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# Shaping youths' perceptions and attitudes toward the police: Differences in direct and vicarious encounters with police

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## ABSTRACT

**Purpose:** Considerable research has examined public attitudes toward the police. Yet, little is known about the effects of direct and vicarious police stops upon youths' attitudes and perceptions of police. The purpose of the current study is to analyze the relationship between direct and vicarious police stops and urban youths' attitudes of and perceptions toward police officers.

**Methods:** Using data from the Fragile Families and Child Wellbeing Survey (FFCWS), linear and ordered logistic regressions were used to examine the relationship between police stops and urban youths' perceptions of and attitudes toward police officers.

**Results:** Findings indicate that direct and vicarious police stops are associated with lower levels of respect and confidence in the police. We also found that direct and vicarious police stops have a positive relationship with perceptions of procedural justice. However, the positive effect of police stops on procedural justice is mitigated by the level of police intrusiveness during such stops.

**Conclusions:** While our findings on respect and confidence suggest that direct and vicarious police stops are catalysts of negative attitude formation, we also show that direct and vicarious stops play an important role in curbing negative sentiments of police injustice.

## 1. Introduction

In a 2016 survey, 38% of Americans reported having been officially stopped by a police officer within the past five years. Moreover, 47% report knowing someone who has been stopped and searched by a police officer within the same time period (Ekins, 2016). While the effects of direct police stops have received considerable attention from scholars, the effects of vicarious police encounters on perceptions of and attitudes toward the police have been largely overlooked in such explorations. Since these types of indirect contact with the police are by far the most common, the lack of evidence regarding them represents a significant gap in our knowledge of public attitudes toward the police. Further understanding the role of vicarious police stops in the formation of perceptions of and attitudes toward the police also has significant implications for policing in practice since police heavily rely upon a cooperative relationship with citizens to fulfill their responsibilities (Murphy, Hinds, & Fleming, 2008; Sunshine & Tyler, 2003). Negative perceptions of the police have serious implications upon the effectiveness of police officers and their ability to prevent crime (Tyler & Fagan, 2008). As Schuck and colleagues (2008) explained, public confidence in the police is the "cornerstone" of cooperation with the

police.

Because youth are in an especially malleable stage of life, experiences with police officers can be exceptionally formative (Ariam et al., 2013; Casey, Jones, & Hare, 2008; Fine et al., 2017). Direct and vicarious experiences with police have the potential to crystallize into attitudes that can remain relatively stable throughout their lives. Such experiences can be far more impactful than the experiences of adults since they may also trickle down to affect future generations as attitudes are passed down from parents to children (Jennings, Stoker, & Bowers, 2008). Despite the growing body of literature on attitudes toward police, little research to date has explored the mechanisms and processes underlying the relationship between direct and vicarious police stops and youth perceptions of and attitudes toward the police (for examples see Friedman, Lurigio, Greenleaf, & Albertson, 2004; Flexon, Greenleaf, Dariano, & Gibson, 2016). Using data from Fragile Families and Child Well-Being Study (FFCWS), the current study addresses this gap in the literature by critically examining how direct and vicarious police stops may be associated with youth perceptions of and attitudes toward the police.

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## 2. Literature review

### 2.1. Police and public opinion

Analyses of longitudinal data demonstrate two significant attributes of American attitudes toward the police. First, these attitudes are rarely negative and are usually even quite positive (Dean, 1980; Ekins, 2016; Miller & Davis, 2008). As Ekins (2016) explained, there is no fundamental demographic group, nor has there ever been, that is “anti-cop.” Rather than express negative sentiment, it is more common for racial minorities (primarily Blacks and Hispanics) to withhold their approval by reporting “neutral feelings” toward the police (Ekins, 2016; Fingerhut, 2017). The second defining feature of police attitudes is that they tend to be quite stable (Ackerman et al., 2001; Ekins, 2016). Although stability is the norm, fluctuations do occur at individual and group levels. Often, these fluctuations can be attributed to media coverage of police officers (Boivin, 2016; Dowler & Zawilski, 2007; Lasley, 1994; Miller, 2004). For instance, notable negative shifts in perceptions of police officers were observed after the highly publicized police killings of Michael Brown and Eric Garner (Pew Research Center, 2014a; Pew Research Center, 2014b; Reinka & Leach, 2017). Critical differences in attitudes toward police have also been detected across race.

Race has been consistently identified as a significant factor across models of police favorability (Brunson, 2007; Brunson & Weitzer, 2009; Lai & Zhao, 2010; Rosenbaum, Schuck, Costello, Hawkins, & Ring, 2005; Tuch and Weitzer, 1997; Weitzer & Tuch, 2014). No noteworthy studies to the authors' knowledge report race as an insignificant variable. Among these studies, Whites generally have the greatest favorability and African Americans have the lowest favorability toward police. Hispanics also have significantly less favorable attitudes, although the difference tends to fall somewhere in between Whites and African Americans (Ackerman et al., 2001; Ekins, 2016; Lee, Steinberg, & Piquero, 2010; Schuck, Rosenbaum, & Hawkins, 2008). With these foundational concepts of attitude stability, media, and race in mind, we now turn to a discussion of past literature regarding direct and vicarious police stops.

### 2.2. Direct and vicarious police stops

One heavily-debated question in the study of police encounters is if direct police-initiated stops have a positive or negative effect on perceptions of and attitudes toward the police. Findings on this matter have varied considerably. Numerous researchers have shown that direct police stops are strongly associated with negative attitudes toward the police (Bradford, 2011; Bradford, Jackson, & Stanko, 2007; Brunson, 2007; Langton & Durose, 2013; Tyler & Fagan, 2008). At the same time, an equally significant body of literature points to a positive relationship between police-initiated stops and positive attitudes toward the police, or at least static levels of support. (Gau, 2010; Reisig & Correia, 1997; Rosenbaum et al., 2005; Tyler, 2006; Tyler & Fagan, 2008; Tyler & Huo, 2002). The most broadly accepted explanation for the variation across these studies is the role of procedural justice. The procedural justice approach maintains that the effect of police stops on attitudes toward police is dependent upon the citizens' perceived fairness of their exchange with the officer (Tyler, 2006; Tyler & Huo, 2002; Lim, 2015). However, the magnitude of these effects varies widely between positive and negative encounters. The consensus is that negative encounters are significantly more impactful than positive encounters. Skogan (2007) found that negative encounters have up to a nine-times greater effect than positive encounters. Other studies have reiterated this principle by failing to find statistically significant changes in attitudes from positive, direct contacts while detecting large changes after negative encounters (Miller, Davis, Henderson, Markovic, & Ortiz, 2004a, 2004b; Skogan, 2005).

The notion that police receive no credit for positive encounters but significant pushback from negative encounters can, at least partially, be

explained by negativity bias and expectancy theory. Negativity bias asserts that we are naturally disposed to remember negative incidents and weigh them more heavily in evaluations than positive incidents (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). According to this theory, a large number of positive encounters with police could be overshadowed by a singular negative experience (Li, Ren, & Luo, 2016). Another possible theoretical explanation for this can be attributed to expectancy theory which purports that people expect police stops to be reasonably pleasant and are therefore less affected by them when they are (Reisig & Chandek, 2001; Rosenbaum et al., 2005). In other words, only in rare cases does one expect an experience with police to be extremely negative. At the same time, people have high expectations for the police and scrutinize them closely. Thus, a positive encounter should align with expectations and cause a minimal or null attitudinal shift while a negative encounter could potentially cause a dramatic negative change in attitudes toward police.

Another possible explanation for varied findings regarding police stops is captured in the difference between police-initiated and citizen-initiated contact. Citizen-initiated police encounters are typically viewed very positively while police-initiated encounters are perceived much less favorably (Skogan, 2007). Bolstered by their inherent positivity, citizen-initiated contacts may increase positive attitudes while police-initiated contact, circumscribed by its inherent negativity, does not. In other words, Gau's (2010) claim that “a simple ‘please’ and ‘thank you’ may be enough [to improve attitudes toward police]” may be qualified by the fact that “please” and “thank you” only lead to more positive attitudes in a citizen-initiated setting. This amalgam of seemingly contradictory findings seems to indicate that direct police stops do affect police favorability, but depend on factors such as perceived procedural justice and who initiates the contact.

There is a remarkably scant amount of research regarding vicarious stops, especially among youth. Yet, what we do know indicates that vicarious stops tend to have a more robust effect on police favorability than direct stops (Flexon, Lurigio, & Greenleak, 2009; Friedman et al., 2004). In one groundbreaking study on police favorability, Rosenbaum et al. (2005) observed that direct experiences with police did not lead to any substantive changes in attitudes. However, vicarious contact (learning about someone else's experience) did predictably affect such attitudes whether the vicarious contact was positive or negative. This holds true across other conceptualizations of “vicarious” which include having family members that have been stopped by the police and hearing about the experiences of others who have been stopped by the police (Weitzer & Tuch, 2005). While it may not be a direct measure of police favorability, recent research has also shown that direct and vicarious police stops are associated with increased legal cynicism (Geller & Fagan, 2019). Despite the dearth of evidence regarding the effect of vicarious stops on police attitudes, what we do know about vicarious stops is compelling. At least in cases of police-initiated contact, they tend to have a stronger effect on sentiments of police favorability than do direct stops (Rosenbaum et al., 2005).

### 2.3. Current study

In sum, research exploring how perceptions and attitudes toward police differ between those who have had direct and vicarious police stops is limited. When extended to youths' perceptions of and attitudes toward the police, scholarship is even more scarce. The purpose of this study is to move beyond previous explorations of perceptions and attitudes toward police by examining how direct police stops and vicarious police stops (witnessing someone else be stopped by a police officer or knowing someone else who has been stopped by a police officer) are correlated with urban youths' perceptions of and attitude toward the police. This is especially important considering that youths' experiences with police can shape their attitudes throughout the rest of their life and potentially carry on into future generations. Specifically, the following hypotheses are investigated:

**Hypothesis 1. (H1):** Youth who report direct or vicarious stops by police will be less likely to report respect and confidence in the police than those who do not report stops.

**Hypothesis 2. (H2):** Direct and vicarious police stops will be negatively related to youth perceptions of procedural justice.

**Hypothesis 3. (H3):** The relationship between direct and vicarious stops and perceptions of procedural justice will be moderated by interactions between direct and vicarious stops and experiences of officer intrusiveness.

### 3. Data and methods

#### 3.1. Sample

Data are drawn from the Fragile Families and Child Wellbeing (FFCW) Study, a birth-cohort, longitudinal study with an oversample of unmarried parents. The study follows individual “focal children” born between 1998 and 2000 in 20 major U.S. cities. Baseline interviews were conducted with the mothers and fathers of focal children soon after their birth. The baseline response rate for mothers was 86%. The FFCWS participants were contacted for follow-up interviews over the phone with a variety of in-home assessments five times, when the focal child was one, three, five, nine, and fifteen years old. The focal child was interviewed in year 9 and year 15, with response rates of 76% and 74%, respectively. Considering the roughly 4700 families in the sample, the study design utilized a three-to-one sample of non-marital-to-marital births resulting in 3600 unwed couples and 1100 married couples. The goal of this study design is to learn more about the nature of the relationships within ‘fragile families’ in the US. These families, generally made up of unmarried, poor, and/or minorities, often encapsulate multiple risk factors associated with the intersections of these statuses that signify the vulnerability of the relationships within these families. Thus, parents in this sample are more likely to have reduced educational attainment, low-income, minority race/ethnicity, and be unmarried relative to the U.S. population (for a thorough description of the sampling design and interview protocol see Reichman, Teitler, Garfinkel, & McLanahan, 2001).

In order to examine various factors that may shape youths' perceptions of and attitudes toward the police, including the role of direct and vicarious police stops, we combined baseline data with core mother and father surveys at year-1, 3, 5, and 9, the youth's primary caregiver survey at year 15, and the youth survey from year 15. At the most recent wave of data collection, 1454 cases (29.7%) were lost due to attrition resulting in 3444 youth who completed the year 15 survey. We performed our analyses for all youth with valid responses on each outcome variable: respect for police ( $N = 3427$ ), confidence in the police ( $N = 3444$ ), and perceptions of procedural justice ( $N = 2474$ ).

In general, the explanatory variables used in the models had modest proportions of missing data (median = 3%). About half of the observed variables had less than 1% missing. To obviate untoward effects of the missing data, though, we used a changed equation method of multiple multivariate data imputation to improve power and efficiency in the estimates (Graham, Olchowski, & Gilreath, 2007). We constructed 20 multiply imputed data sets that included the explanatory variables, the outcome variable, and a set of auxiliary variables (e.g., age, gender) to reduce potential bias in the estimates (Graham, 2009). Although MI is a valuable strategy for handling missing data with longitudinal surveys, imputing data that are not missing at random can produce biased estimates of coefficients and standard errors (Allison, 2002). Because participants who left the study are not missing at random, we take a more conservative approach outlined by Von Hippel (2007) by using both our explanatory and outcome variables to impute missing values, but ultimately excluding any missing cases on our outcome variables (e.g., respect for police, confidence in police, perceptions of procedural

justice). The analyses were conducted pre- and post-MI to understand the effect of the missing data on our findings. Overall, there were no meaningful differences in the results.

#### 3.2. Attitudes toward the police and perceptions of procedural justice

We utilize three items that collectively measure our two primary outcomes—attitudes toward the police and procedural justice during police stops. The attitudinal measures are composed of respect for police and confidence in the police measured in the youth year 15 survey. Respect for police was constructed based on a single survey question: “I have a great deal of respect for the police.” The possible responses were “strongly agree,” “somewhat agree,” “somewhat disagree,” and “strongly disagree.” Confidence in the police was also based on a single survey question: “The police create more problems than they solve.” The possible responses were “strongly agree,” “somewhat agree,” “somewhat disagree,” and “strongly disagree.”<sup>1</sup>

To measure perceptions of procedural justice, we used three items from the youth year 15 survey to determine youth perceptions of their treatment by law enforcement. Specifically, youth were asked, “How often in the times you were stopped/in the incidents you witnessed or heard about did the police: 1) explain why they stopped you/the person in a way that was clear to you/them?, 2) treat you/them with dignity and courtesy?, and 3) respect your/their rights?” Response options included *never* (0), *sometimes* (1), or *often* (2). Responses were coded so that higher scores reflected a greater sense of just treatment by police officers. Scores were ultimately summed into an additive index ranging from 0 to 6 ( $\alpha = 0.72$ ).

#### 3.3. Direct and vicarious encounters with police

Direct police stops were measured by asking youth at year 15 the following question: “Have you ever been stopped by the police while on the street, at school, in a car, or some other place?” Response options included yes (coded as 1) and no (coded as 0). Vicarious police stops are categorized into three separate groups. The first is witnessing a police stop in one's neighborhood and based on the survey question, “Have you ever seen someone stopped by the police in your neighborhood?” The second is witnessing a police stop in one's school which is based on the question, “Have you ever seen someone stopped by the police in your school?” The final measure of vicarious stops is simply knowing someone who has been stopped by the police. This is determined using the question, “Do you know anyone who has been stopped by the police?” Possible responses for the three questions were yes (coded as 1) and no (coded as 0).

#### 3.4. Officer intrusiveness

To provide more context into these police stops, we also include a measure for officer intrusiveness. Officer intrusiveness was measured at year 15 by six items that asked youth about the behavior of law enforcement during the stop they experienced or observed. Specifically, youth were asked whether the following forms of officer intrusiveness occurred: “{In your most memorable incident/In the incident you witnessed or heard about} did the officer 1. Frisk you/them or pat you/them down?, 2. Search your/their bags or pockets?, 3. Use harsh language?, 4. Use racial slurs?, 5. Threaten physical force?, and 6. Use physical force?” Responses to each of these items were yes (coded as 1) and no (coded as 0). These items were summed into an additive index ( $\alpha = 0.72$ ) with six representing the highest level of intrusiveness and zero representing the lowest.

<sup>1</sup> Responses for respect for police and confidence in the police were reverse coded in that “strongly agree” = 4, “somewhat agree” = 3, “somewhat disagree” = 2, and “strongly disagree” = 1.

### 3.5. Control variables

**Low Self-Control:** Research has shown that low self-control is strongly associated with unfavorable attitudes toward the police (Reisig, Wolfe, & Holtfreter, 2011; Wolfe, 2011). Self-control was measured on an index at year 15 based on an abbreviated version of Dickman's (1990) impulsivity scale. Notably, the items from this scale largely reflect impulsivity (or low self-control) as redefined by Hirschi (2004). Hirschi's (2004) redefinition conceives of self-control as "the tendency to consider the full range of potential costs of a particular act" and the "set of inhibitions one carries with one wherever one happens to go" (p. 543). The present index of low self-control includes the following 6 items: (1) "I don't spend enough time thinking over a situation before I act," (2) "I often say whatever comes into my head without thinking first," (3) "I often get into trouble because I don't think before I act," (4) "I often say and do things without considering the consequences," (5) "The plans I make don't work out because I haven't gone over them," and (6) "I often make up my mind without taking the time to consider the situation from all angles." The possible responses were "strongly agree," "somewhat agree," "somewhat disagree," and "strongly disagree." Items were reverse coded so that higher scores reflect a lower level of self-control. Scores were then summed into an additive index ranging from 6 to 24 ( $\alpha = 0.73$ ).

**Neighborhood Effects:** Neighborhood violence and collective efficacy have been linked to attitudes toward the police (Geller & Fagan, 2019; Kirk & Matsuda, 2011; Kirk & Papachristos, 2011). We measure neighborhood safety as a dummy variable based on the question asked of the youth's primary caregiver at year 15: "Have you ever been afraid to let your child outside due to neighborhood violence?" Affirmative responses were set equal to 1 with negative responses set equal to 0. Neighborhood collective efficacy was measured by asking the focal child the following seven questions that measure informal social control and the level of cohesion and trust (Sampson, Raudenbush, & Earls, 1997): 1) "People around here are willing to help their neighbors." 2) "This is a close-knit neighborhood." 3) "People in this neighborhood generally don't get along with each other." 4) "Neighbors would get involved if children skip school." 5) "Neighbors would get involved if children spray paint buildings." 6) "Neighbors would get involved if children show disrespect to adults." 7) "Neighbors would get involved if a fight broke out in front of the house." The possible responses for each question were "strongly agree," "somewhat agree," "somewhat disagree," and "strongly disagree." Responses to the 7-items were summed together into an additive index ( $\alpha = 0.76$ ) with higher scores indicating more neighborhood collective efficacy.

**Parents Encounters with Police/Criminal Justice System:** Research has also shown that parental involvement with the criminal justice system affects youth attitudes toward the police, the legal system in general, and is connected to youth antisocial behavior (Farrington & Murray, 2005; Geller & Fagan, 2019; Wildeman et al., 2013). Parental incarceration was indicated if the mother or biological father had spent any time in prison at year 1, 3, 5, and 9 (yes = 1, no = 0).

**Being a Crime Victim:** Victimization is related to perceptions of the police (Homant, Kennedy, & Fleming, 1984; Smith & Hawkins, 1973; Wu, Lake, & Cao, 2013). Being a crime victim is measured from the question asked of the youth at year 15, "Have you ever been the victim of a crime?" Responses to this question were yes (coded as 1) and no (coded as 0).

**Youth Delinquency:** Youth delinquency is also strongly related to attitudes toward the police (Hurst, Frank, & Browning, 2000; Leiber, Nalla, & Farnworth, 1998). We used youths' self-reports of certain acts at year 15 to determine delinquency. Each youth was asked if they had never, 1–2 times, 3–4 times, or 5 or more times participated in 13 different delinquent acts in the past 12 months. We coded each act into a dichotomous variable (0 = never, 1 = 1–5+ times) and then added them together to create a cumulative delinquency where 0 is no participation and 13 is participation in all acts ( $\alpha = 0.73$ ). These acts

included: "Paint graffiti or signs on someone else's property or in a public place?" "Deliberately damage property that didn't belong to you?" "Take something from a store without paying for it?" "Get into a serious physical fight?" "Hurt someone badly enough to need bandages or care from a doctor or nurse?" "Drive a car without its owner's permission?" "Steal something worth more than \$50?" "Go into a house or building to steal something?" "Use or threaten to use a weapon to get something from someone?" "Sell marijuana or other drugs?" "Steal something worth less than \$50?" "Take part in a fight where a group of your friends was against another group?" and "Were you loud, rowdy, or unruly in a public place?"

**Demographics:** In our regression analyses, we account for a set of sociodemographic characteristics that may be related to youth attitudes toward police. We include gender, age, race, family wealth, and mother's education in our analyses. Gender was measured by the youth indicating his or her gender at year 15 with male as the reference category. Age is measured by the child's age reported at the time of the Year 15 survey. Race is measured by youth self-reporting their race/ethnicity at year 15. Race/ethnicity is divided into three categories for White, Black, and Hispanic/Other with White as the reference group. Our dichotomous measure for wealth at baseline groups families above (200+) poverty level and those who are in extreme (0–99%) and/or moderate poverty (100–199%) as the reference category. Similarly, we include two measures of maternal characteristics to serve as raking variables to account for important aspects of the complex sampling design. These include maternal education at year one of the study (*educ* = high school, *educ* > high school, with *educ* < high school being the reference group), and maternal marital status with the focal child's biological father (1 = married, 0 = not married).

### 3.6. Analytic strategy

Table 1 presents the basic descriptive statistics for our FFCW sample. Several statistical models were estimated to examine the relationships between direct and vicarious police stops and youth attitudes toward police. Two of the dependent variables are ordinal and thus require a model appropriate for ordered data. Typically, with such items, the ordered logit model (or some other cumulative link model) is applied. The ordered logit model maintains the restrictive proportional odds assumption. This assumption requires that the effects of the covariates on the log-odds of observing a score on the dependent variable are invariant to the cutpoint parameters. To evaluate the proportional odds assumption for our models, we estimated both an ordered logit model and a "generalized" ordered logit model for each of the ordered attitudinal outcomes. A series of likelihood-ratio tests for each of the models were run and indicated that the proportional odds assumption was not violated (Hoffmann, 2016).<sup>2</sup> Thus, we used ordered logistic regression (OLR) to examine the relationships between direct and vicarious police stops and respect for police and confidence in police presented in Table 2. The interpretation of odds ratios in OLR is very similar to how odds ratios in standard logistic regressions are interpreted. In the models below, the odds ratio demonstrates the odds of the highest value of an outcome variable occurring (e.g. one responding that they "strongly agree" to the statement, "I have a great deal of respect for the police.") versus the odds of the other attitudinal categories occurring. In simpler terms, an odds ratio that is greater than one indicates that a one-unit increase in the independent variable increases

<sup>2</sup> We utilized the Brant Test of parallel regression assumptions for our ordered logit models (Brant, 1990). For the generalized ordered logit models (gologit2 command in STATA) we used an autofit option that allowed us to test the proportional odds assumption for each explanatory variable allowing the coefficients to vary if the assumption is violated (Williams, 2006). Both approaches resulted in insignificant chi-square tests indicating that the proportional odds assumption was not violated.

**Table 1**  
Sample characteristics.

	Category (min, max)	Percent	Mean (SD)
Female	(0,1)	47.8	
Race/Ethnicity	White (ref. category)	18.1	
	Black	49.0	
	Hispanic/Other	32.9	
Poverty Level	Above Poverty Level	38.1	
	Moderate/Extreme	61.1	
	Poverty (ref. category)		
Mother Education	Educ < High School (ref. category)	34.7	
	Educ = High School	30.3	
	Educ > High School	35.0	
Mother Marital Status at Wave 1		30.3	
Age, mean	(14,19)		15.6 (0.8)
Youth Ever Arrested	(0,1)	4.5	
Parental Incarceration	(0,1)	40.1	
Crime Victim	(0,1)	8.7	
Neighborhood Violence	(0,1)	18.6	
Neighborhood Efficacy	(7,28)		20.5 (4.7)
Low Self-Control, mean	(6,24)		14.9 (3.9)
Delinquency, mean	(13,40)		14.4 (2.5)
Police Stops	Direct	(0,1)	26.8
	Vicarious (Neighborhood)	(0,1)	50.2
	Vicarious (School)	(0,1)	47.9
	Vicarious (Know Someone)	(0,1)	55.6
	Officer Intrusiveness	(0,6)	
Attitudes Toward the Police	Strongly Agree	56.8	
	Somewhat Agree	31.3	
	Somewhat Disagree	6.2	
	Strongly Disagree	5.7	
	Respect for the Police	Strongly Agree	13.5
	Somewhat Agree	27.0	
	Somewhat Disagree	22.4	
	Strongly Disagree	37.1	
Lack of Confidence in the Police	(0,6)		3.8 (1.8)

Source: Fragile Families and Child Well-Being (FFCW) Study.  
Note. SD = standard deviation.

the odds of having positive attitudes toward the police. An odds ratio that is less than one indicates the opposite. In Table 3, we restrict the sample to examine the associations between direct and vicarious police stops, acts of officer intrusiveness, and perceptions of procedural justice using ordinary least squares (OLS) regression. All analyses were conducted using Stata statistical software.<sup>3</sup>

#### 4. Results

Table 1 presents the basic descriptive statistics for each variable used in the analyses. The average age of the respondents was 15.6 years. Youth in the sample were 48% female with a racial/ethnic breakdown of 49% Black, 18% White, and 33% Hispanic/other. Approximately 38% of the families were above the national poverty level. Mother's education breaks down to approximately 35% less than a high school diploma, 30% finished high school, and 35% reported some college or more. About 30% of biological mothers of the youth in the sample were married to the child's biological father at wave one. In addition, 40% of one or both of the youths' biological parents had been incarcerated by year 9 of the study. Approximately 19% of the families in the sample were exposed to neighborhood violence Furthermore,

<sup>3</sup> Multicollinearity was examined using the STATA command "collin" (Ender, 2010) which provides collinearity diagnostics for all the variables. The mean VIF and tolerance values for each of the variables suggested no problems with multicollinearity for any of the models.

**Table 2**  
Ordered logistic regression results examining the relationships between police stops and respect and confidence in the police

	Respect for Police (N = 3427)		Lack of Confidence in Police (N = 3444)	
	Model 1		Model 2	
	OR	SE	OR	SE
<b>Main Effect</b>				
Direct Stop	0.591 <sup>***</sup>	0.053	1.500 <sup>***</sup>	0.128
Vicarious (Neighborhood)	0.858 <sub>*</sub>	0.068	1.280 <sup>***</sup>	0.093
Vicarious (School)	1.008	0.077	1.156 <sub>*</sub>	0.081
Vicarious (Know Someone)	0.750 <sup>***</sup>	0.060	1.396 <sup>***</sup>	0.102
<b>Controls</b>				
Low Self-Control	0.962 <sup>***</sup>	0.010	1.092 <sup>***</sup>	0.010
Delinquency	0.860 <sup>***</sup>	0.014	1.102 <sup>***</sup>	0.018
Youth Ever Arrested	0.611 <sup>**</sup>	0.105	1.262	0.218
Crime Victim	0.655 <sup>***</sup>	0.083	1.340 <sub>*</sub>	0.161
Parental Incarceration	0.968	0.075	1.080	0.076
Neighborhood Efficacy	1.065 <sup>***</sup>	0.009	0.949 <sup>***</sup>	0.007
Neighborhood Violence	0.924	0.085	1.117	0.098
Female	1.082	0.079	1.058	0.071
Black	0.592 <sup>***</sup>	0.060	2.787 <sup>***</sup>	0.256
Hispanic/Other	0.746 <sub>*</sub>	0.080	1.606 <sup>***</sup>	0.153
Mother Educ = High School	1.020	0.090	0.991	0.081
Mother Educ > High School	1.090	0.105	0.800 <sub>*</sub>	0.070
Mother Married at Wave 1	1.116	0.104	0.807 <sub>*</sub>	0.069
Above Poverty Level	1.063	0.091	0.933	0.073
Youth Age	0.815 <sup>***</sup>	0.037	1.095 <sub>*</sub>	0.046

Source: Fragile Families and Child Well-Being (FFCW) Study. The analyses used 20 multiple imputed datasets to adjust for missing data in the variables. Note. All coefficients are presented in odds ratios. OR = odds ratios. SE = standard errors.

Reference categories include mother education less than high school, white, male, and extreme and/or moderate poverty level

- \* p < 0.05.
- \*\* p < 0.01.
- \*\*\* p < 0.001.

about 9% of the youth in the sample reported being a victim of a crime. The average score for youths' perception of neighborhood social cohesion was 4.7. On average, youth in the sample reported a low self-control score of 2.5 and a delinquency score of 1.1.

Concerning youth contact with police, 26.8% reported ever being directly stopped by police. In addition, 50.2% of youth reported experiencing vicarious stops, such as in their neighborhood, 47.9% at their school, and 55.6% through knowing someone who had been stopped by the police. The average score of officer intrusiveness was 1.5. Descriptive statistics for the police attitudinal measures indicate that youth respect for the police was quite high with 88% of youth strongly agreeing or somewhat agreeing that they have a great deal of confidence in the police. Regarding lack of confidence in the police, 40% of respondents reported strongly agreeing or somewhat agreeing with the statement that the police create more problems than they solve. The average procedural justice score was 3.8 with a range of 0 to 6.

#### 4.1. Impact of police stops on respect and confidence in the police

In Table 2, the ordinal regression results for respect and confidence in the police were measured. Our findings in Model 1 show that youth who experienced direct police stops were less likely to strongly agree that they had respect for the police (OR = 0.591, p < .001) than those who did not report a direct stop, as predicted. This is also true for youth who knew someone that had been stopped by the police (OR = 0.750,

**Table 3**  
OLS regression results examining the relationships between police stops, officer intrusiveness, and procedural justice (N = 2474)

	Model 1		Model 2	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
<b>Main Effect</b>				
Direct Stop	0.375***	0.075	0.600***	0.090
Vicarious (Neighborhood)	-0.070	0.069	-0.057	0.090
Vicarious (School)	0.045	0.066	-0.017	0.088
Vicarious (Know Someone)	0.144*	0.071	0.281**	0.097
Officer Intrusiveness	-0.378***	0.220	-0.261***	0.060
<b>Interactions</b>				
Direct Stop*Officer Intrusiveness			-0.189***	0.045
Vicarious (Neighborhood)*Officer Intrusiveness			-0.018	0.047
Vicarious (School)*Officer Intrusiveness			0.040	0.044
Vicarious (Know Someone)*Officer Intrusiveness			-0.813	0.048
<b>Controls</b>				
Low Self-Control	-0.029***	0.009	-0.031***	0.009
Delinquency	0.010	0.013	-0.009	0.013
Youth Ever Arrested	-0.360*	0.148	-0.406	0.191
Crime Victim	-0.294**	0.106	-0.294**	0.106
Parental Incarceration	-0.139*	0.068	-0.147*	0.068
Neighborhood Efficacy	0.046***	0.007	0.047***	0.007
Neighborhood Violence	-0.093	0.081	-0.107	0.081
Female	-0.194**	0.065	-0.226***	0.065
Black	-0.497***	0.088	-0.498***	0.088
Hispanic/Other	-0.249**	0.092	-0.244**	0.092
Mother Educ = High School	0.027	0.077	0.030	0.077
Mother Educ > High School	0.116	0.085	0.116	0.084
Mother Married at Wave 1	-0.003	0.082	0.004	0.082
Above Poverty Level	0.219**	0.075	0.211**	0.075
Age	0.002	0.412	0.007	0.041
Constant	4.016***	0.089	3.695**	0.715

Source: Fragile Families and Child Well-Being (FFCW) Study. The analyses used 20 multiple imputed datasets to adjust for missing data in the variables.

Note. All coefficients from OLS regression are unstandardized.

SE = standard errors.

Reference categories include mother education less than high school, white, male, and extreme and/or moderate poverty level

\*  $p < 0.05$ .

\*\*  $p < 0.01$ .

\*\*\*  $p < 0.001$ .

$p < .001$ ) or had ever seen someone stopped by police in their neighborhood, although the effect is less drastic (OR = 0.858,  $p < .05$ ). In contrast, vicarious school police stops were not significantly related to respect for police. Several control variables also had strong relationships with respect for the police. Low self-control and delinquency were each associated with significantly lower levels of respect for the police (OR = 0.962,  $p < .001$ ; OR = 0.860,  $p < .001$ , respectively). Similarly, being a victim of a crime, having been arrested, age, and being Black or Hispanic/other were also associated with lower levels of respect for the police. Neighborhood collective efficacy was the only variable in the model that was related to a significant increase in respect for the police (OR = 1.065,  $p < .001$ ).

As expected, those who have been directly stopped by the police have significantly less confidence in the police (OR = 1.500,  $p < .001$ ) than those who were not directly stopped. All three forms of vicarious stops were also significantly related to less confidence in the police. More specifically, knowing someone who has been stopped by the police (OR = 1.396,  $p < .001$ ), having seen someone in the neighborhood stopped by police (OR = 1.280,  $p < .001$ ), and having ever seen someone stopped by police at school (OR = 1.156,  $p < .05$ ) increased the odds of strongly agreeing that the police create more problems than they solve. Many of the same control variables that were important for respect in the police were also significantly related to

confidence in the police. For example, low self-control, delinquency, being a crime victim, and age were each related to lower levels of confidence. Black youth were 2.8 times more likely to strongly agree that the police create more problems than they solve compared to Whites (OR = 2.787,  $p < .001$ ). Hispanic/other youth (OR = 1.606,  $p < .01$ ) were also more likely to strongly agree that police create more problems than they solve compared to White youth. Finally, neighborhood collective efficacy and mother's education were associated with significantly greater levels of confidence in the police.

#### 4.2. Impact of police stops on perceptions of procedural justice

Table 3 shows the OLS regression results for the effect of direct and vicarious police stops on perceptions of procedural justice. In Model 1, we explored the effect of direct and vicarious police stops and officer intrusiveness on youths' perceptions of procedural justice. As expected, direct and vicarious police stops and officer intrusiveness were significantly related to perceptions of procedural justice. More specifically, direct police stops were positively associated with perceptions of procedural justice ( $b = 0.375$ ,  $p < .001$ ), holding all other variables in the model constant. Knowing someone who was stopped by the police ( $b = 0.144$ ,  $p < .05$ ) was positively and significantly related to perceptions of procedural justice. In contrast, officer intrusiveness was negatively related to perceptions of procedural justice ( $b = -0.378$ ,  $p < .001$ ), indicating that a one-unit increase in officer intrusiveness decreased perceptions of procedural justice by 0.378. Several control variables were also significantly related to perceptions of procedural justice. Low self-control ( $b = -0.029$ ,  $p < .001$ ) was negatively related to perceptions of procedural justice, indicating that a one-unit increase in low self-control decreased perceptions of procedural justice by 0.029. In addition, ever being arrested, being a crime victim, and parental incarceration had a negative and significant effect on youths' perceptions of procedural justice. Black and Hispanic/other youth had lower perceptions of procedural justice than White youth. Furthermore, female youth had lower perceptions of procedural justice than male youth.

In Model 2, we further explored the relationship between police stops and youths' perceptions of procedural justice by including interactions between police stops and officer intrusiveness. We found that the interaction between direct stops and officer intrusiveness on perceptions of procedural justice produced a significant negative coefficient ( $b = -0.189$ ,  $p < .001$ ), indicating that direct police stops that involve more officer intrusiveness were associated with negative perceptions of procedural justice. Surprisingly, none of the interactions between vicarious police stops (e.g., neighborhood, school, know someone) and officer intrusiveness were statistically significant. All of the police stop and control variables noted in Model 1 remained statistically significant and in the same direction in Model 2.

### 5. Discussion

A large body of research has demonstrated that direct police stops are linked to attitudes toward police. However, significantly less research has focused on the potential role of vicarious police encounters in attitudes toward police as well as youths' attitudes toward police in general. This is unfortunate since early encounters with police can shape perceptions of and attitudes toward police in both adolescence and adulthood. The current study sought to add to the growing literature on attitudes toward police by examining the effect of both direct and vicarious police stops on youths' attitudes toward police. Specifically, we explore how direct and vicarious police stops affected youths': (1) respect for the police, (2) confidence in the police, and (3) perceptions of procedural justice.

The empirical results supported our proposition that direct and vicarious police stops are associated with youth attitudes toward police. Specifically, we found that youth who reported direct or vicarious stops

(e.g., neighborhood, at school, know someone) had lower levels of respect and confidence in the police. These findings are also in line with both our *hypothesis 1* and with previous studies (Friedman et al., 2004; Mazerolle, Antrobus, Bennett, & Tyler, 2013; Rosenbaum et al., 2005; Skogan, 2007; Tyler & Fagan, 2008). This finding also indicates that police-initiated contact can generate negative attitudes toward the police. Indeed, direct and vicarious stops can be associated with negative attitudes toward the police (Rosenbaum et al., 2005). Although, contrary to Rosenbaum et al. (2005), we observe a larger negative effect for direct stops than for vicarious stops.

In addition, we found that direct and vicarious police stops were also significantly related to youths' perceptions of procedural justice. Contrary to our hypothesis and recent scholarship (Mazerolle et al., 2013; Rosenbaum et al., 2005; Skogan, 2007), we found that procedural justice *increased for youth who experienced* a direct stop or a vicarious stop (e.g., know someone) by police. This finding, along with our results from the respect for police and confidence in police models, suggests that direct and vicarious stops can have both positive and negative effects upon youths' attitudes toward the police. While direct and vicarious stops are associated with worsened police attitudes, such as respect and confidence, they are also associated with improved perceptions of police officers' behavior and fairness during police stops. We speculate that expectancy theory may explain the causal mechanism behind this disparity. As Reisig and Chandek (2001) explained, satisfaction with involuntary police encounters is dependent upon the congruence between the expectations for the encounter and the actual outcome of the encounter. Encounters that align with expectations should have little to no effect of perceptions of police officers while encounters that are discordant with expectations should significantly change perceptions of police officers. Respect and confidence are abstract attitudes and, as such, are difficult to hold clear expectations for. Perceived procedural justice, on the other hand, is a more concrete measure that is directly based on actual experiences. Furthermore, due to the overrepresentation of unjust police practices through the media, youths' expectations for procedural justice during a police stop are negatively skewed. Thus, a positive experience during a police stop would understandably cause a significant positive shift in perceived procedural justice.

It is important to note that the effect of direct and vicarious stops on perceptions of and attitudes toward the police are also dependent upon the nature of the stop. While direct and vicarious police contact may increase the likelihood of developing less favorable attitudes toward police, the relationship between police stops and police favorability may be more complex when we consider the contextual nature of the police encounter. Indeed, some researchers have observed positive changes in attitudes after police stops (Gau, 2010; Reisig & Correia, 1997; Rosenbaum et al., 2005; Tyler, 2006; Tyler & Fagan, 2008; Tyler & Huo, 2002). For instance, Rosenbaum et al. (2005) observed positive and negative attitudinal shifts after police stops. The determining factor in which direction the attitudes shift was whether or not the stops were primarily negative or positive. Additionally, Reisig and Correia (1997) came to a similar conclusion by finding that citizen perceptions of their treatment by police officers during a stop had a large effect on their evaluation of police officers in general. Thus, the contextual nature of the police stop can matter a great deal and may directly influence how attitudes toward police are formed. To investigate the context of police stops, we explored whether the effects of direct and vicarious police stops on perceptions of procedural justice was moderated by experiences of officer intrusiveness. We found partial support for this hypothesis. Relative to youth who did not experience a direct police stop, youth who experienced a direct police stop that involved more experiences of officer intrusiveness reported more negative perceptions of procedural justice. Our results indicate that a non-intrusive direct stop is likely to foster positive sentiments of procedural justice while a more intrusive direct stop is more likely to have the opposite effect. We propose one possible explanation for our conclusions based on theories

of media disproportionality and asymmetry (Skogan, 2007).

The media consistently portrays police officers as significantly more prone to violence, aggression, and corruption than they are in reality (Soulliere, 2003; Wolfgang & Ferracuti, 1967). This constant stream of disproportionate violence and corruption has a strong effect on what people hold as salient considerations when thinking about the police. Those who lack personal experiences of being stopped by police must then use what they have learned from the media and witnessing other police stops to shape their attitudes. Similarly, those with direct stops may have high perceptions of procedural justice because their real-life experience with the police has shown them that the police typically behave in a positive and procedurally just manner (Skogan, 2005). In terms of citizen perceptions of procedural justice, being personally stopped by a police officer is positive in the sense that it mitigates sentiments of police intrusiveness and mistreatment propagated by the media. However, this is not always the case. Police stops that involve a high level of officer intrusiveness lead to worsened perceptions of procedural justice. Still, highly intrusive police stops are rare which is why direct stops, in general, are associated with increasingly positive perceptions of procedural justice.

Yet, direct experiences do not have this same relationship with respect and confidence in the police. Our media theory suggests that portrayals of police disrespect and incompetence on television would lead those without personal experiences to have less respect and confidence in the police, but this is not the case. Skogan's theory of asymmetry (2007) may explain this discrepancy. As Skogan (2007) found, the magnitude of the effect of a negative police experience on attitudes toward the police is about nine times greater than the effect of a positive experience. Unfortunately, this theory presents an uphill battle for the police in garnering public support since it is very difficult to recover from negative experiences and easy to lose the effects of numerous positive experiences.

Finally, we found other interesting results that are worth noting. The results of this study indicate that youth who reported low self-control, delinquency, ever being arrested, and being a crime victim were more likely to report lower levels of respect for the police and confidence in the police as well as lower perceptions of procedural justice as suggested in prior work (Hurst et al., 2000; Homant, Kennedy, & Fleming, 1984; Leiber et al., 1998; Reisig & Wolfe, 2011; Wolfe, 2011). In contrast, neighborhood collective efficacy had a positive and robust effect on respect and confidence in police and perceptions of procedural justice. This finding supports previous literature on the role of collective efficacy in attitudes toward police (Geller & Fagan, 2019; Kirk & Matsuda, 2011; Kirk & Papachristos, 2011). Finally, race was a significant factor in measuring all three of our outcomes. In each case, Black youth exhibited significantly worse attitudes and perceptions toward police officers. This supports the substantial body of literature which demonstrates that Blacks hold lower opinions of police officers than Whites (Ackerman et al., 2001; Brunson, 2007; Brunson & Weitzer, 2009; Lai & Zhao, 2010; Lee et al., 2010; Rosenbaum et al., 2005; Weitzer & Tuch, 2014).

Overall, our findings offer a new level of sophistication to our understanding of direct and vicarious police stops and how they are associated with youths' perceptions of and attitudes toward the police. Consistent with previous research, we show direct stops lead to lower levels of respect and confidence in the police (Bradford, 2011; Bradford et al., 2007; Brunson, 2007; Langton & Durose, 2013; Tyler & Fagan, 2008). We also help settle some of the uncertainty regarding the effects of vicarious stops by using a broad spectrum of conceptualizations for vicarious stops and observing a consistent decline in respect and confidence among youth for each type of vicarious stop. Finally, our results concerning procedural justice add to the growing body of literature on attitudes toward the police by showing that direct police stops can also have a markedly positive impact on how youth perceive the police. No prior studies to our knowledge have captured such significant improvements in police favorability through a simple measure of direct

stops. We found that perceptions of procedural justice improve for those who have been directly stopped by the police. However, this effect changes when we consider the contextual nature of the police encounter (e.g. officer intrusiveness). When understood with the role of the media in police attitude formation and Skogan's asymmetry theory (2007) this represents a significant contribution to our understanding of attitude formation toward the police and youth police stops.

## 6. Limitations and future research

There are several limitations with this study that warrant mention. First, although our analyses identified a robust relationship between direct and vicarious stops and youths' attitudes toward police, we caution against causal inferences. Our analyses are limited by the dataset that, though it provides a rich description of family circumstances of urban youth in the first fifteen years, includes only periodic interviews with family members and has interviewed the study's teen respondents, only twice, year 9 and at year 15. We only have single measures of respect and confidence in police and perceptions of procedural justice (year 15 only) and are unable to measure whether the youths' (personal or vicarious) experience with the police caused a change in their attitudes toward police, or whether their reports at age fifteen reflect long-standing attitudes unaffected by police contact. Thus, longitudinal data that tracks the stability of youths' attitudes toward the police over time would be informative.

Second, our measurement of confidence in the police is less than ideal. Prior research has measured confidence in the police as perceptions of fairness, visibility, reliability honesty, cooperation, and trust (Cao, 2014; Cao, Frank, & Cullen, 1996; Ren, Cao, Lovrich, & Gaffney, 2005). Often, a combination of these items is used to make an index measuring confidence in the police. In other cases, it has been measured by simply asking, "How much confidence do you have in the police" (Cao, Lai, & Zhao, 2012). Thus, the single item we based our confidence in the police measure lacks the multidimensionality or specificity incorporated in previous research.

Third, our analytical models lack some contextual variables that would provide more insight into the nature of the police stops. For example, scholars of policing have noted that the difference between positive and negative police stops has a strong effect on attitudes toward the police (Rosenbaum et al., 2005; Skogan, 2007). We include a measure for officer intrusiveness to account for this to a point, but it is not a perfect measure of how positive or negative a police stop actually was. Future research should consider including more contextual measures, particularly capturing overall positivity or negativity the police encounter, to provide a more sophisticated understanding of how these stops affect youths' attitudes toward police.

Fourth, youth in the FFCW study were asked to report on their most memorable incidents with police. Consequently, our analyses are limited by the potential for recall errors in which the least memorable police encounters are not recalled. Finally, although the present findings are derived from a national sample, the nature of the FFCWS sampling strategy (e.g., overrepresentation of low income, unmarried couples and their children) does not allow for the results to be generalized to the U. S. population of youth.

Despite these limitations, this study suggests that direct and vicarious police stops significantly influence youths' perceptions of and attitudes toward police. Our findings highlight the potential for even police-initiated stops to foster increasingly positive relationships between youth and police officers. When these stops involve low levels of officer intrusiveness, we can expect them to overcome presuppositions of unjust policing and lead to notable improvements in youths' perceptions of procedural justice. This is a critical component of police-citizen relations because high procedural justice is strongly associated with legitimacy and cooperation with the police. Based on our results, policymakers, sociologists, and criminologists should consider the role of direct and vicarious police stops (and the contextual nature of the

stop) in understanding and influencing youths' perceptions of and attitudes toward police.

## Declaration of Competing Interest

None.

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