Murder Accountability Project
Examining Associations between Murder Weapons, Circumstances, and Relationships

INTRODUCTION
The Murder Accountability Project is a nonprofit group that makes data available to the general public. These data files accurately account for unsolved homicides within the United States from 1965 to 2017. The collected data is from federal, state, and local governments. From these data files, we have analyzed the associations between the weapons used, relationships of the offenders to the victims, and the circumstances that led to homicide.

METHOD
The data used in this analysis was obtained through the Murder Accountability Project (www.murderdata.org). The data includes recorded details of 769,754 homicides. These details include the following information (when available):
- State, county, and original law enforcement agency making the report and type of agency (i.e., sheriff, county police, constable, tribal police, etc.).
- Year and month of homicide
- Demographic characteristics (i.e., age, sex, race, and ethnicity) of the victim and the offender
- Crime details including murder weapon, relationship of the victim to the offender, and the circumstances in which the homicide occurred (e.g., motor vehicle theft, robbery, etc.).

Chi square analyses were used to analyze the data.

RESULTS
Characteristics of Homicide Victims & Offenders
Of the victims, 77.4% were male, 22.4% were female, and for 0.2% of victims sex was unknown. There were 28.2% non-Hispanic victims, 10.3% Hispanic, and 61.5% of victims whose ethnicity was unknown. The average age of the victims was 32.9 years.

Of the offenders, 62.6% were male, 8.0% were female, and there were 29.4% of offenders for whom sex was unknown. There were 20.4% non-Hispanic offenders, 6.6% Hispanic, and 73.0% of offenders whose ethnicity was unknown. The average age of the offenders was 31.0 years.

Circumstances of Homicide
We first analyzed the circumstances involved in these unsolved homicides. Handgun (i.e., pistol, revolver) use was especially common across various homicide circumstances. In particular, handguns were used in 80.5% of police officers killing a felon, 77.8% of juvenile gang killings, 69.5% of homicides involving narcotic drug violations, 66.3% of homicides related to gambling, 66.2% of private citizens killing a felon, 62.0% of robbery-homicides, 54.1% of gun-cleaning homicides (other than self), 51.2% of homicides resulting from argument over money or property, 51.0% of homicides related to a lovers’ triangle, 29.8% of homicides related to prostitution and commercialized vice, 20.6% of abortion-homicides, and 10.6% of rape-homicides. When the homicide circumstance was judged to be a hunting accident, 32.1% used a shotgun and 57.2% used a rifle.

A knife or cutting instrument was used in 24.9% of rape-homicides, 20% of homicides resulting from a lovers’ triangle, 19.6% of homicides resulting from argument over money or property, and 10.7% of private citizens killing a felon. A personal weapon (including beating) was used in 65.3% of homicides resulting from babysitters killing a child, 30% of abortion-homicides, and 21.5% of rape-homicides.

Out of the circumstances regarding abortion, 10.0% used asphyxiation (includes death by gas) and 10.0% used narcotics, drugs, or sleeping pills. Out of the circumstances regarding abortion, 10.0% used asphyxiation (includes death by gas) and 10.0% used narcotics, drugs, or sleeping pills.

Victim-Offender Relationship & Weapon Use
Next, we analyzed the relationships between homicide victims and offenders, and how victim-offender relationship relates to weapon use. For example, handguns were used in 63.7% of homicides in which the victim was the ex-husband of the offender, 60.0% of stranger victims, 54.4% of ex-wife victims, 49.6% of acquaintance victims, 45.8% of employee victims, 45.3% of employer victims, 44.5% of friend victims, 40.3% of girlfriend victims, 36.6% of boyfriend victims, and 35.4% of neighbor victims.

A personal weapon (hands, fists, feet) was used in 35.0% of homicides in which the victim was the stepdaughter of the offender, 33.8% of daughter victims, 31.3% of son victims, and 29.0% of stepson victims.

Out of the weapons used in homicides, 33.7% of explosives were used to kill a stranger. In addition, 24.2% of drownings were used to kill the son of the offender and 19.7% of drownings were used to kill the daughter of the offender.

We also analyzed the correspondence between victim-offender relationship and weapon use from the perspective of the victim-offender relationship. For example, acquaintances of the offender were killed about equally often by various types of weapons, as follows: 26.7% of acquaintances were killed by shotguns, 26.7% by pushing/throwing out a window, 26.0% by narcotics, drugs, or sleeping pills, 25.6% by knives or cutting instruments, and 24.4% by rifles.

A knife or cutting instrument was used in 47.1% of homicides in which the victim was boyfriend to the offender, 44.4% of common-law husband victims, 41.5% of same-sex partner victims, 26.6% of mother victims, 25.6% of brother victims, 24.6% of stepfather victims, 21.5% of sister victims, 21.3% of father victims, 21.1% of friend victims, and 20.3% of girlfriend victims. Parent, romantic partner, and sibling offenders often used a knife or cutting instrument to commit homicide. This analysis was supported by the results of the chi square test of association, $X^2 (448, 769754) = 148633.844, p < .0001$.

CONCLUSION
Overall, handguns (i.e., pistol, revolver, etc.) were the most used weapons across circumstances and relationships. Interestingly, offenders closely related to the victim (i.e., parents, romantic partners, and siblings) often used a knife or cutting instrument to commit homicide.

REFERENCES