



College of Liberal Arts

Center for Public Safety Initiatives

Violence as a Public Health Issue

Working Paper 2023-06

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Introduction

Violent crime in the United States is a persistent issue. Truly tackling violent crime necessitates effective strategies that consider more than just the criminal aspect of the issue. The city of Rochester, NY has struggled, and continues to struggle, with a high prevalence of violence. Those chronically exposed to violence are more likely to be susceptible to a variety of health-related issues. Existing research also indicates that exposure to violence (chronic or not) can impact the behavioral health of communities. A public health approach to violence allows for the design and implementation of holistic approaches to violence reduction that consider both the individual and the context in which the violence occurs.

Brief Overview of Violence in Rochester

A preliminary review of Rochester's crime data indicates that violent crime is prevalent. From 2018-2022, measurements of violent crime have increased steadily, with most peaking in 2021.

Table 1. Rate of Violent Crime in Rochester, 2018–2022 per 100,000

Year	Shooting	Robbery	Aggravated Assault
2018	66.4	247.7	318.9
2019	76.3	228.3	419.2
2020	126.6	229.4	513.4
2021	165.7	233.6	485.3
2022	144.1	246.3	418.9

Source: [RPD Open Data Portal](#)

Effects of Violence on Public Health

Medical/Physical Effects on the Body

Those most frequently exposed to violence are already marginalized members of the larger community—they tend to lack familial support and live in structurally disadvantaged and disorganized communities (Jackson et al., 2019). Their vulnerable position in an inherently negative environment makes these individuals especially likely to develop anxiety and depressive disorders. “Many disorders originate from stress, especially if the stress is severe and prolonged” (Yaribeygi et al., 2017, p. 1066). Early trauma activates the stress response system prematurely, potentially releasing a barrage of harmful stress hormones that negatively impact overall brain development. Changes to the brain made by stress hormones increase the risk for PTSD, depression, disassociation and borderline personality disorder (Lubit et al., 2003). Those exposed to violence as children (especially those exposed to multiple forms of violence) have an increased likelihood of developing chronic health conditions such as diabetes, cancer, or lung disease (Urban Networks to Increase Thriving Youth through Violence Prevention (UNITY), n.d.).

People under stress are more likely to have an impaired immune system, and as a result, suffer from more frequent illness (Yaribeygi et al., 2017). Stress has also been linked to cardiovascular disease, and most commonly is responsible for an individual having high blood pressure. Stress can also affect appetite because it has a tendency to trigger Gastrointestinal (GI) inflammation: “Many inflammatory diseases, such as Crohn's disease, and other ulcerative-based diseases of the GI tract, are associated with stress” (Yaribeygi et al., 2017 p. 1064). A study using data from the 2016 National Survey of Children's Health found that low social capital and violence exposure or perceived danger were significantly associated with fair or poor health status in children (Jackson et al., 2019).

Behavioral Health Effects

"The 2011 National Survey of Children's Exposure to Violence II found that 57.7 percent of children had been exposed to at least one form of violence...and that 48.4 percent had been exposed to more than one form [of violence]" (Jackson et al., 2019). Exposure to violence has been shown to cause children to suppress or internalize emotions. Studies have found that these emotional-regulation issues can increase the risk of aggressive behavior and harmful coping actions, such as alcohol or substance abuse (Mushe-Eizenman et al., 2004; Löfving-Gupta et al., 2018). A study analyzing substance abuse among urban Black men found that those participants who reported higher stress were more likely to engage in substance abuse/misuse (Seth et al., 2013). Substance abuse may represent a failed attempt to relieve distress through self-medication (Lubit et al., 2003). Gorman-Smith & Tolan (1998) found that children exposed to violence in their community project increased aggressive behavior towards others compared to their peers who were not exposed. Some research suggests that aggressive children suffer from a hostile attribution bias, meaning they infer hostility from others' ambiguous behavior (Seth et al., 2013).

When children are victims of violence the impact can follow them into adulthood, increasing their likelihood of violent victimization, domestic violence victimization, violent offending, and drug use (Menard, 2002). Menard (2002) suggests that childhood victims of violence are also at risk for adult mental health problems such as depression and anxiety. It was found that the only two adult problems in the study that have no relationship with adolescent victimization are marijuana use and polydrug use. When someone is a victim of violence as an adolescent, they are two times more likely to be a victim of violence in adulthood. Adolescents exposed to

violent crime or who have experienced violent crime are twice as likely to report having PTSD. Symptoms of PTSD can be long lasting (Lubit et al., 2003). Some recover within three months of the incident, others are still struggling years later. Individuals may find themselves triggered by an additional trauma, life stresses, or a reminder of the original trauma.

Practical Effects

Communities with high unemployment, poor housing conditions, low community participation, limited economic opportunity, and poverty are at considerable risk for violence in the community (American Psychological Association, n.d.). Individuals living in these communities are typically already marginalized (Black, Indigenous, and people of color) and thus experience compounded trauma. They are not safe in their community or the larger one. To this point, African American adolescent males are six times more likely to be victims of homicide and African American children are twenty times more likely to witness homicide compared to white children (Cohen et al., 2016). With the violence and low economic standing of the area, children, and their ability to achieve in the future are impacted. For many youth, violence is perceived as the only, or most effective way, to achieve status, gain respect, and provide for basic social and personal needs (Anderson, 1999; Elliott, 1996). Some neighborhoods feed this harmful perception by providing opportunities for learning and engaging in violence (Elliott, 1996). For instance, drug distribution networks may provide violent role models whilst also netting positive rewards for violent activities. This can lead youth to abandon the pursuit of more conventional goals. Research shows that growing up in poor, disorganized, and chaotic communities inhibit a normal course of adolescent development. "...dropout rates are near 50% for historically disadvantaged ethnic minority groups—particularly those residents from urban areas with the highest levels of poverty and

violence..." (Cooley-Strickland et al., 2009 p. 131).

Exposure to community violence correlates with lower grade point averages and standardized test scores. Adolescents who experience violence directly are more likely to have to miss school due to safety concerns or recovery needs which can lead to lower academic performance (Borofsky et al., 2013). Violence in the community leads to reduced concentration in the classroom, kids are distracted by intrusive thoughts about the violent environment that surrounds them (Seth et al., 2013). Exposure to violence can change how a person views the world, themselves, and the people around them (Lubit et al., 2003). Those who have been chronically exposed to violence may feel numb to it, and they may feel that there is no escaping the reality that surrounds them. This reduced optimism may greatly decrease individual motivation to make good choices.

Violence also generates significant financial strain for victims. A study by Corso et al. (2007), sought to estimate the medical costs associated with interpersonal violence. By combining data from several nationally representative data sets, they found that the average cost incurred when a nonfatal assault results in hospitalization is \$24,353. This cost can have a substantial impact on a family with low economic status. Another study, using data from two Los Angeles County Level I Trauma Centers, found the median hospital charge, per admission, for gunshot wound victims was \$12,612 (Foran et al., 2019). The high cost associated with admission is largely a result of the intensive and specialized care gunshot wound victims require. Additionally, Spitzer et al (2017), using data from the Nationwide Inpatient Sample from the Agency for Healthcare Research, assert that the financial burden associated with gunshot wound victimization is most acutely felt by those with governmental

insurance coverage. From 2006 to 2014 they estimate Medicare paying \$0.40 billion and Medicaid paying \$2.30 billion to cover the costs associated with initial hospitalization post gunshot wound victimization. The financial strain associated with violence is felt by victims and the government.

Public Health Approach to Violence

A public health approach to violence aims to create a safe and healthy community for everyone. It involves use of a multidisciplinary approach to combat issues within a community using sociology, education, criminology, epidemiology, and social services (National Center for Injury Prevention and Control (Center for Disease Control), n.d.). The CDC and World Health Organization have identified four steps that the public health approach utilizes to combat violence. These steps are outlined in Table 2. The first step is achieved by defining the issue and monitoring it. To do so successfully, agencies should obtain data via state/local crime statistics, violence reporting systems or injury reporting systems (National Center for Injury Prevention and Control (Center for Disease Control), n.d.). The second step of this approach is to identify both risk factors and protective factors pertinent to the previously defined issue. This is done through research to determine what causes or correlates to violence and what factors positively or negatively affect it (World Health Organization, n.d.). The third step is developing and testing interventions. This step is where a strategy is implemented on a small-scale level in one community. Here it can be determined if the project is feasible, successful, and needs any changes (World Health Organization, n.d.). The last step in the public health approach to violence is to expand the intervention to be adopted widely. While these preventions are spread, their impact and cost should be monitored and

altered as seen fit (National Center for Injury Prevention and Control (Center for Disease Control), n.d.).

Table 2. Understanding the Public Health Approach to Violence

Public Health Approach to Violence	
Steps	Guiding Questions
1) Define the problem	How many people are affected? Who is being impacted? When or where is this happening?
2) Identify risk and protective factors	What are the potential risk factors? What are the potential protective factors?
3) Develop and test interventions/ preventions	Are there existing strategies already that could be modified to better serve the community? What resources are needed to develop a new strategy? Who can help with the research? Is the new intervention effective?
4) Assure wide-spread dissemination and implementation	Which communities would benefit from the program? How do we ensure equal access? Who can help make widespread implementation a reality?

Source: National Center for Injury Prevention and Control (Center for Disease Control)

Conclusion

Violent crime remains a persistent issue across the United States. Rochester, NY is no exception. Addressing a criminal act is certainly important but it is also equally important to address what drove the criminal act in the first place. Organizations seeking to tackle violent crime from a public health perspective should identify violence where it exists, determine the root causes, and build a strategy based in those findings to create a meaningful solution that might facilitate meaningful change. Chronic exposure to violence has a significant impact on individuals' health, both behavioral and physical.

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About the Center for Public Safety Initiatives

The Center for Public Safety Initiatives is a unique collaboration between RIT's **Department of Criminal Justice**, the City of Rochester, and the criminal justice agencies of Greater Rochester including the Rochester Police Department and Monroe County Crime Lab. Its purpose is to contribute to criminal justice strategy through research, policy analysis and evaluation. Its educational goals include training graduate and undergraduate students in strategic planning and policy analysis.

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