



Original article

Police Stops and the Erosion of Positive Future Orientation Among Urban Adolescents

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A B S T R A C T

Purpose: The objective is to examine the ramifications of adolescent personal and vicarious police stops for positive future orientation, among all adolescents and by race/ethnicity and sex subgroups, and to assess how features of police stops—including frequency, intrusiveness, resultant stigma, and resultant traumatic stress response—are associated with positive future orientation.

Methods: We used data from the Fragile Families and Child Wellbeing Study (N = 3,437), a national sample of at-risk urban-born youth, and a series of ordinary least squares regression models that account for observed nonrandom selection into police stops to examine the relationship between adolescent police stops and positive future orientation.

Results: Three key findings emerged. First, personal and vicarious police stops, compared to no police stops, are negatively associated with positive future orientation among adolescents. Second, associations are largest among Black and Hispanic girls. Third, any exposure to police stops, regardless of features of the stops (including frequency, intrusiveness, resultant stigma, and resultant traumatic stress response), is negatively associated with positive future orientation.

Discussion: Given that positive future orientation is linked to mental and physical health throughout the life course, the findings suggest both personal and vicarious police stops among adolescents may increase health inequality in the United States.

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IMPLICATIONS AND CONTRIBUTION

Given that positive future orientation is linked to mental and physical health throughout the life course, the findings suggest both personal and vicarious police contact among adolescents may increase health inequality in the United States.

The increase in proactive policing in the past four decades—characterized by preemptive stops, arrests, and searches as a primary tactic to disrupt criminal activity—means that an increasing number of adolescents have experienced their own police contact, witnessed someone experiencing police contact, or know someone who endured police contact [1,2]. More than one fourth of urban adolescents have experienced personal

police stops and an additional half of these adolescents experienced vicarious police stops (via witnessing an encounter or learning of one involving family or friends) [3]. Importantly, research documents that police stops can be a significant life-course event that can set in motion changes that impair adolescent development and create barriers for prosocial opportunities [4–10]. Thus, from a life-course perspective, encounters with law enforcement, and experiences with unfair or hostile treatment by police, can result in internalized cognitive shifts that negatively reshape life-course trajectories [9].

Considering the harmful repercussions, police stops are increasingly recognized as an adverse childhood experience, one

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disproportionately endured by adolescents of color and economically vulnerable adolescents and one with considerable repercussions for health [3,11,12]. Personal police stops are positively associated with depressive symptoms, anxiety, post-traumatic stress symptoms, and overall health among adolescents and young adults [8,13–15]. Furthermore, the deleterious repercussions for adolescent development extend to vicariously experienced police stops [8].

A critical component of adolescent development that is closely associated with health and wellbeing is the development of future orientation [16–18]. Indeed, adolescence is a crucial period of identity development where one begins to envision the future. Positive future orientation entails developing clear goals, strong future planning skills, and the ability to overcome obstacles [16]. Despite theoretical reasons to expect a negative relationship between adolescent police stops and adolescents' future orientation, research has only just begun to consider this [6]. Adolescents enduring police stops, either themselves or vicariously, are experiencing a major event that can alter developmental trajectories and can erode positive future orientation given that these experiences are often undesirable and harmful [19,20], involve critical power differentials [21], and heighten anticipatory stress about future police encounters and the ramifications of these encounters [22], all of which may undermine future outlook. This may be especially likely when police stops are frequent, intrusive, result in stigma, or result in a traumatic stress response [23]. To date, only one study explicitly assesses the role of police stops for future orientation. This research, using data on serious adolescent offenders from Philadelphia and Phoenix, found that personal and vicarious police stops during the transition from adolescence to adulthood are associated with reduced future orientation [6].

Using national data from the Fragile Families and Child Wellbeing Study, we expand upon extant literature about how initial forms of criminal justice contact are associated with future orientation during a critical developmental period. In doing so, we extend earlier research by examining a national sample of youth (as opposed to a sample of adolescents who had been adjudicated for a serious crime in two counties) and by examining how characteristics of police stops (e.g., frequency, intrusiveness, resultant stigma, and resultant traumatic stress response) are associated with responses to police stops [6]. Given that adolescent police stops are not randomly distributed across the population, and are instead concentrated among adolescents of color living in disadvantaged and highly surveilled neighborhoods, our analyses account for observed adolescent, parent, and neighborhood characteristics associated with selection into adolescent police stops. In addition, considering that the police stops are highly concentrated among men and people of color [3], and that future orientation tends to be stronger among women and White people [24], we also investigate the relationship between youth police stops and positive future orientation by race/ethnicity and sex subgroups.

Data, Measures, and Analytic Strategy

Data source

We use data from the Fragile Families and Child Wellbeing Study, a cohort of 4,898 urban children followed through adolescence. Researchers first identified a stratified random sample of 20 US cities with populations greater than 200,000,

then sampled hospitals within these cities, and then sampled births within hospitals [25]. Mothers were interviewed in hospitals after the child's birth. Fathers were interviewed as soon as possible after the child's birth (and mostly in hospitals). Parents were interviewed by telephone an additional five times over a 15-year period (when their children were approximately 1, 3, 5, 9, and 15 years old). Children were interviewed at ages 9 and 15. The analytic sample comprises 3,437 observations, after excluding the 1,454 observations with adolescent nonparticipation at the 15-year survey and the additional seven observations missing data on the dependent variable.

Measures

Positive future orientation. The dependent variable is adolescent-reported positive future orientation at the 15-year survey. Adolescents were asked to respond to the following four statements (1 = *strongly disagree* to 4 = *strongly agree*): (1) I am optimistic about my future; (2) I think good things are going to happen to me; (3) I believe that things will work out, no matter how difficult they seem; and (4) in uncertain times, I expect the best. Positive future orientation, adapted from the EPOCH Measure of Adolescent Wellbeing [26], is an average of adolescent responses to these four items ($\alpha = 0.57$).

Adolescent police stops. The primary independent variables, measured at the 15-year survey, include mutually exclusive measures of adolescent police stops: personal police stop, vicarious but not personal police stop (hereafter, vicarious police stop), and no police stops. Adolescents who responded affirmatively to the following question are coded as having a personal police stop: "Have you ever been stopped by the police while on the street, at school, in a car, or some other place?" Adolescents reporting ever seeing someone stopped by the police (in their neighborhood or school) or knowing someone stopped by the police, who also report no personal police stops, are coded as having vicarious police stops. Adolescents reporting no personal nor vicarious police stops are coded as having no stops.

Some analyses consider features of police stops among adolescents experiencing personal police stops. First, adolescents were asked to report the number of personal police stops they experienced, and we created mutually exclusive variables indicating no personal stop (reference), one personal stop, and two or more personal stops. Second, adolescents were asked to report if, during their most memorable stop, the officer engaged in six types of intrusive behavior. We created mutually exclusive variables indicating no personal stop (reference), stop without intrusiveness, and stop with intrusiveness [27,28]. Third, adolescents were asked to report if they experienced 11 forms of stigma from the stop. We created mutually exclusive variables indicating no personal stop, personal stop with low stigma (i.e., stigma lower than the mean), and personal stop with high stigma (i.e., stigma at or above the mean), following prior research [28]. Fourth, adolescents were asked to report if they experienced nine forms of traumatic stress response from the stop. We created mutually exclusive variables indicating no personal stop, personal stop with low traumatic stress response (i.e., traumatic stress response lower than the mean), and personal stop with high traumatic stress response (i.e., traumatic stress response at or above the mean), again following prior research [28]. See [Appendix Table A1](#) for the individual items comprising these measures.

Control variables. The multivariate analyses adjust for characteristics associated with adolescent police stops and positive future orientation. Adolescent demographic characteristics include race/ethnicity (White [non-Hispanic], Black [non-Hispanic], Hispanic, other race [Hispanic], multiracial); sex (1 = boy); age at the 15-year survey; and low birth weight (1 = less than 2,500 grams). Other adolescent characteristics include internalizing behaviors, measured by mothers' responses to the Child Behavior Checklist (CBCL) at the 9-year survey; adolescent-reported delinquency at the 9-year survey; and adolescent-reported impulsivity at the 15-year survey.

Parent characteristics comprise demographic characteristics including immigrant status, age, and childhood family structure (1 = lived with both biological parents at age 15); relationship characteristics including relationship status (married, cohabiting, nonresidential/no relationship), relationship quality (1 = poor to 5 = excellent), repartnered, and number of children in the household; socioeconomic characteristics including employment (1 = worked for pay in the past week), income-to-poverty ratio, and material hardship; health characteristics including depression, overall health (1 = fair or poor), heavy drinking (1 = four or more drinks in one sitting in past month), and drug use (1 = used drugs in the past month); and neighborhood characteristics including disadvantage, social control, social cohesion, gang activity, fear of violence, and witnessing violence. Finally, multivariate analyses adjust for parent characteristics including cognitive ability, impulsivity, police contact, and incarceration (measured by parents' reports of their own and the other parent's incarceration at all survey waves).

Additional control variables. Some analyses adjust for adolescent characteristics measured at the 15-year survey especially associated with adolescent police stops. These include delinquency, peer delinquency, police officer stationed at school, cigarette smoking, alcohol use, drug use, neighborhood gang activity, neighborhood safety, arrest, and incarceration.

Analytic strategy

First, we use ordinary least squares (OLS) regression to estimate the relationship between adolescent police stops and positive future orientation. The first model is unadjusted. The second model adjusts for all control variables. These control variables are measured prior to adolescent police stops, as nearly all adolescents report their first police stop after age 9 (and findings are robust to excluding those who report earlier police stops). A third model further adjusts for adolescent characteristics at the 15-year survey. These characteristics are measured after adolescent police stops, and may stem from adolescent police stops, so this model is a conservative estimate of the relationship between adolescent police stops and positive future orientation. We also use OLS regression to estimate the relationship between adolescent police stops and positive future orientation separately for race/ethnicity and sex subgroups.

Next, we use OLS regression models to estimate the relationship between adolescent police stops and positive future orientation considering four features of the police stops: frequency, intrusiveness, stigma from the stop, and traumatic stress response from the stop. We first consider the association between number of stops and positive future orientation (focusing on the differences in coefficients between those

who experience one and more than one stop). We also consider the intrusiveness, stigma, and traumatic stress response related to the stop. Analyses that instead restrict the sample to adolescents experiencing personal police stops—and use continuous measures of intrusiveness, stigma, and traumatic stress response—come to similar conclusions. All models adjust for city fixed effects.

Relatively few observations in the analytic sample are missing data. Control variables are missing, on average, 11% of observations, and we preserve these observations with multiple imputation. We pool results across 20 imputed data sets, using the `mi` commands in Stata 17.0.

Sample description

Table 1 displays the descriptive statistics of all variables (and see Appendix Table A2 for these variables by race/ethnicity and sex subgroups). Adolescents report high levels of positive future orientation, with a mean value that falls about halfway between “agree” and “strongly agree.” Adolescent police stops are not uncommon, with more than one quarter of adolescents (26.9%) reporting personal police stops and more than half of adolescents (51.5%) reporting vicarious (but not personal) police stops.

Results

Table 2 presents results that estimate adolescent positive future orientation as a function of police stops. Model 1 shows that adolescents with personal police stops report less positive future orientation than youth without police stops ($b = -0.127, p < .01$). Adolescents with vicarious police stops also report less positive future orientation than adolescents without police stops ($b = -0.079, p < .01$). Model 2 shows these associations remain after adjusting for adolescent and parent characteristics. Compared to no police stops, both personal police stops ($b = -0.143, p < .001$) and vicarious police stops ($b = -0.075, p < .01$) are associated with less positive future orientation. This translates into nearly one third and one seventh of a standard deviation, respectively. A Wald test shows the differences between personal and vicarious police stops are statistically significant ($p < .01$), suggesting personal police stops are especially consequential. In Model 3, which adjusts for adolescent characteristics at the 15-year survey, both personal ($b = -0.096, p < .05$) and vicarious ($b = -0.056, p < .05$) police stops remain negatively associated with positive future orientation. The differences between personal and vicarious police stops are not statistically significant ($p = .161$).

Table 3 presents results that estimate the relationship between adolescent police stops and positive future orientation across race/ethnicity and sex subgroups. We focus on the adjusted models. We find the magnitude of coefficient for personal police stops is largest for Black girls ($b = -0.240, p < .01$) and Hispanic girls ($b = -0.231, p < .05$). The magnitude of the coefficient for vicarious police stops is also largest for Black girls ($b = -0.191, p < .001$).

Table 4 presents results that estimate the relationship between adolescent police stops and positive future orientation, considering features of the stops. We again focus on the adjusted models. Panel A considers the number of stops. Adolescents experiencing one stop and adolescents experiencing two or more stops, compared to those experiencing no stops, report lower positive future orientation. These coefficients are

Table 1
Descriptive statistics of variables used in analyses

	Mean or %	(SD)
Key variables		
Adolescent positive future orientation (y15)	3.407	(0.499)
Adolescent police stops (y15)		
No stops	21.6%	
Personal police stops	26.9%	
Vicarious but not personal police stops	51.5%	
Adolescent characteristics		
Race/ethnicity (y15)		
White, non-Hispanic	18.0%	
Black, non-Hispanic	49.0%	
Hispanic	25.3%	
Other race, non-Hispanic	2.6%	
Multiracial, non-Hispanic	5.2%	
Male (b)	51.5%	
Age (y15)	15.595	(0.768)
Born low birth weight (b)	9.1%	
Internalizing behaviors (y9)	0.159	(0.178)
Delinquency (y9)	1.212	(1.752)
Impulsivity (y15)	2.471	(0.698)
Mother characteristics		
Foreign-born (b)	13.3%	
Age (y9)	34.377	(5.999)
Lived with both parents at age 15 (b)	41.8%	
Relationship to child's father (y9)		
Married	29.7%	
Cohabiting	8.9%	
Nonresidential or no relationship	61.4%	
Repartnered (y9)	34.5%	
Relationship quality (y9)	2.772	(1.468)
Number of children (y9)	2.651	(1.326)
Educational attainment (y9)		
Less than high school	22.0%	
High school diploma or GED	18.9%	
More than high school	59.1%	
Employment (y9)	61.8%	
Income-to-poverty ratio (y9)	2.032	(2.332)
Material hardship (y9)	1.523	(1.871)
Depression (y9)	17.7%	
Fair or poor health (y9)	16.9%	
Heavy drinking (y9)	8.8%	
Illicit drug use (y9)	6.5%	
Neighborhood disadvantage (y9)	0.000	(1.000)
Neighborhood social control (y9)	3.218	(0.835)
Neighborhood social cohesion (y9)	2.780	(0.481)
Gang activity in neighborhood (y9)	1.670	(0.886)
Fear of neighborhood violence (y9)	18.6%	
Witness neighborhood violence (y9)	23.3%	
Cognitive ability (y3)	6.800	(2.652)
Impulsivity (y3)	2.030	(0.612)
Ever stopped by police (y3, y5, y9)	21.6%	
Ever incarcerated (y1, y3, y5, y9)	10.2%	
Father characteristics		
Foreign-born (b)	14.8%	
Age (y9)	36.918	(7.247)
Lived with both biological parents (b)	44.1%	
Repartnered (y9)	6.2%	
Relationship quality (y9)	3.121	(1.403)
Number of children (y9)	1.027	(1.416)
Educational attainment (y9)		
Less than high school	25.2%	
High school diploma or GED	29.9%	
More than high school	44.9%	
Employment (y9)	71.1%	
Income-to-poverty ratio (y9)	2.594	(2.850)
Material hardship (y9)	1.436	(1.969)
Depression (y9)	16.1%	
Fair or poor health (y9)	14.6%	
Heavy drinking (y9)	27.4%	
Illicit drug use (y9)	13.2%	
Neighborhood disadvantage (y9)	0.002	(1.000)

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Table 1
Continued

	Mean or %	(SD)
Cognitive ability (y3)	6.497	(2.731)
Impulsivity (y1)	2.015	(0.674)
Ever stopped by police (y3, y5, y9)	60.6%	
Ever incarcerated (b, y1, y3, y5, y9)	49.8%	
Adolescent characteristics at the 15-year survey		
Delinquency (y15)	1.110	(0.197)
Peer delinquency (y15)	1.198	(0.304)
Police officer stationed at school (y15)	80.3%	
Ever smoked (y15)	5.4%	
Ever drank alcohol (y15)	17.1%	
Ever used drugs (y15)	22.4%	
Gang activity in neighborhood (y15)	1.476	(0.860)
Feeling unsafe in neighborhood (y15)	1.705	(0.833)
Ever arrested (y15)	4.6%	
Ever incarcerated (y15)	2.2%	
N	3,437	

b = measured at baseline survey; SD = standard deviation; y1 = measured at 1-year survey; y3 = measured at 3-year survey; y5 = measured at 5-year survey; y9 = measured at 9-year survey; y15 = measured at 15-year survey.

not statistically different from one another ($p = .420$). Panel B considers intrusiveness. Adolescents experiencing stops without intrusiveness and adolescents experiencing stops with intrusiveness, compared to those experiencing no personal stops, report lower positive future orientation. These coefficients are not statistically different from one another ($p = .820$). Panels C and D consider stigma and traumatic stress response from the stop, respectively. Adolescents reporting stops with low and high stigma, and those reporting stops with low and high traumatic stress responses, report lower positive future orientation than those experiencing no personal stops. The coefficients of low and high stigma and low and high traumatic stress responses are not statistically different from one another ($p = .579$ and $.164$, respectively).

Discussion

Research increasingly documents the harmful repercussions of police stops for adolescents, showing that adolescent police stops are a critical life-course turning point that shapes health and developmental outcomes [7–10]. However, despite good reasons to expect that police stops could dramatically influence how adolescents envision their future, little research investigates this possibility [6]. Our analyses suggest three key findings.

First, adolescent police stops—especially personal stops but also vicarious stops—are negatively associated with positive future orientation, net of adolescent, parent, and neighborhood characteristics that increase the risk of police stops. Police stops are an overwhelming undesirable and harmful experience, one that youth may internalize, that erodes future outlook [6,7]. Police stops may facilitate hypervigilance or anticipatory stress [29], as adolescents foresee additional police contact, further criminal justice processing, or the ramifications of this criminal justice contact for their educational and occupational prospects [30,31]. These findings about the deleterious consequences of both personal and vicarious stops for future orientation are consistent with research investigating these associations with a sample of adolescents found guilty of a serious offense in two counties [6]. The fact that these deleterious consequences extend to a more broadly representative sample of adolescents highlights the importance of adolescent police stops in shaping

Table 2

Ordinary least squares regression estimates of the relationship between adolescent police stops and positive future orientation

	Model 1		Model 2		Model 3	
	Unadjusted		+Controls		+15-year controls	
	<i>b</i>	(SE)	<i>b</i>	(SE)	<i>b</i>	(SE)
Adolescent police stops (reference = no stop)						
Personal police stop	−0.127	(0.030)**	−0.143	(0.030)***	−0.096	(0.033)*
Vicarious but not personal police stop	−0.079	(0.021)**	−0.075	(0.021)**	−0.056	(0.022)*
R-squared	0.017		0.161		0.214	
Constant	3.481		2.978		2.955	
N	3,437		3,437		3,437	

Models 1 through 3 use ordinary least squares regression models to estimate the relationship between adolescent police stops and positive future orientation. Model 1 presents the unadjusted association. Model 2 adjusts for mother, father, and adolescent control variables from Table 1. Model 3 further adjusts for adolescent characteristics measured at the 15-year survey.

SE = standard error.

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

life-course trajectories. Future research, ideally one that uses nonurban samples and qualitative research, should investigate the processes linking police stops to future orientation.

Second, we find that associations are largest among Black and Hispanic girls. The findings about the negative repercussions of police contact being largely concentrated among Black youth is consistent with the prejudice hypothesis, which anticipates that disproportionate exposure to police contact accentuates the negative psychological repercussions for Black youth relative to White youth [6,19]. The findings about sex differences follow a different pattern, considering that boys are more likely to encounter police contact than girls [3] but the association between

police stops and positive future orientation was larger for some girls. Past research shows that youth's responses to stressful life events are patterned by sex, such that boys commonly respond to such experiences with externalizing behaviors and girls do so via internalizing behaviors [32,33]. In this sense, girls may internalize the repercussions of police contact to a greater degree than boys, thereby undermining their future orientations.

Third, we find that stop characteristics are not associated with positive future orientation. Instead, any police stop, regardless of stop characteristics, is negatively associated with positive future orientation. These findings suggest that even in cases where police youth stops are not especially adverse or

Table 3

Ordinary least squares regression estimates of the relationship between adolescent police stops and positive future orientation, considering variation by race/ethnicity and sex

	Model 1		Model 2	
	<i>b</i>	(SE)	<i>b</i>	(SE)
Panel A: White boys (n = 310–321)				
Adolescent police stops (reference = no stop)				
Personal police stop	−0.077	(0.086)	−0.083	(0.076)
Vicarious but not personal police stop	−0.005	(0.081)	−0.051	(0.085)
Panel B: White girls (n = 296–308)				
Adolescent police stops (reference = no stop)				
Personal police stop	−0.260	(0.091)*	−0.142	(0.114)
Vicarious but not personal police stop	−0.084	(0.059)	−0.028	(0.070)
Panel C: Black boys (n = 854–869)				
Adolescent police stops (reference = no stop)				
Personal police stop	−0.114	(0.048)*	−0.092	(0.040)*
Vicarious but not personal police stop	−0.066	(0.061)	−0.039	(0.058)
Panel D: Black girls (n = 818–828)				
Adolescent police stops (reference = no stop)				
Personal police stop	−0.241	(0.073)**	−0.240	(0.079)**
Vicarious but not personal police stop	−0.183	(0.035)***	−0.191	(0.036)***
Panel E: Hispanic boys (n = 438–457)				
Adolescent police stops (reference = no stop)				
Personal police stop	−0.159	(0.068)*	−0.098	(0.072)
Vicarious but not personal police stop	−0.097	(0.046)^	−0.028	(0.056)
Panel F: Hispanic girls (n = 413–427)				
Adolescent police stops (reference = no stop)				
Personal police stop	−0.278	(0.088)**	−0.231	(0.092)*
Vicarious but not personal police stop	0.004	(0.047)	0.026	(0.049)

Model 2 adjusts for all variables in Model 2 of Table 2. Ns sometimes vary across multiply imputed data sets.

SE = standard estimates.

^ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4

Ordinary least squares regression estimates of the relationship between adolescent police stops and positive future orientation, considering variation in stops

	Model 1		Model 2	
	Unadjusted		+Controls	
	<i>b</i>	(SE)	<i>b</i>	(SE)
Panel A: Number of stops				
Adolescent police stops (reference = no personal stop)	–	–	–	–
One personal stop	–0.100	(0.027)**	–0.104	(0.027)**
Two or more personal stops	–0.052	(0.030) [^]	–0.077	(0.029)*
Panel B: Intrusiveness of personal stop				
Adolescent police stops (reference = no personal stop)	–	–	–	–
Personal stop without intrusiveness	–0.092	(0.025)**	–0.092	(0.026)**
Personal stop with intrusiveness	–0.051	(0.033)	–0.083	(0.034)*
Panel C: Stigma from personal stop				
Adolescent police stops (reference = no personal stop)	–	–	–	–
Personal stop with low stigma	–0.059	(0.023)*	–0.081	(0.027)**
Personal stop with high stigma	–0.092	(0.031)**	–0.099	(0.028)**
Panel D: Traumatic stress responses from personal stop				
Adolescent police stops (reference = no personal stop)	–	–	–	–
Personal stop with low traumatic stress response	–0.096	(0.025)**	–0.111	(0.029)**
Personal stop with high traumatic stress response	–0.044	(0.029)	–0.061	(0.027)*

Models adjust for all variable in Model 2 of Table 2.

[^]*p* < .10, **p* < .05, ***p* < .01.

hostile, they may nonetheless instill a sense of despair or hopelessness that erodes future outlook. Perhaps the initial shock of the stop, rather than the details of what happens during or after the stop, creates an internalized shift that starts to diminish an adolescents' view toward the future. It may be that being stopped is all that it takes to damage future orientation, given the collateral consequences that stem from being formally processed in through the criminal justice system for future milestones such as education, employment, and forming romantic partnerships [4–6]. Alternatively, because of the nature of the sample (i.e., urban-born youth), youth in this study may be especially likely to be exposed (either personally or vicariously) to intrusive and hostile police stops and, therefore, such experiences may not be as consequential for perceptions of future orientation compared to a general population sample where youth have less average exposure to hostile police treatment. Accordingly, future research, using alternative samples, should continue to investigate how various types of police stops can alter a youth's future orientation.

Our findings yield meaningful implications for policy and practice. To mitigate the negative association between police stops and youths' positive future orientation, an outcome correlated with health and wellbeing throughout the life course, police departments should invest in youth-focused, trauma-informed, and developmentally sensitive trainings. These trainings remain underutilized in police departments despite research pointing to their effectiveness [34]. Implementation of these trainings may improve police-community relations, build trust between youth and police, and reduce unnecessary police stops when youth are engaging in normative, age-expected behaviors in public spaces. Relatedly, efforts to curtail hyper-surveillance of youth and instead move toward police-initiated diversion strategies and the promotion of greater engagement with civic life among youth may improve youth outcomes [35,36]. Structural investment in community wellness—and youth diversion away from criminal justice processing—could channel youth into support services that bolster, instead of erode, their future orientation [16].

Limitations

Future research can address the limitations of these analyses. First, because the Fragile Families data include urban-born children, the study findings may not generalize to other contexts, including rural or suburban areas. Still, the findings speak to a relevant population considering recent shifts in proactive policing strategies have largely impacted urban communities [1,2]. Second, though models adjust for characteristics relevant to police stops—including delinquency and neighborhood characteristics—the observational data preclude causal conclusions. Experiences of racism and discrimination, media exposure, and other traumatic events may render the relationship between youth police stops and future orientation spurious. Future research may employ longitudinal data with time-varying measures of police stops and positive future orientation to account for time-stable unobserved heterogeneity. Third, the measure of positive future orientation focused on general feelings about future orientation. Future research can assess how police stops influence specific aspects of future orientation (e.g., graduating college, getting married, or expectations of an early death) [37,38]. Although previous studies show this measure has high internal consistency [21], the Cronbach's alpha was low in this sample, potentially suggesting that the association between police stops and positive future orientation is conservative.

Conclusions

The current study provides novel insight into the consequences of police stops for adolescent wellbeing by demonstrating that both personal and vicarious police stops are experiences that can erode positive future orientation. The current study also expands upon related prior work by detailing the role of key features of police stops [6]. Findings revealing that any exposure to personal police stops, regardless of characteristics of the stop—frequency, intrusiveness, resultant stigma, and resultant traumatic stress responses—is negatively associated with positive future orientation. Taken

together, these findings build upon extant research showing that even relatively commonplace forms of police stops can be negatively associated with adolescent wellbeing. Considering that adolescence is a critical period for the development of future orientation, and that one's future outlooks holds important implications for health and development over the life course [16], these findings suggest that efforts to ameliorate the harmful consequences of police-youth contact are sorely needed.

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Supplementary Data

Supplementary data related to this article can be found at <https://doi.org/10.1016/j.jadohealth.2022.02.015>.

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