Did Stop and Frisk Policing Have Effects on the Health of New York City Residents?

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What is Stop, Question, and Frisk?



... a police officer may stop a person in a public place located within the geographical area of such officer's employment when he **reasonably suspects that such person is committing, has committed or is about to commit** either (a) a felony or (b) a misdemeanor defined in the penal law, and may demand of him his name, address and an explanation of his conduct.

- New York State criminal procedure law

Carding across Canada: Data show practice of 'street checks' lacks mandated set of procedures

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The Globe and Mail Published Monday, Aug. 17, 2015 5:19PM EDT Last updated Monday, Aug. 17, 2015 10:11PM EDT

The controversy around carding — the police practice of documenting interactions with community members — is not exclusive to Toronto. The Globe and Mail contacted 21 police departments across the country and found it's common, often unregulated and data collected is frequently kept indefinitely

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Between 2009 and 2011, Toronto Police entered 1,104,561 names into its carding database, according to the force's own figures, a staggering effort disproportionately targeting minority groups. Toronto Police say they need carding to gather intelligence and prevent crime, but in doing so they resorted to tactics that sullied their public standing.

In recent months, the force's carding efforts have been reined in, thanks largely to intense community pressure. Under a new policy, Toronto officers must inform residents they have the right to walk away from a carding engagement at any time and conclude any such interaction by issuing a receipt.

While the carding controversy is confined to Toronto, documenting interactions with community members, also known as a "street check," is common practice for major police forces across Canada. Rules guiding that process, however, are vague or non-existent in most cases.

Did Stop, Question, and Frisk policing have effects on the health of NYC residents?

Why this matters

- Massive intervention in NYC and several other major cities
- We know very little about its effects on population

What we find

- For African-American NYC residents, stop rates are associated with declines in mental health
- For non-Black residents, stop rates are associated with an improvement in mental health

NYC Stop, Question, and Frisk Timeline

		Mayor	Police Commissioner
1990s	"Broken windows"/Quality of life crimes Stop, Question, and Frisk (SQF) policing Attorney General investigates racial bias in stops	Rudy Guiliani (1994-2001)	William Bratton, Howard Safir, Bernard Kerik
2003	Lawsuit settled: **requires data reporting**	Michael Bloomberg (2002-2013)	Raymond Kelly
	Expansion of Stop, Question, and Frisk; Also, CompStat; hot spot policing		
2013	Stop and Frisk ruled unconstitutional		
2014-	Rapid reduction in Stop, Question, and Frisk	Bill de Blasio (2014-)	William Bratton





In peak year, 2011 Ratio of stops : population 16 stops per 100 males 33 stops per 100 black males 114 stops per 100 young black males

Reasons for Stops in 2003-13 (N=4,984,392 stops)



Stops - Low Yield on Arrests, Contraband, and Guns

N= 4,984,392 stops, 2003-13	Percent of Stops
Frisked	51.9%
Gun/firearm found	0.2%
Contraband found	1.8%
Arrest made	5.9%
Summons issued	6.2%
None of the above	87.9%

Little Evidence that SQF reduced crime



"... if there is an impact [of SQF on crime], it is so localized and dissipates so rapidly that it fails to register in annual precinct crime rates, much less the decade-long citywide crime reductions that public officials have attributed to the policy" (Rosenfeld & Fornango 2014)

Positive Effects of SQF via reduction in neighborhood disorder?

- "Broken Windows" Kelling & Wilson, Atlantic Monthly, 1982
- Mid-1970s NJ Safe and Clean Neighborhood program: No crime reduction, yet improvement of feelings of safety

"But how can a neighborhood be "safer" when the crime rate has not gone down... Finding the answer requires first that we understand what most often frightens people in public places. Many citizens, of course, are primarily frightened by crime... But we tend to overlook another source of fear—the fear of being bothered by disorderly people. Not violent people, nor, necessarily, criminals, but disreputable or obstreperous or unpredictable people: panhandlers, drunks, addicts, rowdy teenagers, prostitutes, loiterers, the mentally disturbed.

What foot-patrol officers did was to elevate, to the extent they could, the level of public order in these neighborhoods."

Negative Effects

Negative effects on those stopped (e.g., Geller et. al 2014)

Collateral damage/Community effects - vicarious experiences (e.g., Brunson 2007); chilling effect (Lerman and Weaver 2014); community violence and children's test scores (Sharkey 2010)

Racial biases

Racial composition conflated with neighborhood disorder (Sampson and Raudenbusch 2004)

NYPD data - Blacks and Hispanics stopped more often than Whites net of precinct and criminality (Gelman, Fagan, and Kiss 2007)

"The racial-spatial concentration of excess stop activity threatens to undermine police legitimacy and diminish the social good of policing, while doing little to reduce crime or disorder." (Fagan et al. 2009)

A Mailman Handcuffed in Brooklyn, Caught on Video



Glen Grays, a 27-year-old mail carrier, and his mother, Sonya Sapp, at a news conference in Brooklyn on Tuesday. Dave Sanders for The New York Times

By the time Mr. Grays arrived at the front door of 999 President Street, the police were approaching him. A video of the incident, taken by an observer on the street, begins at this point and shows Mr. Grays, in his postal uniform, as he is handcuffed, frisked and taken to the unmarked car. The officers tell him to stop resisting, even though there is no evidence in the video of resistance. What the video does not show, Mr. Grays said, is what happened next, after he was placed in the back seat of the unmarked car, with his hands cuffed and without a seatbelt, compelling him to leave the mail truck unattended. The driver, who had turned around to taunt him, hit the vehicle in front of them, Mr. Grays said, causing him to bang his shoulder against the front seat. Mr. Grays was then taken to the 71st Precinct station, where he was issued a summons for disorderly conduct that will require him to appear in court. He was then released.

NY Times, March 25, 2016

A Mailman Handcuffed in Brooklyn, Caught on Video



Glen Grays, a 27-year-old mail carrier, and his mother, Sonya Sapp, at a news conference in Brooklyn on Tuesday. Dave Sanders for The New York Times

The arrest of the mail carrier, <u>Glen Grays</u>, attracted national attention after a cellphone recording taken by one of several witnesses at the scene of the March 17 episode was released by the office of Eric L. Adams, the Brooklyn borough president, last week.

Mr. Grays is the oldest of six boys. His mother, Sonya Sapp, who lives in middle-income housing in Fort Greene, spoke briefly, only to say, "I worry about them every day, every minute, every second of every day," before fading off with, "I'm short on words; I'm just hurt."

Mr. Grays's fiancée is also shaken. She is a New York City police officer he met while delivering the mail.

NY Times, March 25, 2016 and March 29, 2016

Hypotheses: Heterogeneous Effects

Positive effects on mental health

- Stop, Question, and Frisk approach improves actual or perceived safety
- Positive effects potentially greatest in poor minority communities because this is where crime/disorder are concentrated (Guiliani; Kelly; Bloomberg)

Negative effects on mental health (Blacks)

Stop, Question, and Frisk approach is intrusive, stressful, traumatic

Data Sources

Monthly stops, frisks, arrests from NYPD administrative data, UF-250 forms

- Self-reported mental and physical health from NYC Community Health Survey (CHS)
- Annual crime data from NYPD
- Neighborhood characteristics and Population counts from 2000 and 2010 US Census and 2009-2013 ACS

Pluto file and GIS to map 77 police precincts to 34 neighborhoods

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STOP, QUE	STION AND	FRISK	Pct.S	Serial	No.				
PD344-151A	(Rev. 11-02)		Date			Pct.	Of Occ.		
Time Of Stop	Period Of Ob Prior To Stop	servation	n		Rad	dio R	un/Sprint #	ŧ.	
Address/Intersection	Address/Intersection Or Cross Streets Of Stop								
🗆 Inside 🔲 Tra	Inside Transit Type Of Location								
Outside D Ho	ousing Des	cribe:							
Specify Which Fel	Specify Which Felony/P.L. Misdemeanor Suspected Duration Of Stop								
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	(MUST CHE	CK AT L	EAST	ONE	BO	X)			
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Address		Apt.	No. Te	I. No.			
Identification: V Other (Specify)	erbal 🗆	Photo I.D.	D F	Refused			
Sex: Male Race: W	nite 🗆 Black D Pacific Islande	□ White Hispar r □ American	nic 🗆 Bla Indian/A	ack Hispanic Jaskan Native			
Age Height	Weight	Hair	Eyes	Build			
Other (Scars, Tattoos, E	itc.)						
Did Officer Explain If No, Explain: Reason For Stop □ Yes □ No							
Were Other Persons St	opped/ 🗆	Yes If Yes,	List Pct.	Serial Nos.			
Questioned/Frisked?		No					
If Physical Force Was	Jsed, Indicate	Type:					
Hands On Suspect		Drawing	Firearm				
Suspect On Ground		Baton					
 Pointing Firearm At Su 	spect	Pepper S	pray				
Handcuffing Suspect		Other (De	escribe)				
Suspect Against Wall/C	Car						
Was Suspect Arrested?	Offense		Arre	st No.			
Was Summons Issued?	Offense		Sum	mons No.			
Officer In Uniform? If No, How Identified? Shield I.D. Card							
Yes No	Verbal						

UF-250 Form

Was Person Frisked? Yes Inappropriate Attire - Possit Verbal Threats Of Violence Knowledge Of Suspects Pri Violent Behavior/Use Of Fo Other Reasonable Suspicio	No IF YES, MUST CHECK AT LEA No IF YES, MUST CHECK AT LEA Subsect Explored or Criminal Engaging rca/Use Of Weapon Crimes n of Weapons (Specify)	AST ONE BOX Movements E s Indicative Of ng In Violent E	 Refusal To Comply With Officer's Leading To Reasonable Fear For Violent Crime Suspected Suspicious Bulge/Object (Described) 	Direction(s) Safety a)				
Was Person Searched?	es INO IF YES, MUST CHECK AT L	EAST ONE BOX Har	d Object Admission Of Weapons	Possession				
Was Weapon Found? Yes Machine Gun Other (Des	No If Yes, Describe: Pistol/R pribe)	evolver 🗆 Rifle/Shotgu	n 🗆 Assault Weapon 🗆 Knife/Cuttin	g Instrument				
Was Other Contraband Found? Yes INO If Yes, Describe Contraband And Location Demeanor Of Person After Being Stopped Remarks Made By Person Stopped								
Additional Circumstances/Fa	ctors: (Check All That Apply)							
 Report From Victim/Witness Area Has High Incidence Of Re Time Of Day, Day Of Week, Se Criminal Activity Suspect Is Associating With Pe Proximity To Crime Location Other (Describe) 	Additional Circumstances/Factors: (Check All That Apply) Report From Victim/Witness Area Has High Incidence Of Reported Offense Of Type Under Investigation Time Of Day, Day Of Week, Season Corresponding To Reports Of Criminal Activity Suspect Is Associating With Persons Known For Their Criminal Activity Proximity To Crime Location Other (Describe)							
Pct. Serial No Additional	Reports Prepared: Complaint Rpt.No.	Juvenile Rpt. No.	Aided Rpt. No Other Rpt. (Speci	fy)				
REPORTED BY: Rank Name /Las	4 First M I \	REVIEWED BY: R	ank Name (Last First MI)					
Print	Tax#	Print	Tax#					
Signature	Command	Signature	Comm	and				

One detailed record for each of 4,984,392 stops from 2003-2013

Neighborhood Stop Rates

Aggregate stops to police precinct and month
 Use GIS to map precincts onto 34 NYC neighborhoods
 Divide stops by neighborhood population

KEY INDEPENDENT VARIABLE = "Stop rate prior 12 mos"











Community Health Survey (CHS)

- 2002-2012 Annual survey of New York residents (use 2004-2012)
- Repeat cross-section
- N=~10,000 individual respondents per year age 18+
- 34 NYC neighborhoods
- Telephone survey response rates 29% to 40%; cell phones 2009
- With survey weights, representative of NYC population 18+ years old
- Merge CHS microdata w/ Aggregate Stop Rates by calendar month and neighborhood

	Census data	CHS
Male	47.5	46.20
Female	52.5	53.8
Black	25.5	22.8
Asian	12.7	10.1
Hispanic	28.6	25.6
White	33.3	39.5
15-24 yrs	14.4	5.7
25-34 yrs	17.0	12.5
35-44 yrs	14.1	16.1
45-54 yrs	13.5	18.9
55+ yrs	23.0	42.0
N	8,175,133	8,665,000

	Census data	CHS	Stops
Male	47.5	46.20	91.80
Female	52.5	53.8	8.2
Black	25.5	22.8	46.3
Asian	12.7	10.1	4.1
Hispanic	28.6	25.6	32.7
White	33.3	39.5	13.3
15-24 yrs	14.4	5.7	48.5
25-34 yrs	17.0	12.5	25.0
35-44 yrs	14.1	16.1	12.6
45-54 yrs	13.5	18.9	8.6
55+ yrs	23.0	42.0	3.1
N	8,175,133	8,665,000	601,285

Dependent Variables – Health (CHS)

In the past 30 days, how often did you feel ... depressed, nervous, restless, hopeless, that everything was an effort, or worthless?

from 1=none of the time to 5 =all the time

Would you say that in general your health is excellent, very good, good, fair, or poor? from 1 = excellent to 5 = poor

Mean Mental and Physical Health by Year 2004-2012

Tabulations from Community Health Survey. All variables on 5-point scale with higher values indicating worse mental or physical health.

Controlling for Neighborhood Crime rate

Annual data (FOIL for monthly)

- Thefts = sum(robbery + burglary + grand larceny + grand larceny auto)
- Violent crime = sum(murder + rape + felony assault)
- Crime rate = crimes / neighborhood population
- Crime rate last year = weighted average of crime in interview year and prior year e.g., interviewed in March 2008
 (.25 * crime rate in 2008) + (.75 * crime rate in 2007)

Aggregate Crime rate also merged with CHS microdata

Controlling for Neighborhood Characteristics

Derived from Census 2000/2010 and ACS 2009-2013

Poverty - % of people below poverty level among those for whom poverty level is determined

Estimates vary by neighborhood and year:

E.g., Poverty = weighted average of poverty in interview year and prior year e.g., interviewed in March 2008

(.25 * poverty rate in 2008) + (.75 * poverty rate in 2007)

Ordered logit with standard errors adjusted for neighborhood clustering

(1) Health_{i,n,m} = fn(Stops_{n,m(m-12 to m-1)} + Neighborhood_n + Year + X_{i,n} + Pov_{n,m(m-12 to m-1)})

Subscripts: person i, neighborhood n, month m

X, individual-level control variables, include sex, age, married, has kids, educational attainment, employment status.

Pov, neighborhood-level poverty rate

Ordered logit with standard errors adjusted for neighborhood clustering

(1) Health_{i,n,m} = fn(Stops_{n,m(m-12 to m-1)} + Neighborhood_n + Year + X_{i,n} + Pov_{n,m(m-12 to m-1)}) (2) Health_{i,n,m} = fn(Stops_{n,m(m-12 to m-1)} + Neighborhood_n + Year + X_{i,n} + Pov_{n,m(m-12 to m-1)} + Crime_{n,m(m-12 to m-1)})

Subscripts: person i, neighborhood n, month m

X, individual-level control variables, include sex, age, married, has kids, educational attainment, employment status.

Pov, neighborhood-level poverty rate

Ordered logit with standard errors adjusted for neighborhood clustering

(1) Health_{i,n,m} = fn(Stops_{n,m(m-12 to m-1)} + Neighborhood_n + Year + X_{i,n} + Pov_{n,m(m-12 to m-1)}) (2) Health_{i,n,m} = fn(Stops_{n,m(m-12 to m-1)} + Neighborhood_n + Year + X_{i,n} + Pov_{n,m(m-12 to m-1)} + Crime_{n,m(m-12 to m-1)}) (3) Health_{i,n,m} = fn(Stops_{n,m(m+1 to m+12)} + Neighborhood_n + Year + X_{i,n} + Pov_{n,m(m-12 to m-1)}) [Falsification test]

Subscripts: person i, neighborhood n, month m

X, individual-level control variables, include sex, age, married, has kids, educational attainment, employment status.

Pov, neighborhood poverty rate

Ordered logit with standard errors adjusted for neighborhood clustering

(1) Health_{i,n,m} = fn(Stops_{n,m(m-12 to m-1)} + Neighborhood_n + Year + X_{i,n} + Pov_{n,m(m-12 to m-1)}) (2) Health_{i,n,m} = fn(Stops_{n,m(m-12 to m-1)} + Neighborhood_n + Year + X_{i,n} + Pov_{n,m(m-12 to m-1)} + Crime_{n,m(m-12 to m-1)}) (3) Health_{i,n,m} = fn(Stops_{n,m(m-12 to m-1)} + Neighborhood_n + Year + X_{i,n} + Pov_{n,m(m-12 to m-1)}) [Falsification test]

Subscripts: person i, neighborhood n, month m

X, individual-level control variables, include sex, age, race, Hispanic, married, has kids, educational attainment, employment status.

Pov, neighborhood-level poverty rate

RESULTS: Ordered Logit Coefficients on Stops; Predicted values of health outcomes at Low (2004) and High (2011) stop rate Black subsample, then non-Black Sample

Stop Rates associated with Worse Health Outcomes for Black NYC Residents

	Depressed	Nervous	Restless	Hopele	ss All effort	Worthless	Poor SRH
Stop rate	29.6 *	* 27.4 *	* 34.1	**	3 13.7	5.7	21.7 *
prior 12 mos	(2.24)	(2.10)	(2.80)	(1.6	4) (0.88)	(0.25)	(1.96)
N	12901	12913	12910	1290	7 12894	12903	19406

Ordered logit coefficients and (t-statistics) p<.05; ** p<.01 Dependent variables on 5-point scale with higher values indicating worse health All models include neighborhood and year fixed effects, individual-level control variables, neighborhood poverty rate

Black New Yorkers' Mental Health x Low/High Stops

Black New Yorkers' Self-Reported Health x Low/High Stops

YOUNG Black New Yorkers' Mental Health x Low/High Stops

Black Sample Results Persist (Slight Attenuation) w/Controls for Neighborhood Crime

	Depressed		Nervous	Restless		Hopeless	All effort	Worthless	Poor SRH	
Stop rate	28.2	*	24.7	31.9	*	30.2	11.9	3.7	17.7	
prior 12 mos	(2.23)		(1.87)	(2.55)		(1.47)	(0.76)	(0.16)	(1.56)	
Theft rate	21.5		38.6	31.1		43.8	26.7	29.4	37.2	***
prior 12 mos	(1.13)		(1.81)	(1.86)		(1.43)	(1.15)	(1.12)	(3.77)	
N	12901		12913	12910		12907	12894	12903	19406	

Ordered logit coefficients and (t-statistics)

p<.05; ** p<.01

Dependent variables on 5-point scale with higher values indicating worse health All models include neighborhood and year fixed effects, individual-level control variables, and neighborhood poverty

Falsification Test for Black Residents

Results repeated for comparison:

	Depressed	Nervous	Restless	Hopeless	All effort	Worthless	Poor SRH
Stop rate	29.6 *	27.4 *	34.1	** 33	13.7	5.7	21.7 *
prior 12 mos	(2.24)	(2.10)	(2.80)	(1.64)	(0.88)	(0.25)	(1.96)
N	12901	12913	12910	12907	12894	12903	19406

Falsification test:

	Depressed	Nervous	Restless	Hopeless	All effort	Worthless	Poor SRH
Stop rate	-7.0	-6.7	-3.8	-15.5	-6.5	5.4	5.3
next year	(0.48)	(0.71)	(0.41)	(0.91)	(0.61)	(0.36)	(0.40)
N	12901	12913	12910	12907	12894	12903	19406

Ordered logit coefficients and (t-statistics)

p<.05; ** p<.01

Dependent variables on 5-point scale with higher values indicating worse health All models include neighborhood and year fixed effects , individual-level control variables, and neighborhood poverty

Stop Rates associated with Better Health Outcomes for Non-Black NYC Residents

	Depressed		Nervous		Restless	Hopeless	All effort	Worthle	ss	Poor SRH
Stop rate	-38.6	**:	-21.03	*	-18.76	-17.46	-18.84	-4.59	92	-2.615
prior 12 mos	(3.61)		(2.10)		(1.37)	(0.88)	(1.27)	(0.2	8)	(0.37)
Ν	41041		41062		41064	41063	41041	4104	4	61680

Ordered logit coefficients and (t-statistics)

p<.05; ** p<.01

Dependent variables on 5-point scale with higher values indicating worse health

All models include neighborhood and year fixed effects , individual-level control variables, and neighborhood poverty

Non-Black New Yorkers' Mental Health x Low/High Stops

Non-Black Sample Results Persist (Some Attenuation) w/Controls for Neighborhood Crime

	Depressed		Nervous	Restless	Hopeless	All effort	Worthless	Poor SRH	
Stop rate	-38.7	**:	- 19.6	-18.9	-15.8	-20.3	-6.0	-5.0	
prior 12 mos	(3.55)		(1.95)	(1.37)	(0.80)	(1.40)	(0.37)	(0.65)	
Theft rate	0.5		-5.9	0.4	-7.9	5.9	6.6	10.0	*
prior 12 mos	(0.08)		(1.50)	(0.08)	(1.43)	(1.61)	(1.37)	(2.57)	
N	41041		41062	41064	41063	41041	41044	61680	

Ordered logit coefficients and (t-statistics)

p<.05; ** p<.01

Dependent variables on 5-point scale with higher values indicating worse health

All models include neighborhood and year fixed effects , individual-level control variables, and neighborhood poverty

Falsification Test for non-Black NYC Residents

Results repeated for comparison:

Depressed			Nervous		Restless	Hopeless	All effort	Worthless	Poor SRH	
Stop rate	-38.6	**:	-21.03	*	-18.76	-17.46	-18.84	-4.592	-2.615	
prior 12 mos	(3.61)		(2.10)		(1.37)	(0.88)	(1.27)	(0.28)	(0.37)	
N	41041		41062		41064	41063	41041	41044	61680	

Falsification test:

Depressed		Nervous	Restless	Hopeless	All effort	Worthless		Poor SRH
Stop rate	10.6	-1.9	10.5	-5.6	-0.8	14.8	*	7.8
next year	(1.62)	(0.17)	(1.05)	(0.68)	(0.11)	(2.04)		(1.19)
Ν	48074	48100	48101	48096	48060	48071		68767

Ordered logit coefficients and (t-statistics)

p<.05; ** p<.01

Dependent variables on 5-point scale with higher values indicating worse health

All models include neighborhood and year fixed effects , individual-level control variables, and neighborhood poverty

Limits and Cautions

Observational data

Community Health Survey underrepresents population at highest risk of being stopped and frisked

SQF correlated with other policing variables

Summary and Implications

NYC's SQF policing in the 2000s: pervasive, low yield, uncertain effects on crime, ruled unconstitutional

Negative effects on the mental health of African American New Yorkers (likely underestimates)

Positive effects on mental health of non-Black New Yorkers

Need for more data reporting and research on collateral damage

Interrelated Policing Practices

"Broken Windows" ->

Zero tolerance Enforcement of quality of life crimes

► "Hot Spot Policing" \rightarrow

Statistical analysis of crime data, strategic targeting of police resources

► "Proactive policing" → Stop, Question, and Frisk What we Measure