

INTRODUCTION

Understanding Gun Violence: Factors Associated With Beliefs
Regarding Guns, Gun Policies, and Gun Violence

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Objective: Gun violence is a pressing public health concern, particularly in the United States. In the midst of the COVID-19 pandemic, 2020 was a record-breaking year with 43,551 deaths attributed to gun violence in the U.S., with almost 20,000 classified as murder/unintentional death and more than 24,000 classified as suicide (Gun Violence Archive, 2021). Black men are 10 times more likely to die from gun violence than are white men (Centers for Disease Control and Prevention [CDC], 2020c). Yet, in proportion to these sobering statistics, researchers' knowledge of the range of causes and possible remedies remains negligible. The purpose of this Special Issue of the *Psychology of Violence* devoted to Gun Violence was to highlight and spur additional, psychologically oriented research regarding firearm violence. **Method:** This Special Issue consists of seven original U.S.-based studies that address various aspects of gun violence, including individual, geographical, psychological, and sociological factors associated with attitudes toward guns, gun policies, and gun violence. **Results:** Individually and collectively, these studies provide novel insights regarding different types of gun perceptions and beliefs. These works consider a wide range of factors including media exposure, beliefs about the link between mental illness and gun violence, cumulative trauma, masculinity norms, regional norms, and trust in law enforcement. **Discussion:** This Special Issue is intended to spark greater interest in working to mitigate firearm violence and encourage researchers across scientific disciplines to collaboratively apply their theoretical perspectives and methodologies to reduce the devastating, but understudied, U.S. gun violence epidemic.

Keywords: gun violence, gun attitudes, gun beliefs, firearms, mental health

Amid a variety of current crises, gun violence remains one of the United States' most pressing, and lethal, public health concerns. The U.S. has the highest rate of gun-related deaths among developed countries, approximately 20× higher than other nations (Centers for Disease Control and Prevention [CDC], 2020a; Grinshteyn & Hemenway, 2016). Nearly 100 people die per day by gun violence, more than motor vehicle accidents (CDC, 2020b). To further underscore this point, since 1968, more individuals in the U.S. have died from gun violence than from all of the wars in which the U.S. has participated beginning with the Revolutionary War (NBC News, 2017). These high prevalence rates of gun violence result in a staggering economic burden, each year gun-related injuries and mortalities cost the U.S. \$280 billion dollars (Everytown Research, 2021).

Gun violence is an umbrella term that includes different types of violence that involve a firearm, including mass shootings, smaller acts of violence, and individual homicides and suicides. These forms of gun violence are crucial to differentiate as they are distinct in perpetrators' motivations and risk factors, as well as in their scope and impact on individuals and communities. Irrespective of the subforms of gun violence, all are critical societal ills that merit far greater political attention. The gun violence crisis is not new, nor can we have confidence that we are making gains toward remediating this public peril. Indeed, 2020 represented a record-breaking year for gun-related deaths in the U.S., with at least 19,223 victims of gun violence, an astounding 25% increase from 2019 (Gun Violence Archive, 2021).

This high rate of gun violence must be interpreted within the context of the global COVID-19 pandemic, which has killed more than 571,000 people in the U.S. and more than 3 million worldwide at the time of this writing. The effects of the COVID-19 pandemic extend beyond an unprecedented public health crisis but also represent a societal calamity. The pandemic can be thought of as a hurricane for gun violence risk factors due to: (a) significant job loss, particularly among those with less educational attainment; (b) increased rates of intimate partner violence (IPV) and child maltreatment; (c) rising levels of mental health difficulties; and (d) a substantial increase in gun sales in 2020 (CDC, 2020c). One of the additional sobering realities of the COVID-19 pandemic, alongside the broader recognition of systematic racism, is the troubling public health disparities associated with the pandemic, including that persons of color are at a much greater risk to be diagnosed with

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COVID-19, be hospitalized from COVID-19, and die from COVID-19 (CDC, 2020c). Thus, the confluence of gun violence risk factors brought on by the pandemic may be amplified among racial and ethnic minorities. Even prior to the pandemic it was widely recognized that the toll of gun violence is not equally distributed. It is not new information that gun violence is also most felt by Black communities, particularly young Black men. Indeed, Black men are 10× more likely to die from gun violence than white men, a sobering statistic that has been documented, and has held constant, for some time (CDC, 2020c). The gun violence storm, therefore, was already still raging prior to COVID-19, but now may be ratcheting up.

Therefore, identification of gun violence risk factors is even more pressing. Nevertheless, both across and within types of gun violence, there is significant heterogeneity in individuals' motivations and expected outcomes. For instance, there are considerable distinctions between individuals attempting to privately die by suicide, those involved in an interpersonal dispute over drugs that leads to gun violence, and those who set out to commit a mass shooting (Rosenberg, 2021; Sanchez et al., 2020). Within these forms of violence, there are also key differences. These complexities create challenges in terms of delineating general risk factors for gun violence. What is certain across forms of gun violence is that these contributing factors are partially conceptualized as part of a larger ecological framework that exists on a number of levels individual (e.g., demographic, psychological, exposure to stressors, bullying/victimization, and traumatic events), family, social, cultural, and community. These multilayered risk factors are often present early in life during childhood and adolescence and may accumulate over time and prior to becoming involved in gun violence (Beardslee et al., 2018, 2019; Spano & Bolland, 2013; Spano et al., 2012).

A discussion of all known gun violence risk factors is outside of the scope of this introduction to the Special Issue; however, in addition to race, a few more established risk factors merit discussion. Age is related to involvement in gun violence with the peak age range for gun violence appearing to be between 18 and 35 (CDC, 2020a). Males are much more likely to perpetrate gun violence (CDC, 2020a). Socioeconomic hardship, lack of employment opportunities, concerns regarding safety and victimization, and community distress are consistently tied to gun violence risk, which likely help account for the previously noted racial disparities (Beardslee et al., 2019; CDC, 2020a; Sanchez et al., 2020). Access to firearms is related to increased likelihood of being involved in gun violence; however, the role of gun regulation policies is less clear (Sanchez et al., 2020). Prior victimization, including bullying, and exposure to trauma are also related to gun ownership, carrying, and risky gun behaviors (Beardslee et al., 2018; Spano & Bolland, 2013; Spano et al., 2012; Wamser-Nanney, Nanney, Conrad, & Constans, 2019). Psychological difficulties and conditions have intricate and still somewhat nebulous ties to gun violence, and these associations certainly differ by form of firearm violence (e.g., suicide vs. homicide). Nevertheless, aggressive behavior and tendencies, substance misuse, and select psychological disorders (e.g., conduct disorder, impulse control disorders, depression) have commonly been associated with gun violence (Banks et al., 2017; Sanchez et al., 2020).

Given the pressing reality of gun violence in the U.S., yet the woefully sparse literature regarding this form of violence (Stark & Shah, 2017), we set out to publish a Special Issue devoted to gun violence. It is important to note that the call for papers was posted

prior to the COVID-19 pandemic. The research included in this issue is not related to COVID-19 or systemic racism; however, it is our hope that this work will encourage and spark ideas for new research, collaborations, and interventions regarding gun violence, particularly to aid Black men. (An upcoming *Psychology of Violence* Special Issue on Police, Violence, and Social Justice will have articles that address systemic racism.) With these important complications in mind, the Special Issue includes an assortment of empirical studies from the U.S. regarding differing aspects of gun violence. Prior to the pandemic, there was much to learn. Now, there is even more to learn, but the call to action is at a din.

Gun Attitudes

One of the challenges in studying gun violence risk factors is that most individuals in general samples will not become involved in gun violence, either as victims or perpetrators, thus researchers may examine gun violence risk somewhat indirectly by investigating key constructs, such as gun attitudes. A promising area of gun violence research is to increase our understanding of gun perceptions, given the prominent role attitudes play in violent behavior more generally (Abramsky et al., 2011; Canan et al., 2018; Wegner et al., 2015). Gun perceptions may also factor into decisions regarding gun ownership, storage, carrying, and the use of a firearm. Presently, we require a much more thorough understanding of gun beliefs, including psychological factors. This knowledge is fundamental to increase our knowledge of how guns are viewed by the general public as well as specific at-risk samples, and how these beliefs may change (or not), and promoting effective prevention policies and interventions. Several of the articles in the Special Issue examined gun attitudes and offer novel insights regarding factors that may influence specific forms of gun perceptions across types of firearm violence.

In the aftermath of a mass shooting, there are predictable calls for gun violence prevention efforts, typically a combination of increased mental health treatment and/or gun restrictions (Barry et al., 2013; McGinty et al., 2014). Yet, to date, it is less clear if mass shootings alter beliefs regarding gun violence. In the wake of the 2016 Pulse Nightclub massacre in Orlando, Jose et al. (2021) assessed gun beliefs using a nationally representative U.S. sample ($N = 3,199$). Most respondents (61–80%) favored some sort of gun restrictions, and increased media coverage exposure was tied to stronger preferences for stricter laws and universal background checks. Interestingly, exposure to the shooting was not tied to gun perceptions. Although this study is cross-sectional, these results point to the importance of media coverage as a potential means of changing gun violence prevention beliefs; however, the tone and the content of the coverage are likely critical to consider.

Mental illness is cited as a factor for gun violence by the majority of Americans (Barry et al., 2013; McGinty et al., 2014). Although increasing access to psychological interventions would likely help remedy a variety of social challenges and make for a healthier, more productive society, it is not certain that it would drastically influence gun violence rates. The interactions between psychological difficulties and gun violence are complex and not well-understood; however, serious mental illness may not be a key driver of gun violence (Fazel & Grann, 2006; Swanson et al., 2015). Three articles in the Special Issue investigated the role of mental illness and gun attitudes. First, Anestis and Daruwala (2021) studied the belief that mental

illness is a gun violence risk factor and perceptions of firearms, including gun safety measures. Stronger endorsement that gun violence is a mental health problem was related to weaker perceptions that gun ownership and storage practices are tied to suicide risk as well as decreased openness to altering gun storage behaviors as a means to prevent suicide. These results may point to the utility of targeting beliefs regarding the contributing factors for gun violence as these perceptions may have real-world implications for safe gun ownership and storage practices.

Interpersonal victimization, generally physical assault with a weapon, is an established risk factor for gun carrying (Beardslee et al., 2018; Spano & Bolland, 2013; Spano et al., 2012); yet the links between trauma exposure and posttraumatic stress disorder symptoms (PTSS) and gun beliefs had been unexplored. Wamser-Nanney et al. (2021a) observed that cumulative trauma was related to more pro-gun beliefs, but not to beliefs that guns confer protection or deter crime among a convenience sample of undergraduates and mturk workers ($N = 495$). PTSS, however, was not tied to gun attitudes. When specific forms of violent trauma were examined (i.e., violent death, physical, weapon, and sexual assault), weapon assault was associated with a stronger belief that guns provide protection, yet the opposite pattern was noted for physical assault. Although PTSS was not implicated in gun attitudes in this study, prior work has found associations between PTSS and risky gun behaviors, mostly among veterans (e.g., Freeman et al., 2003; Freeman & Roca, 2001), although not consistently (i.e., Wamser-Nanney, Nanney, & Constans, 2019). Nevertheless, cumulative trauma, and the specific forms of trauma, may also be involved in understanding specific gun beliefs.

Little is known regarding how gun attitudes differ among individuals who have a diagnosis of a serious mental illness as compared to those who do not, even though they may be prohibited from owning one. Hodges et al. (2021) explored this issue by contrasting a national community sample ($n = 148$) with a small rural forensic psychiatric sample ($n = 57$). Forensic psychiatric participants endorsed more early experiences with guns, as well as prior victimizations, than controls but indicated being less knowledgeable about guns and firearm regulations. They were also less comfortable with guns and more supportive of federal gun regulations than the community sample. Although additional work is needed with a broader range of psychiatric samples, it is noteworthy that the psychiatric sample in this study supported gun regulation. These novel findings will hopefully prompt more research in this area to better appreciate the vantage point of this subgroup, who are often blamed or villainized for gun violence. Additional work in this area may inform prevention policies and legislation and help develop more effective means to address gun violence risk among individuals with serious mental illness.

Although many studies focus on individual-level factors such as victimization, gun attitudes, and experiences are embedded in a larger sociological and geographical context. As noted above, gender is a key issue for gun violence—men are more likely to be gun owners and are disproportionately involved in gun violence (CDC, 2020a) as well as subscribe to masculine honor ideology (Barnes et al., 2012; O'Dea et al., 2017). Thus, for some men, their interest in gun ownership may be deeper than recreation and protection, but is important to maintain a masculine self-image (Carlson, 2015), which may be exaggerated among men who experienced childhood bullying (Kalish & Kimmel, 2010). Ray et al. (2021) tested the associations between masculinity, bullying, honor ideology, and gun

attitudes in sample of male MTurk workers ($N = 399$). Here, bullying victimization was tied to masculinity, which was linked to honor ideology, which was related to more positive gun attitudes. For some men, a history of bullying may engender a strong desire to protect their masculinity, which they may satisfy via enthusiasm for guns. Victimization is a known risk factor for gun violence involvement, and it will be fruitful to further examine how constructs such as masculinity and honor ideology, along with additional factors such as anger, substance misuse, and emotion regulation, may alter gun ownership, carrying, and use.

Larger cultural factors are also clearly relevant in understanding gun beliefs and behaviors. Lantz and Wenger (2021) investigated the role of Southern culture of honor, specifically, group offending, and gun violence using a large sample of 1,881,802 violent incidents from national data. Multilevel models indicated that guns were more likely to be present as the number of offenders increased, and were more likely to be present in the South than in other areas of the U.S. As the size of the group increased, so did risk for serious, gun-related injury. Importantly the region of the incident was key in the South, incidents with a firearm present that were committed by larger groups demonstrated the highest rates for serious injury. These results highlight the need to consider regional factors when studying gun violence, and for the South, it may be important to factor in the role of accomplices and bystanders, and how the presence of others may fit into a culture of honor.

Akin to gun attitudes, psychological factors related to gun ownership remain underdelineated. Reasons for gun ownership are complex, and individuals may own a gun for various purposes, including recreation/sporting or as a means of protection. Concerns and fears regarding crime/victimization appear to be a key driver for gun ownership. Stroebe et al. (2017) have posited that this type of defensive gun ownership is the result of fears of both specific threats or Perceived Lifetime Risk of Assault (PLRA) and diffuse threats, or Belief in a Dangerous World (BDW; Stroebe et al., 2017). Kreienkamp et al. (2021) applied this model to two previously established factors related to defensive gun ownership exposure to mass media news exposure and trust in law enforcement for protection against crime in a large sample ($N = 1,691$) of U.S. gun owners. News exposure and trust in law enforcement were connected to defensive gun ownership via their effects on Belief in a Dangerous World. Importantly, the effect size for trust in law enforcement was roughly three times that of news exposure. Social factors, such as trust in law enforcement, may contribute to defensive gun ownership to the extent that they influence threat perceptions, consistent with some earlier work (e.g., Cao et al., 1997; Luxenburg et al., 1994). Although threat perceptions such as belief in a dangerous world, are generally engrained ideological beliefs that may be challenging to alter, as suggested by the authors, one potential avenue for altering defensive gun ownership may be through promoting increased trust in law enforcement. Even if extreme and unrealistic threat perceptions are difficult to alter, they may be a critical driver and prevention and intervention foci.

Key Themes and Future Directions

Several key themes emerged from these works regarding gun violence. First, despite the importance of understanding people's attitudes about guns, more research is needed that takes the logical next step and identifies when and how attitudes relate to gun behaviors. For example, at what point does one's victimization experiences and/or

concerns regarding crime drive someone to obtain, carry, or use, a gun? Second, there is a need to further disentangle how victimization experiences (direct, witnessed, and via the media) confer risk for defensive gun ownership, and more critically, gun storage, carrying, and use behaviors. We know that victimization may precede owning a gun and being involved in firearm violence but this risk is unlikely to be uniform for all survivors. Are there differences in terms of types of victimization such as physical versus sexual assault or those that include a gun compared to another, less lethal weapon?

Third, the role of mental illness is quite complex and remains muddled. There are likely critical distinctions in terms of types of psychological difficulties such as mood, psychotic, traumatic stress, and externalizing disorders and their unique links to specific forms of gun violence. Comprehensive research is needed to parse out the relations between forms, and levels, of psychological symptoms and disorders and aspects of gun violence—both gun attitudes and actual firearm-related behaviors. Another main take-away from these studies is the importance of accounting for psychological and sociological factors such as masculinity, honor ideology, threat perceptions, and trust in law enforcement. Future work that examines these constructs will help to greatly expand our knowledge of gun attitudes and piece together a larger, fuller, and more nuanced understanding of gun beliefs and behaviors. Given the large and sobering racial disparities of gun violence, we should also pay close and thoughtful attention to experiences of racism and discrimination and internalized racism and how these factors may shape perceptions regarding the need to own, carry, use a weapon, as well as how minorities who carry weapons may be perceived.

Each of the studies should be contextualized in terms of their respective strengths and weaknesses. Two overarching limitations were present in many of these works. First, several of the studies included were limited by the use of measures that did not thoroughly assess exposure to gun violence and firearm perceptions. More systematic examination of various types of gun perceptions will yield richer insights, and perhaps allow us to identify firearm attitudes that may be most at-risk for unsafe or violent gun behaviors. A second larger weakness of many of the represented articles is the focus on gun beliefs compared to actual firearm behaviors. There is therefore a need to further develop measures of gun violence exposure, gun attitudes, and gun behaviors. A new measure, the Gun Behaviors, and Beliefs Scale (GBBS), assesses both gun behaviors and a larger variety of firearm attitudes, including gun perceptions as they relate to one's sense of safety, emotional risk, and social relationships, as well as the presence of guns in one's community and other neighborhood factors (Wamser-Nanney et al., 2021b). Future work must examine how gun attitudes correspond (or don't) with firearm-related behaviors to more precisely identify individuals who may be at risk for gun violence involvement. As relatively few individuals will be involved in gun violence, it can be difficult to find statistical associations. Thus, it is paramount for gun violence researchers to collect, and ultimately consolidate, these data sets to better identify those who are most vulnerable.

The studies in the Special Issue greatly extend the existing gun violence research and will hopefully spark interest in this important, but understudied topic. They offer exciting new avenues for future research, policy, and intervention. It is paramount for future studies to better identify the risk factors, and critical intervention points, for when individuals decide to purchase a gun and engage in high-risk or violent gun behaviors. We know that age, race, income, and victimization appear to be key risk factors, but we are less certain on how culture, prior cultural experiences, political beliefs, cognitive

factors (such as fears of victimization, government interference), and mental health challenges intersect with these factors. As noted above, we still need to further understand the role of specific forms of victimization experiences and/or concerns about crime impact decisions to obtain, carry, store, and fire a gun. It is clear that for some survivors of trauma, victimization may increase the likelihood of purchasing a gun, but not for many others. Larger sociological factors, most certainly interact with victimization experiences to influence gun-making decisions and thus future work should be thoughtfully and carefully embedded into these larger frameworks.

The routine calls for mental health access following mass acts of gun violence are likely to continue even though the presence of psychological difficulties is not a blanket risk factor for gun violence. Therefore, it is particularly pressing to thoroughly discern the complex links between clinical difficulties and gun attitudes and behavior at a more microlevel (e.g., specific psychological conditions, comorbidity patterns, and specific gun beliefs and behaviors), while factoring in other known risk factors. Longitudinal research studies assessing both gun beliefs and behaviors that utilize a comprehensive ecological framework that includes individual, family, social, cultural, and community factors will best help us learn these answers. We thank the authors and participants who were involved in these important research studies and humbly offer this Special Issue, which we hope will stimulate and accelerate novel and clinically relevant research that will help reduce gun violence and its toxic impact.

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