Examining the Situational- and Suspect-Level Predictors of Police Use of Force Among a Juvenile Arrestee Population

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Abstract

Research examining police use of force is well established across many factors, including officer-, suspect-, encounter-, organizational-, and environmental-level characteristics. Although such research has had a profound effect on our understanding police use of force, it has also overwhelmingly relied on adult populations. With the exception of a few qualitative studies, research examining police use of force involving youths is nearly nonexistent. To fill this critical research gap, the current study examines a host of situational- and suspect-level predictors of police use of force among a juvenile arrestee population. In order to investigate these predictors, data from the Arizona Arrestee Reporting Information Network (AARIN) are analyzed using multivariate analysis. The findings indicate that resistance, non-compliant demeanor, and disrespect are the three most robust predictors of police use of force among juvenile arrestees. These findings are

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contextualized using prior research on adult populations and have implications for best policing practices.

Introduction

Police fulfill a complex and amorphous role in society (Manning, 1978). They are expected to enforce the law, prevent crime, mediate disputes, provide safety, and maintain positive relations with the community. As a way to fulfill these roles, achieve objectives, and protect themselves and others, police are legally prescribed the authority to use force, a phenomenon that occurs in approximately 1.4 percent of all police-citizen encounters (Eith & Durose, 2011). These encounters, even when guided by judicious forethought, potentially have far-reaching consequences, such as an altercation that ends in serious injury or death to either the suspect or officer. Such incidents regularly headline media outlets across the United States. The deaths of Eric Garner in New York City (NY), Jamar Clark in Minneapolis (MN), and Freddie Gray in Baltimore (MD) epitomize the extreme consequences of police use of force. As a result of incidents like these, it has become even more imperative for scholars to examine factors that commonly influence the use of force by the police. Research examining the effect of suspect (e.g., race, age, mental health), officer (e.g., gender, age, rank), situation (e.g., demeanor, resistance, arrest), organization (e.g., policy), and neighborhood (e.g., high crime area, racial concentration, socio-economic status) characteristics on police use of force all illustrate the growing salience of such inquiry (Lee, Vaughn, & Lim, 2014; Paoline & Terrill, 2007; Sun & Payne, 2004; Terrill & Mastrofski, 2002; Terrill & Reisig, 2003; White; 2001).

Despite being well-studied, research on police use of force has overwhelmingly relied on adult samples, leaving police use of force encounters with youths relatively absent in the literature. Reconciling this research gap is important for many reasons. First, police contact with youth is a frequent occurrence (Gau & Brunson, 2010; Pepper & Silestri, 2016; Romain & Hassell, 2014). Second, police-youth encounters are "often characterized as challenging or adversarial" (Pepper & Silestri, 2016, p. 2; see also McAra & McVie, 2005; Norman, 2009). Third, police are often the first point of contact with the criminal justice system for youths. As a result, police officers play a significant role in shaping youths' perceptions of the justice system. Hence, encounters involving police use of force have the potential to have a lasting effect on youths' perceptions and attitudes toward the police, which persist over time into adulthood and influence their willingness to cooperate with law enforcement (Dirikx & Bulck, 2014; Piquero, Fagan, Mulvey, Steinberg, & Odgers, 2005). Fourth, youth are transitioning through a developmental stage in which they are physiologically and cognitively immature, rendering them less able to anticipate consequences, discern right from wrong, and self-regulate their

emotionally charged behaviors in comparison to their adult counterparts (Bonnie, Johnson, Chemers, & Shuck, 2013; Steinberg, 2009). Such research demonstrates that "adolescents clearly differ from adults in crucial ways that suggest the need for a different response from the justice system" (Bonnie et al., 2013, p. 91). Thus, research can help inform best practices for handling youth encounters that have the potential to escalate into a situation involving police use of force.

With the exception of one qualitative study (Fratello, Rengifo, & Trone, 2013), research examining police use of force involving youths is nearly nonexistent in the literature. To fill this critical research gap, the current exploratory study examines a host of situational- and suspect-level predictors of police use of force among a juvenile arrestee population. In order to investigate these predictors, data from the Arizona Arrestee Reporting Information Network (AARIN) are analyzed using multivariate analysis and contextualized using prior research on adult populations. The findings are contextualized using prior research on adult populations and have implications for best policing practices.

Youth and Police Contact

All youth transitioning from childhood to adulthood experience the developmental phase of adolescence. Adolescence is a stage in which youths seek to form their identities and develop adult skills (Bonnie et al., 2013). As part of this maturation process, adolescents test limits and experiment with risky behaviors, such as alcohol and drug use, unsafe sex, and reckless driving (Spear, 2010). Consequently, youths find themselves in precarious situations that place them in contact with the police.

Although it is difficult to gauge the true extent of police-youth contact, data from the Police-Public Contact Survey (PPCS) and Uniform Crime Report (UCR) help to illuminate the frequency of contact with the police and the kinds of crimes that most commonly precipitate police-youth contact. According to the most recent PPCS report, youth aged 16-to-19 years old comprised 20.8%, 20.7%, and 13.2% of all police contacts in 2002, 2005, and 2008, respectively (Eith & Durose, 2011). Furthermore, the UCR reported that individuals under the age of 18 accounted for 8.0% (or 681,701) of all arrests, with those aged 15-17 comprising the majority of that percentage. The most common types of crimes individuals under the age of 18 were arrested for included property crime (147,350), larceny-theft (107,287), simple assault (102,694), drug abuse violations (78,330), disorderly conduct (52,315), and violent crime (41,335). Undoubtedly, such crimes set the stage for police-youth

encounters, which may be peacefully resolved or escalate into a situation where the officer deems force is necessary.

Predictors of Police use of Force

The frequency and serious consequences associated with police use of force has served as the impetus for researchers and practitioners to identify the various factors associated with force. By better understanding the phenomenon, research may reduce the number of police use of force incidents, thereby increasing the safety of officers and citizens. Researchers interested in police use of force have examined a number of factors related to force, including suspect, officer, situational, organizational, and ecological characteristics. Although prior research has uncovered many factors related to police use of force, most of the variance is explained by situational-level variables.

Research examining the transactional nature of police encounters has found that police use of force is often related to suspect resistance, especially if the encounter involves a weapon (McCluskey & Terrill, 2005; McCluskey et al., 2005; Mulvey & White, 2014; Paoline & Terrill, 2004, 2007; Schuck, 2004; Terrill et al., 2003; Terrill, Leinfelt, & Kwak, 2008). In cases involving suspect resistance, Alpert and Dunham (1999) found that police officers employ force in 97 percent of the cases. Moreover, as the level of suspect resistance becomes more severe, police officers use higher levels of force to protect themselves and gain compliance (Terrill & Mastrofski, 2002). When a suspect is carrying a weapon, for example, research commonly finds that police officers employ higher levels of force, which may include lethal or less-than-lethal forms of force (Binder & Fridell, 1984; Binder & Scharf; 1982; Fyfe 1980, 1982, 2010; McCluskey & Terrill, 2005; McCluskey, Terrill, & Paoline, 2005; Paoline & Terrill, 2007; Sun & Payne, 2004; Terrill & Mastrofski, 2002). Given that police officers are instructed to use force along a continuum, the nexus between suspect resistance and police use of force is an intuitive outcome.

The manner in which a suspect conducts him or herself during a police encounter has also been vigorously researched but with less conclusive results. On one hand, research has found that police are more likely to use force in encounters involving disrespectful citizens in comparison to their respectful counterparts (Engel, Sobol, & Worden, 2000; Garner, Maxwell, & Heraux, 2002; Kaminski, Digiovanni, & Downs, 2004; Sun & Payne, 2004). These are the individuals that Van Maanen (2006) described as the "asshole": Individuals who are disrespectful, confrontational, and display a "flagrant disregard for the sentiments of the police," all characteristics that pose an affront to a police officer's authority (p. 316). Consequently, "street justice" may manifest itself in a higher likelihood of police use of force (Klocker, 1986). On the other hand, several studies have failed to establish

a significant association between suspect demeanor and police use of force (McCluskey, Terrill, & Paoline, 2005; McCluskey & Terrill, 2005; Paoline & Terrill, 2004, 2007; Phillips & Smith, 2000; Terrill, Paoline, & Manning, 2003). These inconsistent findings are often attributed to the disparate ways in which demeanor is conceptualized and operationalized in research (Engel, Klahm, & Tillyer, 2010; Klinger, 1994, 1996).

Although not as robust as situational characteristics, suspect-level factors have been a focal concern among researchers. The race/ethnicity, sex, age, and intoxication level of suspects have all been analyzed in prior research with varying degrees of significance (Klahm, & Tillyer, 2010). Whereas early research typically found that police officers were more likely to use deadly force against Blacks than Whites (Goldkamp, 1976; Reiss, 1980; Sparger & Glacopassi, 1992; Walker, Spohn, & Delone, 2012), more recent studies examining the relationship between less-lethal forms of force and race/ethnicity report variation. For example, Terrill and Mastrofski (2002) found that police officers were more likely to use verbal commands and impact weapons on non-White citizens than Whites. Other research, however, suggests the significance of race and ethnicity on police use of force dissipates after controlling for key situational, organizational, and ecological factors (Kaminski, Digiovanni, & Downs, 2004; Mulvey & White, 2014; Paoline & Terrill, 2004, 2007; Sun & Payne, 2004; Terrill et al., 2008; Terrill & Reisig, 2003).

Sex-based disparities in police use of force research is another area of inquiry with mixed results. Some research suggests that police officers are more likely to use force against males than females (Garner et al., 2002; McCluskey et al., 2005; McCluskey & Terrill, 2005; Phillips & Smith, 2000; Sun & Payne, 2004; Terrill & Reisig, 2003; Terrill et al., 2003). In a peripheral finding, Terrill and Mastrofski (2002) found that police were more likely to use physical restraint (19 percent versus 13 percent), verbal force (44 percent versus 40 percent), and impact force (.5 percent versus .3 percent) on males than females. Additionally, Kaminski and colleagues (2004) found that police tend to use higher levels of force against males than females. It should be noted, however, that Kaminski and colleagues (2004) found no difference between males and females in the likelihood that police employ force in general. In fact, several studies do not document any kind of significant association between police use of force and sex (Engel et al., 2000; Lawton, 2007; Morabito & Doerner, 1997; Mulvey & White, 2014).

Finally, research examining the link between police use of force and suspect's use of alcohol/drugs is inconsistent in the literature (Klahm and Tillyer, 2010). A handful of studies have found that suspects under the influence of alcohol and/or

drugs were more likely to have police use of force used against them during the encounter in comparison to their sober counterparts (McCluskey & Terrill, 2005; McCluskey et al., 2005; Paoline & Terrill, 2007; Terrill et al., 2008). Other studies, conversely, report a null association between alcohol/drug use and police use of force (Morabito & Doerner, 1997; Phillips & Smith, 2000; Schuck, 2004). Such inconsistencies in the research leave little room for generalities pertaining to police use of force and suspect's use of alcohol/drugs.

Current Focus

Research examining police use of force is well established across many factors, including officer-, suspect-, encounter-, organizational-, and environmental-level characteristics. Although such research has had a profound effect on our understanding of police use of force, it has also overwhelmingly relied on adult populations. Given the frequency and adversarial nature of the encounter in combination with the youths' developmental phase, it is important to supplement police use of force research involving adult populations so that a more complete body of research exists. To fill this critical research gap, the current exploratory study examines a host of situational- and suspect-level predictors of police use of force among a juvenile arrestee population.

Data and Methods

The current study examines data from interviews with 324 juvenile arrestees in Maricopa County, Arizona, from 2011 through 2013. Data were collected through the Arizona Arrestee Reporting Information Network (AARIN), a research project funded by Maricopa County that monitors drug use trends, treatment needs, and other behaviors of recently booked arrestees. The AARIN project was established in 2007 and followed the methodology of the National Institute of Justice's Arrestee Drug Abuse Program.

The AARIN project used a systematic sampling protocol in which data were collected on a quarterly basis from both of the County's juvenile detention facilities, the South East Facility and Durango Facility. During the data collection periods, interviews were conducted with adult and juvenile arrestees who were randomly selected based on booking time using a stock (i.e., arrested while interviewers were not present in the facility) and flow (i.e., arrested during data collection hours) selection process. Each selected participant was asked to complete the core AARIN instrument. The core instrument collected self-reported data on background and

demographic characteristics as well as a wide range of individual-level attributes. Additionally, participants were asked to respond to a survey addendum that focused on police perceptions. Data from both of these surveys were used for this study. At the end of the interview, each respondent was asked to provide a urine sample, which was analyzed for alcohol and four different drugs including marijuana, cocaine, opiates, and methamphetamine.

Dependent Variable: Use of Force

Research illustrates that police officers can and do employ both non-physical (e.g., verbal threats) and physical forms of force (Klinger, 1995; McLaughlin, 1992; Terrill & Mastrofski, 2002; Terrill & Reisig, 2003; Terrill, 2001). Several scholars have stressed the importance of adopting a broader definition of force because of the coercive nature of police commands and threats (Alpert & Dunham, 1999; Garner et al., 1995; Klinger, 1995). Alpert and Dunham (1999), for instance, classify verbal force in the lowest force category. Given this context, we define police force "as acts that threaten or inflict physical harm on suspects" (Terrill & Reisig, 2003, p. 299).

The dependent variable of interest was use of force (i.e., whether the police officer used force against the juvenile arrestee). Use of force was measured by capturing juvenile arrestee's self-reported responses to the following seven questions regarding the most recent contact they had with the police: "Did the police officer push or grab you?" "Did the police officer hit or kick you?" "Did the police officer hit or threaten to hit you with a baton, flashlight or other object?" "Did the officer use or threaten to use chemical or pepper spray?" "Did the officer use or threaten to use a TASER?" "Did the officer use or threaten to use a gun?" "Did the officer use or threaten to use other force?" These response categories were collapsed into a dichotomous (or binary) variable with 0 = no force and 1 = force. Although previous research is cautious about using dichotomous outcomes for use of force, it is still acceptable in the literature (Ferrandino, 2015, Levchak, 2017).

Situational-Level Predictors

A number of situational- and suspect-level variables were examined in relation to police use of force. The situational-level variables included disrespect, non-compliant demeanor, and resistance, which were all dichotomous variables (0= No, 1 = Yes). Disrespect was captured through juveniles' self-reported answers to the following question: "[Did you] Curse at, insult or call the officer an offensive name?" Similarly non-compliant demeanor was measured through the following question: "Did you argue with or disobey the officer for any reason?" Resistance was constructed using the following two items: "[Did you] Resist being handcuffed or

arrested?" "[Did you] Resist being searched, or having your vehicle searched?" If the respondent answered yes to either one of these questions, they were coded as showing resistance during the arrest.

Suspect-Level Predictors

At the suspect-level, a number of characteristics were examined that may influence the likelihood of the officer using force during the interaction. These suspect-level characteristics include race and ethnicity, sex, age, employment status, school enrollment, offense type, and whether the suspect was under the influence of drugs and/or alcohol.

Race and ethnicity was measured using self-report data and include four different groups: White, Hispanic, Black, and "Other." The "Other" category includes those respondents who self-reported being American Indian, Asian, Hawaiian or Pacific Islander, mixed, or an "other" racial or ethnic group. These categories were collapsed into one variable (i.e., other) because there were too few of these youths for meaningful analysis. For comparison purposes, these four groups were recoded into dummy variables, with White being the reference category. Similarly, sex and age were measured using self-report data, with sex being a dichotomous variable (0 = female, 1 = male) and age being a continuous variable.

In addition, employment, school attendance, alcohol/drug use, and offense type were controlled for in the modeling. Youths that reported working at least part-time were coded as having employment (0= No, 1 = Yes). School attendance was measured by asking juveniles, "Do you still attend school?" Response categories were coded as 0 = No and 1 = Yes. The analysis also controlled for substance use, which included alcohol and drug use. Alcohol/drug use was measured through the results of a urinalysis (0 = Negative, 1 = Positive). Lastly, using official data, the analysis assessed whether the offense type was related to use of force, which included misdemeanor and felony arrest, with status offense as the reference category.

Findings

The descriptive statistics and results are presented in tables 1 and 2. Table 1 presents the overall sample characteristics. As reported in Table 1, the majority of participants were male (81.1 percent) and the mean age was 15.59 years old, with a range from 9 to 17 years old. In terms of racial and ethnic background, the majority of participants were Hispanic (47.8 percent), followed by White (22.4 percent), "Other" (18 percent), and Black (11.8 percent). More than half of the participants

reported they were still attending school (57.8 percent) and close to 15 percent reported being employed. Respondents were most likely to be arrested on a felony charge (38 percent), compared to a misdemeanor (28.8 percent) or status offense (33.2 percent). Over half of respondents tested positive for drug use (54.5 percent) but only 4.2 percent tested positive for alcohol use. Just under a third of respondents (28.4 percent) reported having disrespectful demeanor during their encounter with the police and about a quarter (26.5 percent) resisted arrest. Additionally, approximately 34.0 percent indicated non-compliant demeanor during the police encounter. Finally, about half of respondents reported that the police used some type of force during the arrest.

The results from the logistic regression are presented in Table 2. The analysis was conducted using a step-wise approach. First, the relationship between suspect-level characteristics and police use of force was assessed. Overall, few of the suspect-level variables were significant. The findings presented in model 1 show that in comparison to those arrested on a status offense, those arrested on a misdemeanor offense had lower odds of reporting use of force by police (Exp[B]= .375; Β = -.981). There were also significant differences between those that tested positive for drug use. Specifically, compared to those that tested negative for drug use, those that tested positive had greater odds of reporting use of force (Exp[B]= 1.711; Β = .537). Individual level characteristics such as age, race/ethnicity, employment, school attendance, and alcohol use were not significantly related to police use of force. Sex, however, was significantly related to police use of force. The odds of females reporting use of force by the police was approximately 48% lower than their male counterparts (Exp[B] = 0.524; Β = -0.647).

The second step of the analysis introduced the situational-level predictors into the model. These findings are presented in model 2. In this model, suspect-level characteristics were no longer significantly related to use of force. However, several of the situational-level characteristics were significantly and positively related to use of force. Respondents that reported non-compliant demeanor had higher odds of reporting police use of force during the interaction (Exp[B]= 5.210; Β = 1.651). Specifically, the odds of reporting police use of force were 421% higher for individuals that reported non-compliant demeanor in comparison to those that reported being compliant. Similarly, for respondents that reported being disrespectful, they had odds of reporting police use of force that were 410% higher than those that were not disrespectful (Exp[B]= 5.098; Β = 1.629). Finally, displaying resistance during the arrest had higher odds of reporting police use of force (Exp[B]= 28.687; Β = 3.356), which was the strongest predictor of police use of force.

The odds of reporting police use of force were 2,768% higher for individuals that reported resistance in comparison to those that did not resist. Overall, these results suggest that situational-level characteristics exerted a stronger effect on the likelihood of use of force, which is explored in more detail in the discussion.

Table 1. Participant demographic (*N* = 324)

	n	%
Dependent Variable		
Use of force		
No Force	161	49.7
Force	163	50.3
Independent Variables		
Disrespect	92	28.4
Non-compliant Demeanor	110	34.0
Resistance	86	26.5
Sex		
Female	61	18.9
Male	261	81.1
Mean Age (SD)	322	15.59 (1.396)
Race/Ethnicity		
White	72	22.4
Black	38	11.8
Hispanic	154	47.8
Other	58	18.0
Employment		
No job	275	85.4
Full or part time job	47	14.6
Still attends school		
No	136	42.2
Yes	186	57.8
Arrest charge		
Status offense	105	33.2
Misdemeanor offense	91	28.8
Felony offense	120	38.0
Positive alcohol urinalysis	13	4.2
Positive drug urinalysis	170	54.5

Table 2. Results from the logistic regression models predicting use of force

	Model 1: Suspect-Level Characteristics				Model 2: Suspect-Level and Situational-Level Characteristics		
	B	*S.E.*	*Exp(B)*		*B*	*S.E.*	*Exp(B)*
Male (reference)							
Female	-0.647*	.320	0.524		-0.841	.455	0.431
Age	0.024	.093	1.025		-0.080	.115	0.923
White (reference)							
Black	0.293	.448	1.341		0.397	.518	1.263
Hispanic	-0.175	.308	0.839		-0.053	.396	0.948
Other ethnicity	0.004	.389	1.003		-0.733	.558	0.480
Full or part time job	-0.183	.346	0.833		-0.235	.463	0.791
Still attends school	-0.378	.257	0.685		-0.377	.340	0.686
Status offense (reference)							
Felony offense	-0.430	.296	0.650		0.297	.394	1.346
Misdemeanor	-0.981**	.318	0.375		-0.765	.452	0.465
Alcohol UA	0.003	.657	1.003		0.309	.868	1.362
Drug UA	0.537*	.245	1.711		0.193	.322	1.212
Disrespectful	---	---	---		1.629*	.653	5.098
Non-Compliant Demeanor	---	---	---		1.651**	.489	5.210
Resistance	---	---	---		3.356**	1.175	28.687
Pseudo R²		0.061				0.395	

$*$ $p< .05$; $**$ $p< .01$; $***$ $p< .001$

Discussion

Deploying force is a difficult and complex decision that police officers must make in the field. Although police use of force is a rare event (Eith & Durose, 2011), police may find themselves in precarious situations where they must make a decision about the necessary action needed to control the situation and ensure public safety (Fyfe, 2010). As research highlights, there are many factors that may influence

police use of force including officer-, suspect-, encounter-, organizational-, and environmental-level characteristics. Such research has had a profound effect on our understanding police use of force. This understanding, however, has also overwhelmingly relied on adult populations. Moving beyond police use of force involving adult populations is a crucial step for research as the decision-making capacity of youths and their motivations to commit crime are often different from their adult counterparts (Bonnie et al., 2013). To rectify the absence of research on police use of force involving youths, this study serves as a starting point for such discourse. Based on the findings from this research, there are several implications that must be contextualized and further explored by future research.

First, the descriptive statistics indicate that approximately 50.3 percent of juvenile arrestees had some level of force used against them during their encounter with the police. Such a percentage is considerably larger than national estimates of 16-to-19 year old juvenile arrestees' encounters with the police. Research examining data from the Police-Public Contact Survey (PPCS) in combination with the Survey of Inmates in Local Jails (SILJ) estimates that approximately 31.2 to 33.1 percent of all arrestees 16-to-19 years old experience the threat or use of force by police (Hickman, Piquero, & Garner, 2008). Using this estimate, police use of force or threat of force against juvenile arrestees is 1.52 to 1.61 times higher than data from the PPCS and SILJ. These discrepancies may be the artifact of (1) a juvenile arrestee population that embellishes the true extent of police use of force, (2) a "heavy-handed" police force in the current study, (3) selection bias,[4] or (4) an incomplete body of research on police use of force that is limited to adult samples. Future research should continue gathering data on juvenile arrestees or youth populations to provide a more accurate assessment of police use of force with youth in the United States.

Second, the most robust predictors of police use of force for juvenile arrestees were non-compliant demeanor, disrespect, and resistance. These findings parallel results from a recent meta-analysis that found encounter-level variables to be the most influential correlates of police use of force (Bolger, 2015). In fact, Bolger (2015) found that suspect resistance had one of the largest mean effect sizes in relation to police use of force. The findings from this study reinforce the centrality of situational-level variables during the transactional interaction between police and

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[4] Since the data does not include all of the encounters that police had with youth but rather only those that were detained and arrested, there is the potential that the data suffers from selection bias. Future research should mitigate this shortcoming through a more inclusive sampling methodology.

the public (McCluskey & Terrill, 2005; McCluskey et al., 2005; Mulvey & White, 2014; Paoline & Terrill, 2004, 2007; Schuck, 2004; Terrill et al., 2003; Terrill, Leinfelt, & Kwak, 2008). Regardless of age, police officers will employ force to control the encounter in order to protect themselves and the public.

Although the findings from this study may seem predictable given the larger body of literature on police use of force correlates, the focus on a juvenile arrestee sample complements earlier empirical studies with adult populations. Furthermore, these findings also extend our understanding of age-graded predictors of police use of force and corollary efforts to improve law enforcement practices with youth. For example, the robustness of resistance and non-compliant demeanor may be reflective of the juvenile arrestees' developmental stage. Research continues to reveal and emphasize how adolescent decision making and actions are influenced by psychosocial factors such as impulsivity, reward seeking, and the inability to assess future consequences, all of which predispose adolescents to risk-taking behaviors (Steinberg, 2010; Scott & Steinberg, 2003). Some of these risk-taking behaviors may manifest in the form of rebellion or indignity toward law enforcement, making youth the quintessential "assholes" in police-citizen encounters (Van Maanen, 2006). The resulting outcome may be police use of force or heightened threat of force.

One potential solution to reduce the likelihood that police officers employ force against youths is through academy or in-service training. To date, very few police academies provide training in effective communication and interaction with youth. According to Strategies for Youth, less than one percent of contacted academies train their officers in interactions with youth (Bostic, Thurau, Potter, & Brury, 2014). Through training and a better understanding of the youths' developmental stage, it may help guide the transactional nature of use-of-force encounters whereby police officers utilize de-escalation techniques that help youth calm down and realize the potential consequences of their decisions and actions. In fact, research has demonstrated the effectiveness of police-youth training courses in the field. Bostic and colleagues (2014) found that through training officers about adolescence (i.e., neuroscience, developmental differences, mental health differences, trauma exposure, demographic and cultural factors influencing youth behavior, and juvenile law for law enforcement) and providing them with a platform to role play and apply their newly learned strategies, there was a decrease from 646 arrests in 1999 to 74 in 2009. Such training is not only endorsed by the International Association of Chiefs of Police (2014), but it may also enhance police-youth

encounters such that the transactional nature between the two parties never escalates into a situation where force is necessary.

Training officers on how to handle adolescents in police-youth encounters may also have an unintended effect of preventing youth from matriculating through the criminal justice system and buttressing police legitimacy. Through appropriate training, police officers learn that adolescents need more time to process information, which may translate into the officer calmly repeating instructions and clearly explaining the potential consequences in absence of the lawful alternatives. Moreover, the training teaches officers to "approach the adolescent in an emotionally neutral manner and to focus on their own behaviors, language, and timing and those of youth" (Bostic et al., 2014, p. 127). The desired outcome of police-youth training is a situation where neither force is employed nor an adolescent is arrested and processed through the criminal justice system, because it may have "the unwanted effect of increasing the risk of reoffending and/or otherwise impeding successful maturation" (Bonnie et al., 2013, p. 120). Considering that adolescent criminal offending is typically outgrown (Farrington, 1989; Moffitt, 1993), it is feasible to consider that police training on adolescence may encourage best practices during the police-youth encounter, ultimately keeping more youth out of the criminal justice system.

Finally, police training on adolescence may enhance police legitimacy through a more procedurally just encounter. The police are often the first point of contact with the criminal justice system for youths, which plays a fundamental role in shaping youths' perceptions of the police. Given that youths' perceptions and attitudes toward the police persist over time into adulthood and influence their willingness to cooperate with law enforcement (Dirikx & Bulck, 2014; Piquero, Fagan, Mulvey, Steinberg, & Odgers, 2005), police must ensure a procedurally-just encounter by showing the youth respect, fairness, and dignity even though such interactions can be challenging and adversarial (Pepper & Silestri, 2016). As Bonnie and colleagues' (2013) note, "adolescents' tendencies to question adult authority [(including police)] are often accompanied by sensitivity to whether they and their peers have been treated fairly by adults" (p. 121). Police training on how to approach and interact with adolescents will undoubtedly shape youths' perceptions of whether they were shown respect, fairness, and dignity. The benefits of these procedurally just encounters may be greater cooperation with law enforcement and amplified policy legitimacy.

The interaction between police officers and adolescents should not be limited to law enforcement settings because these encounters provide a more opportune backdrop for a negative experience to occur for either party (Goodrich, Anderson, &

LaMotte, 2014). Instead, police officers and community youth should meet and interact on more neutral terms and actively engage with one another to build positive rapport and mutual trust. Goodrich and colleagues' (2014) research illustrates how joint participation between law enforcement and youth in fun activities and community service projects has the capacity to foster improved police officers' and youths' attitudes toward each other. If such programs have the ability to positively change attitudes and preconceived notions of youths and police officers, it may result in police-youth encounters that are far less volatile and more cooperative.

As with any study, there are a number of limitations that should be juxtaposed against the findings. First, the findings presented should not be generalized to the general youth population, as past research has found that arrestee samples can differ from the general population who has not been in contact with the justice system (Tonry, 1995). Related, these findings are only representative of juvenile arrestees within Maricopa County, and these findings may not be representative of juvenile arrestees in other jurisdictions. Given such caveats, these findings are only representative of juvenile arrestees within Maricopa County, Arizona, and future research should assess similar populations in other settings. Second, although the reliance on a juvenile arrestee sample has provided a meaningful beginning for research on police use of force against youths, this study did not compare a youth sample against an adult sample, which would provide a true comparison of police use of force between the two samples. Including both a youth and adult sample for cross-population comparisons could strengthen the current findings.

Nevertheless, the current study expands our understanding of police-citizen interactions by extending use of force analysis to an arrestee population of youth. To our knowledge, very little empirical analysis has been completed in this area. The lack of research is problematic given the regularity in which police and juveniles come into contact on a daily basis. Thus, this study serves as foundation upon which research on this topic can be built. Future research should continue to explore questions regarding police-juvenile interactions so that scholars may increase the understanding about how these dynamic encounters play out, and how police-juvenile and police-adult contacts may be analogous or dissimilar to one another. Ultimately, understanding the difference between the two populations are imperative for developing policy, training, and resource allocation amongst agencies nationwide.

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