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**Interpersonal Violence and Institutional Misconduct in Jails:  
An Empirical Investigation of Adverse Outcomes in the  
Los Angeles County Jail System**

**Final Report**

Prepared for

**Scott Privette**  
Grant Manager  
National Institute of Justice  
810 Seventh Street, NW  
Washington, DC 20531  
scott.privette@ojp.usdoj.gov

Prepared by

**Portland State University**  
Sponsored Projects Administration  
1600 SW Fourth Ave.  
Portland, OR 97201

**Ryan M. Labrecque, PhD**  
Principal Investigator

Assistant Professor  
Department of Criminal Justice  
University of Central Florida  
12805 Pegasus Drive  
Orlando, FL 32816  
ryan.labrecque@ucf.edu

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## **Study Overview**

There are nearly 11 million county and city jail admissions in the United States each year, with more than 730,000 people confined in these systems on any given day (Zeng, 2018). These figures are not inconsequential and are disconcerting when one considers that aside from admission counts and basic descriptive information (e.g., gender, race, age, criminal charges), there is scant information available on jails and jail populations (Turney & Conner, 2019). To date, penological scholarship has tended to focus on state and federal prisons, which has left jails an understudied research topic. The inattention of jails in the academic literature is curious considering that these settings confine nearly half the number of inmates on a daily basis as do state and federal prison systems (Bronson & Carson, 2019).

The lack of scholarship in this area is concerning—not least because jails may inadvertently be affected by broader changes in criminal justice policies in a number of ways. For example, sentencing reforms may be effective at reducing the number of people incarcerated in prison (Bird Tafoya, Grattet, & Nguyen, 2016), but its impact on jail safety and order remains largely unknown. This is because policy evaluators have focused their investigations on criminal behavior outcomes in the community rather than those occurring within the jail (e.g., Bartos & Kubrin, 2016; Lofstrom & Raphael, 2016; Sundt et al., 2016; Tellis & Spohn, 2019). This is a critical oversight in the literature because sentencing reforms changing the composition of the jail population may also have an influence levels of violence and disorder within these settings. Jails housing offenders with more serious criminal records, for instance, may experience more incidents of violence and misconduct. Internal changes to jail policies and practices—whether court-ordered or self-initiated—may also produce intended and unintended consequences. These changes, however, are

often not well documented and are rarely evaluated. It is important, therefore, that researchers explore how changes in policy and practice influence jail safety and security.

In addition, jail inmates represent a diverse population who pose a wide range of managerial challenges. Criminal suspects, for example, are often taken to jail abruptly and unexpectedly. Some individuals react poorly to the sudden transition into the jail environment, including those who are unfamiliar with its procedures, anxious about their court case, or fearful for their safety. Jails also house a disproportionate number of individuals who are mentally ill, emotionally unstable, and are in crisis (Haney, Weill, Bakhshay, & Lockett, 2016). Furthermore, many of the inmates entering jail are under the influence of drugs or alcohol, or suffering from withdrawal. These factors undoubtedly make it difficult for jail authorities to effectively manage the inmates in their care, which is especially true given the limited resources available for responding to the growing number of inmate needs. As such, there is an urgency for the development of offender management tools and other strategies that can assist jail authorities in operating more safe and secure facilities (Chakraborty, 2019).

This study addresses these gaps in knowledge by conducting a mixed methods evaluation of interpersonal violence and institutional misconduct in the Los Angeles county jail system. More specifically, it examines staff perspectives on levels of violence and misconduct in Los Angeles county jails and analyzes administrative data to assess for trends in these adverse outcomes over time. In addition, this study develops and tests two risk assessment tools that predict the *perpetrators* and *victims* of jail violence, respectively. The research and policy implications of the study's findings are discussed.

## **Research Methodology**

The current study took place in the Los Angeles County Sheriff's Department (LASD) jail system. Los Angeles is the ideal setting for an evaluation of this type for several reasons. First, it is the largest county jail system in the United States, housing more than 15,000 inmates daily across its seven facilities. Second, the department has been the subject of a number of recent internal and external policy changes that have had an unknown effect on violence and misconduct within the jail system. Third, the department maintains a computerized management data system that possesses the necessary information for addressing the research questions posed here. Finally, the department provided the principal investigator with access to its administrative data and staff for interviews as part of this project. This study represents the first known longitudinal investigation of violence and misconduct in a county jail system to date. The implications of its findings extend beyond Los Angeles to other agencies that are interested in improving staff and inmate safety in jails.

### **Procedure**

The objectives of this study were accomplished in the following four phases.

#### ***Phase I: Administrative Data Collection***

In the first phase, administrative data was requested from the LASD Custody Support Services (CSS) Research, Planning, and Development Department. This process involved numerous emails, phone calls, and on-site discussions with an assigned departmental representative (i.e., a Sheriff's Deputy on special assignment for this project). Once an agreement was reached with the LASD administration, the data was transferred securely following the procedure detailed in the Portland State University (PSU) Institutional Review Board (IRB) protocol (#174123). The data obtained included information on inmate demographics, arraignment and booking charges, admission and

release details, participant and incident information for institutional misconducts and new criminal charges while in custody. This data was sent in separate files by type of information and year (2000 through 2017). These numerous databases were then connected using a unique inmate identifier in preparation for empirical analysis.

### ***Phase II: Staff Interviews and Site Observations***

In the second phase, 52 semi-structured interviews were conducted with a variety of custodial staff across the seven housing facilities and main administrative office to assess views on interpersonal violence and institutional misconduct within the Los Angeles county jail system (see Table 1 for a breakdown of interviews by location). These interviews took place over a period of eight days during the summer of 2018 in adherence to the PSU IRB protocol (#174466). A convenience sampling method was used to identify participants, targeting individuals of different ranks and duties with a preference given to those with greater longevity in the LASD (see Table 2 for a breakdown of interviews by staff type).<sup>1</sup> Approximately two-thirds of the sample was male ( $n = 33$ ) and the average length of service with the department was 16 years.

**Table 1. Number of Staff Interviews, by Location (N = 52)**

<b>Location</b>	<b><i>n</i></b>
Men's Central Jail (MCJ)	11
Twin Towers Correctional Facility (TTCF)	9
Century Regional Detention Facility (CRDF)	7
North County Correctional Facility (NCCF)	6
Inmate Reception Center (IRC)	5
Pitchess Detention Center (PDC) – North	4
Pitchess Detention Center (PDC) – South	3
Administration	7

<sup>1</sup> To maintain the anonymity of the individuals in this report, the term “Administrator” is used when quoting statements made by Captains, Commanders, and Chiefs.

**Table 2. Number of Staff Interviews, by Job Type (N = 52)**

<b>Job Type</b>	<b><i>n</i></b>
Custody Assistant	2
Deputy	19
Senior Line Deputy	6
Sergeant	7
Lieutenant	6
Captain	2
Commander	2
Chief	2
Medical/Mental Health	6

The principal investigator was escorted across and within the facilities by the assigned Deputy Sheriff. Interviewees were approached while on duty and read a script about their participation in the study. Staff were then brought to a nearby private location where they were informed that their participation was voluntary, and they were free to end the conversation at any time. Staff were also ensured their personal identity would not be shared with departmental administrators or referenced in any report. After the staff signed a consent form granting permission to take part in the study, the conversation was voice recorded. There were two individuals approached who opted not to participate in the study (i.e., < 4% refusal rate). The interviews focused on staff views about changes in the prevalence of institutional violence and other inmate rule violations within the jail system during their time with the department. Staff were also asked if there were any specific events or changes in policy they felt had an influence on levels of violence/misconduct, what current practices they thought were effective at keeping levels of violence/misconduct down, and what other strategies they would recommend for reducing violence/misconduct even further. This information was used to direct the empirical analyses in the next phase and the interviews lasted on average about 28 minutes.

### ***Phase III: Time Series Analyses***

The outcomes of interest in this study include interpersonal violence (i.e., inmate-on-inmate or inmate-on-staff violence)<sup>2</sup> and serious institutional misconduct (e.g., defiance, disorder, contraband, and other regulation rule violations). Data on incidents of violence were obtained from the Los Angeles Regional Crime Information System (LARCIS) and information on incidents of misconduct were retrieved from the Inmate Reporting Tracking System (IRTS). The observation period for the time series data begins in January 2010 and ends in December 2017.<sup>3</sup> Figure 1 shows there has been considerable variation in the number of inmates incarcerated in the Los Angeles county jail system over this eight-year time period.<sup>4</sup> To account for the potential impact that differences in the jail population may have had on the number of adverse outcomes experienced over this time period, these variables are examined here as monthly rates per 1,000 of the average daily inmate population (ADIP).

The time series analyses begin by examining the systemwide monthly rates of violence and misconduct over the eight-year (or 96 month) observation period. It then assesses if the policies/events identified in the staff interviews correspond as anticipated with changes in the rates of these adverse outcomes over time. Finally, it explores if the qualitative information gathered from the interviews can explain how these policies/events have influenced violence and misconduct in the jail system. More specifically, the individual-level data was aggregated to test whether shifts in inmate demographics, criminal history, and other pertinent characteristics align with the staff predictions and help interpret the results.

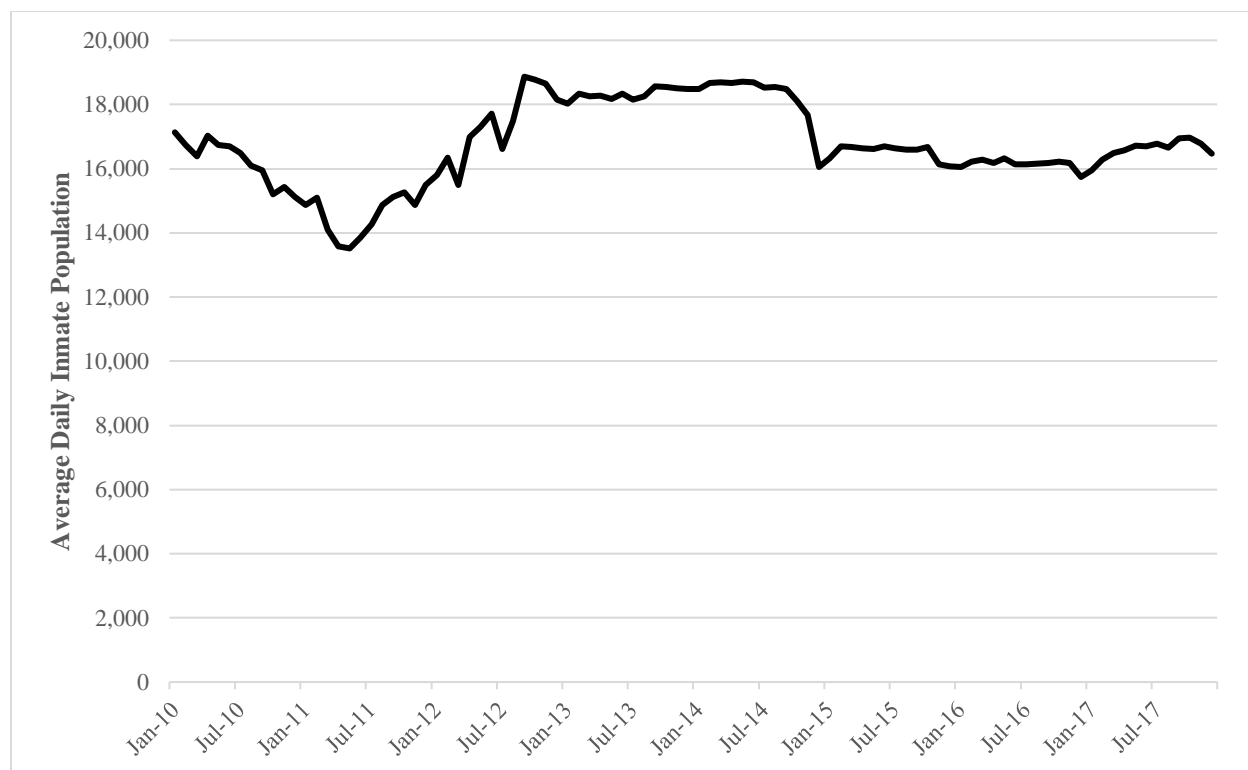
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<sup>2</sup> This definition does not include staff use of force against inmates (justified or unjustified).

<sup>3</sup> Data were initially intended to begin in January 2000; however, changes in record keeping on new crimes and institutional misconduct did not allow for a comparable analysis of records over the entire 17-year period.

<sup>4</sup> The average monthly jail population was obtained from the California Board of State and Community Corrections (BSCC) website (see <http://app.bscc.ca.gov/joq/jps/queryselection.asp>).





**Figure 1. Average daily inmate population (ADIP) in Los Angeles county jail system from January 2010 to December 2017, by month**

#### ***Phase IV: Development and Validation of Risk Assessment Scales***

In the fourth phase, two risk assessment tools—the Inmate Risk Assessment for Perpetration (IRAP) and the Inmate Risk Assessment for Victimization (IRAV)—were developed to proactively identify the perpetrators and victims of interpersonal violence in jail, respectively. The subjects used to construct and test these instruments were an admission cohort of all adjudicated inmates entering the Los Angeles County jail system in 2016 ( $N = 104,919$ ). This population of inmates was randomly assigned into one of four groups. The first was the construction sample ( $n = 26,404$ ), which was used to create the risk assessment scales, and the other three served as cross-validation samples (Validation Sample 1:  $n = 26,322$ , Validation Sample 2:  $n = 25,934$ , Validation Sample 3:  $n = 26,259$ ). Additional analyses were also conducted to evaluate the predictive accuracy and reliability of these two instruments among inmate gender and race subgroups.

## **Results**

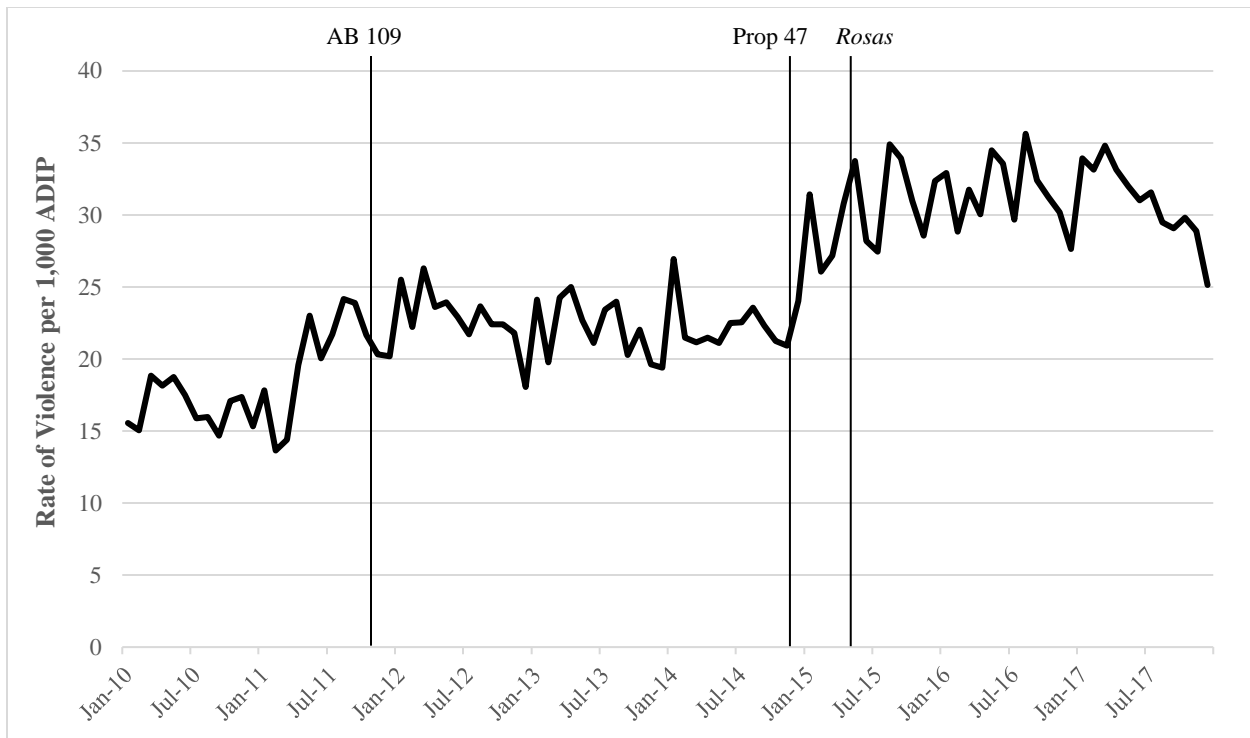
This study focuses on interpersonal violence and institutional misconduct in the Los Angeles county jail system from both a qualitative and quantitative perspective. The staff interviews helped provide context about these outcomes by systematically capturing the views of a wide range of individuals who work in the jail environment on a regular basis. Study participants were responsible for a variety of organizational duties, including operations and security functions; inmate transportation and movement; medical and mental health services; education and other treatment programs; staff supervision and training; and various other administrative tasks. One of the points emphasized during the interviews was that individual well-being and institutional order are of the utmost importance to correctional personnel. In the words of an Administrator, “above everything else, our number one priority is to ensure the safety and security of inmates and staff.”

On the whole, staff presented a rather optimistic view regarding the departments performance in providing a safe and orderly jail environment. Putting this challenge into perspective, one of the Sergeants summarized the situation: “Given the scope and size of our jail, the largest in the country, we do a pretty outstanding job.” Another Sergeant noted that “we do the best we can based on our current resources, but we cannot stop all of the incidents that happen.” Although it is unclear how much violence or misconduct is prevented, there was a consensus among respondents that these adverse outcomes nevertheless occur regularly within the Los Angeles county jail system.

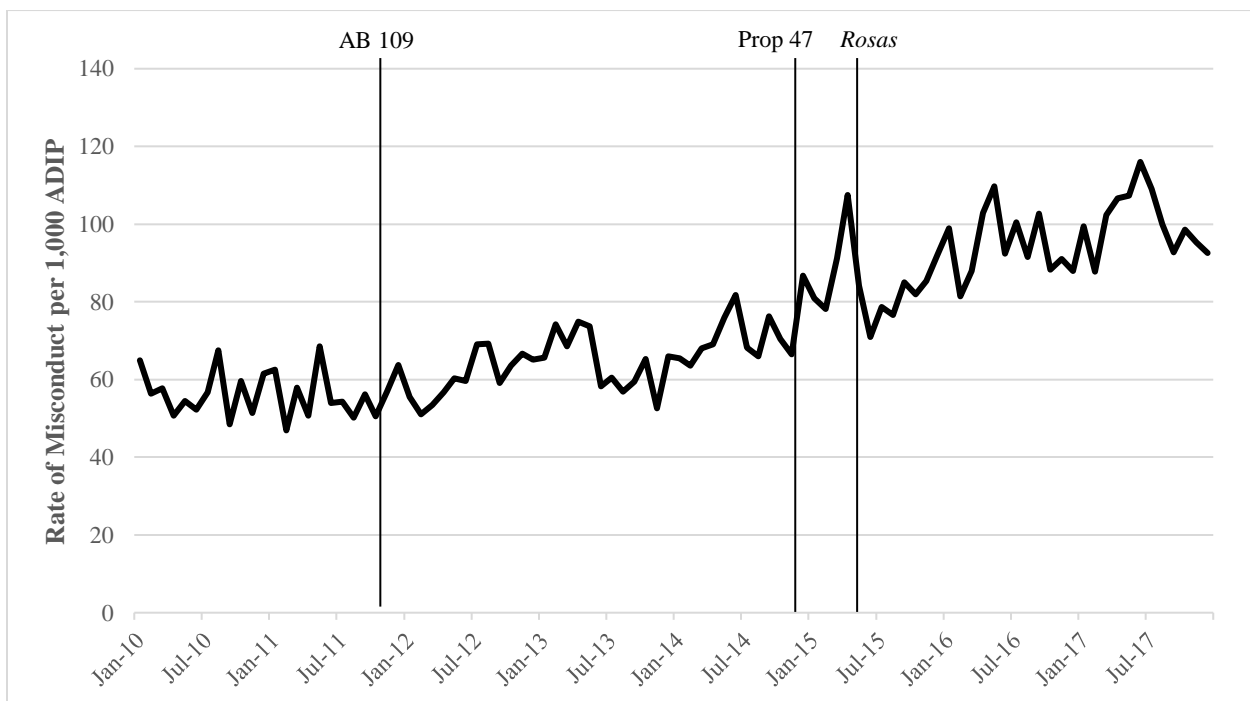
Respondents estimated that across the jail system inmate-on-inmate violence happens multiple times per day and that inmate-on-staff violence occurs once every two weeks to weekly. When gassings (i.e., throwing of urine or fecal matter at staff through cell bars) were also considered, violence against staff was believed to be a daily occurrence. In addition, respondents reported that other non-violent rule infractions happened numerous times each day. By far, the most prevalent

institutional rule violation of concern mentioned was possessing contraband. One Sergeant described the possession of weapons, narcotics, and pruno (i.e., alcoholic beverage made in jail) as especially problematic because the former “makes inmates more dangerous to staff and other inmates” and the use of the latter two “alters the way that inmates behave.” Staff also described concerns about other types of misconduct, including being recalcitrant, non-compliant, or otherwise disrespectful; gambling; committing theft; damaging county property; and tenting (i.e., hanging sheets or other material to blind the staff view into an inmate’s cell).

The majority of respondents expressed the opinion that the number of violent and misconduct incidents had “increased” or remained “about the same” over the course of their career. Only a handful of interviewees suggested that these adverse outcomes were becoming less prevalent over time. To assess these predictions, Figures 2 and 3 display the monthly rates of violence and misconduct per 1,000 ADIP from January 2010 through December 2017, respectively. Visual inspection of these figures reveals fluctuations in these events from month to month with a general upward trajectory of both outcomes during the eight-year observation period. For context, the rate of violence per 1,000 rose from 15.6 in January 2010 to 25.2 in December 2017. Similarly, the rate of misconduct per 1,000 climbed from 65.0 at the start of 2010 to 92.6 at the close of 2017.



**Figure 2. Average monthly rate of violence per 1,000 ADIP in Los Angeles county jail system from January 2010 to December 2017**



**Figure 3. Average monthly rate of serious misconduct per 1,000 ADIP in Los Angeles county jail system from January 2010 to December 2017**

## Influential Policy Changes

These findings support the position that violence and misconduct have both increased over this time period. The next logical question is whether there have been any policy changes during the observation window that might have influenced these adverse outcomes. Across the interviews, there were three events consistently reported to have increased levels of violence and disorder throughout the Los Angeles county jail system:

- In October 2011, California voters passed **Assembly Bill 109** (AB 109), or Realignment, as a response to a federal court order to reduce overcrowding in the state's prison system. Under this bill, the responsibility for managing offenders convicted of most non-serious, non-violent, and non-sexual offenses shifted from the state prison authority to those in the individual counties (see Lofstrom, Bird, & Martin, 2016; Tellis, & Spohn, 2019). There was a perception among the correctional personnel interviewed, however, that AB 109 resulted in a greater number of violent-prone and disruptive inmates with more extensive criminal histories being sentenced to the jail making this setting less safe and secure.
- In November 2014, California voters approved **Proposition 47** (Prop 47), or the Reduced Penalties for Some Crimes Initiative, which reclassified most non-violent property and drug crimes from felonies to misdemeanors (see Lofstrom et al., 2016). Staff indicated that Prop 47 removed many of the lower-level and easier-to-manage individuals from the jail population, leaving behind the more serious and difficult-to-manage inmates. This shift in the composition of the population was also believed to be responsible for an increase in violence and misconduct throughout the jail system.
- Finally, in April 2015, a settlement agreement was approved in the *Rosas v. Baca* class-action lawsuit filed against the LASD (hereafter referred to as *Rosas*). The *Rosas* case alleged that violence on the part of some deputies violated their Eight and Fourteenth Amendment rights. As part of the settlement, the Sheriff's Department agreed to reform its policies and practices on use of force, enhance the use of force training for all deputies, and increase methods for tracking and reviewing use of force incidents and inmate complaints and grievances (see American Civil Liberties Union, 2015). One of the concerns expressed in the interviews, however, was that these policy changes tied the hands of the Deputies, which reduced their ability to effectively manage and control the inmates under their care. Staff reported that the new policies limited the discretionary power of Deputies and as a result the inmates are less likely to comply with Deputy orders because they have less fear of consequence for acting out or breaking the institutional rules.

These three events helped guide the specification of the empirical analyses that follow. More specifically, the outcome variables were separated into four groups (or periods): *baseline* ( $n = 22$ ;

January 2010 to October 2011), *post-AB 109* ( $n = 37$ ; November 2011 to November 2014), *post-Prop 47* ( $n = 5$ , December 2014 to April 2015), and *post-Rosas* ( $n = 32$ ; May 2015 to December 2017). The vertical lines in Figures 2 and 3 indicate when these three events occurred.

Table 3 summarizes the average rates of violence and misconduct per 1,000 ADIP across these four time periods. As can be seen in the table, there was an increase in these outcomes following each of the successive events examined. The mean rate of violent incidents per 1,000 was 18.2 during the baseline period, followed by 22.3 in the post-AB 109 period, 27.9 in the post-Prop 47 period, and 31.3 in the post-*Rosas* period. A similar pattern also emerged for the misconduct variable, rising from an average of 56.4 misconducts per 1,000 during the baseline period to 93.9 in the post-*Rosas* period. One-way analysis of variance (ANOVA) tests confirm that the mean differences in these two outcomes across these four time periods are statistically significant at the .001 level. For contextual purposes, these differences represent a 72.0% increase in the rate of violent incidents and a 66.5% increase in the rate of misconduct incidents from the baseline period to the post-*Rosas* period.

**Table 3. Means and Standard Deviations Comparing the Rates of Violence and Misconduct per 1,000 Across the Four Time Periods**

<b>Outcome</b>	<b>Baseline <i>M (SD)</i></b>	<b>Post-AB 109 <i>M (SD)</i></b>	<b>Post-Prop 47 <i>M (SD)</i></b>	<b>Post-<i>Rosas</i> <i>M (SD)</i></b>
Violence*	18.2 (3.1)	22.3 (1.9)	27.9 (3.1)	31.3 (2.6)
Misconduct*	56.4 (6.1)	65.0 (7.2)	89.0 (11.5)	93.9 (10.6)

Note: \* $p < .001$ .

### **ARIMA Time Series Analyses**

Although the previous analyses make clear that there has been a rise in these adverse outcomes across the four time periods examined, it is possible that these increases were due in part (or in whole) to a larger trending pattern over the study's observation period. Stated differently, it is possible that the trajectory of violence and misconduct were already elevating during this time

period irrespective of the passage of AB 109, Prop 47, or the *Rosas* decision. In order to determine if these changes were influenced by these three events or merely represent ongoing patterns in the time-series data, autoregressive integrated moving average (ARIMA) models were estimated (see Box, Jenkins, Reinsel, & Ljung, 2015). The use of ARIMA modeling in the current context is important because this method can statistically control for trending and autocorrelation in the time series data. Failure to account for these influences may bias the interpretation of the simple pre/post intervention comparison of the time series segments (see also Tabachnick & Fidell, 2019).

The first step in this process involved constructing univariate ARIMA models for the violence and misconduct time series data. These models were built using the monthly rate information from the baseline period through an iterative strategy. In selecting the appropriate models, consideration was given to whether there were any transformations or differencing in scores necessary to make the outcomes stationary with respect to central tendency and dispersion (e.g., remove any linear or quadratic trends in data, adjust for seasonal effects). In addition, the data series were also examined for the presence of any autoregressive or moving-average processes. The final model specifications were determined through a variety of mechanisms, including assessing the ARIMA model parameters, Schwarz's Bayesian Criterion (BIC) goodness-of-fit values, autocorrelation functions (ACFs) and partial autocorrelation functions (PACFs), Box-Ljung statistics, and *t* ratios of the residuals. The systematic variation (i.e., autocorrelation) in the violence series was accounted for with first-order differencing and the application of a moving-average parameter. The misconduct series required first-order differencing with the application of autoregressive and moving-average parameters to achieve a white noise process.

Once the appropriate univariate model specifications were identified on the baseline data, an intervention analysis was conducted on the full series with this information to evaluate the impact

of AB 109, Prop 47, and *Rosas* on the two dependent measures. These three events were expected to produce an immediate impact on these adverse outcomes that would continue over the long term, so an abrupt, permanent step function was modeled. Table 4 presents the regression coefficients along with standard errors, t-values, and significance levels for these two ARIMA intervention models. The results of these analyses indicate that there was a 5.5% increase in the average monthly rate of violence and an 18.35% increase in the average monthly rate of serious misconduct following the passage of Prop 47. These findings also suggest that AB 109 and *Rosas* had little influence on these two outcomes.<sup>5</sup>

**Table 4. Parameter Estimates for ARIMA Intervention Models Predicting Rates of Interpersonal Violence and Institutional Misconduct per 1,000**

Model <sup>a</sup>	Estimate	Standard Error	t value	p
Violence <sup>b</sup>				
Moving average	0.72	0.08	8.70	<.001
AB 109	0.28	1.82	0.15	.880
Prop 47	5.50	1.83	3.00	.003
<i>Rosas</i>	2.83	1.83	1.54	.126
Misconduct <sup>c</sup>				
Autoregressive	0.32	0.12	2.75	.007
Moving average	0.94	0.05	20.83	<.001
AB 109	-1.75	4.65	-0.38	.708
Prop 47	18.35	5.27	3.48	.001
<i>Rosas</i>	-7.47	5.24	-1.43	.158

Note: <sup>a</sup>The general form of an ARIMA model is  $(p, d, q)$ , where  $p$  = the auto-regressive component,  $d$  = the differencing component, and  $q$  = the moving-average component.

<sup>b</sup> ARIMA (0,1,1).

<sup>c</sup> ARIMA (1,1,1).

<sup>5</sup> Owing to the relatively small number of time intervals between the passage of Prop 47 and the *Rosas* decision ( $n = 5$ ), the ARIMA intervention models were also conducted using only AB 109 and Prop 47 as independent variables (not shown) and the findings were similar to those presented here. More specifically, AB 109 had no statistically significant or substantively meaningful impact on either series, whereas Prop 47 produced a sizeable positive effect on the violence ( $b = 5.70, p = .004$ ) and misconduct outcomes ( $b = 15.34, p = .001$ ).



### **Explanations for Variation in Violence and Misconduct**

In addition to knowing if a correctional policy increases (or decreases) violence and disorder, it is critical to understand the reason for this effect. Again, the qualitative interviews were essential in this regard. Feedback from staff helped identify more fully the mechanism through which causal relationships may operate by providing potential explanations for how these events might have influenced changes in these adverse outcomes within the Los Angeles county jail system. The themes identified in the interviews were then tested (where possible) with the administrative records to assess if the staff predictions were able to explain the results.

There was a common belief that AB 109 and Prop 47 effectively changed the composition of the inmate population thereby making the jail a more dangerous and volatile place to live and work. Summarizing the situation, an Administrator noted “we no longer house low level crimes, we are now dealing with a much more violent population.” This sentiment was shared among the ranks. For example, a Sergeant described the population as having “a lot more hard-core criminals” and a Deputy reported the presence of “more dangerous people.”

Table 5 examines demographic and criminal history information of the jail population across the four time periods. As can be seen in this table, there has been little change in the gender, race, and age composition of the inmate population over the eight-year observation period. There have been, however, some notable transformations in inmate criminal history and risk. The number of inmates incarcerated for a violent offense elevated from 19.6% in the baseline period to 24.7% in the post-*Rosas* period. This difference represents a 26% increase in the number of inmates arrested for a violent crime. On the other end of the spectrum, the number of inmates incarcerated with a drug offense decreased by 18.3% from baseline to post-*Rosas*. Although the number of inmates incarcerated for a felony is lower in the post-Prop 47 and post-*Rosas* periods, these estimates must

be interpreted cautiously because prop-47 reclassified some felonies into misdemeanors. Finally, there have been fluctuations in the proportion of inmates falling into the three security levels of the Northpointe COMPAS Classification Tool. While the percentage of inmates in the low and medium security groups are both slightly lower from baseline to post-*Rosas*, the number of high security inmates has increased by 20.6% during this time.

**Table 5. Comparison of Demographic and Criminal History Information Across the Four Time Periods**

Variable	Baseline	Post-AB 109	Post-Prop 47	Post- <i>Rosas</i>
Male	81.4	81.1	82.7	82.4
Hispanic	49.4	49.5	50.4	52.0
Black	28.9	28.4	27.8	26.6
White	17.9	18.4	17.8	17.6
Mean age (SD)	33.6 (11.5)	34.0 (11.6)	34.1 (11.6)	34.2 (11.4)
Any felony	49.5	53.2	49.3	47.9
Any violent offense	19.6	19.2	22.9	24.7
Any sex offense	1.7	1.5	1.7	1.6
Any property offense	31.7	30.5	32.5	35.6
Any drug offense	41.6	40.1	34.8	34.0
Low security	26.4	32.7	42.6	26.0
Medium security	66.8	61.9	50.9	65.8
High security	6.8	5.4	6.5	8.2

### Development and Validation of Risk Assessment Scales

Despite the changes to the characteristics of the jail population, as well as the increases in the rates of violence and misconduct over the observation period, it is clear the majority of inmates in Los Angeles county are not written up for a rule violation or formally charged with a new offense while in custody. One of the Lieutenant's interviewed estimated that "10% of the inmates cause us 90% of the problems." As such, one way to reduce the overall levels of violence and misconduct is to proactively target the problematic (and vulnerable) inmates with increased supervision and other rehabilitative services before they engage in (or are victimized by) such misbehavior (Labrecque & Smith, 2019; Labrecque, Smith, & Wooldredge 2014). In order for this strategy to work, however, there is a need for risk assessment tools that can identify the individuals who are

at high-risk for engaging in violent behavior and being victimized while in custody. In this part of the study, two such risk scales—the Inmate Risk Assessment for Perpetration (IRAP) and the Inmate Risk Assessment for Victimization (IRAV)—are developed on the 2016 admission cohort of inmates ( $N = 104,919$ ).

Table 6 presents the descriptive characteristics of these inmates, who are separated into four groups (i.e., a construction sample and three separate validation samples). Generally speaking, the individuals from each of the four groups were predominately men in their mid-30s. The majority were also Hispanic (53%), followed by Black (26%), White (17%), and other races (4%). Approximately 13% were identified as having a serious mental illness and 4% were recognized as belonging to a vulnerable population (i.e., mobility impaired, blind, fragile, LGBTQ). Nearly half were charged with a felony offense, about a quarter for a violent crime, and fewer than 2% were incarcerated awaiting sentencing for an AB 109 offense. About 8% were classified as high security and 4% were labeled as a safety concern (i.e., highly dangerous, cautious, threat, special transport instructions). These inmates spent an average of 27 days in custody.

During their incarceration, more than 4% of inmates engaged in a serious institutional rule violation (i.e., major defiance, disorder, or contraband infraction), 2% perpetrated an act of violence against another inmate or staff member (i.e., assault), and 1% were violently victimized by another inmate.<sup>6</sup> In addition, about 6% were housed in administrative segregation and 3% were placed in protective custody at some point during their commitment. Comparative tests revealed no statistically significant differences between the groups on any of the characteristics examined.

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<sup>6</sup> There are three classifications for offender role in violence, including suspect, suspect/victim, and victim. This study includes the first two in its definition of perpetrator and the third to define victim. Supplemental analyses (not shown) were completed using just suspect to define perpetrator and victim and suspect/victim to define victim. The results were similar to those presented here.

**Table 6. Descriptive Statistics of the Construction and Validation Samples**

Variable	Construction sample	Validation sample 1	Validation sample 2	Validation sample 3
	%	%	%	%
Male	82.5	82.8	82.2	82.6
Hispanic	52.2	52.3	52.5	52.6
Black	26.6	26.2	26.2	26.1
White	17.2	17.7	17.3	17.3
Mean age (SD)	34.0 (11.4)	34.1 (11.5)	34.0 (11.4)	33.9 (11.4)
Serious mental illness	13.5	13.2	13.4	13.3
Vulnerable population	3.6	3.6	3.8	3.5
Safety concern	3.9	4.0	4.0	3.8
Felony offense	45.6	45.5	45.8	45.9
Violent offense	23.6	24.0	23.5	22.9
Property offense	34.7	33.9	34.1	33.9
Drug offense	34.3	34.5	34.1	34.6
Sex offense	1.4	1.5	1.5	1.5
AB 109 offense	1.6	1.6	1.7	1.6
Medium security	48.7	48.6	48.5	48.8
High security	7.5	7.5	7.5	7.5
Mean days in custody (SD)	27.0 (45.0)	27.2 (45.4)	26.9 (44.9)	26.6 (44.7)
Serious rule infraction	4.3	4.6	4.3	4.4
Perpetrator of violence	2.5	2.5	2.5	2.4
Victim of violence	1.1	1.3	1.1	1.1
Administrative segregation	6.3	6.6	6.6	6.3
Protective custody	2.6	2.7	2.8	2.5

The development of the risk instruments began with an exploration of the data files obtained from the LASD. The goal was to identify individual items from these sources that were associated with either the perpetrators or victims of jail violence. Possible predictors were purposely restricted to only those available during the initial intake process, which included various types of inmate demographic, criminal history, and other classification information. Using the construction sample, a series of bivariate correlational analyses were conducted separately between the potential risk factors on this list and the two interpersonal violence variables. For each outcome type, the zero-order correlations (Pearson's  $r$ ) were examined and only those with a statistically significant relationship ( $p \leq .01$ ) were moved forward for further analysis. The next step involved the iterative use of multivariate logistic regression with a backwards stepwise elimination technique. This

involved placing all of the significant predictors into a single regression model, removing the variable contributing the least predictive utility, and rerunning the model. This procedure was repeated until the point when any further subtraction of variables significantly reduced the overall predictive accuracy of the model.

The final regression models are presented in Tables 7 and 8, which include 13 risk factors for the IRAP and 12 for the IRAV. A description of these variables is provided in the two scoring guides located in the Appendix. When these combinations of variables are considered together, they significantly predicted whether or not an inmate was a perpetrator or victim of violence while in custody ( $p < .001$ ). For scoring purposes, all of the items were weighted by their respective unstandardized ( $b$ ) coefficient values from the final regression analyses. Total scale scores were then computed to produce a possible range of values from 0 to 100, with larger numbers indicating a higher probability for violent perpetration and victimization, respectively. The mean risk scores for the construction sample were 29 for the IRAP (range = 3 to 68) and 16 for the IRAV (range = 3 to 33).

**Table 7. Final Multivariate Logistic Regression Model Predicting Perpetrator of Jail Violence in the Construction Sample**

Item	<i>b</i>	<i>SE(b)</i>
Age	-.04**	.004
Male	.60**	.14
Medium security	1.19**	.13
High security	2.34**	.15
AB 109	1.59**	.18
Serious mental illness	.93**	.10
Safety concern	.31*	.14
Any violent crime	.37**	.09
Any drug + theft crimes	.39*	.16
Any vandalism	.64**	.09
Any court violations	.26**	.10
Number of felonies	.35**	.06
Bail > 150k	.33*	.14
Constant	-4.90**	.21
Model Chi-square ( <i>df</i> )	1,090.34 (13)	
-2 Log Likelihood	5,141.06	
Nagelkerke <i>R</i> <sup>2</sup>	.192	

Note: \*\* $p \leq .01$ . \* $p \leq .05$ .

**Table 8. Final Multivariate Logistic Regression Model Predicting Victim of Jail Violence in the Construction Sample**

Item	<i>b</i>	<i>SE(b)</i>
Age	-.03**	.01
Male	.76**	.21
Medium security	.53**	.16
High security	.94**	.20
AB 109	.81**	.27
Serious mental illness	.52**	.14
Vulnerable population	.77**	.22
Any violent crime	.54**	.13
Any property crime	.58**	.14
Any prior institutional offense	.65*	.30
Any felony	.84**	.15
Number of offenses	.17**	.03
Constant	-6.17**	.32
Model Chi-square ( <i>df</i> )	341.76 (12)	
-2 Log Likelihood	2,914.49	
Nagelkerke <i>R</i> <sup>2</sup>	.111	

Note: \*\* $p \leq .01$ . \* $p \leq .05$ .

The predictive validity of the risk scales is assessed through the examination of the Area Under the Curve (AUC) statistics, which are derived from a series of receiver operating characteristic (ROC) curve analyses. Possible AUC values range from 0 to 1, with .5 suggesting that the scale performs no better than chance and 1 indicating perfect predictive accuracy. For context, the results are compared to the standards established by Rice and Harris (2005) for determining small (AUC = .556), medium (AUC = .639), and large (AUC = .714) effect sizes. The results of the main ROC analyses are presented in the top rows of Tables 9 and 10. Across the three validation samples, the AUC values for both the IRAP (range = .845 to .852) and the IRAV (range = .769 to .790) were found to be in the large effect size range according to Rice and Harris' (2005) criteria. In addition, these analyses were conducted separately across several different offender subgroups. These findings indicate that these two risk assessments performed well among men, women, White, Black, and Hispanic inmates (range = .725 to .881).

**Table 9. AUCs for IRAP Score on Perpetration of Violence in Jail, by Sample Type**

	<b>Construction sample</b>	<b>Validation sample 1</b>	<b>Validation sample 2</b>	<b>Validation sample 3</b>
Total sample	.835	.845	.849	.852
Men	.823	.840	.855	.844
Women	.874	.840	.805	.881
White	.799	.820	.856	.847
Black	.830	.831	.839	.859
Hispanic	.849	.857	.849	.836

*Note:* Reported values are AUCs.

**Table 10. AUCs for IRAV Score on Violent Victimization in Jail, by Sample Type**

	<b>Construction sample</b>	<b>Validation sample 1</b>	<b>Validation sample 2</b>	<b>Validation sample 3</b>
Total sample	.787	.778	.790	.769
Men	.788	.765	.784	.756
Women	.785	.805	.801	.773
White	.750	.811	.852	.725
Black	.797	.771	.768	.768
Hispanic	.789	.764	.770	.787

*Note:* Reported values are AUCs.

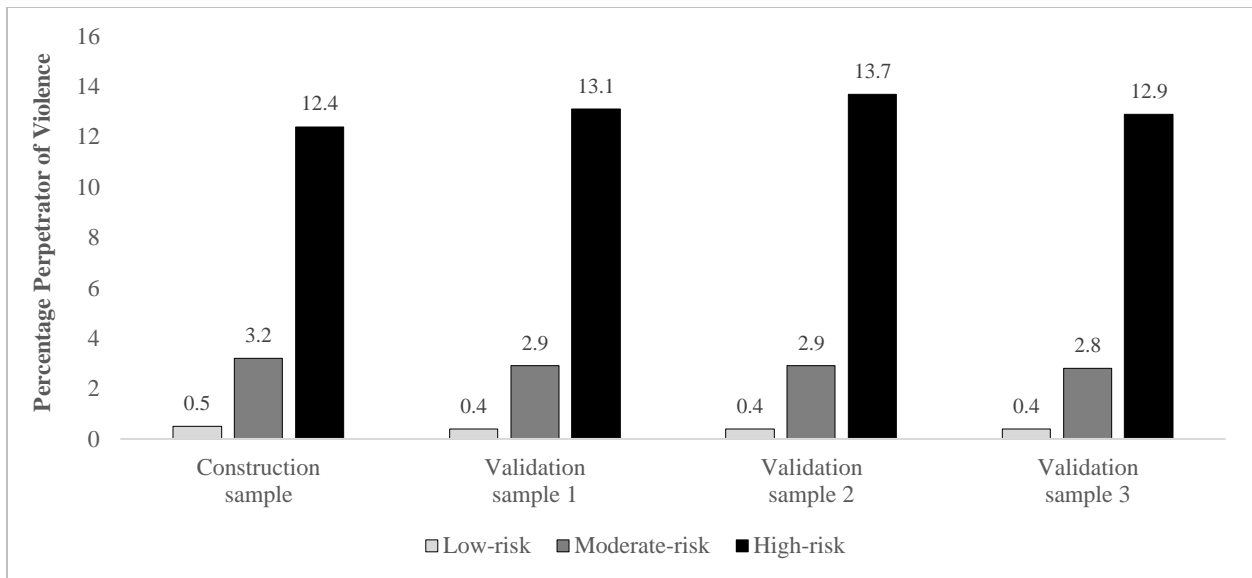
For practical purposes, these two scales were further binned into three categories each, including low- (total scores of 1 to 30), moderate- (total scores of 31 to 40), and high-risk (total scores of 41 to 100) for perpetrating violence, and low- (total scores of 1 to 16), moderate- (total scores of 17 to 21), and high-risk (total scores of 22 to 100) for being violently victimized. According to this cut-off criteria, approximately 60%, 30%, and 10% of inmates were identified as low-, moderate- and high-risk on both the IRAP and IRAV assessments (see Table 11).

**Table 11. Inmate Risk Assessment for Perpetration (IRAP) and Inmate Risk Assessment for Victimization (IRAV) Information for the Construction and Validation Samples**

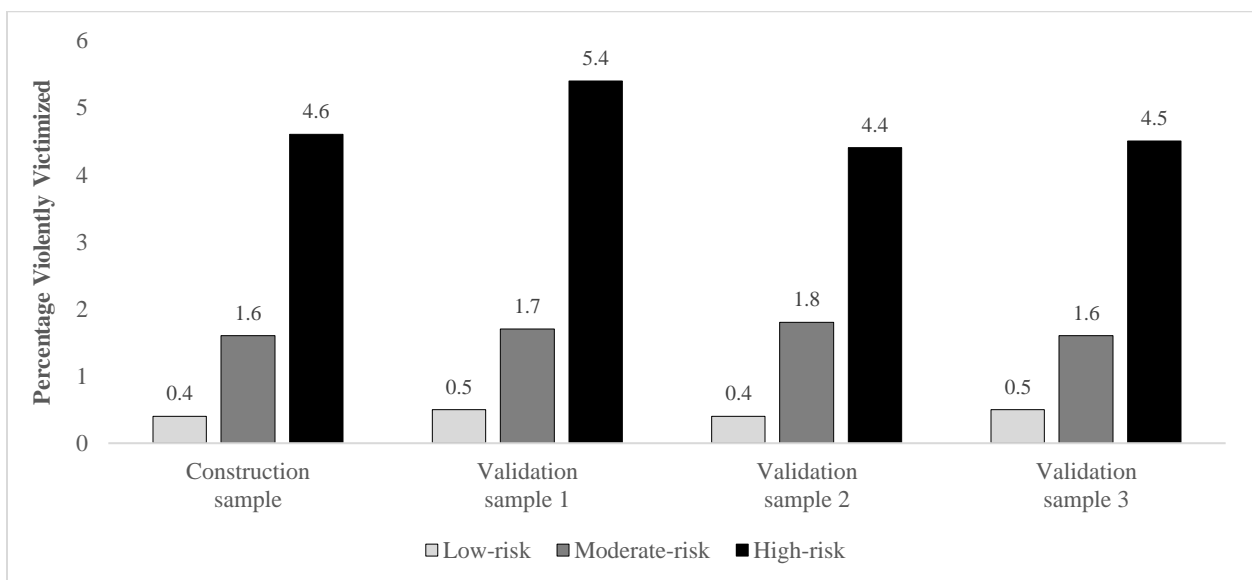
	Construction sample	Validation sample 1	Validation sample 2	Validation sample 3
IRAP				
<i>Low-risk</i>	58.1	58.1	58.3	58.0
<i>Moderate-risk</i>	31.7	31.9	31.9	32.1
<i>High-risk</i>	10.1	10.0	9.8	9.9
IRAV				
<i>Low-risk</i>	63.8	64.2	64.3	64.5
<i>Moderate-risk</i>	26.0	25.9	26.0	26.2
<i>High-risk</i>	10.2	9.9	9.7	9.4

Figures 4 and 5 depict the percentage of inmates from each sample who perpetrated violence or were violently victimized by risk category. As can be seen from these two graphs, there is a monotonic increase in the adverse outcomes for the higher risk groups of both instruments. Across the three validation samples, less than 1% of the low-risk IRAP inmates engaged in an act of violence during their commitment, followed by 3% of moderate-risk and 13% of high-risk inmates. Similarly, less than 1% of low-risk IRAV inmates were violently victimized in custody, followed by 2% of moderate-risk and 5% of high-risk inmates. In the three validation samples, the high-risk IRAP inmates accounted 53% of the total perpetrators of violence and the high-risk IRAV inmates represented 38% of the total victims of violence.





**Figure 4.** *Percent of inmates perpetrating violence in jail by IRAP risk category and sample type*



**Figure 5.** *Percent of inmates violently victimized in jail by IRAP risk category and sample type*

### Discussion and Implications

Jails are among one of the least studied components of the entire criminal justice system. The lack of scholarship in this area is concerning because jail inmates represent a diverse population who pose a wide range of management challenges. This study sought to address this gap in knowledge by conducting a mixed methods evaluation of interpersonal violence and institutional misconduct in the Los Angeles county jail system. The qualitative portion of this study helped

systematically capture the views of the correctional staff who work in the jail environment and the quantitative portion provided an empirical test of these perspectives. The goal of this work was to help justice officials better understand and develop strategies to reduce violence and disorder in jail settings.

Fifty-two interviews with a variety of custodial staff across the seven LASD facilities and main administrative office confirmed these individuals view safety and security as the department's primary responsibility. The respondents also reported that incidents of violence and misconduct often occur multiple times per day across the entire jail system and most believed that these adverse outcomes were becoming more prevalent or have remained about the same over the course of their career. An examination of the monthly rates of violence and misconduct per 1,000 ADIP revealed evidence of an increasing trend in both of these outcomes from 2010 to 2017.

The interviews also uncovered a widely shared belief among respondents that AB 109, Prop 47, and the *Rosas* decision had each contributed to an increase in these adverse outcomes. An analysis of the mean monthly rates of violence and misconduct showed that there was an increase in these adverse outcomes in the periods following the passage of these three events. Intervention ARIMA models which account for trending and autocorrelation in the time series data, however, detected a statistically significant increase in violence and misconduct following only the passage of Prop 47.

The staff interviews also provided some potential explanations for the rising rates of violence and misconduct during the observation period. More specifically, respondents noted that AB 109 and Prop 47 effectively removed many low-level inmates from their care and simultaneously replaced them with individuals who were more dangerous and prone to violence. An assessment of inmate characteristics and other criminal history information across these time periods

confirmed these suspicions. Following the passage of these events, the Los Angeles county inmates were significantly less likely to be incarcerated for a drug crime and more likely to be incarcerated for a violent offense. There were also more inmates found in the later time period to be rated as high security on the COMPAS classification tool.

Prior scholarship indicates that AB 109 and Prop 47 have helped reduce the number of people incarcerated in the California state prison system and further suggest that these policies have not resulted in an increase of crime in the community (e.g., Bartos & Kubrin, 2016; Lofstrom & Raphael, 2016; Sundt et al., 2016; Tellis & Spohn, 2019). The impact of these policies within the California jails, however, has been overlooked in the research literature. The findings of this study suggest one of the unintended consequences of the implementation of these policies is that violence and misconduct have increased within the Los Angeles county jail system. It remains unknown if a similar impact has emerged in the other California county jail systems and further if any additional factors may have contributed to this increase. Future research should seek to address these important questions.

The correctional personnel interviewed generally felt that the *Rosas* decision has made the jail system less safe and secure because it removed discretionary power and control away from the line staff and requires Deputy's to call for a Sergeant when responding to nearly every type of incident. The time series ARIMA analysis, however, did not find a statistically significant impact of this event on the monthly rates of violence or misconduct. Nevertheless, it remains possible that *Rosas* may have had an influence on other important outcomes that were not included in the current investigation (e.g., staff use of force). Future research should seek to involve a wider range of outcome variables and include an analysis of direct observations of staff and inmate interactions.

The longitudinal analyses in this study focused on the three events most commonly identified by staff as leading to increases in violence and misconduct. There were, however, several other practices discussed during the interviews as being effective in keeping levels of these adverse outcomes down. In no particular order, these include the use of cameras throughout the jail system, early release of inmates when the jail becomes overcrowded, better living accommodations for inmates (e.g., fewer men to a cell, more opportunities for going into the yard, greater access to television), inmate town hall meetings, good communication between clinical and security staff, more frequent safety checks and greater officer presence in the living units, prosecution of criminal offenses committed in custody (e.g., assaults, gassings), targeted response teams (e.g., pruno sweeps), single man cells for violent inmates (i.e., restrictive housing), greater number of staff and supervisors, use of force training and reviews, education-based incarceration (EBI) programs, and staff training in Divert (i.e., a program designed to help staff more effectively respond to mentally ill inmates). Owing to the retrospective design of this study, it was not able to assess the influence of these practices on the outcome variables. Future research, therefore, should seek to explore how these practices may impact institutional safety and order.

While the administration can do little about who is arrested or sentenced to jail, one way to reduce violence and misconduct in this setting is to proactively identify problematic (and vulnerable) inmates upon entry to the system and connect them with appropriate supervision strategies and resources. This strategy, however, requires that jail officials are effectively able to differentiate between inmates who are at a lower and higher risk for engaging in these types of adverse outcomes while in custody. The current study sought to aid in this endeavor by developing and validating two risk assessment tools for this task: the IRAP and IRAV. The results of this study indicated that these risk instruments were highly effective in identifying the perpetrators and

victims of violence, respectively. These two tools were also shown to work well across the inmate subgroups of gender and race.

The IRAP and the IRAV each separated the inmates into three risk categories. Across both assessments, approximately 60% were identified as low-risk, 30% as moderate-risk, and 10% high-risk. The high-risk groups were found to be disproportionately represented as the perpetrators and victims of violence. More specifically, the inmates identified as high-risk on the IRAP accounted for more than half of the total perpetrators of violence and those rated as high-risk on the IVAV represented nearly 40% of the total victims of violence. From a pragmatic perspective, therefore, authorities may be wise to target the high-risk inmates for increased supervision and other rehabilitative services. Identifying risk, however, is only the first part of this challenge. What remains to be determined is which specific strategies and interventions applied to this group are best able to decrease the number of these adverse events from occurring. Prior scholarship on criminal conduct is helpful in this regard. A large body of literature, for example, suggests the most successful correctional interventions in reducing criminal behavior involve those that target the crime producing factors (i.e., criminogenic needs) of moderate- to high-risk offenders with cognitive-behavioral treatment in a manner that matches one's specific learning style, motivations, and abilities (see Bonta & Andrews, 2017). Research also suggests that occupying one's time in programs and other services is helpful in reducing their opportunities for offending and keeping vulnerable inmates under greater staff supervision (Steiner & Wooldredge, 2020).

Drawing on this literature, there are several policy implications that can be gleaned from this study. First, if the jail system is going to receive higher risk inmates, there will also be a greater need for more rehabilitative and other treatment services. In order to increase programming options; however, it may not only require a reprioritization of current resources but might also

necessitate an increase in dedicated county funding for this purpose. Second, authorities should take steps to ensure that the interventions provided to inmates throughout the jail system are evidence-based (i.e., have empirical support regarding its effectiveness in improving offender behavior; MacKenzie, 2006; Serin, 2005). The department should consider taking an inventory of its current programs to ensure the most effective services are being offered (Campbell, Abboud, Hamilton, Van Wormer, & Posey, 2019). Third, administrators should also consider the location of where treatment programs and other services are offered. Anecdotally, it appears that most of the rehabilitative interventions are found in the lower security facilities. Although some level of programming may be necessary in these less secure settings, it may be beneficial to prioritize service offerings in the higher security facilities where more of the higher risk inmates reside (Labrecque & Smith, 2019).

Fourth, programming should be triaged toward those individuals who are at the greatest risk of engaging in violence. The IRAP provides one such mechanism for differentiating between levels of risk. This instrument was also developed using information already collected during the inmate admission process so it could be internally automated and would not require additional intake staff time to score the items manually. Fifth, the IRAP and the IRAV could be helpful to operations staff in making inmate housing and other case planning decisions. Finally, the interviews uncovered two consistent recommendations for helping the department improve safety and security, increasing the number of personnel on duty and providing staff with more training. The department might consider reviewing the staff assignments and also incorporating training on the risk-need-responsivity (RNR) model and core correctional practices (Bonta & Andrews, 2017; Dowden & Andrews, 2004; Gendreau, 1996).

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### Inmate Risk Assessment for Perpetration (IRAP)

<b>Inmate Name:</b>			
<b>Assessment Date:</b>			
Item	Risk Factor	Scoring Criteria	Score
1	Age	Age at intake (capped at 90) x .041 =	
2	Male	If male, add .603	
3	Medium security	If security level is medium, add 1.185	
4	High security	If security level is high, add 2.342	
5	AB 109	If sentenced for an AB 109 offense, add 1.589	
6	Serious mental illness	If known to have a mental health diagnosis or is prescribed psychotropic medication, add .928	
7	Safety concern	If identified as threatening, highly dangerous, or requires special transportation instructions, add .308	
8	Violent crime	If arrested for a violent offense, add .365	
9	Drug and theft crimes	If arrested for a combination of drug and theft crimes, add .387	
10	Vandalism crime	If arrested for vandalism, add .644	
11	Court violations	If arrested for a contempt of court, failure to appear, or probation violation, add .259	
12	Number of felonies	Number of felonies on current admission (capped at 5) x .346 =	
13	Bail > \$150,000	If bail was set at \$150,000 or more, add .334	
<b>Sum of scores</b>			
<b>Final Score = (Sum + 3.69) x 6.96</b>			
<b>Nominal Risk Categories</b>			
Final Score:	Risk Category:		
1 to 30	Low-risk		
31 to 40	Moderate-risk		
41 to 100	High-risk		

### Inmate Risk Assessment for Victimization (IRAV)

<b>Inmate Name:</b>			
<b>Assessment Date:</b>			
Item	Risk Factor	Scoring Criteria	Score
1	Age	Age at intake (capped at 90) x -.029 =	
2	Male	If male, add .764	
3	Medium security	If security level is medium, add .528	
4	High security	If security level is high, add .943	
5	AB 109	If sentenced for an AB 109 offense, add .807	
6	Serious mental illness	If known to have a mental health diagnosis or is prescribed psychotropic medication, add .516	
7	Vulnerable population	If in wheelchair, mobility impaired, blind, fragile, deaf or LGBTQ, add .768	
8	Violent crime	If arrested for a violent offense, add .541	
9	Property crime	If arrested for a property crime, add .575	
10	Institutional offense	If arrested for bringing drugs into custody or escaping from custody, add .654	
11	Felony	If arrested for a felony offense, add .837	
12	Number of offenses	Number of offenses arrested for on current admission (capped at 10) x .168 =	
<b>Sum of scores</b>			
<b>Final Score = (Sum + 2.61) x 4.07</b>			
<b>Nominal Risk Categories</b>			
<b>Final Score:</b>	<b>Risk Category:</b>		
1 to 16	Low-risk		
17 to 21	Moderate-risk		
22 to 100	High-risk		