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## Implications of Sentencing Reform on Mental Health Symptoms in the Declining Juvenile Justice Populations

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*Though the juvenile justice system was built on the premise of rehabilitation, “tough on crime” policies in the 1980s and 1990s exponentially increased arrest and incarceration of minors. The turn of the 21<sup>st</sup> century marked the beginning of comprehensive reform in California due to a Court-ordered consent decree citing the illegal conditions existing in youth detention facilities. In addition to realignment of supervision of justice-involved youth from the State to the County level, California legislators implemented sentencing reform regarding marijuana possession, truancy, and re-assignment of misdemeanor status for some non-serious, non-violent felony convictions. This study examined changes in mental health symptoms in 7,437 detained youth within the context of these policies, as indicated by Massachusetts Youth Screening Instrument (MAYSI-2) scales. Results revealed significant decreases in alcohol/drug involvement and substance-related symptoms over time as well as an increased need for screening for suicidal ideation. In addition, youth reporting more traumatic experiences had higher levels of mental health symptoms. The results of this study highlighted a need to further understand mental health characteristics in light of the changing composition of youth who are detained or incarcerated.*

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### INTRODUCTION

While the juvenile court was built upon the premise of rehabilitation, the 1980s and 1990s were marked by a “tough on crime” approach. However, legislation in the past decade favored a rehabilitative focus. In the early 2000s, the California Youth Authority (CYA) came under scrutiny due to overcrowding, poor conditions, and high levels of violence and suicide resulting in a court-ordered consent decree for comprehensive reform of state facilities (CJ CJ, 2013;

Krisberg, 2013). Since then, legislation and reform in California has led to the realignment and near disintegration of the CYA, presently known as the California Department of Corrections, Division of Juvenile Justice. Senate Bill 81 began a realignment of state-committed juveniles to the county level that continued with the Public Safety and Rehabilitation Act of 2010 that moved supervision of more serious criminal offenders from the state to county probation (Juvenile Corrections Reform in California, 2015).

In addition to administrative changes in supervision, the juvenile justice system has seen drastic decreases in arrest and incarceration of minors through sentencing reform. In January 2011, Senate Bill 1449 reduced simple marijuana possession to an infraction, which resulted in a 47% decrease in total juvenile arrests from 2010 to 2011 and a decrease in overall juvenile justice encounters (CJCJ, 2012). In November of 2014, California approved Proposition 47, reducing nonviolent, non-serious felonies (frequently drug-related crimes) to misdemeanors and also providing retroactive reductions. In January 2015, Senate Bill 1296 implemented a ban on incarcerating youth adjudicated as truants. Arrests for truancy in California decreased from 35% to 17% of Status Offense arrests from 2009-2014 (CJSC, 2011; CJSC, 2014). Additionally, the overall juvenile arrest rate saw a decrease of 42% between 2007 and 2012. Similarly, rates of minors detained in secure county facilities decreased from 15,152 in 2011 to 10,394 in 2014, a reduction of 31% (CJSC, 2011; CJSC, 2012; CJSC, 2014). Changes in public attitudes influenced this transition to less punitive policies as captured by national surveys endorsing rehabilitation instead of incarceration of youth offenders and favor toward increasing government spending for counseling, education, and job training (Merlo & Benekos, 2010). As the unprecedented legislation in California continues to change outcomes for offenders, service providers must assess the current needs of detained and incarcerated minors. In particular, the changing composition of the juvenile justice population may inform mental health service needs necessary to decrease recidivism.

The prevalence of mental health problems in incarcerated youth is well documented. Estimates reveal between 50-75% of justice-involved youth have psychiatric disorders, with conduct disorder and substance use disorders as the most common (Cohen & Pfeifer, 2011; Geary, 2005; Vermeiren et al., 2006). Similar to adults, female youth have consistently high rates of depression, anxiety, PTSD, and suicide attempts (Vermeiren et al., 2006). Furthermore, youth studied at baseline and five years after detention had significantly higher rates of comorbidity than the general population (Abram et al., 2015).

Clinical research continues to develop an understanding of the extremely high incidence of trauma in justice-involved youth and pathways to PTSD, other disorders, and adolescent delinquent behavior. Traumatic experiences contribute largely to emotional dysregulation and difficulty coping with intense feelings, anger, and irritability (McCoy et al., 2014). Trauma is defined as an emotional reaction to a frightening or horrible event that can have lifelong effects on functioning and well-being (SAMHSA, 2017). In one study of 898 youth in a short-term detention facility, 93% of boys and 84% of girls had experienced at least one traumatic life event with as many as 14 traumatic stressors experienced in his or her lifetime (Kerig et al., 2010). For low-income youth and youth of color, the juvenile justice system has become a “*de facto* mental health system” due to limited access to community mental health care and a shortage of

culturally sensitive services (Cohen & Pfeifer, 2011). Although incarcerated youth are designated status as a protected and vulnerable population, research indicates that these youth become vulnerable much earlier in childhood and prior to incarceration. Without access to adequate mental health care in the community, the juvenile justice system often functions as a mental health provider.

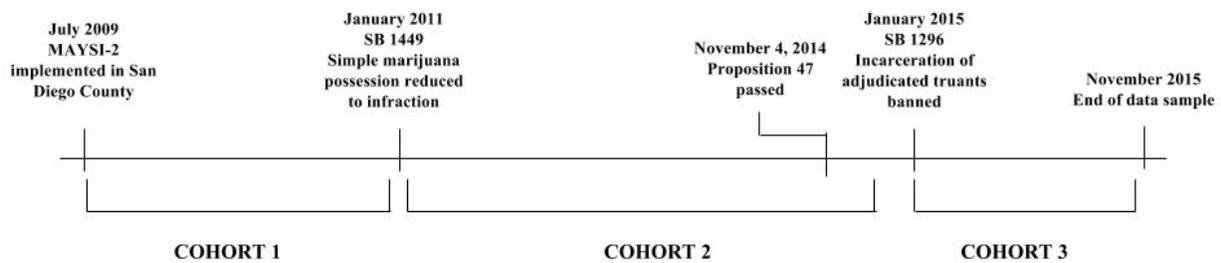
### **PURPOSE OF THE STUDY AND HYPOTHESIS**

This study examines the mental health needs of a detained juvenile justice population within the context of legislative reform to better identify targets of treatment to meet these changing needs. With low-level offenders actively diverted from the system, the purpose of this study is to identify the mental health needs of the reduced population of youth who are placed in a custodial setting. We hypothesize that as the numbers of juveniles who in custody decrease due to legislative changes, those who are in the detained population will report increased levels of mental health symptoms. We also predicted that traumatic experiences will contribute to higher mental health clinical elevations.

### **METHOD**

This study consists of a secondary analysis of an existing data set collected by a juvenile detention facility in the southwest region of the United States. The Institutional Review Board (IRB) of the first author's university provided approval for the current study. Participants were male and female, ages 12-17 years old. Data were gathered from a mental health screen administered within the first one to three days of entering the facility. Participants completed the MAYSI-2 individually at a computer. Data analyzed included entries from July 2009, when the screen was first implemented, to November 2015. Data were missing from January 13, 2010 to August 25, 2010, with only 11 entries recorded during that time period. Data were also missing from May 2011 to March 2012. The cause for missing data is unknown. Analyses were performed in SPSS, (Statistical Program for Social Sciences, version 23).

Three cohorts of youth were analyzed to determine characteristics and mental health needs related to California Juvenile Justice reform legislation: Cohort 1 included detained juveniles from July 2009, when San Diego first implemented the MAYSI-2 screen, to December 2010, before the implementation of SB 1449, which reduced simple marijuana possession to an infraction; Cohort 2 included juveniles detained from January 2011 to December 2014, before SB 1296 banned incarceration of adjudicated truants, and included passage of Proposition 47, that reduced non-serious, non-violent crimes from felony to misdemeanor status; Cohort 3 included detained juveniles from January 2015, when SB 1296 was implemented, to November 2015 (see Figure 1).

**Figure 1. Legislation Timeline**

## MEASURES

*The Massachusetts Youth Screening Instrument-Second Version (MAYSI-2):* The MAYSI-2 is a self-reported 52-question yes/no item screen, readable at a fifth grade level (Ford et al., 2007). The MAYSI-2 is used to signal mental health related symptoms in the juvenile justice population on seven scales: alcohol/drug use; angry-irritable; depressed-anxious; somatic complaints; suicide ideation; thought disturbance; and traumatic experiences. The thought disturbance scale has been found to be reliable for males only (Kerig et al., 2010). The MAYSI-2 was administered in English or Spanish in the detention facility. All of the subscales except traumatic experiences have a cutoff point for a “Caution” or “Warning” level. Caution cutoff scores correspond with clinically significant elevations on other validated mental health measures (Grisso & Barnum, 2006). The warning cutoff scores represent the highest 10% of scores observed in the juvenile justice population. In this current study setting, scoring at a warning level on any of the scales triggers a referral for further evaluation by a licensed mental health provider. For the purposes of this study, the warning level was used as an indicator for high mental health need as this measure is used for referral and further assessment.

*Racial/Ethnic background:* The MAYSI-2 prompts participants to self-report age, gender (male or female), and race and ethnicity. The questions prompting for race and ethnicity information mirror the national Census. Individuals are first asked if they identify as Hispanic or non-Hispanic. Individuals can then specify up to three races by writing in a response and subsequently categorizing up to three races indicated by a number. In this study, all participants who identified as “Hispanic” were placed in the category “Hispanic/Mexican,” including those who identified as “black,” “white,” or other racial identities. Respondents who self-identified as non-Hispanic but racially as Mexican were added to the category “Hispanic/Mexican.” All respondents were categorized based on the first written specified race and subsequent numeric category. The “other” category in this study includes respondents who identified as Alaskan Native, American Indian, Pacific Islander/Native Hawaiian, other Indigenous, Middle Eastern, and other.

## ANALYSES

A “yes”/“no” dichotomous variable indicated the presence/absence of the warning level for each of the seven MAYSI-2 subscales. First, a chi-square analysis was conducted to observe

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differences among the cohorts and percentages of those who scored a warning level on MAYSI-2 subscales. Logistic regression analyses were then performed for each subscale to predict likelihood of scoring above the warning cutoff. The logistic regression analyses evaluated whether respondent cohort was a significant factor predicting scores in the warning category. Then, demographic variables (age, gender, and race/ethnicity) and traumatic experience scores were added to the logistic regression model evaluating potential confounding effects if they were significant at the bivariate level. Cohort 1 was the reference variable for the three cohorts. Male was the reference variable for gender and Hispanic/Mexican the reference variable for race/ethnicity due to the two groups' larger size. Six of the seven MAYSI-2 subscales were analyzed in these analyses as the traumatic experience subscale does not have a warning level cutoff; thus it was not used as an outcome for this study. However, we did include this measure as a covariate in our logistic regression models.

The data set included only the initial entry for each minor from July 2009 to November 2015, thus excluding subsequent MAYSI-2 entries for minors entering detention more than once. Also, some entries were excluded from the analyses ( $n = 3,510$ ) due to procedural practices (e.g., an identification number attached to a MAYSI-2 that was more than 8 digits; no identification to a detained minor; two MAYSI-2 entries for the same minor in the same day [one entry was selected if duplicate, both entries were deleted if scores differed]; and invalid dates.) within the Probation Department that deemed these entries invalid. Additionally, we also excluded responses from participants who: 1) either completed the MAYSI-2 in less than two minutes or more than 20 minutes; 2) were under the age of 12 or over the age of 18; and 3) indicated "No" for all 52 questions.

## RESULTS

Table 1 shows the total sample ( $N=7437$ ) divided into three cohorts with 32.3% ( $n=2402$ ) in Cohort 1, 59.2% ( $n=4399$ ) in Cohort 2, and 8.5% ( $n=634$ ) in Cohort 3. *(Insert Table 1 here)* Results showed significant differences in race and traumatic experiences across the cohorts. The percentage of participants across cohorts classified in the warning level category on the six MAYSI-2 subscales is shown in Table 2. *(Insert Table 2 here)*. The alcohol-drug and thought disturbance (males only) subscales significantly decreased across cohorts while suicide ideation increased. There were no significant differences across cohorts for scores on the other three MAYSI-2 subscales.

The results of the logistic regression analyses found statistically significant results for three of the six scales across the three cohorts of data: alcohol/drug use, suicide ideation, and thought disturbance. As shown in Table 3, females were significantly more likely to be classified in the warning level for the alcohol-drug subscale than males ( $OR=1.20$ , 95%  $CI=[1.04-1.40]$ ), consistent with findings demonstrating females score significantly higher on all MAYSI-2 scales (Grisso, Fusco, Paiva-Salisbury, Perraut, Williams, & Barnum, 2012). *(Insert Table 3 here)* Relative to Hispanic/Mexican juvenile detainees, whites were significantly more likely to score in the warning level ( $OR=1.21$ , 95%  $CI=[1.03-1.42]$ ) while black/African American respondents ( $OR=.40$ , 95%  $CI=[.32-.49]$ ) and "other" ethnicities ( $OR=.73$ , 95%  $CI=[.53-.99]$ ) were less likely. Higher traumatic experiences scores were significantly associated with the increased

likelihood of being classified in the warning level on the alcohol/drug use subscale (OR=1.64, 95% CI=[1.57-1.71]). Age was not significant. Cohort 3 (OR=.61, 95% CI=[.46-.81]) compared to Cohort 1 was significantly less likely to score in the warning level. No differences between Cohort 2 and Cohort 1 were observed.

Table 1: Demographics of Participants (N=7,437)

	Total	Cohort 1	Cohort 2	Cohort 3	Univariate Test
	N (%)	n (%)	n (%)	n (%)	$\chi^2$ (p)
# of Participants	7437 (100)	2404 (32.3)	4399 (59.2)	634 (8.5)	
Gender					4.94 (.085)
Female	1713 (23)	516 (21.5)	1046 (23.8)	151 (23.8)	
Male	5724 (77)	1888 (78.5)	3353 (76.2)	483 (76.2)	
Race/Ethnicity					13.33 (.038)
Hispanic/Mexican	4284 (57.6)	1351 (56.2)	2578 (58.6)	355 (56.0)	
White	1389 (18.7)	437 (18.2)	835 (19.0)	117 (18.5)	
Black/African American	1370 (18.4)	472 (19.6)	779 (17.7)	119 (18.8)	
Other	394 (5.3)	144 (6.0)	207 (4.7)	43 (6.8)	
Age	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	F (p)
	15.7 (1.2)	15.7 (1.2)	15.7 (1.3)	15.6 (1.3)	1.93 (.145)
Traumatic Experience	1.7 (1.5)	1.7 (1.5)	1.6 (1.5)	1.6 (1.5)	4.74 (.009)

Table 5 displays results from the suicide ideation subscale. (*Insert Table 5 here*) Females were significantly more likely (OR=2.43, 95% CI=[2.03-2.90]) to score in the warning level for the suicide ideation subscale than males while white detainees were more likely to score in the warning level relative Hispanics/Mexicans (OR=1.67, 95% CI=[1.36-2.06]). Higher scores on the traumatic experience scale were associated with an increased likelihood (OR=1.68, 95% CI=[1.59-1.78]) of being classified in the suicide ideation warning category. Cohort 2 (OR=1.52, 95% CI=[1.25-1.86]) was significantly more likely to score in the warning category than Cohort 1. No differences were observed between Cohort 3 and Cohort 1.

As observed in Table 6, white respondents (OR=.63, 95% CI=[.51-.79]) and Black/African American respondents (OR=.67, 95% CI=[.54-.84]) were less likely to score at the warning level for the thought disturbance subscale compared to Hispanic/Mexican respondents. Respondents with higher traumatic experience scores were associated with a greater likelihood of being classified in the warning category (OR=1.82, 95% CI=[1.73-1.92]). Cohort 2 (OR=.84, 95% CI=[.71-.99]) and Cohort 3 (OR=.70, 95% CI=[.50-.97]) were less likely to score in the warning category for the thought disturbance subscale relative to Cohort 1.

Table 2: Percentage of participants in each cohort categorized as warning level on MAYSI-2 subscales

	Cohort 1	Cohort 2	Cohort 3	$\chi^2$ ( <i>p</i> )
	n (%)	n (%)	n (%)	
	Yes	Yes	Yes	
Alcohol-Drug	412 (17.1)	679 (15.4)	69 (10.9)	15.13 (.001)
Angry-Irritable	209 (8.7)	355 (8.1)	41 (6.5)	3.39 (.184)
Depressed-Anxious	198 (8.2)	343 (7.8)	52 (8.2)	.458 (.796)
Somatic Complaints	187 (7.8)	342 (7.8)	50 (7.9)	.010 (.995)
Suicide Ideation	164 (6.8)	405 (9.2)	48 (7.6)	12.10 (.002)
Thought Disturbance*	297 (15.7)	437 (13.0)	52 (10.8)	11.34 (.003)

\*Does not include females, as this MAYSI-2 scale is not valid for that population.

Table 3: Results of a logistic regression analysis predicting the alcohol/drug use warning level

Variables	<i>B</i>	<i>SE B</i>	<i>p</i>	OR (CI 95%)
Age	.033	.028	.239	1.03 (.98-1.09)
Gender (Male)				
Female	.186	.077	.016	1.20 (1.04-1.40)
Race/Ethnicity (Hispanic/Mexican)				
White	.188	.082	.023	1.21 (1.03-1.42)
Black/African American	-.930	.110	.000	.40 (.32-.49)
Other	-.315	.157	.045	.73 (.53-.99)
Traumatic Experience	.49	.022	.000	1.64 (1.57-1.71)
Cohort (1)				
2	-.086	.072	.234	.92 (.80-1.06)
3	-.490	.145	.001	.61 (.46-.81)

N = 7,437

Table 4: Results of a logistic regression analysis predicting suicide ideation warning level

Variables	<i>B</i>	<i>SE B</i>	<i>p</i>	OR (CI 95%)
Gender (Male)				
Female	.887	.091	.000	2.43 (2.03-2.90)
Race/Ethnicity (Hispanic/Mexican)				
White	.514	.107	.000	1.67 (1.36-2.06)
Black/African American	.119	.119	.317	1.13 (.89-1.42)
Other	.278	.191	.145	1.31 (.90-1.91)
Traumatic Experience	.519	.028	.000	1.68 (1.59-1.78)
Cohort (1)				
2	.421	.101	.000	1.52 (1.25-1.86)
3	.190	.178	.286	1.21 (.85-1.72)
N = 7,437				

Table 5: Results of a logistic regression analysis predicting thought disturbance warning level

Variables	<i>B</i>	<i>SE B</i>	<i>p</i>	OR (CI 95%)
Race/Ethnicity (Hispanic/Mexican)				
White	-.458	.113	.000	.63 (.51-.79)
Black/African American	-.396	.114	.001	.67 (.54-.84)
Other	-.332	.189	.078	.72 (.50-1.04)
Traumatic Experience	.599	.027	.000	1.82 (1.73-1.92)
Cohort (1)				
2	-.178	.086	.039	.84 (.71-.99)
3	-.364	.169	.031	.70 (.50-.97)
N = 7,437				

## DISCUSSION AND IMPLICATIONS

Study results provided support for our hypothesis that higher scores on the traumatic experiences subscale would be associated with poorer mental health outcomes. Juvenile detainees who endorsed higher scores on the traumatic experiences scale were more likely to be classified in the warning category for alcohol/drug use, suicide ideation, and thought disturbance. The results of our analyses only partially supported our hypothesis that later cohorts of juvenile offenders would endorse higher levels of mental health symptoms than previous cohorts. Specifically, we only observed significant increases of mental health symptoms from cohort 1 to cohort 2 for the suicide ideation subscale. The results for the alcohol/drug use and thought disturbance subscales showed *decreases* in mental health symptoms over time when comparing the three cohorts.

Table 6: Logistic Regression Analysis of Predicting Thought Disturbance Warning Level for Cohort 1 (n=2404), Cohort 2 (n=4399), and Cohort 3 (n=634) Controlling for Demographic Variables (Males Only)

Variables	<i>B</i>	<i>SE B</i>	<i>p</i>	OR (CI 95%)
Race/Ethnicity (Hispanic/Mexican)				
White	-.458	.113	.000	.63 (.51-.79)
Black/African American	-.396	.114	.001	.67 (.54-.84)
Other	-.332	.189	.078	.72 (.50-1.04)
Traumatic Experience	.599	.027	.000	1.82 (1.73-1.92)
Cohort (1)				
2	-.178	.086	.039	.84 (.71-.99)
3	-.364	.169	.031	.70 (.50-.97)

The legal process prior to detention is stressful on adolescents. As the MAYSI-2 screen is the first tool administered in juvenile detention, this initial screening is an essential first opportunity to identify the need for comprehensive full assessment and intervention in cases of suicidal ideation. For example, in the six-year period of this study, 617 respondents scored at the warning level for suicide ideation, indicating that at least three of the five questions on the suicidal ideation subscale were endorsed. Detention facilities might consider the potential benefit of utilizing the caution cutoff score (not just the warning cutoff) as the trigger for referral to a licensed mental health provider to encompass all identifiable potentially high-risk youth for suicidal ideation and potential suicide attempt.

Additionally, the results suggest an urgent need for particular attention to high-risk groups, which this study reveals to be females, non-Hispanic white youth, and respondents with high scores on the traumatic experiences subscale. The risk groups identified are highly consistent with previous research on suicidal ideation in detained youth (Richardson-Vejlgaard et al., 2009; Stokes et al., 2015). Interventions promoting resiliency and protective factors in justice-involved youth that are routinely provided throughout the judicial process, upon admittance to detention and during the length of stay are likely to benefit the emotional wellbeing of these vulnerable youth. Given our findings revealed suicidal ideation scores with Cohort 3 were not significantly higher relative to Cohort 1, continued monitoring of suicidal ideation and improved screening of youth entering detention may be necessary in the juvenile justice system.

The decrease in percentages of alcohol-drug warning level scores may illustrate the impact of sentencing reform and diversion of low-level drug offenders on the composition of the juvenile justice population. If the current pattern of reform legislation regarding substance use continues to focus on rehabilitative strategies and decriminalization of substance use, it is likely that the downward trend of substance use involvement will remain consistent for the population of youth entering juvenile detention facilities. In terms of overall youth use of alcohol and drugs, the

Monitoring the Future survey in 2015 demonstrated a decrease in use of illicit drugs in the recent survey but steady rates of marijuana use over multiple years (Johnston et al., 2016). Alcohol use has decreased significantly in the past five years. As the MAYSI-2 screen does not ask for specific alcohol/drug use information, the results suggest lower endorsement on alcohol/drug items parallels nationwide trends of a decrease in alcohol and illicit drug use in addition to legislation reform regarding marijuana possession.

While rates of substance use have decreased, services must continue to focus on at risk youth for problematic alcohol and drug use including females, non-Hispanic white youth, and those reporting a history of traumatic experiences. Treatment for substance use disorders should continue to focus on community-based efforts and evidence-based strategies to prevent unnecessary incarceration of minors. Additionally, as the entire juvenile justice system addresses disproportionate minority contact, this study corroborates previous MAYSI and substance abuse research indicating lower rates of problematic substance use involvement by African-American youth compared to whites (Coker et al., 2014; Ewing et al., 2011; SAMHSA, 2013; Vincent et al., 2008). As earlier drug policies disproportionately impacted youth of color, particularly African Americans, policymakers and professionals in the judicial system may be mindful of these findings when developing and applying legislation in this area.

The parallel decrease in warning scores on alcohol-drug use (AD) and thought disturbance (TD) subscales suggests a relationship between the scales. Substance-induced paranoia, hallucinations, and delusions are likely to trigger “yes” responses on the TD scale. Clinical practice requires thorough investigation to distinguish between substance-related psychosis or the presence of co-occurring disorders. Therefore, interpretation of the decline in TD warning levels as a function of decreased problematic alcohol and drug involvement is made with caution. Studies have reported a minor association between endorsement of thought disorder warning scores and suicidal ideation and substance abuse. Additionally, a small relationship has been reported between TD and current mental status, individual and family psychiatric history, and diagnostic criteria for bipolar, dissociative, and psychotic disorders (Archer et al., 2010; Ford et al., 2008; Gilbert et al., 2015).

The lack of significant change on other subscales (angry-irritable, depressed-anxious, somatic complaints) calls into question whether population decreases and legislative reform have made an impact on these aspects of mental health. Warning levels remained consistent for six years of data on these subscales. With the concern that incarceration is used as *de facto* mental health care of underserved youth and youth of color, and with the increasing burden on county caseloads, this study indicates continued need for allocation of resources to public and community-based mental health systems to address the challenging and complex relationships between trauma, mental health, and delinquent behaviors presently observed in young people who enter detention. Prevention continues to be a critical approach in addressing the continued prevalence of high mental health need for justice-involved youth and there continues to be a need for treatment and intervention with the decreasing, but significant population of youth who enter a detention setting.

Trauma remained salient in all aspects of mental health examined in the study, indicating a potential foundation for understanding the mental health needs and characteristics of incarcerated youth. As this study and complimentary sources shed light on the relationship between traumatic experiences and delinquency, it seems the clearest path for effective prevention lies in greater treatment for children and youth experiencing symptoms from trauma. As suggested by high rates of suicidal ideation in the juvenile justice population compared to the general population of youth, the process of arrest, adjudication and subsequent detainment can exacerbate traumatic responses. The juvenile justice system as a whole would benefit from implementing thorough trauma-informed approaches to all aspects of the system, from initial contact and arrest to incarceration and release. The site of this study has recently implemented a trauma unit in the facility.

### **LIMITATIONS, STRENGTHS, AND FUTURE DIRECTION**

Limitations in this study should be considered when interpreting results. The MAYSI-2 data analyzed included only the youth's initial entrance into the detention facility. This study does not address the unique mental health needs facing youth with multiple entries into a detention facility. Thus, we cannot address how multiple entries into the juvenile justice system affect MAYSI-2 scores. Furthermore, as the MAYSI-2 is a self-report instrument, youth may have under- or over-reported endorsements on the subscales. As youth complete the MAYSI-2 screen upon entrance to the detention facility, the initial stressor of confinement may cause higher endorsement of items on the subscale that may be state dependent and may not persist. This study did attempt to take some elements of underreporting into consideration, however by excluding less valid entries, such as youth who answered no to all 52 questions or who completed the questionnaire in less than two minutes, as this does not provide enough time for thorough reading and response. A third limitation concerns the fact there were months of data missing from the detention facility that may have affected the study results in important ways.

The study was unique in that the research design took into account changes in the MAYSI-2 over time within the context of policy and sentencing reform. The purpose of utilizing the MAYSI-2 as a measure for mental health symptoms was to gain broad knowledge about the characteristics of mental health in light of the declining juvenile justice population. Caution should be used to interpret these results as diagnostic, as the MAYSI-2 is a mental health screen, not an assessment. A strength of this study was the consideration of traumatic experience in predicting elevated mental health symptoms. Previous research using the MAYSI-2 has not fully explored the relationship of traumatic experience scores and higher endorsement on other MAYSI-2 subscales.

Future studies would benefit from increased comparison across counties within California for further understanding of how legislation affects the juvenile justice population. Laws nationwide are changing with regard to marijuana and substance use that could guide future comparisons of substance use disorder prevalence in justice-involved youth across states with differing drug policies. Additionally, future research regarding best practices for reducing suicidal ideation in detained youth, including effective prevention strategies implemented prior to detention, would greatly impact this vulnerable population. As trauma-informed mental health services become

increasingly established, further longitudinal and prospective research must be performed to evaluate effectiveness in prevention and treatment of mental health symptoms in justice-involved youth.

## REFERENCES

- Abram, K., Zwecker, N., Welty, L., Hershfield, J., Dulcan, M., et al. (2015). Comorbidity and continuity of psychiatric disorders in youth after detention: A prospective longitudinal study. *JAMA Psychiatry*, 72(1), 84-93. doi: 10.1001/jamapsychiatry.2014.1375
- Archer, R., Simonds-Bisbee, E., Spiegel, D., Handel, R., & Elkins, D. (2010). Validity of the Massachusetts youth screening instrument-2 (MAYSI-2) scales in juvenile justice settings. *Journal of Personality Assessment* 92(4), 337-348. doi: 10.1080/00223891.2010.482009
- Criminal Justice Statistics Center (CJSC). California Department of Justice, California Justice Information Services Division, Bureau of Criminal Information and Analysis. (2011). Juvenile justice in California. Retrieved from <https://oag.ca.gov/sites/all/files/agweb/pdfs/cjsc/publications/misc/jj11/preface.pdf>
- Criminal Justice Statistics Center (CJSC). California Department of Justice, California Justice Information Services Division, Bureau of Criminal Information and Analysis. (2012). Juvenile justice in California. Retrieved from <https://oag.ca.gov/sites/all/files/agweb/pdfs/cjsc/publications/misc/jj14/preface.pdf>
- Criminal Justice Statistics Center (CJSC). California Department of Justice, California Justice Information Services Division, Bureau of Criminal Information and Analysis. (2014). Juvenile justice in California. Retrieved from <https://oag.ca.gov/sites/all/files/agweb/pdfs/cjsc/publications/misc/jj14/preface.pdf>
- Center on Juvenile and Criminal Justice (CJCJ). (2012). *California youth crime plunges to all-time low*. San Francisco, CA: Mike Males. Retrieved from [http://www.cjcj.org/uploads/cjcj/documents/CA\\_Youth\\_Crime\\_2011.pdf](http://www.cjcj.org/uploads/cjcj/documents/CA_Youth_Crime_2011.pdf)
- Center on Juvenile and Criminal Justice (CJCJ). (2013). *California's division of juvenile facilities: nine years after farrell*. San Francisco, CA: Lizzie Buchen. Retrieved from [http://www.cjcj.org/uploads/cjcj/documents/state\\_of\\_djf.pdf](http://www.cjcj.org/uploads/cjcj/documents/state_of_djf.pdf)
- Cohen, E., & Pfeifer, J. (2011). Mental health services for incarcerated youth: Report from a statewide survey. *Juvenile and Family Court Journal*, 62(2), 22-34. doi: 10.1111/j.1755-6988.2011.01059.x
- Coker, K., Wernsman, J., Ikpe, U., Brooks, J., Bushell, L., et al. (2014). Using the Massachusetts youth screening instrument—version 2 on a community sample of african american and latino/a juvenile offenders to identify mental health and substance abuse treatment needs. *Criminal Justice and Behavior*, 41(4), 492-511. doi: 10.1177/0093854813505565
- Ewing, S., Venner, K., Mead, H., & Bryan, A. (2011). Exploring racial/ethnic differences in substance use: A preliminary theory-based investigation with juvenile justice-involved youth. *Bmc Pediatrics*, 11(1), 71. doi:10.1186/1471-2431-11-71
- Ford, J., Chapman, J., Pearson, G., Borum, R., & Wolpaw, J. (2008). Psychometric status and clinical utility of the maysi-2 with girls and boys in juvenile detention. *Journal of Psychopathology and Behavioral Assessment*, 30(2), 87-99. doi: 10.1007/s10862-007-9058-9

- Geary, P. (2005). Juvenile mental health courts and therapeutic jurisprudence: Facing the challenge posed by youth with mental disabilities in the juvenile justice system. *Yale Journal of Health Policy, Law, and Ethics*, 5(2), 671. Retrieved from <http://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1122&context=yjhple>
- Gilbert, A., Grande, T., Hallman, J., & Underwood, L. (2015). Screening incarcerated juveniles using the maysi-2. *Journal of Correctional Health Care*, 21(1), 35-44. doi: 10.1177/1078345814557788
- Grisso, T., & Barnum, R. (2006). Massachusetts Youth Screening Instrument Version 2 (MAYSI-2): User's manual and technical report, 2006 revised edition. Sarasota, FL: Professional Resource Press.
- Grisso, T., Fusco, S., Paiva-Salisbury, M., Perrauot, R., Williams, V., & Barnum, R. (2012). *The Massachusetts Youth Screening Instrument-Version 2 (MAYSI-2): Comprehensive research review*. Worcester, MA: University of Massachusetts Medical School. [www.nysap.us](http://www.nysap.us).
- Hopper, A., Austin, J., & Forman, J. (2014). Shifting the paradigm or shifting the problem? The politics of California's criminal justice realignment. *Santa Clara Law Review*, 54(3), 527. Retrieved from <http://digitalcommons.law.scu.edu/lawreview/vol54/iss3/1>
- Johnston, L. D., O'Malley, P. M., Miech, R. A., Bachman, J. G., & Schulenberg, J. E. (2016). Monitoring the Future national survey results on drug use, 1975-2015: Overview, key findings on adolescent drug use. Ann Arbor: Institute for Social Research, The University of Michigan.
- Juvenile Corrections Reform in California. Retrieved September 21, 2015, from <http://www.cjcj.org/education1/california-s-farrell-litigation.html>
- Kerig, P., Moeddel, M., & Becker, S. (2010). Assessing the sensitivity and specificity of the MAYSI-2 for detecting trauma among youth in juvenile detention. *Child Youth Care Forum Child & Youth Care Forum* 40, 345-362. doi: 10.1007/s10566-010-9124-4
- Krisberg, B. (2013). Reforming the California division of juvenile justice: What's the end game?. *Federal Sentencing Reporter*, 25(4), 281. doi: 10.1525/fsr.2013.25.4.281
- McCoy, H., Liverso, J., & Bowen, E. (2014). What the MAYSI-2 can tell us about anger-irritability and trauma. *International Journal of Offender Therapy and Comparative Criminology*. doi: 10.1177/0306624X14555855
- Merlo, A., & Benekos, P. (2010). Is punitive juvenile justice policy declining in the united states? A critique of emergent initiatives. *Youth Justice*, 10 (1), 3-24. doi: 10.1177/1473225409356740
- Richardson-Vejlgaard, R., Sher, L., Oquendo, M., Lizardi, D., & Stanley, B. (2009). Moral objections to suicide and suicidal ideation among mood disordered whites, blacks, and hispanics. *Journal of Psychiatric Research*, 43(4), 360-365. doi: 10.1016/j.jpsychires.2008.03.008
- Stokes, M., McCoy, K., Abram, K., Byck, G., & Teplin, L. (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. doi: 10.1177/1078345815587001

- 
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2014). Results from the 2013 National Survey on Drug Use and Health: Summary of National Findings, NSDUH Series H-48, HHS Publication No. (SMA) 14-4863. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (January, 2017). Trauma. Retrieved from <http://www.integration.samhsa.gov/clinical-practice/trauma>.
- Vermeiren, R., Jaspers, I. , & Moffitt, T. (2006). Mental health problems in juvenile justice populations. *Child and Adolescent Psychiatric Clinics of North America*,15(2), 333. doi: <http://dx.doi.org/10.1016/j.chc.2005.11.008>
- Vincent, G., Grisso, T., Terry, A., & Banks, S. (2008). Sex and race differences in mental health symptoms in juvenile justice: The maysi-2 national meta-analysis. *J Am Acad Child Adolesc Psychiatry*, 47(3), 282-290. doi:10.1097/CHI.0b013e318160d516