have you ever tried to kill yourself?” All responses were dichotomous (y/n).

Mental Health Symptoms—The Behavior Assessment System for Children, Second Edition, Self-Report of Personality-Adolescent (BASC-2 SRP-A) is a standardized behavioral assessment tool that helps to classify emotional and behavioral disorders of adolescents’ ages 12 to 18 years (Reynolds & Kamphaus, 2004). Participants responded to 176 items in a “true or false” format or on a 4-point Likert-type scale: 0 (*never*), 1 (*sometimes*), 2 (*often*), and 3 (*almost always*). Raw scores were entered into the BASC-2 ASSIST software program and were converted into *t* scores for interpretation. Scores of 70 or more were interpreted as clinically significant, scores between 60 and 69 as at-risk, and scores below 60 as nonclinically significant. We dichotomized each scale to indicate which youth had at-risk or clinically high levels of internalizing problems (*t* score ≥60). This study examined the BASC composite scale Internalizing Symptoms. All mental health symptom data were collected at 4-month follow-up.

The BASC-2 SRP-A includes five validity scales that provide insight into the reliability of participant responses. Validity of each scale was labeled as either acceptable, low caution or caution, or extreme caution. We utilized the BASC-2 L and V validity indices to flag and exclude response profiles ($n = 7$) in the extreme caution range, indicating an excessively positive self-description or with a usually large number of nonsensical items endorsed.

Mental Health Diagnoses—Self-reported mental health diagnoses were collected from participants at baseline. Youth were first asked, “Have you ever been told that you have a mental health diagnosis?” If the youth answered yes, the youth was then asked, “What is/are the diagnosis or diagnoses?” Diagnoses were collected in six categories (yes/no):

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depression (e.g., major depression), anxiety (e.g., generalized anxiety disorder, phobias), bipolar disorders (e.g., manic depressive disorder), psychosis (e.g., schizophrenia, brief psychotic episode, paranoia), and substance use (e.g., alcohol, marijuana, other drugs). Participants were able to select all that applied.

Delinquency—Delinquency was assessed at baseline and 4-month follow-up using the National Youth Survey-Self-Reported Delinquency scale (NYS-SRD; Elliott et al., 1985). This 40-item self-report measure is well validated and widely used to examine the frequency of adolescent delinquent acts. The General Delinquency subscale with 23 items was used and included questions inquiring about a history of assault, theft, prostitution, sexual offenses, selling drugs, and property damage. Items were endorsed as yes/no. When summing all the possible items, scores could range from 0 to 23 with higher scores indicating greater number of delinquent acts endorsed. Data were collected at both the baseline and 4-month assessments. The baseline and 4-month assessment values were combined with the higher of the two values being maintained to create a new lifetime variable.

Substance Use—Using the Adolescent Risk Behavior Assessment (ARBA; Donenberg et al., 2001), participants reported lifetime and recent (past 4 months) alcohol and marijuana use, and other drug use (e.g., cocaine, synthetic drugs, ecstasy) yes/no at both the baseline and 4-month assessments. The baseline and 4-month assessment values were combined to create a new lifetime variable; if the participant answered yes at either timepoint, the variable was coded as yes. Ages of onset for alcohol and marijuana use were also collected at baseline.

Self-Cutting Behaviors—Lifetime report of self-cutting behavior at baseline was assessed through a single item: “Have you ever intentionally cut your body using pins, knives, razorblades, safety pins, or other things?” The same question was used to assess self-report in the past 4 months. The lifetime and 4-month values were combined to create a new lifetime variable (y/n), with the higher of the two values being retained.

RESULTS

BIVARIATE ANALYSES

Demographics—Overall, 37 (27%) of youth endorsed lifetime SI and 22 (27%) endorsed a lifetime history of SA. Of youth who endorsed lifetime SI, 9 (24%) were male and 4 (17%) youth endorsing a history of lifetime SA were male. Females endorsed SI (χ^2 [1] = 13.06, $p < .001$) and SA (χ^2 [1] = 11.53, $p = .001$) significantly more frequently than males. Report of lifetime SI or SA was not significantly different by race. Of youth endorsing SI, 10 (27%) identified as Latinx and 7 (32%) of youth endorsing a lifetime SA, identified as Latinx. Latinx youth were significantly less likely to seriously consider suicide (χ^2 [1] = 5.24, $p = .02$) than non-Latinx youth, but there was no significant difference in lifetime SA by ethnicity (χ^2 [1] = 1.75, $p = .19$; see Table 1). Youth who identified as a sexual minority were significantly more likely to endorse lifetime SI (χ^2 [1] = 17.90, $p < .001$) and lifetime SAs (χ^2 [1] = 15.54, $p < .001$). Youth who endorsed SI and SA were also significantly more

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likely to endorse lifetime child welfare involvement (χ^2 [1] = 12.58, $p < .001$ and χ^2 [1] = 7.37, $p = .007$, respectively).

Suicidal Ideation/Attempt and Mental Health Diagnoses/Symptoms—Youth who endorsed SI were significantly more likely than those who did not endorse SI to self-report diagnoses of depression (χ^2 [1] = 4.93, $p = .03$) and anxiety (χ^2 [1] = 8.09, $p = .004$), but not bipolar disorders (χ^2 [1] = .01, $p = .91$). Youth who endorsed SA were not significantly different from those who did not endorse SA on self-reported diagnoses for depression (χ^2 [1] = 1.08, $p = .30$), anxiety (χ^2 [1] = 2.16, $p = .14$), and bipolar disorders (χ^2 [1] = .64, $p = .42$). There were no differences between youth with or without a lifetime history of SI (χ^2 [1] = 2.16, $p = .14$) or SA (χ^2 [1] = 3.43, $p = .06$) in terms of past receipt of mental health services (see Table 1). Youth who endorsed SI (χ^2 [1] = 11.80, $p = .001$) and SA (χ^2 [1] = 9.33, $p = .002$) were significantly more likely to be in the at-risk or clinical range for internalizing problems.

Suicidal Ideation/Attempt and Substance Use—Regarding alcohol use, 22 (59%) youth who endorsed lifetime SI and 12 (56%) who endorsed an SA also reported lifetime alcohol use, compared with 43% of youth who did not endorse either. There was a significant difference in lifetime alcohol use for youth endorsing SI (χ^2 [1] = 5.66, $p = .02$). Youth who endorsed SI were also more likely to initiate alcohol at a significantly younger age ($M = 12.89$, $SD = 2.37$) compared with youth who did not endorse SI ($M = 14.23$, $SD = 1.38$), $t(46) = 2.49$, 95% confidence interval (CI) = [0.26, 2.43], $p = .02$. Youth who endorsed SAs also initiated alcohol use at a younger age ($M = 12.64$, $SD = 2.87$) compared with youth who did not ($M = 14.23$, $SD = 1.38$), $t(46) = 2.25$, 95% CI = [0.15, 2.68], $p = .03$. Youth who endorsed lifetime SI were significantly more likely to endorse lifetime other drug use (χ^2 [1] = 6.74, $p = .009$). The significant difference in lifetime drug use between groups also held for youth who endorsed a lifetime SA compared with youth who did not (χ^2 [1] = 7.37, $p = .002$). Neither cannabis use nor the age of cannabis initiation differed significantly between youth who endorsed lifetime SI/SA and those youth who did not endorse either (see Table 1).

Suicidal Ideation/Attempt and Delinquency—Youth endorsing lifetime SI ($M = 2.68$, $SD = 2.11$) reported higher rates of lifetime general delinquent behavior at baseline compared with first-time preadjudicated diverted youth who did not ($M = 1.55$, $SD = 1.97$), $t(131) = -2.88$, 95% CI = [−1.89, −.35], $p = .005$. Similarly, youth endorsing lifetime SA ($M = 3.00$, $SD = 1.93$) had higher rates of lifetime delinquent behavior compared with first-time preadjudicated diverted youth who did not ($M = 1.63$, $SD = 2.02$), $t(131) = -2.98$, 95% CI = [−2.28, −0.46], $p = .003$.

Suicidal Ideation/Attempt and Self-Injurious Behaviors—Of youth who endorsed lifetime SI, 24 (68%) also endorsed a lifetime history of self-injurious behaviors, and 13 (35%) had self-injured in the past 4 months. Seventeen (78%) youth who endorsed a history of SA also endorsed a history of self-injurious behaviors. Finally, 9 (43%) youth who endorsed SA had self-injured in the past 4 months.

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SI STEPWISE LOGISTIC REGRESSION

A stepwise logistic regression (see Table 2) was conducted to evaluate the relationship between SI with demographic and mental health variables. At Step 1 with sex, sexual minority, and lifetime child welfare involvement entered as covariates, a test of the overall effect was significant [χ^2 (3, n =126) = 28.02, p < .001, R^2 = .29] and there were differences among the associations of sexual minority status (p = .01) and lifetime child welfare involvement (p = .006).

In Step 2, internalizing symptoms and self-cutting were added to the model. Self-cutting but not internalizing symptoms were associated with SI [χ^2 (2, n = 126) = 19.15, p < .001, R^2 = .45]. Specifically, self-cutting (p < .001) was strongly associated with lifetime SI. The final logistic regression model with all variables entered was also significant [χ^2 (6, n = 126) = 47.17, p < .001, R^2 = .45]. The independent contribution of significant covariates is as follows: lifetime child welfare involvement (odds ratio [OR] = 2.94, 95% CI = [1.03, 8.40], p = .04) and self-cutting (OR = 8.55, 95% CI = [2.83, 25.79], p < .001).

SA STEPWISE LOGISTIC REGRESSION

A stepwise logistic regression (see Table 2) was also conducted to evaluate the relationship between SA with demographic and mental health variables. At Step 1 with sex and sexual minority entered as covariates, a test of the overall effect was significant [χ^2 (2, n =133) = 20.12, p < .001, R^2 = .23] and there were differences among the associations of gender (p = .05) and sexual minority status (p = .01). Self-cutting and sexual minority status were associated with SA [χ^2 (1, n = 133) = 16.87, p < .001, R^2 = .40]. Specifically, self-cutting (p < .001) was strongly associated, and sexual minority status was associated (p = .04) with lifetime SA. The final logistic regression model with all variables entered was also significant [χ^2 (4, n = 126) = 36.98, p <.001, R^2 = .40]. The independent contribution of significant covariates was self-cutting (OR = 10.51, 95% CI = [3.11, 35.51], p < .001) and sexual minority status (OR = 3.49, 95% CI = [1.07, 11.39], p = .04).

DISCUSSION

In this sample of 135 first-time preadjudicated court-involved youth, 27% reported lifetime SI and 17% reported a lifetime history of an SA. These rates are considerably higher than those in the general population of youth in the United States: Lifetime prevalence of SI and SA were 18.8% and 8.9%, respectively, in a nationally representative anonymous youth survey (CDC, 2020). Lifetime prevalence of SI in our sample was also higher than the 12% to 14% reported in other community-based justice-involved youth samples (Battle et al., 1993; Bhatta et al., 2014; Freedenthal et al., 2007; Kemp et al., 2016). However, lifetime prevalence of SA in our sample was similar to prior research with other justice-involved youth samples, in which rates ranged from 10% to 18% (Buttar et al., 2013; Kretschmar et al., 2016; Mallett et al., 2012; Wasserman et al., 2010; Wasserman & McReynolds, 2006). The high lifetime SI and SA prevalence rates in this sample suggest that youth who come into contact with the legal system for the first time are a population in need of public health attention as it relates to suicidality. In addition, multiple demographic characteristics, as well as mental health, delinquency, and substance use variables were associated with elevated risk

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within this population. These correlates of SI and SA could inform screening methods to identify justice-involved youth most in need of intervention.

Demographic variables correlated with both SI and SA include sex, sexual minority status, and prior child welfare involvement. Although the sample comprised equal numbers of boys and girls, the number of girls who endorsed lifetime SI and SA outnumbered the number of boys by roughly 3 to 1 and 5 to 1, respectively. Our findings are consistent with the well-established link of female with SI and SA in community based (Cha et al., 2018). However, justice-involved adolescent samples have had mixed outcomes by gender with some studies suggesting no difference (Chapman & Ford, 2008; Esposito & Clum, 2002; Kemp et al., 2016; Penn et al., 2003; Stokes et al., 2015) and at least one study find a substantial gender difference (Stokes et al., 2015). This potential gender discrepancy in SI and SA is not well understood, according to Stokes and colleagues (2015), but they suggested that the higher prevalence of depression among girls starting in adolescence—another correlate of suicidality—might be a contributing factor. Dating violence, common among justice-involved girls, may also contribute (Kerig, 2018). Being the recipient of physical or sexual dating violence was associated with SA among justice-involved girls in one study (Buttar et al., 2013), even after controlling for sexual orientation, history of childhood abuse, and substance abuse. In addition, the proportion of sexual minority youth who endorsed lifetime SI and SA was 4 and 6 times that of their straight identifying peers, and the proportion of youth with child welfare involvement who endorsed lifetime SI or SA was 3 times that of their peers not involved with child welfare. Our findings are consistent with the limited extant research showing higher rates of SI and SA among sexual minority youth in community-based (Silenzio et al., 2007) and justice-involved samples (Buttar et al., 2013). Cha and colleagues' (2018) review of the literature suggested that higher rates of victimization may explain the higher suicide risk of sexual minority youth, especially if their social environments are not supportive of their sexual orientation. Victimization in the form of child abuse or neglect may also account for the higher rates of SI and SA among youth with a history of child welfare involvement. Although the reason for involvement with a child welfare agency was not assessed in this study, it is likely to result from suspected or actual childhood abuse or neglect, and prior research has linked various forms of childhood abuse with later adolescent SI and SA (Cha et al., 2018).

With respect to mental health variables, our study found that internalizing problems and diagnoses were correlated with suicidality among these youth. Specifically, more severe symptoms of anxiety and depression were correlated with both SI and SA, and self-reported diagnoses of anxiety and depressive disorders were only correlated with SI. These findings mirror those of most studies of justice-involved youth (Abram et al., 2008; Bhatta et al., 2014; Stokes et al., 2015). Stokes and colleagues (2015) highlighted depression as the most common predictor for both SI and SA among youth in various stages of justice involvement. These findings are also somewhat consistent with those of the NCS-A, in which multiple anxiety disorders (e.g., specific phobia, panic disorder, social phobia) as well as major depressive disorder and dysthymic disorder were all associated with both SI and SA (Nock et al., 2013). Notably, the NCS-A used a structured diagnostic interview, whereas our study relied on youth self-report of symptoms.

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In addition, we found that higher rates of general delinquent behaviors and lifetime drug use were correlated with both SI and SAs; lifetime alcohol use correlated with SI only. Our finding that suicidality was associated with delinquent behaviors even prior to their first court contact is consistent with findings from a review (Stokes et al., 2015) linking suicidality to continued justice contact over time. In addition, the four studies that have included first-time preadjudicated youth populations have consistently found a relationship between suicidality and delinquent behaviors in this group of youth (Kemp et al., 2016; Stokes et al., 2015). Our findings are also consistent with the NCS-A, which found that diagnoses of conduct disorder, alcohol abuse, and drug abuse were each associated with both SI and SA (Nock et al., 2013).

Finally, youth with a history of self-cutting behavior endorsed lifetime SI at 5 times than the rate of youth who had never self-cut; for SA, this rate was 10 times that of non-self-cutting youth. Moreover, self-cutting history remained a highly significant correlate of both SI and SA even after controlling for other correlates of SI and SA, including sex, sexual minority status, internalizing symptoms, and child welfare involvement. The high co-occurrence of self-injurious behavior, including nonsuicidal self-injury (NSSI), and both SI and SA have been documented with community and clinical adolescent samples (Andover et al., 2012; Glenn et al., 2017). Examining the timeline of different kinds of self-injurious thoughts and behaviors among clinical samples, Glenn and colleagues (2017) found that thoughts of NSSI and SI have the earliest age-of-onset, followed by NSSI behaviors, suicide plans, and SA. They noted simultaneous development of NSSI and suicidal self-injury after SI, thus concluding that the 6 to 12 months after the onset of SI is a critical window for intervention.

Our findings dovetail with those of our colleagues who study suicidality among adolescents in justice-involved and other populations to suggest an ideal time to intervene. The high rates of SI and SA among first-time preadjudicated youth we found, along with the relatively brief time lag between onset of SI and onset of suicidal self-injury (Glenn et al., 2017) and the increase of suicide risk with deeper penetration into the justice system (Kemp et al., 2016; Stokes et al., 2015), all support intervention at the point of first contact with the justice system. From a public health perspective, this window could be most impactful in terms of preventing future SA; from a JJ perspective, treating mental health problems may disrupt the trajectory of continued justice involvement. Recent efforts have demonstrated how mental health screening in general, and suicide risk screening in particular, could be embedded into a family court diversionary program during the youth's initial appointment (Kemp et al., 2020).

Our findings also suggest the need for suicide screening and intervention may begin at the youth's first involvement with the justice system. In addition to screening directly for SI and SA, screening and triage could incorporate other strong correlates of suicidality that may direct next steps for tailored interventions. We recommend including lifetime self-cutting behavior, given its independent association with SI and SA beyond that of other correlates. Sex, sexual minority status, child welfare involvement, internalizing symptom severity, delinquency, and lifetime drug use could also be considered in triage decisions and used to inform interventions that would be most beneficial to each youth. A recent study found that a brief 40-min safety plan and coping intervention with subsequent phone check-in 1 week

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later was both feasible and acceptable to implement with a family court setting (Kemp et al., 2021).

Our study had both strengths and limitations. We used only one question to measure lifetime suicidality, and the anonymous, self-reported measure of SI and SAs, while perhaps allowing for greater veracity in responding, also meant that we could not verify the severity of SI and the occurrence of SAs with other sources (e.g., caregivers, clinical records). Similarly, current measures of mental health symptoms and diagnoses, substance use, and delinquency were based on youth self-report. In addition, with this initial cross-sectional analysis, we could not draw conclusions about temporal relationships between lifetime SI or SAs and their mental health and risk behavior correlates. Future analysis with this sample will be able to examine the development of mental health symptoms and substance use disorders and make continued contributions to this nascent body of literature. We will also track longitudinal relationships between mental health problems and recidivism of first-time preadjudicated diverted youth. Despite these limitations, we believe that our findings contribute to the sparse literature on an understudied population and highlight the clinical significance of the need for suicide assessment and prevention at the front door of the juvenile court and justice system and for those youth with particular demographic, mental health, and risk behavior characteristics, such as identifying as a sexual minority and endorsing lifetime alcohol and other drug use.

CONCLUSION

In sum, we found higher rates of SI and SAs among first-time preadjudicated diverted youth compared with general adolescent samples. Our findings indicate that first-time preadjudicated diverted youth represent a high-risk population needing enhanced suicide screening and increased access to mental health services, especially girls, sexual minority youth, those with prior child welfare involvement, and those with a history of self-cutting. Future research that rigorously empirically tests whether a brief suicide-specific intervention tailored to address individual risk factors among suicidal first-time preadjudicated diverted youth can reduce further suicide ideation, suicide behavior, and justice involvement.

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REFERENCES

Abram KM, Choe JY, Washburn JJ, Teplin LA, King DC, & Dulcan MK (2008). Suicidal ideation and behaviors among youths in juvenile detention. Journal of the American Academy of Child and Adolescent Psychiatry, 47(3), 291–300. [PubMed: 18216737]

Abrantes AM, Hoffmann NG, & Anton R (2005). Prevalence of co-occurring disorders among juveniles committed to detention centers. International Journal of Offender Therapy and Comparative Criminology, 49(2), 179–193. [PubMed: 15746269]

Andover MS, Morris BW, Wren A, & Bruzzese ME (2012). The co-occurrence of non-suicidal self-injury and attempted suicide among adolescents: Distinguishing risk factors and psychosocial correlates. Child and Adolescent Psychiatry and Mental Health, 6, Article 11. 10.1186/1753-2000-6-11

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Archer RP, Stredny RV, Mason JA, & Arnau RC (2004). An examination and replication of the psychometric properties of the Massachusetts Youth Screening Instrument-(MAYSI-2) among adolescents in detention settings. Assessment, 11(4), 290–302. [PubMed: 15486166]

Bahk YC, Jang SK, Choi KH, & Lee SH (2017). The relationship between childhood trauma and suicidal ideation: Role of maltreatment and potential mediators. Psychiatry Investigation, 14, 37–43. [PubMed: 28096873]

Battle AO, Battle MV, & Tolley EA (1993). Potential for suicide and aggression in delinquents at juvenile court in a southern city. Suicide and Life Threatening Behavior, 23(3), 230–244. [PubMed: 8249034]

Bhatta MP, Jefferis E, Kavadas A, Alemagno SA, & Shaffer-King P (2014). Suicidal behaviors among adolescents in juvenile detention: Role of adverse life experiences. PLOS ONE, 9(2), Article e89408.

Breslau N, Davis G, & Schultz C (2003). Posttraumatic stress disorder and the incidence of nicotine, alcohol, and other drug disorders in persons who have experienced trauma. Archives of General Psychiatry, 60, 289–294. [PubMed: 12622662]

Bridge JA, Horowitz LM, Fontanella CA, Sheftall AH, Greenhouse J, Kelleher KJ, & Campo JV (2018). Age-related racial disparity in suicide rates among US youths from 2001 through 2015. JAMA Pediatrics, 172(7), 697–699. [PubMed: 29799931]

Buttar A, Clements-Nolle K, Haas J, & Reese F (2013). Dating violence, psychological distress, and attempted suicide among female adolescents in the juvenile justice system. Journal of Correctional Health Care, 19(2), 101–112. [PubMed: 23475852]

Centers for Disease Control and Prevention. (2014). Suicide: Facts at a glance [Online]. National Center for Injury Prevention and Control, CDC (Producer).

Centers for Disease Control and Prevention. (2015). 10 Leading causes of death by age group [Online]. National Center for Injury Prevention and Control, CDC (Producer).

Centers for Disease Control and Prevention. (2017). QuickStats: Suicide rates for teens aged 15–19 years, by sex—United States, 1975–2015. MMWR Morbidity and Mortality Weekly Report, 66, Article 816.

Centers for Disease Control and Prevention. (2020). Youth Risk Behavior Surveillance—United States, 2019. MMWR Supplement 2020, 69(1), 1–83.

Cha CB, Franz PJ, Guzman EM, Glenn CR, Kleiman EM, & Nock MK (2018). Annual Research Review: Suicide among youth—Epidemiology, (potential) etiology, and treatment. Journal of Child Psychology and Psychiatry, 59(4), 460–482. [PubMed: 29090457]

Chapman JF, & Ford JD (2008). Relationships between suicide risk, traumatic experiences, and substance use among juvenile detainees. Archives of Suicide Research, 12(1), 50–61. [PubMed: 18240034]

Dierkhising CB, Ko S, & Halladay Goldman J (2013). Trauma-informed juvenile justice roundtable: Current issues and directions in creating trauma-informed juvenile justice systems. National Center for Child Traumatic Stress.

Donenberg G, Emerson E, Bryant F, Wilson H, & Weber-Shifrin E (2001). Understanding AIDS-risk behavior in clinically disturbed adolescents: Links to psychopathology and peer relationships. Journal of the American Academy of Child and Adolescent Psychiatry, 40, 642–653. [PubMed: 11392341]

Dube SR, Anda RF, Felitti VJ, Chapman DP, Williamson DF, & Giles WH (2001). Childhood abuse, household dysfunction, and the risk of attempted suicide throughout the life span: Findings from the Adverse Childhood Experiences Study. JAMA, 286(24), 3089–3096. [PubMed: 11754674]

Elliott DS, Huizinga D, & Ageton SS (1985). Explaining delinquency and drug use. SAGE.

Esposito CL, & Clum GA (2002). Social support and problem-solving as moderators of the relationship between childhood abuse and suicidality: Applications to a delinquent population. Journal of Traumatic Stress, 15(2), 137–146. [PubMed: 12013065]

Freedenthal S, Vaughn MG, Jenson JM, & Howard MO (2007). Inhalant use and suicidality among incarcerated youth. Drug and Alcohol Dependence, 90(1), 81–88. [PubMed: 17433572]

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Galaif ER, Sussman S, Newcomb MD, & Locke TF (2007). Suicidality, depression, and alcohol use among adolescents: A review of empirical findings. International Journal of Adolescent Medicine and Health, 19(1), 27–35. [PubMed: 17458321]

Giaconda RM, Reinherz H, Paradis A, & Stashwick CK (2003). Comorbidity of substance disorders and posttraumatic stress disorder in adolescents. In Ouimette P & Brown P (Eds.), Trauma and substance abuse (pp. 227–242). American Psychological Association.

Glenn CR, Lanzillo EC, Esposito EC, Santee AC, Nock MK, & Auerbach RP (2017). Examining the course of suicidal and nonsuicidal self-injurious thoughts and behaviors in outpatient and inpatient adolescents. Journal of Abnormal Child Psychology, 45, 971–983. [PubMed: 27761783]

Gray D, Achilles J, Keller T, Tate D, Haggard L, Rolfs R, … McMahon WM (2002). Utah youth suicide study, phase I: Government agency contact before death. Journal of the American Academy of Child and Adolescent Psychiatry, 41(4), 427–434. [PubMed: 11931599]

Hayes LM (2009). Juvenile suicide in confinement—Findings from the first national survey. Suicide and Life-Threatening Behavior, 39(4), 353–363. [PubMed: 19792977]

Hockenberry S, & Puzzanchera C (2014). Delinquency cases in juvenile court, 2011. Office of Juvenile Justice and Delinquency Preventions.

Hockenberry S, & Puzzanchera C (2020). Juvenile court statistics 2018 (fact sheet). National Center for Juvenile Justice.

Kemp K, Tolou-Shams M, Conrad S, Dauria E, Neel K, & Brown L (2016). Suicidal ideation and attempts among court-involved, nonincarcerated youth. Journal of Forensic Psychology Practice, 16(3), 169–181. [PubMed: 29142507]

Kemp K, Webb M, Wolff J, Affleck K, Casamassima J, Weinstock L, & Spirito A (2021). Screening and brief intervention for psychiatric and suicide risk in the juvenile justice system: Findings from an open trial. Evidence-Based Practice in Child and Adolescent Mental Health, 6(3), 410–419. 10.1080/23794925.2021.1908190 [PubMed: 34693005]

Kemp K, Yurasek AM, Poindexter B, Webb M, & Tolou-Shams M (2020). Suicide screening among youth at first court contact. Archives of Suicide Research, 1–13. 10.1080/13811118.2020.1833795

Kerig PK (2018). Polyvictimization and girls' involvement in the juvenile justice system: Investigating gender-differentiated patterns of risk, recidivism, and resilience. Journal of Interpersonal Violence, 33(5), 789–809. [PubMed: 29411692]

King DC, Abram KM, Romero EG, Washburn JJ, Welty LJ, & Teplin LA (2011). Childhood maltreatment and psychiatric disorders among detained youths. Psychiatric Services, 62(12), 1430–1438. [PubMed: 22193789]

Kretschmar JM, Butcher F, Flannery DJ, & Singer MI (2016). Diverting juvenile justice-involved youth with behavioral health issues from detention: Preliminary findings from Ohio's Behavioral Health Juvenile Justice (BHJJ). Initiative Criminal Justice Policy Review, 27(3), 302–325.

Lindsey MA, Sheftall AH, Xiao Y, & Joe S (2019). Trends of suicidal behaviors among high school students in the United States, 1991–2017. Pediatrics, 144(5), Article e20191187.

Mallett C, De Rigne LA, Quinn L, & Stoddard-Dare P (2012). Discerning reported suicide attempts within a youthful offender population. Suicide and Life-Threatening Behavior, 42(1), 67–77. [PubMed: 22276846]

Merikangas KR, He JP, Burstein M, Swanson SA, Avenevoli S, Cui L, … Swendson J (2010). Lifetime prevalence of mental disorders in U.S. adolescents: Results from the National Comorbidity Survey Replication—Adolescent Supplement (NCS-A). Journal of the American Academy of Child and Adolescent Psychiatry, 49(10), 980–989. [PubMed: 20855043]

Morris RE, Harrison EA, Knox GW, Tromanhauser E, Marquis DK, & Watts LL (1995). Health risk behavioral survey from 39 juvenile correctional facilities in the United States. Journal of Adolescent Health, 17(6), 334–344.

Nock MK, Green JG, Hwang I, McLaughlin KA, Sampson NA, Zaslavsky AM, & Kessler RC (2013). Prevalence, correlates, and treatment of lifetime suicidal behavior among adolescents: Results from the National Comorbidity Survey Replication Adolescent Supplement. JAMA Psychiatry, 70(3), 300–310. [PubMed: 23303463]

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Penn JV, Esposito CL, Schaeffer LE, Fritz GK, & Spirito A (2003). Suicide attempts and self-mutilative behavior in a juvenile correctional facility. Journal of the American Academy of Child and Adolescent Psychiatry, 42(7), 762–769. [PubMed: 12819435]

Plemmons G, Hall M, Doupnik S, Gay J, Brown C, Browning W, … Williams D (2018). Hospitalization for suicide ideation or attempt: 2008–2015. Pediatrics, 141(6), Article e20172426.

Putnins AL (1995). Recent drug use and suicidal behavior among young offenders. Drug and Alcohol Review, 14, 151–158.

Reynolds C, & Kamphaus R (2004). Behavior assessment scale for children (2nd ed.). AGS Publishing.

Romer D, Hornik R, Stanton B, Black M, Li X, Ricardo I, & Feigelman S (1997). "Talking" computers: A reliable and private method to conduct interviews on sensitive topics with children. Journal of Sex Research, 34, 3–9.

Rosenberg HJ, Jankowski MK, Sengupta A, Wolfe RS, Wolford GL, & Rosenberg SD (2005). Single and multiple suicide attempts and associated health risk factors in New Hampshire adolescents. Suicide and Life Threatening Behavior, 35(5), 547–557. [PubMed: 16268771]

Scott M, Underwood M, & Lamis DA (2015). Suicide and related-behavior among youth involved in the juvenile justice system. Child and Adolescent Social Work Journal, 32(6), 517–527.

Sickmund M, Sladky A, & Kang W (2020). Easy access to Juvenile Court Statistics: 1985–2018. National Center for Juvenile Justice. https://www.ojjdp.gov/ojstatbb/ezajcs/

Silenzio VM, Pena JB, Duberstein PR, Cerel J, & Knox KL (2007). Sexual orientation and risk factors for suicidal ideation attempts among adolescents and young adults. American Journal of Public Health, 97, 2017–2019. [PubMed: 17901445]

Stokes ML, McCoy KP, Abram KM, Byck GR, & Teplin LA (2015). Suicidal ideation and behavior in youth in the juvenile justice system: A review of the literature. Journal of Correctional Health Care, 21(3), 222–242. [PubMed: 26084946]

Substance Abuse and Mental Health Services Administration. (2020). Comparison of 2017–2018 and 2018–2019 population percentages (50 States and the District of Columbia). Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health. https://www.samhsa.gov/data/

Teplin LA, Abram KM, McClelland GM, Dulcan MK, & Mericle AA (2002). Psychiatric disorders in youth in juvenile detention. Archives of General Psychiatry, 59(12), 1133–1143. [PubMed: 12470130]

Tolou-Shams M, Brown LK, Marshall BDL, Dauria E, Koinis-Mitchell D, Kemp K, & Poindexter B (2020). The behavioral health needs of first-time offending justice-involved youth: Substance use, sexual risk, and mental health. Journal of Child and Adolescent Substance Abuse, 28(2), 1–13.

Wasserman GA, & McReynolds LS (2006). Suicide risk at juvenile justice intake. Suicide and Life-Threatening Behavior, 36(2), 239–249. [PubMed: 16704327]

Wasserman GA, McReynolds LS, Schwalbe CS, Keating JM, & Jones SA (2010). Psychiatric disorder, comorbidity, and suicidal behavior in juvenile justice youth. Criminal Justice and Behavior, 37(12), 1361–1376.

Wu P, Hoven CW, Liu X, Cohen P, Fuller CJ, & Shaffer D (2004). Substance use, suicidal ideation and attempts in children and adolescents. Suicide and Life-Threatening Behavior, 34(4), 408–420. [PubMed: 15585462]

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TABLE 1:

Demographic and Descriptive Data for Outcome Variables by Lifetime SI and SA

	Total sample (*N* = 135)		Lifetime SI (*N* = 37)		Lifetime SA (*N* = 23)	
Demographics/outcome variables	***N***	***M* (*SD*) or %**	***N***	***M* (*SD*) or %**	***N***	***M* (*SD*) or %**
Age	135	14.48 (1.62)	37	14.86 (1.55)	23	14.74 (1.79)
Gender						
Male	67	50%	9	25%***	4	17%***
Ethnicity						
Latinx	57	42%	10	27%*	7	32%
Race						
White	65	48%	24	65%	16	73%
African American	11	8%	3	8%	2	9%
Multiracial	21	16%	6	16%	3	14%
Other	35	26%	9	26%	7	32%
Sexual identity						
Sexual minority	37	27%	23	62%***	16	73%***
Child welfare involvement						
Lifetime	65	48%	27	77%***	17	74%**
Mental health						
Self-reported MH diagnoses						
Depression	26	19%	16	43%*	9	39%
Anxiety	24	18%	16	43%**	9	39%
Bipolar	10	7%	5	14%	4	17%
BASC internalizing problems						
At-risk or clinical	20	18%	11	36%***	8	38%**
MH service usage						
Lifetime	89	67%	28	76%	19	83%
Self-injurious behavior						
Lifetime	38	28%	24	69%***	18	82%***
Substance use						
Alcohol use						
Lifetime	58	43%	22	59%*	13	56%
Age of first alcohol use		13.73 (1.91)		12.89 (2.37)*		12.64 (2.87)*
Cannabis use						
Lifetime	70	52%	21	57%	14	61%
Age of first cannabis use		13.52 (1.63)		13.25 (1.71)		13.65 (1.60)
Drug use						
Lifetime	22	16%	11	30%**	8	35%**
General delinquency						
Lifetime		1.86 (2.07)		2.68 (2.11)**		3.00 (1.93)**

Note. SI = suicidal ideation; SA = suicidal attempts; MH = mental health; BASC = Behavior Assessment System for Children.

* $p \leq .05$.

** $p \leq .01$.

*** $p \leq .001$.

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TABLE 2:

Final Model of Stepwise Logistic Regression Examining Variables Associated With Lifetime Suicidal Ideation and Attempts

Lifetime suicidal ideation					
Predictors	**β**	***SE***	***p* value**	**OR**	**95% CI**
Sex	−0.07	0.62	.912	0.93	[0.28, 3.16]
Sexual minority status	1.06	0.55	.05	2.89	[0.98, 8.57]
Child welfare involvement	1.08	0.54	.04	2.94	[1.03, 8.40]
Internalizing symptoms	0.71	0.63	.26	2.04	[0.59, 7.04]
Self-cutting	2.15	0.56	<.001	8.55	[2.83, 25.79]
Lifetime suicide attempt					
Predictors	**β**	***SE***	***p* value**	**OR**	**95% CI**
Sex	0.34	0.73	.64	1.41	[0.34, 5.96]
Sexual minority status	1.25	0.60	.04	3.49	[1.07, 11.39]
Self-cutting	2.35	0.62	<.001	10.51	[3.11, 35.51]

Note. SE = standard error; OR = odds ratio; CI = confidence interval.