

Bodily Harm: The Health Consequences of Policing in the United States

Abhery Das,* Michael Esposito** & Hedwig Lee***

INTRODUCTION

In the United States, more than fifty million people have direct contact with police every year.¹ Types of direct contact include pedestrian or traffic stops, traffic accidents, arrests, or resident-initiated events.² During these police encounters, approximately one million individuals experience use of force.³ Annually, an estimated 250,000 individuals are injured in interactions with police officers and about 85,000 suffer a non-fatal injury requiring hospital treatment.⁴ Law enforcement kills approximately 1,000 individuals each year.⁵ These are considered to be conservative estimates.⁶

While there are clear linkages between police use of force, civilian bodily harm, and even premature death, an emerging body of research suggests that the health consequences of policing are far more expansive. In this review, we summarize the empirical evidence on the varied connections between policing and population health in the United States. We move beyond describing direct linkages between policing practices and immediate bodily harm to considering the ways in which multiple forms of police contact can harm families and communities. Additionally, we examine the durable and potentially long-run consequences of police contact for individuals' mental and physical well-being.

DOI: <https://doi.org/10.15779/Z38804XM28>

Copyright © 2024 Abhery Das, Michael Esposito, and Hedwig Lee.

* Health Policy & Administration, School of Public Health, University of Illinois Chicago

** University of Minnesota Department of Sociology

*** Duke University Department of Sociology

1. SUSANNAH N. TAPP & ELIZABETH J. DAVIS, BUREAU OF JUST. STAT., U.S. DEP'T OF JUST., CONTACTS BETWEEN POLICE AND THE PUBLIC, 2020, at 1 (2022).

2. *Id.*

3. *Id.*

4. *U.S. Data on Police Shootings and Violence*, L. ENF'T EPIDEMIOLOGY PROJECT, UNIV. ILL. AT CHI., <https://policeepi.uic.edu/u-s-data-on-police-shootings-and-violence/> [<https://perma.cc/SBT6-YHMM>].

5. MAPPING POLICE VIOLENCE, <https://mappingpoliceviolence.org/> [<https://perma.cc/NH8E-8RJV>]; Frank Edwards, Michael H. Esposito, & Hedwig Lee, *Risk of Police-Involved Death by Race/Ethnicity and Place, United States, 2012–2018*, 108 AM. J. PUB. HEALTH 1241, 1243 (2018).

6. Edwards et al., *supra* note 5, at 1243; MAPPING POLICE VIOLENCE, *supra* note 5.

Finally, we consider the racial and ethnic disproportionality in contact with police and its consequences for health disparities. While still an emerging area of scholarship, a growing body of research suggests that police contact, in its multiple forms, is linked to adverse physical and mental health consequences. These consequences affect not only the individuals who experience direct contact with law enforcement but also their families and communities.

I. INJURY AND DEATH

The most direct—and oft-discussed—pathway connecting law enforcement to civilian harm is physical violence. This is typically due to excessive use of force that results in civilian injury and sometimes death. Indeed, relative to civilians in comparable countries, U.S. residents of all races and ethnicities face an exceptionally high risk of being killed by law enforcement.⁷ Police are responsible for an estimated eight percent of all homicides of adult males in the United States⁸ and often kill more civilians over the course of months than police in other comparable countries do over the course of decades.⁹ Moreover, there are also considerable racial and ethnic disparities in deaths at the hands of police: about one in 1,000 Black men and boys are estimated to be killed by police sometime over the course of their life, compared to one in 2,000 Latinx or American Indian men/boys, one in 2,500 White men/boys, and one in 5,000 Asian men/boys.¹⁰ While the risk of being killed by the police is significantly lower among women and girls, there are also significant racial and ethnic disparities within this population.¹¹ For instance, Black and American Indian/Alaska Native women and girls face approximately a 1.4 and 1.5 times higher risk of being killed by police, respectively, than their White counterparts.¹²

Large racial and ethnic disparities also exist in non-fatal injuries resulting from police use of force. During police-initiated contact, for instance, both Black and Latinx men are nearly twice as likely to experience either force or threat of force.¹³ Black women also experience more frequent use of force than their

7. See Paul J. Hirschfield, *Exceptionally Lethal: American Police Killings in a Comparative Perspective*, 6 ANN. REV. CRIMINOLOGY 471, 477 (2023).

8. Edwards et al., *supra* note 5, at 1243.

9. Jamiles Lartey, *By the Numbers: US Police Kill More in Days than Other Countries Do in Years*, GUARDIAN (June 9, 2015), <https://www.theguardian.com/us-news/2015/jun/09/the-counted-police-killings-us-vs-other-countries> [<https://perma.cc/V4BZ-WDCU>]; *The Counted: People Killed by Police in the United States*, GUARDIAN, <https://www.theguardian.com/us-news/ng-interactive/2015/jun/01/the-counted-police-killings-us-database> [<https://perma.cc/V4BZ-WDCU>].

10. Frank Edwards, Hedwig Lee & Michael Esposito, *Risk of Being Killed by Police Use of Force in the United States by Age, Race–Ethnicity, and Sex*, 116 PROC. NAT’L ACAD. SCI. 16793, 16794 (2019).

11. *Id.* at 16795–96.

12. *Id.*

13. TAPP & DAVIS, *supra* note 1, at 5.

Latinx or White counterparts.¹⁴ Relatedly, during a police encounter, Black civilians are almost five times more likely than non-Hispanic White civilians to suffer an injury that requires medical care at a hospital.¹⁵ This is likely the lower bound of estimates given that approximately thirty-seven percent of individuals injured by the police seek medical care following the event.¹⁶ However, among the non-fatal injuries that are reported, many comprise serious injuries from blows, manhandling, firearms, or strikes from blunt objects by police.¹⁷

Based on additional demographic information from individuals who received emergency health services following a non-fatal, police-involved injury, we know that, in addition to being disproportionately Black, Latinx, and male, they are also young and socioeconomically disadvantaged.¹⁸ For instance, approximately thirty-five percent of injuries from law enforcement in Chicago concentrate in young adults aged 25–34 years old.¹⁹ Information on the housing status of individuals injured by the police shows that approximately 5.5% were injured in abandoned housing and 1.5% were homeless.²⁰ Lastly, the majority of individuals injured by the police paid for emergency health services following the injury using Medicaid (49.8%).²¹ Although there are burgeoning efforts to collect demographic information in different urban localities,²² data on law enforcement-related injuries are still very limited because they lack information on socioeconomic factors, costs, geographic location, and healthcare resources used for treatment.²³

Collecting data that describe in detail all civilian-police interactions, and not only encounters ending in injury or death, is a critical step towards better understanding how police interactions shape peoples' well-being. For example, with more data, we could systematically analyze the factors that increase risk of injury or death during an interaction with law enforcement. Compilation of these detailed data systems will necessitate considerable state buy-in, including but not

14. See *Policing Women: Race and Gender Disparities in Police Stops, Searches, and Use of Force*, PRISON POL'Y INITIATIVE (May 14, 2019), <https://www.prisonpolicy.org/blog/2019/05/14/policingwomen/> [<https://perma.cc/N8VH-LKLH>].

15. See Justin M. Feldman, Jarvis T. Chen, Pamela D. Waterman & Nancy Krieger, *Temporal Trends and Racial/Ethnic Inequalities for Legal Intervention Injuries Treated in Emergency Departments: US Men and Women Age 15–34, 2001–2014*, 93 J. URB. HEALTH 797, 806 (2016).

16. Alfreda Holloway-Beth, Rachel Rubin, Kiran Joshi, Linda Rae Murray & Lee Friedman, *A 5-Year Retrospective Analysis of Legal Intervention Injuries and Mortality in Illinois*, 49 INT'L J. HEALTH SERV. 606, 607 (2019).

17. *Id.* at 612.

18. See *id.* at 607.

19. *Id.*

20. *Id.*

21. *Id.*

22. Press Release, ACLU of Washington, D.C., *ACLU Analysis of D.C. Stop-and-Frisk Data Reveals Ineffective Policing, Troubling Racial Disparities* (June 16, 2020), <https://www.aclu.org/press-releases/aclu-analysis-dc-stop-and-frisk-data-reveals-ineffective-policing-troubling-racial> [<https://perma.cc/2RUP-TGQU>]; *AB 953: The Racial and Identity Profiling Act of 2015*, CAL. DEP'T OF JUST., <https://oag.ca.gov/ab953> [<https://perma.cc/5XUS-A3F5>].

23. See *supra* note 22.

limited to laws that require public reporting of most police activity,²⁴ as well as universal data reporting standards to ensure the quality and consistency of data sourced across agencies. Currently, police data sources undercount use of force by and injuries from law enforcement.²⁵ They also do not provide granularity for local or agency-specific trends.²⁶ To overcome these issues, the Federal Bureau of Investigation (FBI) created a national police use of force dataset in 2019. However, voluntary participation in the dataset only allowed for information on fifty-five percent of officers and forty-one percent of agencies in the United States.²⁷ Without mandated participation from the government, progress in tracing connections between policing and well-being will continue to be slow.

The harms that can result from direct encounters with law enforcement include other forms of injury as well, such as sexual assault, psychological violence, and neglect. Approximately 18.6% of individuals report psychological violence from police, such as being threatened, intimidated, stopped without cause, or being called discriminatory slurs. Similarly, 18.8% report neglect from the police, such as receiving no response when asking for assistance. A smaller proportion of individuals (2.8%) report sexual violence, such as inappropriate sexual conduct or public strip searches.²⁸ Comprehensive data describing such interactions with police, however, are generally restricted, incomplete, or limited.²⁹

II.

MENTAL AND PHYSICAL HEALTH

While physical injuries or death resulting from use of force provide straightforward links between policing and population well-being, police contact can also undermine individuals' long-term mental and physical functioning well after an interaction with law enforcement occurs. And here, it's important to note that "police contact" encompasses a broad package of exposures. Prior research

24. See *A Closer Look at Stop-and-Frisk in NYC*, NYCLU, <https://www.nyclu.org/en/closer-look-stop-and-frisk-nyc> [https://perma.cc/BMZ4-A99S]; CAL. DEP'T OF JUST., *supra* note 22.

25. See GBD 2019 Police Violence US Subnational Collaborators, *Fatal Police Violence by Race and State in the USA, 1980–2019: A Network Meta-Regression*, 398 LANCET 1239, 1243 (2021).

26. See Erika Harrell, Rachel Morgan, Alexandra Thompson, Jennifer Truman, Susannah Tapp & Emilie Coen, *National Crime Victimization Survey (NCVS)*, BUREAU OF JUST. STAT., <https://bjs.ojp.gov/data-collection/ncvs> [https://perma.cc/B3YC-9Y5J].

27. Tom Jackman, *FBI May Shut Down Police Use-of-Force Database Due to Lack of Police Participation*, WASH. POST (Dec. 9, 2021), <https://www.washingtonpost.com/crime-law/2021/12/09/fbi-police-shooting-data/> [https://perma.cc/4HLG-YMJ8].

28. J.E. DeVlyder, H.Y. Oh, B. Nam, T.L. Sharpe, M. Lehmann & B.G. Link, *Prevalence, Demographic Variation and Psychological Correlates of Exposure to Police Victimization in Four US Cities*, 26 EPIDEMIOLOGY & PSYCHIATRIC SCIS. 466, 468 (2016) [hereinafter DeVlyder et al., *Exposure to Police Victimization*].

29. Evan L. Eschliman, Brie A. Garner, Tiffany Le, Priyanka Srinivasan & Robert E. Fullilove, *Police Transparency Is a Public Health Issue, Too*, HEALTH AFFS. FOREFRONT (June 30, 2020), <https://www.healthaffairs.org/content/forefront/police-transparency-public-health-issue-too> [https://perma.cc/2Z5M-F49N].

has drawn connections between people's long-term welfare and everything from voluntary encounters with law enforcement to indirect and community-level policing. Below, we summarize the health impacts of various forms of direct and indirect police contact at both the individual and community levels.

A. Individual-Level Harms

People who have experienced violence in encounters with law enforcement have been shown to display elevated levels of psychological distress.³⁰ These include clinically valid indicators for post-traumatic stress disorder (PTSD), anxiety, and depression among adults and adolescents.³¹ Racial and ethnic minoritized groups experience greater adverse mental health following police contact when compared to their White counterparts.³² Adults exposed to law enforcement violence show an increased risk for psychotic episodes, suicidal

30. See Amanda Geller, Jeffrey Fagan, Tom Tyler & Bruce G. Link, *Aggressive Policing and the Mental Health of Young Urban Men*, 104 AM. J. PUB. HEALTH 2321, 2323 (2014); Kristin Turney, Amanda Geller & Sarah K. Cowan, *Disclosure Among Youth Stopped by the Police: Repercussions for Mental Health*, 2 SSM - MENTAL HEALTH 100089, at 3 (2022) [hereinafter Turney et al., *Disclosure Among Youth Stopped*]; Kristin Turney, Alexander Testa & Dylan B. Jackson, *Police Stops and the Erosion of Positive Future Orientation Among Urban Adolescents*, 71 J. ADOLESCENT HEALTH 180, 182 (2022) [hereinafter Turney et al., *Erosion of Positive Future Orientation*]; Jaquelyn L. Jahn, Madina Agenor, Jarvis T. Chen & Nancy Krieger, *Frequent Police Stops, Parental Incarceration and Mental Health: Results Among US Non-Hispanic Black and White Adolescent Girls and Boys*, 75 J. EPIDEMIOLOGY & CMTY. HEALTH 658, 659 (2020); Erinn C. Bacchus, Alexa B. D'Angelo & Christian Grov, *Experiences of Police-Related Stress Among a U.S. National Cohort of Gay and Bisexual Men*, 72 AM. J. CMTY. PSYCH. 89, 93 (2023); J.L. Hirschtick, S.M. Homan, G. Rauscher, L.H. Rubin, T.P. Johnson, C.E. Peterson & V.W. Persky, *Persistent and Aggressive Interactions with the Police: Potential Mental Health Implications*, 29 EPIDEMIOLOGY & PSYCHIATRIC SCI., at 3 (2019); Sirry Alang, Cortney VanHook, Jessica Judson, Adalia Ikiroma & Paris B. Adkins-Jackson, *Police Brutality, Heightened Vigilance, and the Mental Health of Black Adults*, 12 PSYCH. VIOLENCE 211, 214 (2022); Amber J. Landers, David Rollock, Charity B. Rolfes & Demietrice L. Moore, *Police Contacts and Stress Among African American College Students*, 81 AM. J. ORTHOPSYCHIATRY 72, 75 (2011); Jolaade Kalinowski, Ryan D. Talbert, Brandy Woods, Aisha Langford, Haile Cole, Veronica Barcelona, Cindy Crusto & Jacquelyn Y. Taylor, *Police Discrimination and Depressive Symptoms in African American Women: The Intergenerational Impact of Genetic and Psychological Factors on Blood Pressure Study*, 6 HEALTH EQUITY 527, 529 (2022); Molly Remch, Dustin T. Duncan, Amanda Geller, Rodman Turpin, Typhanye Dyer, Joy D. Scheidell, Charles M. Cleland, Jay S. Kaufman, Russell Brewer, Christopher Hucks-Ortiz, Willem van der Mei, Kenneth H. Mayer & Maria R. Khan, *Police Harassment and Psychosocial Vulnerability, Distress, and Depressive Symptoms Among Black Men Who Have Sex with Men in the U.S.: Longitudinal Analysis of HPTN 061*, 13 SSM - POPULATION HEALTH 100753, at 3 (2021); Robert O. Motley, Jr., Yu-Chih Chen, Yasir Masood, Alyssa Finner & Sean Joe, *Prevalence and Correlates of Police Contact Anxiety Among Male and Female Black Emerging Adults in St. Louis, Missouri*, 47 SOC. WORK RSCH. 50, 55 (2023); Juan Del Toro, Tracey Lloyd, Kim S. Buchanan, Summer Joi Robins, Lucy Zhang Bencharit, Meredith Gamson Smiedt, Kavita S. Reddy, Enrique Rodriguez Pouget, Erin M. Kerrison & Phillip Atiba Goff, *The Criminogenic and Psychological Effects of Police Stops on Adolescent Black and Latino Boys*, 116 PROC. ACAD. SCI. 8261, 8265 (2019).

31. See Del Toro et al., *supra* note 30, at 8265.

32. See Bacchus et al., *supra* note 30, at 5; Jahn et al., *supra* note 30, at 659; Alang et al., *supra* note 30, at 214; Kalinowski et al., *supra* note 30, at 529; Turney et al., *supra* note 30, at 3; see also Jonathan S. Gaines, *Social Correlates of Psychological Distress Among Adult African American Males*, 37 J. BLACK STUD. 827, 846 (2007).

ideation, and suicide attempts relative to those who have not been exposed.³³ Psychotic experiences and suicide attempts also follow policing experiences that include physical violence, sexual violence, and neglectful behavior.³⁴ Moreover, the mental health consequences of police contact do not appear to be conditional on experiencing physical injury or arrest.³⁵ Indeed, research suggests that the stress of even relatively nonviolent, short-lived interactions with police, such as pedestrian stop-and-frisk or *Terry* stop encounters, can produce greater psychological distress, anxiety, depression, and trauma.³⁶

In addition to these durable psychological harms, direct, intrusive contact with police might also have persistent physiological consequences for individuals. Police altercations have been shown to result in greater hypervigilance—the propensity to constantly assess for potential threats and exhibit a state of heightened alertness—as well as induce increases in blood pressure.³⁷ Stress-laden police contact may also result in the development of abnormalities in the hypothalamic-pituitary-adrenal axis and the subsequent release of cortisol or increases in inflammatory responses.³⁸ Chronic

33. Jordan E. DeVlyder, Jodi J. Frey, Courtney D. Cogburn, Holly C. Wilcox, Tanya L. Sharpe, Hans Y. Oh, Boyoung Nam & Bruce G. Link, *Elevated Prevalence of Suicide Attempts Among Victims of Police Violence in the USA*, 94 J. URB. HEALTH 629, 631 (2017) [hereinafter DeVlyder et al., *Elevated Suicide Attempts*]; DeVlyder et al., *Exposure to Police Victimisation*, *supra* note 28, at 468; Jordan E. DeVlyder, Hyun-Jin Jun, Lisa Fedina, Daniel Coleman, Deidre Anglin, Courtney Cogburn, Bruce Link & Richard P. Barth, *Association of Exposure to Police Violence with Prevalence of Mental Health Symptoms Among Urban Residents in the United States*, 1 JAMA NETWORK OPEN e184945, at 5 (2018) [hereinafter DeVlyder et al., *Prevalence of Mental Health Symptoms*].

34. DeVlyder et al., *Exposure to Police Victimisation*, *supra* note 28, at 468.

35. See Turney et al., *supra* note 30, at 3; Turney et al., *supra* note 30, at 3; Gaines, *supra* note 32, at 846; Motley et al., *supra* note 30, at 55; Sophie I. Leib, Emma C. Faith, Samuel R. Vincent & Steven A. Miller, *Police Interactions, Perceived Respect, and Longitudinal Changes in Depression in African Americans*, 40 J. SOC. & CLINICAL PSYCH. 27, 34 (2021); Adam C. Alexander, Joseph J.C. Waring, Bishop Noble, David Bradley, Oluwakemi Olurotimi, Jack Fronheiser, Munjireen Sifat, Sarah J. Ehlke, Laili Kharazi Boozary, Julia McQuoid & Darla E. Kendzor, *Perceptions of Mental Health and Exploring the Role of Social Activism Among African Americans Exposed to Media Coverage of Police Brutality and Protests*, 10 J. RACIAL & ETHNIC HEALTH DISPARITIES 1403, 1406 (2023); Alang et al., *supra* note 30, at 214; Jonathan M. Cox, Anaïs Toussaint, Jacqueline Woerner, Andrea Smith & Angela M. Haeny, *Coping While Black: Comparing Coping Strategies Across COVID-19 and the Killing of Black People*, J. RACIAL & ETHNIC HEALTH DISPARITIES, at 5 (2023); Adam D. Fine, Juan Del Toro & Carlena Orosco, *Consequences of Fearing Police: Associations with Youths' Mental Health and Felt Obligation to Obey Both the Law and School Rules*, 83 J. CRIM. JUST. 101934, at 4 (2022).

36. See Fine et al., *supra* note 35, at 4; Turney et al., *Disclosure Among Youth Stopped*, *supra* note 30, at 3; Turney et al., *Erosion of Positive Future Orientation*, *supra* note 30, at 182.

37. Nichole A. Smith, Dexter R. Voisin, Joyce P. Yang & Elizabeth L. Tung, *Keeping Your Guard Up: Hypervigilance Among Urban Residents Affected by Community and Police Violence*, 38 HEALTH AFFS. 1662, 1665 (2019); Matthew Kimble, Mariam Boxwala, Whitney Bean, Kristin Maletsky, Jessica Halper, Kaleigh Spollen & Kevin Fleming, *The Impact of Hypervigilance: Evidence for a Forward Feedback Loop*, 28 J. ANXIETY DISORDERS 241, 246 (2014); Jennifer Ahern, Ellicott C. Matthay, Dana E. Goin, Kriszta Farkas & Kara E. Rudolph, *Acute Changes in Community Violence and Increases in Hospital Visits and Deaths from Stress-Responsive Diseases*, 29 EPIDEMIOLOGY 684, 689 (2018); Michelle Billies, *Surveillance Threat as Embodied Psychological Dilemma*, 21 PEACE & CONFLICT: J. PEACE PSYCH. 168, 178 (2015).

38. Ahern et al., *supra* note 37, at 689.

perseveration and rumination after experiencing intrusive contact with law enforcement, as well as the anticipation of similar contact in the future, may serve as unique social stressors that increase the risk of developing several chronic conditions.³⁹ These conditions include, but are not limited to, diabetes, hypertension, or stroke.⁴⁰ Although research on the long-term physiological consequences of police contact is generally new and limited to overall physical health status, recent studies have identified associations between interactions with law enforcement and biomarkers, such as telomere length.⁴¹ This suggests that policing may biologically age or “get under the skin” of the people it affects and engender enduring physical harm.⁴² Research also shows that recovery from physical conditions or injuries becomes more difficult for individuals who have experienced consistent police discrimination.⁴³

Intrusive police encounters and the resulting hyperawareness and distress have also been shown to contribute to deficits in sleep among youth and adults in the United States. Specifically, adverse experiences with the police increase the frequency with which individuals have trouble sleeping and reduce the number of hours they are able to sleep.⁴⁴ Insufficient sleep may further exacerbate chronic conditions, as it has previously been linked to obesity and depressive symptoms, and it also coincides with increased participation in risky behaviors, such as drinking and driving. For youth populations, sleep deprivation also impedes significant cognitive development.⁴⁵

The negative impact of police encounters on individuals’ long-term health manifests in other contexts as well. For instance, recent research has demonstrated a link between individuals’ prior experiences with police and their

39. Smith et al., *supra* note 37, at 1665.

40. Ryan D. Talbert, *Lethal Police Encounters and Cardiovascular Health Among Black Americans*, 10 J. RACIAL & ETHNIC HEALTH DISPARITIES 1756, 1760 (2023); Alexa A. Freedman, Andrew V. Papachristos, Britney P. Smart, Lauren S. Keenan-Devlin, Sadiya S. Khan, Ann Borders, Kiarri N. Kershaw & Gregory E. Miller, *Complaints About Excessive Use of Police Force in Women’s Neighborhoods and Subsequent Perinatal and Cardiovascular Health*, 8 SCI. ADVANCES eabl5417, at 2 (2022).

41. Telomeres are genetic sequences at the ends of chromosomes and represent cellular aging from processes of oxidation and inflammation that result in erosion and deterioration. Telomere length is used in social science research as an indicator of biological aging from stress and the social environment. Telomere lengths shorten at an accelerated rate when individuals are exposed to significant stress.

42. Michael J. McFarland, John Taylor, Cheryl A.S. McFarland & Katherine L. Friedman, *Perceived Unfair Treatment by Police, Race, and Telomere Length: A Nashville Community-Based Sample of Black and White Men*, 59 J. HEALTH & SOC. BEHAV. 585, 596 (2018).

43. Timothy J. Geier, Sydney C. Timmer-Murillo, Amber M. Brandolino, Isela Piña, Farah Harb & Terri A. deRoon-Cassini, *History of Racial Discrimination by Police Contributes to Worse Physical and Emotional Quality of Life in Black Americans After Traumatic Injury*, J. RACIAL & ETHNIC HEALTH DISPARITIES, at 4 (2023).

44. Dylan B. Jackson, Alexander Testa, Michael G. Vaughn & Daniel C. Semenza, *Police Stops and Sleep Behaviors Among At-Risk Youth*, 6 SLEEP HEALTH 435, 437 (2020); Alexander Testa, Dylan B. Jackson & Daniel Semenza, *Unfair Police Treatment and Sleep Problems Among a National Sample of Adults*, 30 J. SLEEP RSCH. e13353, at 2 (2021).

45. Jackson et al., *supra* note 44, at 437.

subsequent mistrust of medical institutions, such as hospitals. Indeed, people who have had negative past experiences with police—even in cases where that contact was perceived to be necessary—express higher levels of medical mistrust than those lacking this exposure.⁴⁶ This type of harm perpetuated by law enforcement, while less apparent than the harms described above, may prove to be particularly destructive for health over a person’s life. For instance, greater generalized mistrust in medical institutions can lead individuals to forgo seeking regular treatment from health care facilities, which, in turn, can lead to development of several otherwise preventable health conditions. Research on similar distal mechanisms is needed to fully understand the variety of potential ways that police contact may impact individuals’ health as they age.

B. Community-Level and Vicarious Harms

Beyond direct, one-to-one civilian encounters with police officers, “police contact” might also be defined as interactions between civilians and law enforcement that are indirect or occur at higher levels of spatial aggregation, such as within neighborhoods or counties. These alternative forms of contact carry with them several significant population health consequences.

As an example of this form of contact, consider so-called order-maintenance policing strategies, which typically involve the persistent surveillance of communities and routine engagement with civilians in a concentrated area in order to control crime and deviance.⁴⁷ Under these regimes, police generate indirect forms of contact with civilians—i.e., they create a broad, hypervigilant neighborhood climate where residents anticipate being unfairly and unnecessarily criminalized when leaving their homes.⁴⁸ The additional stress stemming from the chronic anticipation of possible unfair treatment produces additional health harms: residents of heavily surveilled neighborhoods, for instance, have been shown to experience elevated levels of psychological distress and worse outcomes on several long-term and chronic physical health conditions.⁴⁹

46. Sirry Alang, Donna D. McAlpine & Rachel Hardeman, *Police Brutality and Mistrust in Medical Institutions*, 7 J. RACIAL & ETHNIC HEALTH DISPARITIES 760, 764 (2020).

47. *Zero Tolerance and Aggressive Policing (and Why to Avoid It) in Depth*, RAND, <https://www.rand.org/pubs/tools/TL261/better-policing-toolkit/all-strategies/zero-tolerance-in-depth.html> [<https://perma.cc/FRU5-C3LD>].

48. See Rod K. Brunson, “Police Don’t Like Black People”: African-American Young Men’s Accumulated Police Experiences, 6 CRIMINOLOGY & PUB. POL. 71, 75 (2007); Rod K. Brunson & Jody Miller, *Young Black Men and Urban Policing in the United States*, 46 BRITISH J. CRIMINOLOGY 613, 622 (2006); Patrick J. Carr, Laura Napolitano & Jessica Keating, *We Never Call the Cops and Here Is Why: A Qualitative Examination of Legal Cynicism in Three Philadelphia Neighborhoods*, 45 CRIMINOLOGY 445, 452 (2007).

49. See Abigail A. Sewell & Kevin A. Jefferson, *Collateral Damage: The Health Effects of Invasive Police Encounters in New York City*, 93 J. URB. HEALTH 542, 546 (2016); Alyasah Ali Sewell, Kevin A. Jefferson & Hedwig Lee, *Living Under Surveillance: Gender, Psychological Distress, and Stop-Question-and-Frisk Policing in New York City*, 159 SOC. SCI. & MED. 1, 6 (2016); Abhery Das & Tim A. Bruckner, *New York City’s Stop, Question, and Frisk Policy and Psychiatric Emergencies*

Day-to-day experiences of police stops and surveillance may also practically prohibit or constrain individuals' ability to engage in healthy behaviors, such as physical activity, that prevent the incidence of poor health. For example, a robust body of research has examined the ways in which daily police surveillance and stops of Black and Latinx young men impact their perceptions of safety and the public places they feel safe to navigate.⁵⁰ In other words, constant surveillance by the police may keep targeted groups from walking outside to engage in otherwise productive, healthy behavior. These expectations of surveillance and unfair criminalization spurred by police extend to other institutions.⁵¹ Consequently, residents of communities with high levels of aggressive policing may also forgo health care utilization, even in moments of acute need, based on the real or perceived legal ramifications of seeking care that would initiate contact with police.⁵²

Similar "secondhand" or "spillover" effects of police contact can be seen in so-called vicarious exposures. This type of police contact is where a person does not experience direct contact with officers but instead witnesses or experiences violent police engagement with another civilian, a family member, or a friend.⁵³ Vicarious contact with police and its associated health harms are experienced on an individual level, as well as area-level exposure within neighborhoods or counties.⁵⁴ More localized examples include the stopping of

Among Black Americans, 100 J. URB. HEALTH 255, 258 (2023); Jaquelyn L. Jahn, Maeve Wallace, Katherine P. Theall & Rachel R. Hardeman, *Neighborhood Proactive Policing and Racial Inequities in Preterm Birth in New Orleans, 2018–2019*, 113 AM. J. PUB. HEALTH 21, 23 (2023).

50. See ELIJAH ANDERSON, CODE OF THE STREET: DECENCY, VIOLENCE, AND THE MORAL LIFE OF THE INNER CITY 35 (2000); Amanda Geller & Jeffrey Fagan, *Police Contact and the Legal Socialization of Urban Teens*, 5 RUSSEL SAGE FOUND. J. SOC. SCI. 26, 31 (2019); Brunson, *supra* note 48, at 75; Brunson & Miller, *supra* note 48, at 622; Mark T. Berg, Eric A. Stewart, Johnathan Intravia, Patricia Y. Warren & Ronald L. Simons, *Cynical Streets: Neighborhood Social Processes and Perceptions of Criminal Injustice*, 54 CRIMINOLOGY 520, 526 (2016); Carr et al., *supra* note 48, at 452.

51. Erin M. Kerrison & Alyasah A. Sewell, *Negative Illness Feedbacks: High-Frisk Policing Reduces Civilian Reliance on ED Services*, 55 HEALTH SERV. RSCH. 787, 792 (2020); Sarah Brayne, *Surveillance and System Avoidance: Criminal Justice Contact and Institutional Attachment*, 79 AM. SOCIO. REV. 367, 375 (2014).

52. Brayne, *supra* note 51, at 375.

53. See Dylan B. Jackson, Alexander Testa, Daniel C. Semenza & Rebecca L. Fix, *Youth Mental Well-Being Following Witnessed Police Stops*, 99 J. URB. HEALTH 783, 787 (2022); Dylan B. Jackson & Kristin Turney, *Sleep Problems Among Mothers of Youth Stopped by the Police*, 98 J. URB. HEALTH 163, 166 (2021); Kristin Turney, *The Relationship Between Youth Police Stops and Depression Among Fathers*, 100 J. URB. HEALTH 269, 272 (2023); Juan Del Toro, Dylan B. Jackson, Alexander Testa & Ming-Te Wang, *The Spillover Effects of Classmates' Police Intrusion on Adolescents' School-Based Defiant Behaviors: The Mediating Role of Institutional Trust*, 78 AM. PSYCH. 941, 945 (2023).

54. See Ilias Kyriopoulos, Sotiris Vandoros & Ichiro Kawachi, *Police Killings and Suicide Among Black Americans*, 305 SOC. SCI. & MED. 114964, at 2 (2022); Abhery Das, Parvati Singh, Anju K. Kulkarni & Tim A. Bruckner, *Emergency Department Visits for Depression Following Police Killings of Unarmed African Americans*, 269 SOC. SCI. & MED. 113561, at 3 (2021); Jacob Bor, Atheendar S. Venkataramani, David R. Williams & Alexander C. Tsai, *Police Killings and Their Spillover Effects on the Mental Health of Black Americans: A Population-Based, Quasi-Experimental Study*, 392 LANCET 302, 306 (2018); David S. Curtis, Tessa Washburn, Hedwig Lee, Ken R. Smith, Jaewhan Kim, Connor D. Martz, Michael R. Kramer & David H. Chae, *Highly Public Anti-Black*

individuals within a person's community, and more national examples include highly publicized killings of civilians by police that occur far from where a person lives. Both produce acute and persistent health harms.⁵⁵

Various levels of spatial aggregation (e.g., neighborhoods, counties, states, census divisions) with heightened police stops and police killings of unarmed Black Americans have produced detrimental impacts on the mental health and psychiatric needs of individuals.⁵⁶ Overpolicing by way of police stops, frisks, and use of force within urban neighborhoods and cities has resulted in greater anxiety symptoms and psychiatric emergencies among residents of those areas.⁵⁷ Additionally, killings of unarmed Black civilians by police have corresponded with greater emergency department visits related to depression and suicides within Black populations at the county and regional levels, respectively.⁵⁸ This brings attention to the far-reaching nature of such acute exposures.⁵⁹ Urban neighborhoods with excessive policing also have a higher prevalence of poor birth outcomes, such as preterm birth and small-for-gestational-age measures.⁶⁰ This suggests that overpolicing may have intergenerational consequences by placing additional stress on mothers, which subsequently transfers to their infants. Residents of overly surveilled neighborhoods are also more likely to exhibit poor health behaviors and physical health conditions, such as smoking cigarettes, physical inactivity, diabetes, increased Body Mass Index (BMI), and asthma.⁶¹

Research finds significant negative mental and physical health consequences for the family members and friends of those who have had intrusive police contact.⁶² For instance, mothers and fathers of adolescents who experience police stops have increased rates of depression and anxiety.⁶³ Mothers also experience worse overall health and encounter anxiety-related

Violence Is Associated with Poor Mental Health Days for Black Americans, 118 PROC. ACAD. SCI. e2019624118, at 2 (2021); Johannes C. Eichstaedt, Garrick T. Sherman, Salvatore Giorgi, Steven O. Roberts, Megan E. Reynolds, Lyle H. Ungar & Sharath Chandra Guntuku, *The Emotional and Mental Health Impact of the Murder of George Floyd on the US Population*, 118 PROC. ACAD. SCI. e2109139118, at 2 (2021).

55. See Sewell et al., *supra* note 49, at 6; Eichstaedt et al. *supra* note 54, at 2.

56. Bor et al., *supra* note 54, at 306; Das et al., *supra* note 54, at 3.

57. See Sewell et al., *supra* note 49, at 6 (2016); Das & Bruckner, *supra* note 49, at 258 (2023); Katherine P. Theall, Samantha Francois, Caryn N. Bell, Andrew Anderson, David Chae & Thomas A. LaVeist, *Neighborhood Police Encounters, Health, and Violence in a Southern City*, 41 HEALTH AFFS. 228, 231 (2022).

58. See Das et al., *supra* note 54, at 3; Kyriopoulos et al., *supra* note 54, at 2.

59. See Kyriopoulos et al., *supra* note 54, at 2.

60. See Freedman et al., *supra* note 40, at 2; Jahn et al., *supra* note 49, at 23.

61. See Sewell & Jefferson, *supra* note 49, at 546; Jahn et al., *supra* note 49, at 23; Theall et al., *supra* note 57, at 231.

62. See Jackson & Turney, *supra* note 53, at 166; Del Toro et al., *supra* note 53, at 948; Turney, *supra* note 53, at 272.

63. See Kristin Turney & Dylan B. Jackson, *Mothers' Health Following Youth Police Stops*, 150 PREVENTIVE MED. 106693, at 3 (2021); Turney, *supra* note 53, at 272.

sleep difficulties.⁶⁴ Lastly, friends of adolescents who have experienced police altercations show greater behavioral problems, including engaging in defiant activities at school.⁶⁵

Overall, additional research is needed to specify the full breadth of health effects of these indirect forms of police contact. Specifically, police encounters and oversurveillance may have long-term health effects over the life course. Overpolicing and racial targeting may contribute to chronic stress and premature aging, also known as “weathering,”⁶⁶ in certain subpopulations. Research on policing and health conditions related to aging, such as early-onset dementia, may allow for such evaluation. Still, the research findings available to us now suggest that members of law enforcement not only erode population welfare through their direct interactions with individuals, but also through their broader vicarious and community-level contacts. And here, it’s important to again note that these forms of contact (e.g., contact in heavily surveilled neighborhoods) are unevenly shouldered by Black, brown, and working-class communities—and so too are the potential consequences for health. Further interrogating these linkages is thus a matter of health equity.

CONCLUSION

Emerging evidence suggests that police contact harms population health through various means. Excessive force applied in police encounters can directly result in civilian injury or death. Excessive force and the lasting chronic stress stemming from these experiences also increase the long-term risk of poor mental and physical health outcomes for individuals. These harms extend to the mental and physical well-being of friends and family members connected to individuals who have been harmed by the police. These consequences extend even further outwards, impacting the health of entire communities that are in close proximity to spaces where violent or intrusive police contact has occurred. While these issues are of concern for the entire nation, Black, Latinx, and economically disadvantaged individuals and communities disproportionately shoulder these harms. This is because they are the consistent targets of police surveillance, intrusion, and violence.

Research has only begun to scratch the surface of how police contact generates population harm. Moving forward, we must consider a broad and encompassing definition of police contact—beyond just encounters ending with excessive force—in order to understand the full range of potential connections between law enforcement and health. In addition to relying on more expansive definitions of contact, this will require careful and systematic empirical

64. Jackson & Turney, *supra* note 53, at 166; Turney & Jackson, *supra* note 63, at 3.

65. See Del Toro et al., *supra* note 53, at 948.

66. Arline T. Geronimus, Margaret Hicken, Danya Keene & John Bound, “Weathering” and Age Patterns of Allostatic Load Scores Among Blacks and Whites in the United States, 96 AM. J. PUB. HEALTH 826, 828 (2006).

measurement of the alternative forms of police contact and harm. For example, police negligence or other means through which police may prevent individuals from meeting their basic needs should be considered in this shared project of cataloging police-produced health harms.⁶⁷

Critics argue that use of crowdsourced data on police killings overcounts estimates of police killings and provides inconsistent measurement of whether the individual killed by police was armed. In turn, they contend that this results in inflated estimates of the true health consequences of policing in Black, brown, and low-income communities.⁶⁸ But crowdsourced databases on policing are triangulated with other sources, including official police records, news reports, social media references, and obituaries. These datasets were developed in response to administrative datasets and police records that underreport police encounters that result in fatal and non-fatal injuries.⁶⁹ Differences in reporting of injuries also makes comparability an issue when using official police records. This said, police departments legally mandated to report actions during police stops, such as frisks and use of force, have produced more consistent reports when auditing occurs at multiple levels.⁷⁰

In this review, we have examined the ways in which policing can cause health harms to populations and disproportionately harm disadvantaged and racial and ethnic minoritized populations. While beyond the scope of this review, our examination does not negate the potential role police can play in promoting population health. Indeed, central to the mission of most police departments across the United States is the promotion of public safety, which is a key driver of population well-being.⁷¹ However, the fact remains that the United States far exceeds most wealthy democracies in killings by police. Additionally, the United States continues to struggle with police brutality, particularly in poor, racial and ethnic minoritized communities.⁷² Moreover, racial violence remains foundational to policing as it stems from a long history of racial control that

67. See Monica L. Wendel, Gabriel Jones, Jr., Maury Nation, Tanisha Howard, Trinidad Jackson, Aishia A. Brown, Jelani Kerr, Monique Williams, Nicole Ford & Ryan Combs, *Their Help Is Not Helping*: Policing as a Tool of Structural Violence Against Black Communities, 12 PSYCH. VIOLENCE 231, 238 (2022); BANDY X. LEE, VIOLENCE: AN INTERDISCIPLINARY APPROACH TO CAUSES, CONSEQUENCES, AND CURES 123 (2019).

68. See M. James Lozada & Justin Nix, *Validity of Details in Databases Logging Police Killings*, 393 LANCET 1412, 1412 (2019).

69. GBD 2019 Police Violence US Subnational Collaborators, *supra* note 25, at 1243.

70. GREG RIDGEWAY, ANALYSIS OF RACIAL DISPARITIES IN THE NEW YORK POLICE DEPARTMENT'S STOP, QUESTION, AND FRISK PRACTICES 43 (2007), https://www.rand.org/pubs/technical_reports/TR534.html [<https://perma.cc/JTD2-8VLS>].

71. Emily Owens & Bocar Ba, *The Economics of Policing and Public Safety*, 35 J. ECON. PERSPS. 3, 10 (2021); Jeremiah Goulka, Brandon del Pozo & Leo Beletsky, *From Public Safety to Public Health: Re-Envisioning the Goals and Methods of Policing*, 6 J. CMTY. SAFETY & WELL-BEING 22, 24 (2021).

72. Brunson, *supra* note 48, at 75; Brunson & Miller, *supra* note 48, at 622; Claudio G. Vera Sanchez & Ericka B. Adams, *Sacrificed on the Altar of Public Safety: The Policing of Latino and African American Youth*, 27 J. CONTEMP. CRIM. JUST. 322, 329 (2011).

began with slavery.⁷³ Therefore, it is critical to better understand the scope and scale of police violence and its health consequences to inform policies and practices that can serve to improve population well-being across all communities.

73. Elizabeth Hinton & DeAnza Cook, *The Mass Criminalization of Black Americans: A Historical Overview*, 4 ANN. REV. CRIMINOLOGY 261, 265 (2021).