

PROJECT INSIGHT

Lethal and Non-lethal Firearm Violence in the European Union

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KEY FINDINGS

- Most firearm violence in the European Union (EU) is non-lethal, with many threats or shootings with firearms not resulting in a physical injury.
- Firearm homicides cannot be used as a proxy for firearm violence as a whole, given differences in the trends and characteristics of lethal and non-lethal types of firearm violence.
- The reliable, systematic, and comparable recording of incidents of non-lethal firearm violence is lacking across and within EU countries. Such measures are essential for furthering knowledge on the phenomenon of firearm violence, as well as for targeted and effective policymaking on this pressing issue.
- Public health and criminology research on non-lethal firearm violence in Europe continues to reference studies conducted in the United States, where the social and economic context of gun violence is unique. Furthermore, European-focused studies would provide European policymakers with more relevant information.

Acknowledgements

The author wishes to thank Emile LeBrun, Mira Fey, Diederik Cops, Nils Duquet, Anne-S  verine Fabre, Joakim Sturup, Natacha Cornaz, and Alessandra Allen, who reviewed the draft and whose comments led to important improvements to the text for this paper. She would also like to thank the many colleagues who offered suggestions and encouragement along the way, as well as Olivia Denonville and Katie Lazaro from the Small Arms Survey, and Margarida Ferro and Wouter Claes from the Flemish Peace Institute for their role in the production of this publication.

Introduction

Homicides committed with firearms are regularly used as a proxy for measuring the prevalence of firearm violence, in Europe and abroad. Researchers and policymakers use firearm homicides to compare the (illegal) use of firearms across countries,¹ to measure the possible influence of firearms on violence rates,² and to evaluate counter-measures against the illegal use of firearms.³ This reliance on firearm homicide statistics is partly because homicides are relatively easy to detect and assumed to have a low “dark figure”—meaning that, internationally, most homicides will be reported to law enforcement agencies and thus included in statistics.⁴

Statistics and research on non-lethal firearm violence are comparatively sparse. The main obstacles to improving understanding of non-lethal firearm violence are a lack of not only accessible records, but also a common definition shared by law enforcement agencies in European countries. Overall, the lack of coherent systems for recording incidents of non-lethal firearm violence hinders in-depth, comparative research that may

be used to inform and shape policy.

There are good reasons, however, for both research and policymakers to advance understanding of non-lethal firearm violence. First and foremost, not including non-lethal firearm violence in the broader societal, political, and academic debate ignores the majority of firearm-related crimes, as lethal firearm violence accounts for a relatively small proportion of all firearm violence.⁵ Many of the—already scarce⁶—findings about the prevalence and characteristics of firearm violence in Europe are also based on empirical data on firearm homicides alone, leading to a serious gap in the intelligence picture on non-lethal firearm violence.

Secondly, using firearm homicides as an indicator for non-lethal firearm violence assumes that both types of violence share structural characteristics and that the lethal outcome is determined by other factors, such as access to professional medical care, the calibre of the firearm used, or sheer chance.⁷ Yet this assumption has rarely

been tested in the European context. If structural differences exist between lethal and non-lethal firearm violence, then both types of violence need to be addressed differently, both in research and policy.

This paper addresses the knowledge gap with regards to non-lethal firearm violence in relation to firearm homicides. The following sections will review the prevalence of lethal and non-lethal firearm violence across various European countries, the various types of non-lethal firearm violence, and the contexts in which they occur. This paper focuses specifically on interpersonal violence, meaning firearm violence that occurs between two or more people. Self-directed violence in the form of (attempted) suicide, acci-

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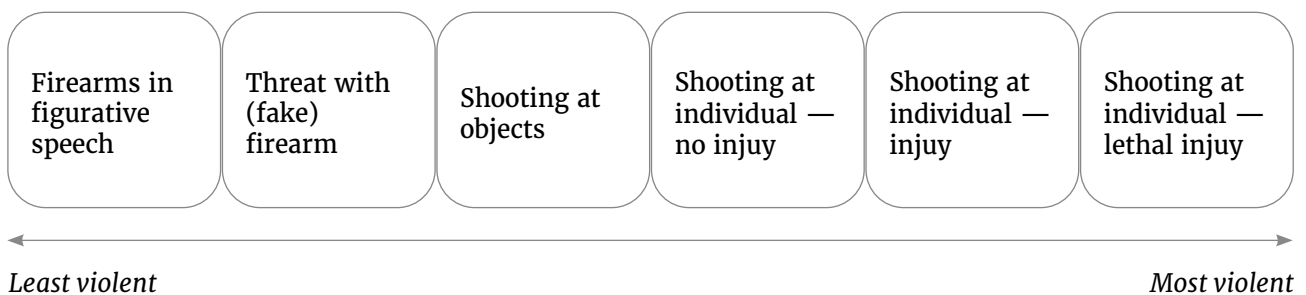
dental shootings, or shootings not directly or indirectly targeted at individuals are therefore not discussed. Examples are drawn from the Gunviolence.eu – Incident Monitor^a (hereafter referred to as “the Incident Monitor”) to illustrate and support arguments. The paper concludes by discussing the factors that determine the lethality of firearm violence and the implications for future research and policymaking.

Continuum of firearm violence

Previous studies have suggested that aggression and violence manifest in various forms and types and should be approached as a continuum—ranging from relatively minor forms of aggres-

sion, such as verbal threats, to violent acts, such as assaults and homicides.⁸ This idea may also be applied to aggression or violence committed with firearms (see Figure 1). At the least aggressive end of the continuum, firearms are used in figurative speech to threaten an individual; at the most violent end of the continuum, shootings result in the death of an individual. Between these two extremes lie various forms of aggression or violence that can involve firearms, such as making threats with a real or fake firearm, shooting at objects to threaten an individual, shooting at individuals without causing physical injuries, or shooting at individuals causing physical but non-lethal injuries.^b The next section will discuss the prevalence and various manifestations of firearm violence.

Figure 1 Firearm violence continuum



a The Incident Monitor (www.gunviolence.eu/incident-monitor) aims to collect media articles on firearm-related violence in all EU member states. It processes data in real time through an automated system that uses artificial intelligence. For more detailed information on the development and functioning of the Monitor, consult the methodological report: Cops, D., De Schutter, A. & De Smedt, T. (2023), *Gunviolence.eu – Incident Monitor: Methodological report*, Brussels: Flemish Peace Institute, <https://vlaamsvredesinstituut.eu/en/project-insight/#methodologicalreport>.

b The classification of types of firearm violence as more or less violent may differ, according to the individual and their personal perceptions of violence, experience with aggression and violence, and other factors. The continuum presented here is therefore only exemplary.

Prevalence and trends of lethal and non-lethal firearm violence

Data sources on non-lethal firearm violence

As previously mentioned, the most significant challenge to assessing the prevalence and nature of lethal and non-lethal firearm violence is the lack of available data on non-lethal firearm violence. On the one hand, there is a relative scarcity of publicly accessible statistics,^a with only one cross-national database on non-lethal firearm violence in Europe: the Armed Violence Monitoring Platform—developed by the South Eastern and Eastern Europe Clearinghouse for the Control of Small Arms and Light Weapons (SEESAC)—registers firearm-related incidents in South-east Europe by monitoring local media and relevant reports from public institutions.⁹ Other non-governmental databases that include statistics on non-lethal firearm violence are so far restricted to specific national contexts, such as the Dutch Firearm Violence Monitor by Leiden University,¹⁰ or the database of firearm-related incidents developed by the Flemish Peace Institute for the regions of Flanders and Brussels as part of Project TARGET.¹¹ Next to these non-governmental data sources, some European national law enforcement organizations publish statistics on lethal and non-lethal firearm violence. Yet, due to their differing definitions and classifications, these statistics are not comparable across countries and rarely include any details about the context, victims, or offenders of firearm violence.

Gunviolence.eu – Incident Monitor: “Scraping” of media articles using machine learning

Media sources can be used to compensate for the lack of official statistics, specifically on non-lethal firearm violence. The Incident Monitor uses machine learning to collect and scrape data from news articles on firearm violence in all 27 EU countries for the years 2019–22. Using keywords such as “deadly shooting”, “fatal shots”, or “stable condition”—or simply the mention of “an injury” or “no injury”—machine learning technology is able to differentiate between not just lethal and non-lethal firearm violence, but also levels of severity. Such a differentiation could help improve our understanding of firearm violence as a continuum in the future. At the time of writing this paper, early 2023, the process of collecting data from media sources was not yet complete. The following section therefore does not present statistics from the Incident Monitor but draws examples from it.

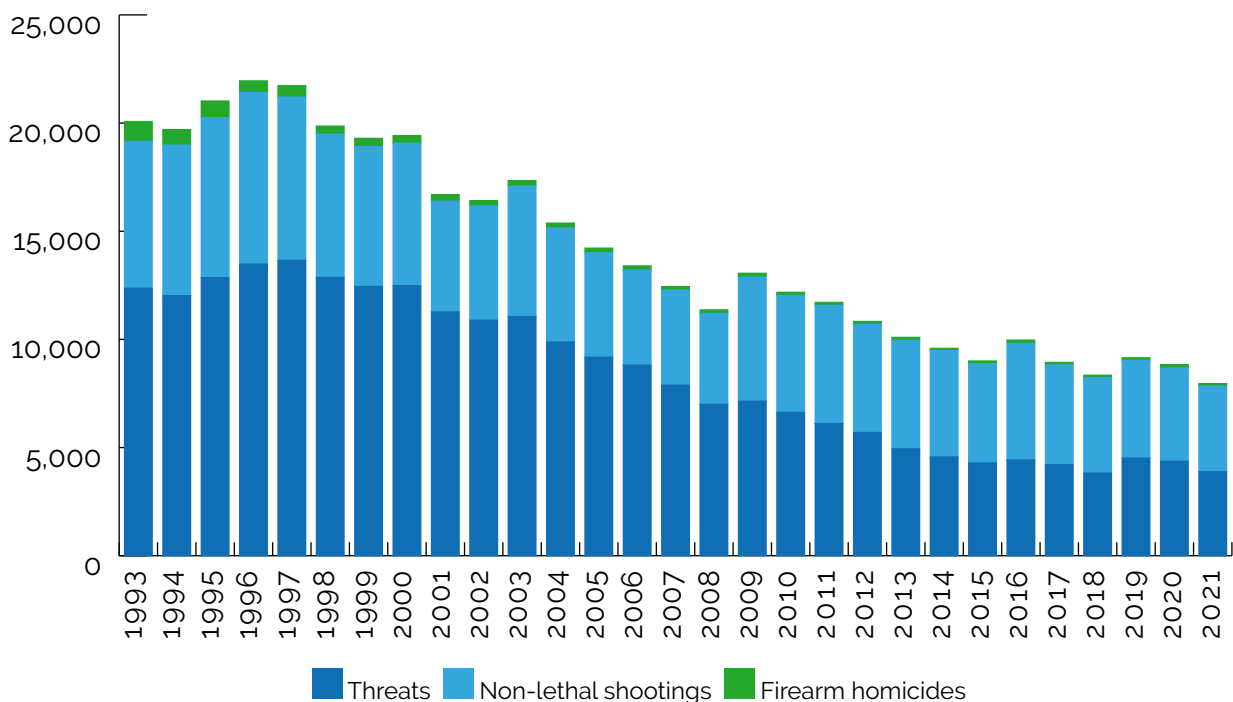
^a Exceptions include the French National Statistics Office and the Belgian police, which provide some statistics on non-lethal firearm use in “armed violence” (France) and “armed robberies” (Belgium). Written correspondence with armed violence researcher, October 2023.

Trends and lethality of firearm violence in European countries

Due to the lack of systematic and structural data on non-lethal firearm violence, trends are difficult to establish for the European context as a whole. National statistics provide more detailed insights, but most official registers do not differentiate between lethal or non-lethal firearm violence or include non-violent crimes, such as the possession or trade of firearms, which hinders cross-country comparisons.¹² The following section therefore focuses only on four European countries, whose records of lethal and non-lethal firearm violence are to a large extent similar and thus comparable. Interestingly, the statistics from these four European national law enforcement agencies suggest different national trends of non-lethal firearm violence.

Statistics from the German Federal Criminal Police Office (Bundeskriminalamt) allow for a long-term trend analysis since the early 1990s. Between 1993 and 2021, the number of threats with firearms drastically declined from around 12,000 to 4,000 incidents annually; the number of non-lethal shootings declined from around 7,000 to 4,000 (see Figure 2).¹³ Throughout this period, between 95 and 99 per cent of all firearm violence was non-lethal. In 2021, the latest available year, police registered 34 threats and 35 non-lethal shootings for each firearm homicide. Interestingly, in 2021, more non-lethal shootings were recorded than threats with firearms, which could suggest an increase in the number of disputes in which firearms are used, or a change in the recording and reporting of threats. The Bundeskriminalamt does not report how many individuals sustained physical injuries due to gunshot wounds in non-lethal shootings.

Figure 2 Threats, non-lethal shootings, and homicides with firearms in Germany, 1993-2021

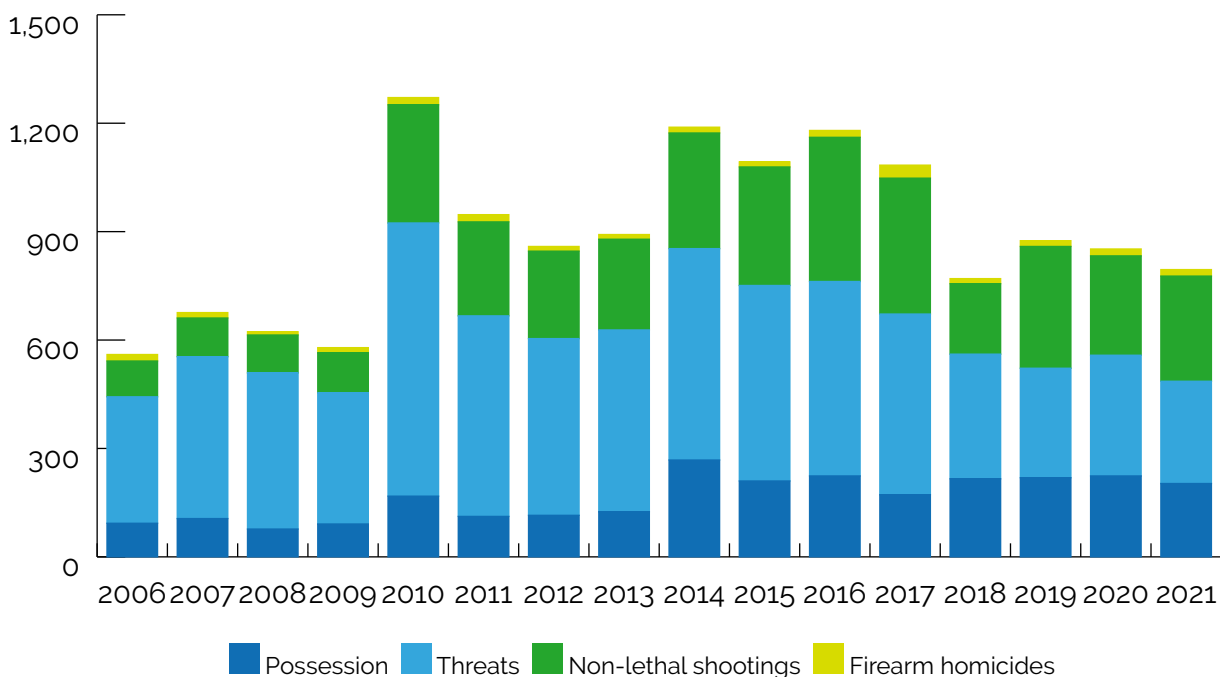


Source: Bundeskriminalamt (Germany) (n.d.)¹⁴

The data gathered by the Austrian Bundeskriminalamt and published since 2006 reveals similar statistics. The numbers show a significant increase in non-lethal shootings and threats with firearms between 2009 and 2010, from 474 such incidents in 2009 to 1,083 the following year (see Figure 3).¹⁵ This increase may be explained by an increase in firearm violence and/or related to changes in definitions, record practices by law enforcement, or other factors that are not indicated in the sources. The numbers have declined somewhat since 2010

to just under 600 non-lethal shootings and threats in 2021. Nevertheless, the number of non-lethal shootings seems to have almost tripled since 2006. Like Germany, Austrian law enforcement reports an almost equal number of threats and non-lethal shootings in 2021. During the period 2006–21, on average 97 per cent of firearm violence (excluding illegal possession) remained non-lethal. In 2021, 16 non-lethal shootings, 16 threats, and 11 cases of illegal possession of firearms were registered for every firearm homicide.

Figure 3 Threats, non-lethal shootings, and firearm homicides in Austria, 2006–21

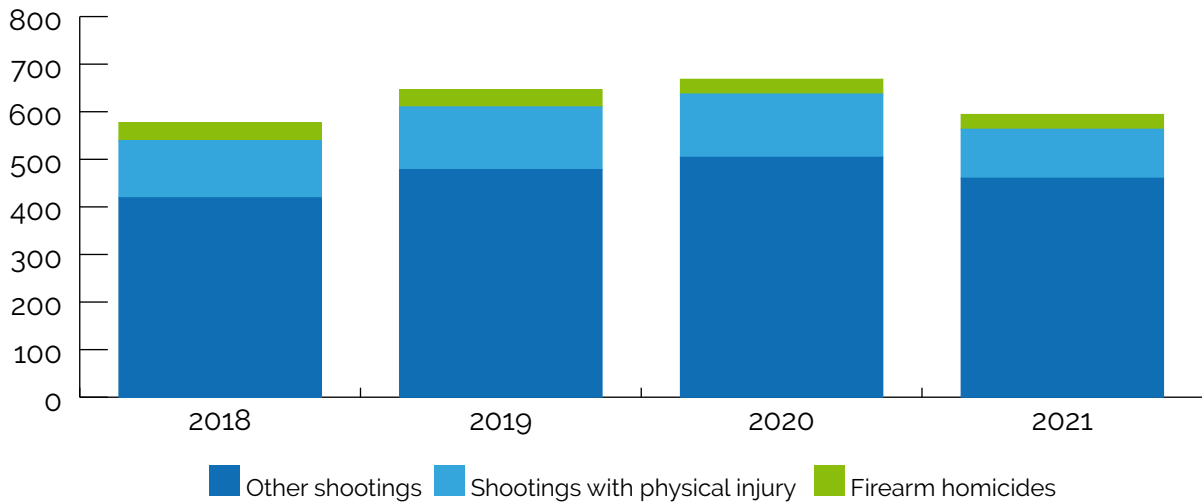


Source: Bundeskriminalamt (Austria) (n.d.)¹⁶

The Netherlands only began keeping records of shooting incidents at the national level in 2018, which makes it difficult to establish long-term trends. In the period 2018–21, however, 621 shootings took place per year on average—94 per cent of which were non-lethal (see Figure 4).¹⁷ This includes shootings at individuals or buildings, and

shootings for which no specific target could be identified. Around 19 per cent of these shootings resulted in physical injuries. For 2021, the Dutch police registered 15 non-lethal shootings without physical injuries and three shootings with physical injuries for every firearm homicide.

Figure 4 Non-lethal shootings with and without physical injuries and firearm homicides in the Netherlands, 2018-21

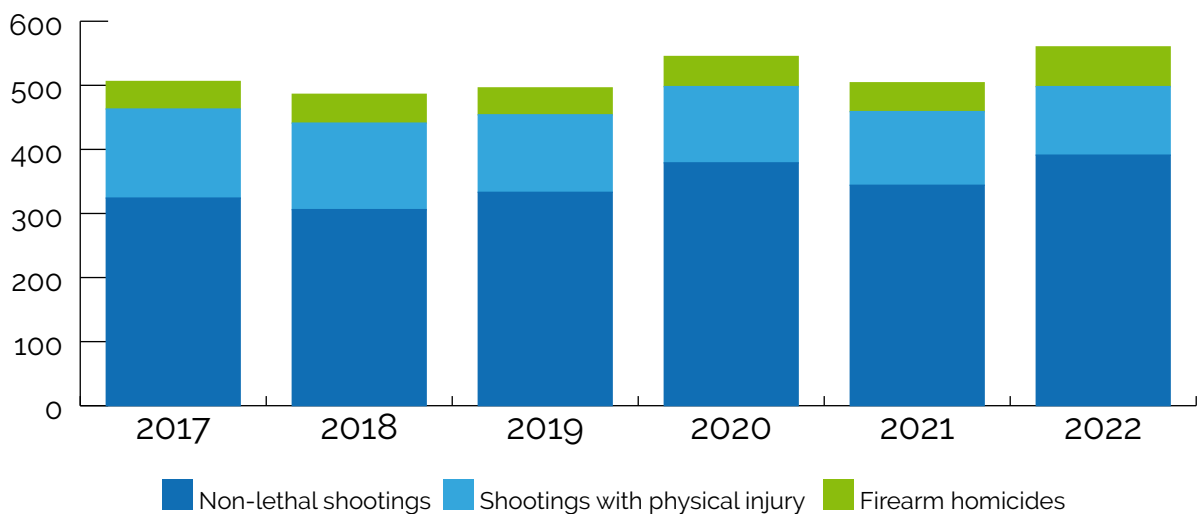


Source: Dutch National Police (2022)¹⁸

In Sweden, police have recorded confirmed shootings, shootings causing physical injuries, and lethal shootings since November 2016.¹⁹ During the six-year period for which data is available (2017-22), the number of non-lethal shootings increased from 324 to 391 annually, whereas shootings causing injuries declined from 139 to

107. Around 91 per cent of the shootings were non-lethal, with 26 per cent of all non-lethal shootings resulting in an injury. In 2021, police recorded approximately two and a half (2.55) non-lethal shootings with physical injuries and six without for every firearm homicide.

Figure 5 Non-lethal shootings with and without physical injuries and firearm homicides in Sweden, 2017-22



Source: Polisen (2023)²⁰

Although the four countries show varying trends with regards to non-lethal firearm violence—which may partly be ascribed to differences in definitions and recording practices—their data confirms that the vast majority of firearm violence remains non-lethal and that firearm homicides are relatively rare events in the broader spectrum of firearm violence. Specifically, in 2021, around 95 per cent of firearm violence did not result in the victim’s death across these four countries.

Types of non-lethal firearm violence

This section reviews the various types of non-lethal firearm violence and how they manifest themselves in the European context, drawing on examples from the Incident Monitor.

Firearms as threats in figurative speech

Numerous languages—and the English language in particular—include metaphors or sayings that refer to firearms, such as “to go ballistic”, “to bite the bullet”, or “trigger warning”. Many of these sayings have become idioms and embedded in everyday speech but are not intended to be aggressive or threatening. At the same time, more than any other weapon, firearms are a well-known symbol for lethal violence and can therefore be used in speech or visual forms as a threat (see Box 2). In the Netherlands, for example, a 21-year-old woman was sentenced to community service for instigating violence against and threatening a Dutch politician, after singing “[i]f you want to see him dead, scream ‘paf’” during a demonstration, and mimicking the sound of a shot being fired.²¹ While these types of threats may not lead to physical injuries, the psychological impact on victims or potential ripple effect should not be underestimated.

Firearms in the music industry

In various European countries, law enforcement agencies have expressed concern about the imagery and metaphors of weapons, and particularly firearms, present in the rap scene in the United Kingdom, Belgium, Sweden, the Netherlands, and other countries.²² In Sweden, rap songs top the charts, collect millions of clicks and views, and have won national music awards. Some of the best-known and most frequently listened to songs include lyrics with references to violence and firearms, for example:

- “If you do something wrong, I put the bullet in your forehead” (“Om du gör nåt(t) fel, jag lägger kulan I din pan-na”);²³
- “The CZ, it has the most power; the TT, it has horses” (“CZ: an den har mest kraft; TT:n, den har hästar”);²⁴ or
- “She and I are like me and my Glock, babe” (“Hon och jag är som jag och min Glock, babe”).²⁵

In addition, music videos often display firearms or include sounds of gunshots in the background. Yet, while firearms and violence seem to be embedded in this music scene, a recent study on the local “drill rap” scene in Rotterdam reveals that provocations and threats expressed through music and videos seldomly lead to real-life physical violence.²⁶ Nevertheless, four Swedish rap artists have been shot to death in the last two years.

Threats with firearms

Threats made with live-firing or fake firearms, in which no shots are fired, constitute another type of non-lethal firearm violence. During these incidents, firearms can have three functions: to showcase the lethal power of the offender and thereby send a message to the victim; to enforce compliance by the victim; and to avoid a physical altercation between the victim and the offender. A number of US studies support the notion that the risk of a physical attack, for example during a robbery, is reduced when the offender uses a firearm over another weapon.²⁷

Threats with firearms commonly occur in the context of armed robberies (see Box 3). During robberies, the offender's primary goal is not to physically hurt the victim but to acquire goods. The firearm therefore acts as a tool to coerce the victim, rather than inflict injury. This is reflected in statistics: in Belgium or the Western Balkans, for example, more than 90 per cent of robberies with firearms did not result in any injury at all.²⁸ Robberies with firearms can take various forms, ranging from relatively spontaneous street robberies to robberies of shops or elaborate bank heists (see Box 3). In addition to robberies, firearms may be used to threaten a victim in personal disputes, for example in financial conflicts between acquaintances. Threats with firearms in the domestic setting are rarely reported in studies on firearm violence in Europe or elsewhere. While this may be because firearm violence in the domestic setting appears to be more lethal (see sections below), these threats are also presumably less likely to be reported to law enforcement agencies out of fear of the offender, or to protect the offender from the consequences.

Due to the nature of these crimes, offenders mainly use handguns, which are relatively easy to conceal.²⁹ More than other types of firearm violence, threats can also involve toy firearms, airsoft guns, or gas, acoustic, or other replica firearms that are unable to fire bullets unless

Examples of firearm threats

Street or house robberies

In Italy, a 45-year-old woman was attacked on the street and threatened with a firearm. The offender demanded her purse and ran away after the victim began screaming and attracting the attention of bystanders. No shots were fired.³⁰ In the Netherlands, a pizza delivery man was called to an address where he was held at gunpoint and asked to turn over any money. The two offenders then fled the scene.³¹

Shop or bank robberies

In May 2020, a Hungarian police officer used his service weapon to rob a bank in Pécs. The offender threatened the bank's employees with his weapon and demanded money. Without firing a shot, he left the bank with more than five million forints—roughly EUR 14,000 at the time. He was later captured through CCTV footage and arrested for both this and a previous robbery.³² Two other robbers acquired significantly less money after entering a gas station near Cologne, Germany, and threatening the 25-year-old employee with a handgun (or an object resembling a pistol).³³

Personal disputes

In Vienna, Austria, a 49-year-old man became impatient when waiting for change in a local supermarket. To coerce the cashier into giving him the money faster, the offender pulled out an airsoft pistol and threatened the employee, before being quickly apprehended by the police.³⁴ An airsoft pistol was also used in a dispute between neighbours in Angles, France, in which a man who had become annoyed by noise from his upstairs neighbours threatened them while displaying his airsoft firearm.³⁵

converted into live-firing firearms.³⁶ As long as the victim perceives the firearm to be real, the offender will be able to coerce the victim.

Shootings at objects

Another way to threaten someone without causing physical injury is by shooting at an object. Research on this phenomenon is almost non-existent in the European context, making it hard to establish its prevalence and identify trends. An exception is the Firearm Dashboard of the Dutch National Police: their data reveals that more than a thousand shootings occurred between 2018 and 2021 in which shots fired caused damage to objects, which accounts for between 20 and 25 per cent of annual shootings registered by the Dutch police.³⁷ Information from open sources also reveals certain patterns in data on this type of non-lethal firearm violence. Used as a modus operandi mainly by organized crime groups or other criminals, shootings at objects—such as the private home of a victim—serve a similar function as threats with a firearm: they showcase the capability and will of the offender to use a firearm (see Box 4). The primary motive is not, however, to cause physical injury to the victim, although law enforcement agencies have warned that such shootings can unintentionally result in injuries to the intended victim or other bystanders.³⁸ In addition, given the public nature of these shootings, the impact on victims, bystanders, and even whole neighbourhoods can be high.

While there are no publicly available statistics on the types of firearms used during such incidents, newspaper reports may indicate the use of types of firearms that are easy to fire from a car or that do not require extensive experience, such as automatic firearms.³⁹ In addition, a recent report drawing on data from the Netherlands, Belgium, and Sweden also indicates that such shootings may occur in combination with the use of illegal hand grenades or other types of explosives that are placed in front of buildings.⁴⁰

Examples of non-lethal shootings at objects

Shots fired at house in Ireland

In July, 2022, a house in Clara, County Offaly, was shot at during the night. The occupant was not hit and escaped. Police suspected that the shooting was connected to a financial conflict with a criminal gang.⁴¹

Shots fired at houses in the Netherlands

In the Netherlands, the local government of Zaandam—a city close to Amsterdam—chose to increase video surveillance in parts of the city after several shootings at houses, including private homes and a local dentist.⁴² In the south of the Netherlands, in Tilburg, shots were fired at a hairdresser. The shooters clearly directed their threat by writing the name of a friend of the salon's owner on the window. The friend had been shot and injured just a few days earlier.⁴³

Non-lethal shootings at individuals

Finally, possibly the most severe forms of non-lethal firearm violence are shootings directed at individuals that do not result in the death of the victim, but in either no physical injuries or non-lethal physical injuries (see Box 5). As previously mentioned, this type of firearm violence makes up the majority of shootings. Trends for non-lethal firearm violence are hard to establish based on the few reliable official statistics available; however, these few sources show varying trends across countries (see previous section).

Research on patient registers indicates that victims of non-lethal firearm violence are mainly young males. In Sweden, for example, more than 90 per cent of firearm violence patients were male and most of the victims were 30 years old or younger.⁴⁴ Gunshot wounds to the extremities were the most common recorded injury from firearm assaults. Similar demographics for firearm violence victims were also recorded in England, Wales, and Finland.⁴⁵

Like firearm homicides (discussed in the next section), the contexts and motivations behind non-lethal firearm violence can be diverse. Several studies from Belgium, the Netherlands, and Sweden associate large parts of non-lethal firearm violence in their respective countries to conflicts

in the criminal milieu, such as financial disputes, rivalries, or so-called rip-deals—that is, violent robberies of drugs.⁴⁶ This finding is also supported by media articles on non-lethal firearm violence collected through the Incident Monitor that refer to conflicts among organized crime groups, gangs, or other criminals.⁴⁷ Other public disputes may also result in non-lethal shootings, such as conflicts between family members or rival groups that are not related to criminal activities or nightlife violence. Box 5

Research on patient registers indicates that victims of non-lethal firearm violence are mainly young males.

discusses a few examples of such shootings. Regardless of the context, both news articles as well as studies note the often public nature of these shootings and the impact on victims, offenders, and the neighbourhoods in which they occur.⁴⁸

Very little is known about the firearms used in non-lethal shootings specifically. Dutch forensic data indicates that the majority of non-lethal shootings involve handguns (such as pistols) or revolvers, as well as converted alarm or gas pistols.⁴⁹ Similarly, in Spain, the vast majority of firearms used in shootings resulting in non-lethal injuries were categorized as short firearms.⁵⁰ At the same time, however, firearms that are not normally able to fire bullets, such as gas pistols, but have been converted into live-firing weapons also caused a relatively high number of injuries and should therefore not be disregarded. Long firearms, on the other hand, were most prominent in domestic violence.

Examples of non-lethal shootings at individuals

Organized crime

A father and his two-year-old child were almost hit by a bullet that entered their car when it was shot at during an ongoing rip-deal in the streets of Amsterdam, the Netherlands. Fortunately, neither the father or the child, nor the four suspected intended victims, were physically injured during the shooting. The alleged shooter had previous convictions for weapon-related crimes.⁵¹

Nightlife violence

In Romania, a 20-year-old man was arrested after firing several shots with a converted gas

pistol from the backseat of a moving car. A pedestrian next to the road was hit and taken to hospital, where he was treated for non-lethal injuries.⁵²

During a night out in a club in Marbella, Spain, a violent fight broke out between two groups. After having been slashed with a sharp object in the face, a 40-year-old Dutchman drew his concealed weapon and fired several shots in the crowd. Four people, excluding the offender, were injured, two of whom received critical gunshot wounds to the chest and abdomen.⁵³

Firearm homicides

Firearm homicides are at the most extreme end of the continuum of firearm violence. Research on this lethal type of firearm violence is more established—compared to non-lethal firearm violence research—although some of the issues concerning non-lethal firearm violence data also apply to that of firearm homicides. From a global point of view, firearm homicide rates are declining.⁵⁴ This holds true for most European countries, and is reflected in the European average, with a rate of 0.3 firearm homicides per 100,000 population in 2021 (see Figure 6). Nonetheless, firearm homicide rates have stalled in certain countries or recently increased, as in the case of Sweden.⁵⁵

Less is published on the characteristics of firearm homicides. A recent study focusing on five European countries concluded that firearm homicides have various characteristics.⁵⁶ Specifically, the study identified two profiles across the five countries. In the first, firearm homicides are mainly committed in the domestic context with an above-average proportion of female victims and a relatively old average age. In the second, firearms are mainly used in homicides related to criminal

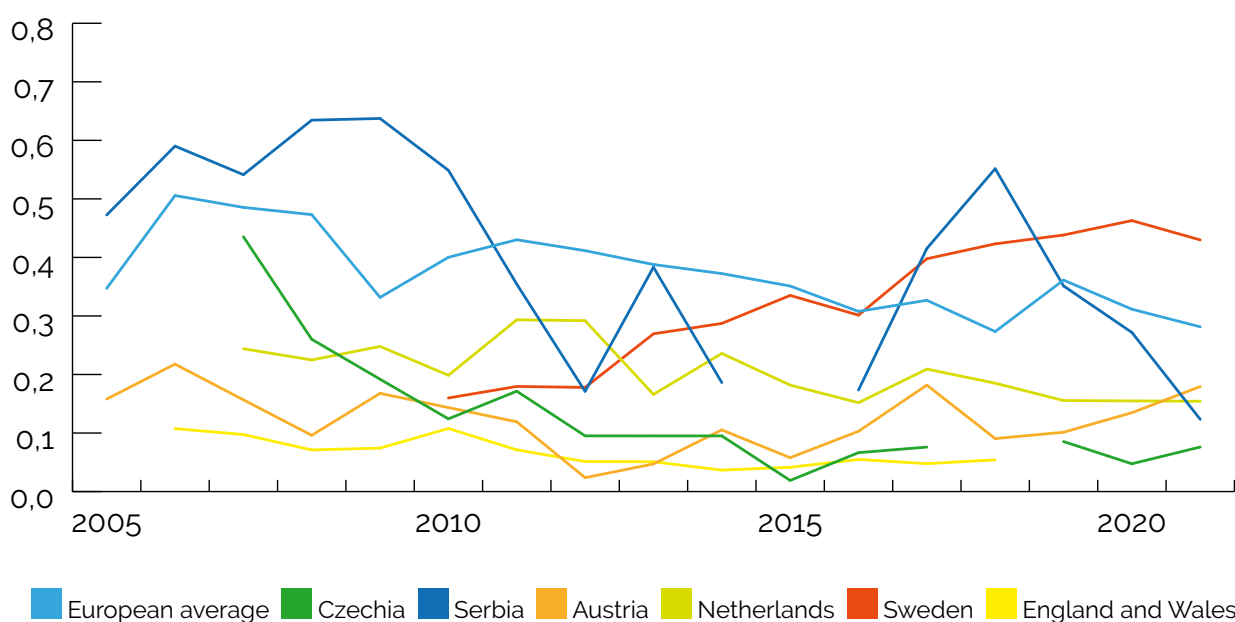
activities, such as organized crime, drug trafficking, or robberies. Here, victims and offenders are often disproportionately male and relatively young. These findings are also supported by seven reports published in the context of Project TARGET, as well as the other Project INSIGHT research papers in this series. The reports on firearm violence and trafficking in Belgium, Estonia, the Netherlands, Poland, Serbia, Spain, and Sweden show varying profiles and patterns in the use of firearms in incidents of lethal violence.⁵⁷ Overall, then, firearm homicides cannot be considered a homogenous phenomenon in the European context.

Studies resulting from the recent renewed interest in firearm homicides in Europe also reveal more about the firearms used in these lethal incidents.⁵⁸ The final report of Project TARGET reviewed forensic data from World Health Organization mortality statistics as well as information from various official statistics and forensic analyses.⁵⁹ The report concludes that the majority of firearm homicides in Europe involve handguns. The prevalence of long guns in certain countries—Finland,

France, Portugal, and Spain, among others—may be explained by the strong hunting culture in these countries, and thus the availability of hunting rifles or shotguns. Yet the use of a particular type of firearm may also differ depending on the context: automatic rifles, for example, are more commonly used by offenders linked to organized crime who illegally traffic

such weapons in order to hit an intended target.⁶⁰ Domestic firearm homicides, on the other hand, may involve certain types of firearms present in the household (see Box 6); in countries such as Finland, where hunting rifles are commonly stored at home, domestic homicides may be more likely to be committed with such long weapons due to their availability.⁶¹

Figure 6 Firearm homicide rate per 100,000 population, European average and selected countries, 2005–20



Source: UNODC (2023)⁶²

Examples of firearm homicides

Ideologically motivated firearm homicide

On 23 December 2022, a 69-year-old French man opened fire at a Kurdish culture centre in Paris, killing three and wounding three others. He used a semi-automatic Colt pistol.⁶³ The case received a lot of attention from the media, not only because of the racist motives of the shooter, which he declared in police custody, but also because of his previous convictions, including weapon-related charges for prohibited possession of a weapon and assault with a weapon.⁶⁴

Family annihilation

In 2019, a Dutch policeman killed his wife and two children with his service weapon. The killing may have been motivated by the separation and upcoming divorce from his wife. In the aftermath of the event, the children's grandmother advocated for better psychological controls among police officers. According to her, her son-in-law should not have been allowed to bring home his service weapon while suffering from post-traumatic stress disorder.⁶⁵

Determinants of firearm violence lethality

Compared to other weapons, firearms used in violent encounters increase the likelihood of the victim's death. Dutch researchers, for example, found that the likelihood of a lethal outcome during an assault is increased considerably if an offender displays or uses a firearm.⁶⁶ Furthermore, in the United States, assaults in the domestic setting committed with firearms are three times more likely to end in a lethal outcome compared to assaults committed with knives, and 23 times more likely compared to those committed with other weapons or physical force.⁶⁷ Yet the question of which factors determine the outcomes of firearm violence specifically remains largely unexplored, particularly in the European context. A number of factors that influence whether firearm violence ends in the victim's death have, however, been identified—mainly by US studies.

First, and most relevant to the lethality of firearm violence, are medical factors. Gunshot wounds to vital parts of the body—in particular the head and chest—increase the odds of the victim's death. Gunshot wounds to non-vital parts, such as extremities, on the other hand, decrease the odds.⁶⁸ A gunshot wound to vital parts of the body does not, however, automatically result in a fatality: a study found that 45 per cent of non-lethal shooting victims survived gunshot wounds to the head, chest, or stomach.⁶⁹ The impact of the number of gunshot wounds is contentious: some found that the likelihood of the victim's death increased with every gunshot wound, while others found that it decreased.⁷⁰ One explanation for these contradictory findings may lie in the type of

firearm used.⁷¹ Firearms that allow several shots to be fired in a short amount of time, such as automatic firearms, usually fire relatively small-calibre bullets that result in less severe gunshot wounds.^a Thus, although a victim may be hit by several bullets fired from an automatic firearm, if not hit in critical parts of the body, those gunshot wounds may have less of an impact on the body than one gunshot wound fired with a high-calibre weapon. Unsurprisingly, medical response time is also of critical importance for the victim's chances of survival after receiving one or several gunshot wounds.⁷²

Second, one study has suggested that certain characteristics of the victim may seem so threatening to the offender that they feel the need to lethally shoot their victim to avoid a counter-attack or future retaliation.⁷³ Surprisingly though, the victim's gender, ethnicity, or criminal background alone play no role in the lethality of shootings, according to US research.⁷⁴ Certain combinations of these factors, however, do: in one study, for example, the likelihood of dying due to a shooting increased by 42 times when the victim had a criminal history and was carrying a weapon.⁷⁵

Another relevant factor in discussions about lethal and non-lethal outcomes of shootings is the context in which a shooting takes place. Several studies have found that shootings that occur in the context of drug trade or otherwise drug-related criminal activities are most likely to result in severe, and potentially fatal, injuries or in fatality, both in the United States and in Europe.⁷⁶ Vicious cycles of retaliation and the fear of armed adversaries and targeted attacks may explain why shootings in this context more often result in lethal outcomes. Furthermore, firearm violence in the domestic setting appears to be more lethal.

The question of which factors determine the outcomes of firearm violence specifically remains largely unexplored, particularly in the European context.

a The severity of a gunshot wound is based on several factors. A shot to the head with a small-calibre firearm can be just as lethal as a shot with a high-calibre firearm.

Reports on the killing of women in South-east Europe reveal that firearm violence in domestic settings is 1.5 times more lethal than in criminal settings and that more than a third of domestic conflicts involving a firearm ended in the death of the victim.⁷⁷ The reasons for this relatively high risk of lethality for female victims of shootings in domestic conflicts may vary, but research suggest that the close physical proximity between the victim and the offender makes potentially lethal gunshot wounds to the head or other critical parts of the body more likely.⁷⁸ As previously mentioned, however, it must be noted that non-lethal firearm violence in the domestic setting may be reported less to law enforcement agencies out of fear of retaliation, or to protect other family members such as children or even the offender. Shootings that occur in the context of robberies or sexual violence are less common, yet research on the risk of lethality in such contexts differs, with some studies suggesting that they increased the likelihood of the victim's death, and others seeing no significant effects on the outcome.⁷⁹

Conclusion and implications

Much of the current European research on firearm violence focuses on firearm homicides due to available statistics on homicides and the comparability of data across countries. Firearm homicides are, however, the most extreme form of firearm violence, suggesting that non-lethal firearm violence is likely to occur more frequently. Despite this observation, there is a knowledge gap on non-lethal firearm violence

Several studies have found that shootings that occur in the context of drug trade or otherwise drug-related criminal activities are most likely to result in severe, and potentially fatal, injuries or in fatality.

in the European context, compounded by a lack of systematically recorded, detailed, and publicly accessible sources of information at both the national and European level. This paper has explored this gap by summarizing and discussing the trends and characteristics of non-lethal firearm violence in Europe based on available data.

Firstly, the few available statistics from European countries support the notion that the vast majority of firearm violence remains non-lethal. In Austria, Germany, the Netherlands, and Sweden,

more than 90 per cent of firearm violence did not result in the death of a victim. For most European countries, however, no comparable, publicly accessible statistics are available to provide a comprehensive picture on non-lethal firearm violence.

Secondly, this paper addressed the various manifestations of firearm violence. A simple distinction between lethal and non-lethal firearm violence does not explain this heterogeneity. Firearm violence can take on non-lethal, as well as lethal, forms, including threats against individuals—(ex-)intimate partners, acquaintances, or strangers—and in the contexts of robberies, domestic disputes, or other interpersonal conflicts; shots fired at objects to indirectly threaten an individual associated with that object; or shots fired at individuals but resulting in non-lethal injuries. A detailed and comprehensive comparison between these different types of violence is currently hindered by a lack of detailed information and

Decreasing trends in lethal firearm violence may mask an underlying increase in, or relatively high levels of, non-lethal violence.

studies, particularly on non-lethal violence. The few studies from the United States and Europe indicate, however, that medical factors (such as

medical capacities), the location of the gunshot wound, victim characteristics, and situational characteristics may impact the lethality of firearm violence. In other words, different types of firearm violence may have different characteristics.

Our understanding of firearm violence, which forms the basis for evidence-driven policymaking to prevent firearm violence, is often based on the rarest form of firearm violence: firearm homicides. Focusing solely on firearm homicides is therefore problematic: decreasing trends in lethal firearm violence may mask an underlying increase in, or relatively high levels of, non-lethal violence, and interventions may be designed in response to lethal events rather than as preventative measures. Research also indicates that homicide is not necessarily an indicator of other types of violence.⁸⁰ The systematic, comparable, and reliable recording of both lethal and non-lethal firearm violence is required to fully understand and subsequently address the issue. Networks driven by the EU, such as the European Multidisciplinary Platform Against Criminal Threats (EMPACT) or EU-coordinated national focal points, can play a vital role in addressing this intelligence gap by harmonizing definitions and efforts for data collection.

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This report was funded by the European Union's Internal Security Fund - Police

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Project INSIGHT

Project INSIGHT is an initiative that aims to prevent violence by enhancing the visibility of firearm violence in the European Union. With an online knowledge platform (www.gunviolence.eu) as its primary tool, the project also entails the creation of eight research reports on various themes of firearms violence. Project INSIGHT is funded by the European Union's Internal Security Fund - Police.

Project INSIGHT is coordinated by the Flemish Peace Institute. The Flemish Peace Institute was established in 2004 as a para-parliamentary institution within the Flemish Parliament. It provides thorough analyses, informs and organizes the debate and promotes peace and the prevention of violence. In the past the institute has coordinated other EU-funded projects on firearms such as SAFTE, DIVERT and TARGET.

The publication process of the Project INSIGHT research reports was supervised by the Small Arms Survey. The Small Arms Survey strengthens the capacity of governments and practitioners to reduce illicit arms flows and armed violence through three mutually reinforcing activities: the generation of policy relevant knowledge, the development of authoritative resources and tools, and the provision of training and other services.

Other partners in the Project INSIGHT-network include Textgain, SIPRI, and the Institute of Security and Global Affairs at Leiden University. The project also receives support from the Belgian Federal Police, Europol, European Firearms Experts, Dutch National Police and SEESAC.

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