

The Importance of Dynamic Risk Factors for First Time Juvenile Offenders



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Abstract

The Oregon Juvenile Crime Prevention Assessment (JCP; 2006) is used in all Oregon county juvenile justice departments for the assessment of risk. The JCP (2006) incorporates both dynamic and static risk factors. Research from the Netherlands found the importance of static and dynamic factors vary with age. Static risk factors increase in importance for older youth (age 15 and older), and dynamic risk factors are more important for younger youth (age 14 and younger). In this study we were interested in examining whether these findings generalize to juveniles in the United States. Contrary to previous research, we found no significant difference in recidivism using the JCP Static Scale Score for older compared to younger youth. Furthermore, in terms of the JCP Dynamic Scale Score, we found a stronger relation to recidivism among juvenile offenders ages 15 and over, than for juvenile offenders age 14 and younger. Thus, reduction in the number of dynamic risk variables should result in positive change and reduce the risk that a youth will reoffend in the future. Our research findings are encouraging for juvenile justice workers and lend support for current state and federal practices in the United States.

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Introduction

In 2010, law enforcement agencies in the United States made 1.6 million arrests of juveniles under the age of 18 (Office of Juvenile Justice and Delinquency Prevention, 2014). This constituted 11 percent of all male arrests and 14 percent of female arrest for 2010. Further, approximately 450,000 youth are detained in secure facilities at any given time (Katsiyannis & Archwmety, 1997). However, the national arrest rate of juveniles is actually declining; over the last decade, arrests of juveniles have declined 26.4 percent nationwide to approximately 450 per 100,000. Concurrently in Oregon, the arrest rate of juveniles increased 46.6 percent to approximately 800 in 100,000 (Feyerherm, 2011). Additionally, Oregon has the second highest juvenile drug arrest rate in the country, and twelfth highest for property crime.

According to the most recent statistics in the State of Oregon, law enforcement agencies made 34,407 annual arrests of juveniles under the age of 18 (Oregon Juvenile Department Directors Association, 2014). Although this number represents a long-term decline in juvenile referrals across the last decade, Oregon's arrest rate is still significantly higher than the national arrest rate (Feyerherm, 2011). Furthermore, despite the consistent decline in the total number of juvenile offenders, and general public preference and support for rehabilitation (Piquero & Steinberg, 2010), those who do offend often receive more severe sentences, sanctions, and interventions (Lambie & Randell, 2013); a majority of juvenile sentences result in out-of-home placements in secure facilities (Maschi et al., 2008). One of the primary goals of both the juvenile court and the juvenile justice system more broadly is to reduce the likelihood that a youth will reoffend in the future. In the state of Oregon recidivism rates fluctuate between 20 and 40 percent (Grunwald et al., 2010).

Given these rates of re-offense, there is an overwhelming need for reliable methods to accurately classify juvenile offenders and identify those with the highest risk for re-offending. This is vital to reduce costs not only to the individual but also to the community, as juvenile offenders frequently experience more interpersonal and mental health difficulties than prosocial peers and are more likely to depend on social service programs as adults (Ireland et al., 2005; Moffitt et al., 2002; Shufelt & Cocozza, 2006).

Categorization of risk is most often accomplished through the use of structured risk assessment instruments that classify offenders into low-, medium-, and high-risk categories. This not only ensures that those with the highest levels of risk are engaged in the most intensive interventions, but also provide appropriate services for those identified as low risk. This is important to note as there is evidence to

suggest engaging offenders who are at low risk for re-offense in intensive services increases their engagement in criminal behavior (Augustyn & Ward, 2015; Hirtenlehner et al., 2015; Krysik & LeCroy, 2002; Mennis & Harris, 2011). The use of incarceration and harsh or overly punitive interventions can also interrupt the course of developmentally typical “aging out” of antisocial behavior, thereby making recidivism and life-course persistent antisocial behavior more likely (Ashkar & Kenny, 2008; Dmitrieva et al., 2012; Edwards & van den Eynde, 2013; Esperanza, 2010; Moffitt, 1993; Monahan et al., 2013). Another factor to consider is the skills needed to succeed in these types of environments are not the same as those needed to be successful in the community, which further increases the likelihood of negative outcomes (Altschuler, 2008; Brown & Ireland, 2005; Chung et al., 2005; Hagedorn, 1998; Howell, 2010).

Due to the increase in the use of risk assessments in juvenile justice, it is vital that the instruments have validated psychometric properties and sufficient relation to recidivism for all youth. The use of prevention and intervention services for youth most at risk for re-offense has the potential to positively impact the individual as well as the broader community in terms of decreased crime victimization, reduced incarceration, and reduced time on parole and probation, as well as increased levels of physical and psychological safety for the individual and the community more broadly (Blomberg et al., 2011; Melde et al., 2011; Mitchell, 2011). In the State of Oregon, all county juvenile justice departments currently use the Oregon Juvenile Crime Prevention Assessment (JCP; 2006) for the assessment of risk of recidivism within 12 months (Oregon Juvenile Department Directors Association, 2006). The JCP incorporates 30 variables that are a combination of dynamic and static risk factors that can be divided into seven general categories: school, peer relationships, behavioral problems across settings, family, substance use, personal attitudes, and mental health. Protective factors are also identified to assist in determining the youth’s stage of change (Prochaska & Diclemente, 1986) and response to treatment.

The JCP is used for all juveniles regardless of age to determine risk level and identify treatment targets for intervention. However, this may not be best practice as international research has found the importance of factors within these categories varies with age (van der Put et al., 2011). Static risk factors increase in importance for older youth (age 15 and older), and dynamic risk factors are more important for younger youth (age 14 and younger). In fact, dynamic risk factors do not appear to increase the accuracy of prediction of recidivism for youth over the age of 14 (van der Put et al., 2011). This means that the ability of the JCP to identify

high-risk youth may not be equal across age groups. Therefore, it is necessary to investigate whether the accuracy of the JCP varies across age groups.

The purpose of this study was to fill a critical gap in existing literature in the United States and examine whether the accuracy of the JCP varies with age. This provided us with an opportunity to examine whether the research findings from studies conducted in the Netherlands could be replicated in the US. Additionally, because the JCP instrument was normed across a broad group of all youth involved with the juvenile justice system in Oregon, there is a lack of information about how well this assessment performs for young (age 14 and younger) and late (age 15 and older) adolescents. It is vital that juvenile justice workers only use risk assessments that have an established relation to recidivism for specific age groups. If the impact of dynamic risk factors declines with age, then it is possible the JCP is a less accurate measure for older youth. Given that risk assessment scores are used in decision making at many points within the juvenile justice process, such as determining level of sanctions or need for particular interventions, accurate risk scores are vital.

Review of the Literature

Recidivism is broadly defined as the recurrence of criminal behavior (Office of Juvenile Justice and Delinquency Prevention, 2014). Unlike the adult criminal justice system, the focus of juvenile justice has traditionally been on rehabilitation rather than punishment, regardless of the offense. Therefore, within juvenile justice, recidivism is a valuable performance measure of the efficacy of juvenile justice programs and interventions, as well as overall system performance. However, historically there have been problems with this system, and workers and judges often lacked effective programs and treatment techniques, and standardized ways to assess recidivism, so rehabilitation was often unsuccessful, and the programs appeared to lack efficacy. Modern juvenile justice programs, established by each state, attempt to balance punishment and rehabilitation, and include separate sentencing laws. In theory, juvenile justice sentences should be tailored to each specific offender and according to their specific needs and challenges, rather than a “one-size-fits-all” model more typically seen in adult justice (Cauffman et al., 2007). Additionally, the risk principle of effective correctional treatment (Andrews et al., 1990; Bonta, 1997) states that interventions and treatment must be appropriately matched to the offender’s level of risk (Dowden & Andrews, 2000). This is vital because there is evidence that engaging low-risk offenders in intensive services actually results in an increase in criminal behavior, and that grouping juvenile offenders together for extended periods of time encourages the establishment of

friendship ties and promotes the development of a criminal self-identity (Augustyn & Ward, 2015; Boduszek et al., 2016; Dishion, 2013; Dishion & Dodge, 2005; Dishion & Tipsord, 2011; Hirtenlehner et al., 2015; Krysik & LeCroy, 2002; Mulder et al., 2011). Therefore, continued examination of juvenile justice policies and procedures, and of risk assessment procedures in particular, allows for greater customization and adjustment to align the system with the broader mission of the juvenile justice system. This review of existing literature illustrates the need for further investigation into the performance of the JCP across age groups.

Static risk factors are useful for predicting recidivism, however, these factors do not represent treatment targets as they cannot be modified. This does not mean these factors should be ignored as the presence of these factors does increase risk for reoffending. However, juvenile offending is often the result of complex interactions between unchangeable factors and modifiable risk (Chung et al., 2005; Anthony et al., 2010; Mitchell, 2011; McGrath & Thompson, 2012; Thompson & Upperton, 2007).

Dynamic risk factors in a person's life can be altered and include substance use, school performance, and peer relationships. Once identified, these factors are often primary targets of treatment and rehabilitative efforts (Abrams & Snyder, 2010; Towl & Crighton, 2010; van der Put et al., 2014). There is evidence that dynamic risk factors must be targeted to alter criminal behavior and reduce recidivism risk. Further, identification of dynamic factors is essential for juvenile justice personnel to ensure proper case planning and targeted interventions. In general, dynamic risk factors are more strongly related to recidivism risk in youth under the age of 15, and static risk factors are more strongly related to recidivism risk in youth ages 15 and over (van der Put et al., 2011). Therefore, it is vital to understand how risk factors change in importance across adolescence to effectively intervene with juvenile offenders and decrease recidivism. In general, this is accomplished through the identification of dynamic risk factors, which then function as treatment targets for juvenile justice workers. However, as juveniles grow older, this approach may be less effective.

Further, the JCP is used in every juvenile justice department within the state of Oregon to assess risk for offenders, and scores on these measures are considered when evaluating appropriate sanctions, as well as decisions whether to grant probation or parole. Therefore, it is necessary to understand whether these risk assessment instruments are effective for all youth equally, or whether they are more effective for some age groups rather than others.

Lastly, there is evidence that risk assessment scores or level assignments are sometimes ignored by juvenile justice workers due to a lack of understanding of the

psychometric properties of the instruments, or perceptions the instrument does not provide reliable information (Schwalbe, 2004). Mulvey and Iselin (2008), identified this as an ongoing problem and noted that although there are valid and reliable tools widely available, juvenile justice professionals are reluctant to use them. Further, juvenile justice as a field lags far behind other professional fields in embracing the use of standardized assessments. This suggests that vital decisions regarding proper level of sanctions, interventions, and rehabilitative services are often made based on intuition and gut feelings. The addition of structured approaches combined with professional judgment reduces error and make these high-stakes decisions more equitable for diverse populations (Schwalbe, 2008). Currently there is a significant overrepresentation of ethnic minorities at every level of the juvenile justice system; therefore, it is necessary not only to examine the accuracy of risk assessment instruments, but also to compare average performance across different demographic groups to see if significant differences exist.

The Present Study

Given the identified gap in the literature, the purpose of the present study was to examine whether JCP scores were more related to recidivism among different age groups. There is evidence the importance of dynamic risk factors decreases as much as 40 percent across adolescence (van der Put et al., 2012). This has important implications as most interventions in juvenile justice aim to reduce the presence of dynamic risk factors within the individual. As children move through adolescence, they have increasing levels of autonomy and more independent decision-making, which may account for why dynamic risk factors, such as peer influence and social environment, are less important in late-adolescent youth.

Method

Participants

Participants included juvenile offenders under the adjudication of a county juvenile justice department in the Northwest United States, currently or in the past. To be eligible for inclusion in this study, the individual must have served, or be currently serving, a sentence or be on probation in the county of record. The final number of participants was 417 juvenile offenders furnished by the county juvenile justice department. The sample was 76.5% male and 23.5% female. Age of participants ranged from 8 years old to 18 years old ($M = 13.76$, $SD = 1.74$). The ethnicity of the sample was comprised of: 54% Caucasian, 37% Latino, 6% African American, 2%

Asian, 1% Native Hawaiian/Pacific Islander, and 0.2% Native American/Alaska Native. JCP Total Scores of the participants ranged from 0 to 8 ($M = 2.77$, $SD = 1.86$), JCP Dynamic Scores ranged from 1 to 20 ($M = 7.89$, $SD = 4.73$), and JCP Static Scores ranged from 0 to 8 ($M = 2.77$, $SD = 1.86$). A total of four cases had missing data and were excluded from the study analyses.

Measures

The JCP is a 30-item questionnaire that includes demographic information, dynamic and static risk factors, and protective factors. The Juvenile Justice Information System (JJIS) automatically computes the total JCP score, total risk factors, total protective factors, mental health factors, as well as risk level (Oregon Juvenile Department Directors Association, 2006), and these data were used for statistical analysis. The JCP provides a single score between 0 and 39. Scores near 0 represent a low level of risk and scores near 39 represent a high level of risk that the individual will recidivate within 12 months. Additionally, the JCP provides risk levels for ranges of scores: low risk for scores 0 to 5, medium risk for scores 6 to 13, and high risk for scores 14 and higher.

The JCP is further divided into static and dynamic subscales. Static scores are calculated by summing the total number of "Yes" answers across the static variables, which provides a single score between 0 and 8. Scores near 0 reflect the presence of few static risk variables and scores near 8 reflect the presence of many static risk variables. Scores for the dynamic subscale are calculated by summing the total number of "Yes" answers across the dynamic variables of the measure, which provides a single score between 0 and 22. Scores near 0 reflect the presence of few dynamic risk variables and scores near 22 reflect the presence of numerous dynamic risk variables. The scores for each of these subscales were used for statistical analysis for research questions two and three.

Procedure

We obtained data for this study from a county juvenile justice department: JCP total scores and subscale scores, recidivism information, and demographic data. Data on recidivism, as measured by the total JCP score, as well as the calculated JCP static subscale score and JCP dynamic subscale score were obtained. All scores are automatically calculated by JJIS when the risk assessments are initially conducted following the individual's first referral. Additional data obtained included gender, current age, age at first referral, ethnicity, and number of subsequent referrals following the initial risk assessment.

Results

A series of regressions were used to examine the research questions for this study. First, we examined whether the JCP Total Score had a strong relation to recidivism in older youth than younger youth. We did not find support for this and the interaction was not significant. Table 1 shows regression coefficients, odds ratios, and p values.

Table 1. Regression Analysis of Recidivism as a Function of Age and JCP Total Risk Assessment Scores (N = 413)

Variables	<i>B</i>	Odds Ratio	<i>p value</i>
Constant	-0.62	--	--
Age	-0.33	0.72	0.24
JCP Total Score	0.02	1.02	0.84
Age x JCP Total Score	0.01	1.01	0.31

Next, we examined whether the JCP Static Scale Score had a stronger relation to recidivism (R) in older youth than in younger youth. We did not find support for this because the interaction was not significant. In other words, we did not find a significant difference in recidivism between younger and older youth. Table 2 shows regression coefficients, odds ratios, and p values for each of the equation variables.

Table 2. Regression Analysis of Recidivism as a Function of Age and JCP Subscale Risk Assessment Scores (N = 413)

Variables	<i>B</i>	Odds Ratio	<i>p value</i>
Constant	-0.73	--	--
Age	-0.35	0.71	0.23
JCP Dynamic Scale Score	-0.27	0.76	0.23
JCP Static Scale Score	0.92	2.51	0.12
Age x JCP Dynamic Score	0.30	1.03	0.05
Age x JCP Static Score	-0.60	0.94	0.17
Age x JCP D x JCP S	-0.001	1.00	0.59

We then examined whether the JCP Dynamic Scale Score had a stronger relation to recidivism (R) in younger youth than in older youth. The interaction term was significant. Thus, there was a difference in recidivism between younger and older youth. Table 2 shows regression coefficients, odds ratios, and p values for each of the equation variables. The results indicated a significant disordinal interaction effect between age and the JCP Dynamic Scale score. As a result, simple slope analysis was used to visualize the interaction (Figure 1). Visual examination of the data revealed the relation of JCP Dynamic Scale Scores to recidivism was different between the younger and older groups. The slopes of the two lines indicated the JCP Dynamic Scale Score had a stronger relation to recidivism among juvenile offenders ages 15 and over, than for juvenile offenders age 14 and younger.

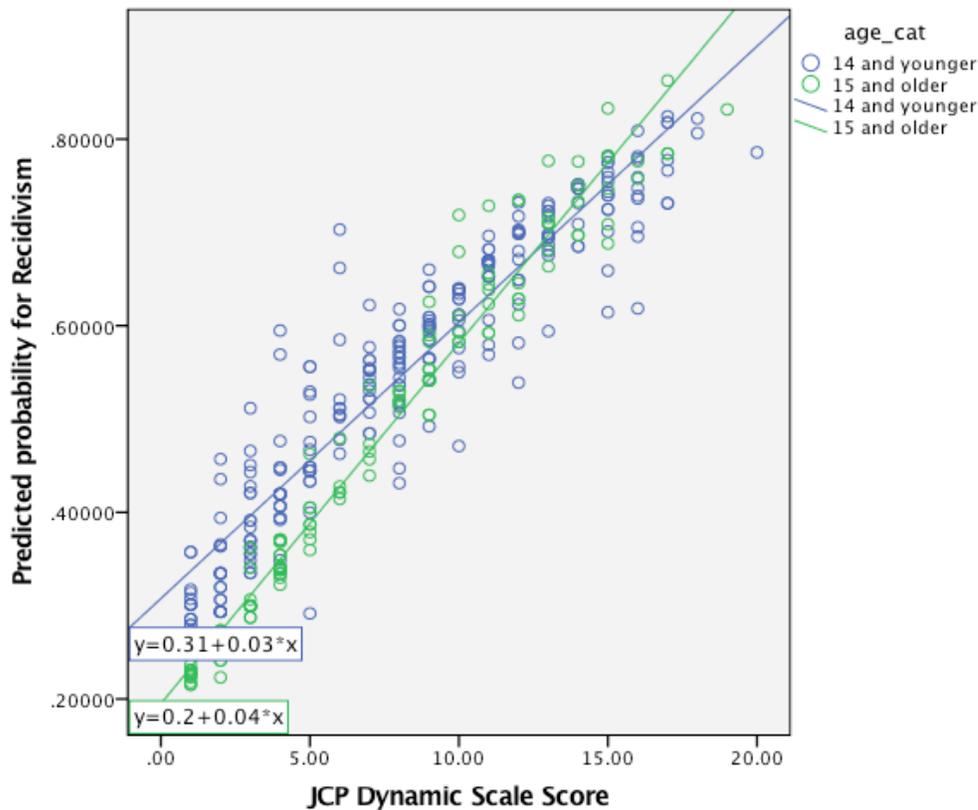


Figure 1. Plot depicting the interaction between predicted probabilities and age

Discussion

The JCP is a measure used within the state of Oregon in the United States to assess risk among juvenile offenders at the community corrections levels. We had two research questions. First, does the static risk factors subscale score of the JCP have

a stronger relation to recidivism than the dynamic factors subscale score in youth ages 15 and older? We did not find support for this because the interaction was not significant. Further, finding that JCP Dynamic Risk Scores are correlated with recidivism for older youth in our sample, directly contradicts this possibility. Dutch research suggests dynamic risk factors decrease in importance as youth age, and concurrently static risk factors increase in importance. Therefore, if the findings from the Netherlands held true for our sample, we would have found that the static risk factors subscale score would have had a stronger relation to recidivism among older youth than the dynamic factors subscale score. This was not the case.

Previous evidence suggests the importance of dynamic risk factors in Dutch samples decreases across adolescence, and this is thought to be due to increasing levels of autonomy and independent decision making that tends to increase with age. However, it is possible that the older youth in the current sample were not engaging in independent decision-making typical of late adolescence and that dynamic variables such as peer influence or substance use, the two domains most strongly related to recidivism of all dynamic variables (McGrath & Thompson, 2012), played an important role in decisions to engage in criminal behaviors. Future research aimed at examination of the various risk domains present in the sample could help to clarify this finding.

Second, does the dynamic risk factors subscale score of the JCP have a stronger relation to recidivism than the static risk factors subscale score in youth under the age of 15? The interaction between the JCP Dynamic Scale score and age was significant. Simple slope analysis revealed that the JCP Dynamic Scale scores have a positive correlation with recidivism in younger youth. However, it also revealed that these scores have a stronger relation with youth who are 15 years of age or older. This is inconsistent with Dutch research findings suggesting the importance of dynamic risk factors decreases as much as 40 percent across adolescence in their samples (van der Put et al., 2012).

This finding supports the targeting of dynamic risk factors by juvenile justice workers for intervention, case planning, and rehabilitation efforts. The presence of these factors was strongly correlated to recidivism among all juvenile offenders in the current sample. Therefore, reduction in the number of dynamic risk variables should result in positive change and reduce the risk that a youth will reoffend in the future. Our research findings are encouraging for juvenile justice workers and lend support for current state and federal practices in the US.

Moreover, it speaks to the presence of continued plasticity and malleability among late adolescents, which is typically assumed to decline. These qualities are necessary for successful offender rehabilitation and re-entrance into the

community as productive members of society. Further, the entire juvenile justice system in this country is built on the foundational assumption that youth can be rehabilitated through the application of justice. This finding serves as an affirmation of this assumption and provides empirical support for continued efforts to help juvenile offenders, regardless of age, rebuild their lives and make meaningful and sustainable change.

The current study has policy implications for juvenile justice organizations and informs best practices for the administration of sanctions and rehabilitation efforts. According to the findings in this study, corrections workers should place emphasis on dynamic variables for youth in their custody, particularly first-time offenders in their late adolescence. For the county of record, prioritization and interpretation of the JCP Dynamic Scale score, alongside other recidivism measures can help increase effective treatment planning and identification of appropriate interventions, as well as the administration of sanctions. This is because use of this scale will likely result in increased accuracy of recidivism risk categorization. This is vital because some study findings demonstrate putting juvenile offenders together for long periods, such as in residential homes or jail environments, is not only ineffective in mitigating risk, it actually increases risk for continued criminal behavior and juvenile justice system involvement (Axford & Morpeth, 2012; Henggler & Schoenwald, 2011; Lambie & Randell, 2013). With more accurate categorization of risk, the number of youth subjected to these types of sanctions could be reduced and treatment efficacy improved. This subsequently reduces the risk of continued justice system involvement for a large number of offenders, while still protecting members of the community.

This research aimed to clarify the influence of dynamic and static risk factors on older and younger youth, and whether Dutch research findings could be replicated in a sample of American youth involved with the justice system. To this end, we examined the performance and accuracy of the JCP risk assessment for young and late adolescents. Limitations of this research include the use of a sample from a single state. However, ultimately, this research has implications for better understanding the factors that contribute to recidivism and how these vary across adolescence. This understanding is crucial not only on an individual level, but can help drive policy decisions in regards to how to best rehabilitate justice-involved young offenders.

Future Directions

Future research should include an examination of types of offenses and whether these vary by age. Additionally, investigation into how strongly specific domains of risk factors, such as antisocial behavior or peer influences, are related to recidivism would also increase our understanding of factors influencing an individual's recidivism risk. A more detailed examination of the JCP especially in regards to different ethnic groups is also crucial.

One important factor to consider is, by basing decisions on static factors, the justice system may be disproportionately impacting offenders who come from minority groups. This is because minority communities, particularly in urban areas, have high levels of poverty and unemployment, which make them targets for increased policing efforts (Hartney & Vuong, 2009). Increased scrutiny by police combined with institutional and cultural biases increases the odds that people of color will have increased contact with police, thereby increasing the presence and severity of static risk factors.

However, this does not necessarily lead to recidivism and continued criminal behavior; Hartney and Vuong (2009) found that in general, Latino youth were less likely to recidivate than non-Latino offenders, despite the fact that this population tends to have higher recidivism risk scores. Therefore, it is possible that these risk assessments are not culturally appropriate, and their continued use may only serve to further exacerbate existing disparities within the juvenile justice system for these populations (Baird et al., 2013). Furthermore, in many cases these static or historical factors are not directly under the offender's control and their use does not promote fair and equal administration of justice for all offenders.

Risk assessments are tools used to predict future behavior and, like all assessments, are subject to error. Therefore, false positives and false negatives are a legitimate concern. This can occur when an offender is assessed as high risk but does not reoffend or when an offender is judged to be low risk but reoffends at some time in the future. Further, there are no absolute methods for determining what future behavioral outcomes might occur. Given these assessments are used in high-stakes decisions such as whether to continue incarceration or release an offender into the community, minimization of error is critical. Further, due to the overrepresentation of people of color within the justice system, it is necessary to ensure that there are no conflicts of interest between the rights of the individual and the aims of the justice system and the broader community.

This is especially salient given the current political climate and the pressure to increase incarceration rates of people of color, particularly Latino youth. Remarks

from people in the highest offices of government portraying Latinos in a negative light surely increases the chance of increased contact with police and immigration officials. This is further supported by new legislation such as stop and frisk policies, the ban on sanctuary cities and enforced cooperation between local law enforcement and government immigration enforcement, which also unfairly target minority youth. Therefore, continued research examining the accuracy and performance of these measures is crucial.

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