**Gun Trends and Gun Violence**

This analysis details gun deaths and gun violence in the US, and goes over trends, patterns, and misconceptions about the data commonly portrayed in the news and other media outlets.

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For project details and presentation, please see our PowerPoint (.pptx).

Data used for this project was gathered from various sources:

* CDC
* US Census Bureau
* Gun Violence Archive website
* Kaggle
* FBI Uniform Crime Report
* ATF

**Repository Structure**

**Project Information**

• Gun\_Violence\_PPT.pptx: Presentation PowerPoint

**Data Folder Files**

• ‘Datasets’: folder contains all CSV files used for project

**Data Processing and Cleaning**

• ‘Jupyter\_Notebooks’: folder contains all Jupyter Notebooks for coding and cleaning

**Charts Folder Files**

• ‘Figures’: folder contains all visualizations for project

**Analysis Write-Up**

Our overarching goal of this project was to show how the data and statistics relating to guns and gun violence is often misconstrued and that important details are left out of the overarching story. We had several major takeaways after exploring all the data, which are outlined below.

**Gun Death Statistics**

Every year, there are an average of 30,000 gun deaths per year. What we are not told is that of all of those deaths, over 60% of those deaths are from suicide. We found this to be a very alarming statistic, seeing as how the media and other news outlets rarely, if ever, address this statistic when discussing the "gun problem". This seems to be indicitive that we actually have a mental health problem disguised as a gun problem.

We also found that of all races compared, white people have a much higher death by gun count than any other race, with the majority of the deaths being from suicide. On the other hand, black/African-American gun deaths are much lower in volume compared to whites, but the majority are due to homicide.

It was also noted that the vast majority of gun deaths are men.

**Mass Shooting Statistics**

We looked at mass shootings by state, and found that the top 5 states with the highest incidents of mass shooting deaths/injuries are California, Texas, Florida, Illinois, and Georgia. One thing we noted is that although the deaths/injuries are much higher in these states, the death rate is actually lower compared to other states because of population density. It is to be logically expected that you will have more shootings in areas where there are more people just by the sheer volume.

The bottom 5 states for mass shooting deaths/injuries are Rhode Island, Alaska, West Virginia, Iowa, and Vermont. We suspect this can be attributed to population size, but possibly other factors such as area type (mostly rural and suburban). States with fewer people and a rural setting such as Alaska would be less likely to have shootings, again, based on the number of people.

**School Shooting Statistics**

For school shooting breakdowns, we looked at school level (college, high school, middle school, elementary), as well as by area (urban/suburban/rural). Based on the data, we found that school shootings were more prevalent in high schools and in urban areas. In a timeline from 1990-2013, we saw 2 years spike in the number of school shootings, specifically 1993 and 2008. We took note than in 1993, the Brady Handgun Violence Prevention Act was enacted that mandated federal background checks on firearms purchasers and imposed a 5 day waiting period after purchasing the firearm before it was transferred to the purchaser. In 2003, the Supreme Court case District of Columbia v Heller took place, which repealed a handgun ban on the grounds of being unconstitutional. We are not tying any specific correlation to these events and school shooting increases, but we felt the need to take note of them as context.

**Conclusions**

Overall we found the following:

* Gun violence is an issue that everyone agrees on wanting to prevent, but misconceptions can lead to ineffective solutions.
* There is a misconception that gun ownership has increased in recent years, however data shows that households owning guns has decreased since the 1970s.
* Although households owning guns has decreased, the number of firearms has increased significantly, leading us to believe that people are owning multiple firearms.
* Suicide is the leading cause of gun deaths, which calls for more attention for better mental health services and suicide prevention methods.
* Gun education is another method that could potentially reduce other types of gun deaths, such as accidents.