Statement on Behalf of the National Coalition Against Domestic Violence

Submitted for the hearing on

Stop Gun Violence: The Jackson-Elias Domestic Violence Survivor Protection Act

Subcommittee on the Constitution

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The National Coalition Against Domestic Violence (NCADV) is America's oldest national grassroots domestic violence organization, amplifying the voices of victims, survivors, and advocates in our nation's capital. Our mission is to lead, mobilize, and raise our voices to support efforts that demand a change of conditions that lead to domestic violence such as patriarchy, privilege, racism, sexism, and classism. We are dedicated to supporting survivors and holding offenders accountable and supporting advocates. NCADV envisions a national culture in which we are all safe, empowered, and free from domestic violence.

Introduction:

Sarah Johnson[1] was devoted to her son, Adam. She always had a smile on her face and a song on her lips. She brought joy to the people around her and was beloved by her family, friends, and community.

Adam returned home from school one day, expecting to be greeted with his customary hug and a snack. Instead, he found Sarah's corpse, lying where her ex-boyfriend had left it after shooting her. The boyfriend's corpse lay near it, also dead of a bullet wound. Adam was ten years old.

Sarah's boyfriend had abused her in the past. After he strangled her and threw her against a wall, he was charged with a felony domestic violence crime. As is all too common in domestic violence situations, he pled guilty to a misdemeanor assault charge and was sentenced to two days in jail. A year later, after Sarah had ended the relationship, her ex-boyfriend brought a gun into Sarah's home and murdered her.

[1] Sarah and Adam are fictional, but they are based on real people – to spare families the pain, we chose not to use real names and combined two different cases.

Due to a gap in Federal law, despite having been convicted of domestic violence, Sarah's boyfriend was legally permitted to possess the firearm he used to murder his victim.

Background

At NCADV, we define domestic violence (used interchangeably with intimate partner violence) as the willful intimidation, physical assault, battery, sexual assault, and/or other abusive behavior as part of a systematic pattern of power and control perpetrated by one intimate partner against another. It includes physical violence, sexual violence, threats, economic, and emotional/psychological abuse. The frequency and severity of domestic violence varies dramatically. According to the Centers for Disease Control and Prevention, more than 12.4 million American adults experience physical violence, sexual violence, and/or stalking at the hands of an in intimate partner annually.[i] One in four women and one in ten men experience intimate partner physical violence, intimate partner sexual violence, and/or intimate partner stalking in their lifetimes.[ii]

As noted in the definition, domestic violence is a pattern. Domestic violence tends to escalate, becoming more severe over time. Sarah's boyfriend did not start out by strangling her. On the contrary, he started out by telling her he loved her, by being kind and attentive; but over time, things changed. It started with a shove, then a slap, then a punch, then rape. This escalation is typically most extreme when survivors take steps to leave the abuser, such as by petitioning a court for protection, reporting the abuse to law enforcement, seeking services from a domestic violence program, or announcing their intention to leave.

Domestic abusers regularly use firearms as a tool with which to exert power and coercive control. They threaten to kill the victim, the victim's children, pets, family, friends, co-workers, law enforcement, community members, and themselves. A shocking 13.6% of women and 5.9% of men in the United States experience nonfatal intimate partner firearms abuse in their lifetimes, with 43% of the women experiencing nonfatal firearm abuse being injured with a firearm (shot, pistol whipped, sexually assaulted with the firearm, etc.).[iii] A survey of callers to the National Domestic Violence Hotline found that 67% of respondents whose abusers owned firearms believed their abuser partners were capable of killing them.[iv]

Far too often, abusers follow through on these threats. Most femicides in the United States are committed by intimate partners,[v] and 60% of intimate partner femicides are committed using firearms.[vi] Research shows that a male abuser's firearm possession is a key indicator of lethality. Domestic violence assaults involving a firearm are 12 times more likely to result in death than assaults using other weapons or bodily force.[vii] A male abuser's access to a firearm increases the risk of intimate partner femicide by 1,000%.[viii] In short, armed abusers pose an existential threat to their victims.

Moreover, domestic abusers often target not only their intimate partners but also others around them. Twenty percent of intimate partner homicide victims are someone other than the intimate partner, including children, other family members, friends, neighbors, law enforcement responders, other parties who intervened, or bystanders.[ix] Almost 60% of mass shootings between 2014 and 2019 were related to domestic violence, and in 68% of mass shootings, the shooter either had a history of domestic violence or killed an intimate partner or family member in the shooting.[x]

Troublingly, after declining steadily, intimate partner homicides began to increase in 2010. Between 2010 and 2017, intimate partner homicides committed with firearms increased 26%.[xi] This more than offset the continued decrease in intimate partner homicides committed using other means during this period. The COVID-19 pandemic has exacerbated this trend. For example, in Indiana, intimate partner fatalities increased an astounding 181% between July 1, 2020 and June 30, 2021 compared to the previous year, with the percentage committed using firearms increasing from 67% to 98%.[xii] In Ohio, intimate partner violence fatalities increased 62% between July 2019 and June 2021.[xiii] Texas saw a 22% increase in 2020 over 2019.[xiv] A survey of domestic violence programs early in the pandemic found that 50% of survey respondents reported that abusers threatening to shoot survivors had become more of a problem and that 33% reported an increase in intimate partner homicides in their communities.[xv] Based on what we hear anecdotally at NCADV, we expect that both of those percentages have increased substantially in the almost two years since the survey.

Domestic violence protective orders

As noted, survivors leaving abusive partners face escalating danger, and they often need legal protection. States, territories, Tribes, and some municipalities have a process by which a court can issue an order restraining an individual from abusing an intimate partner. States have different terms for the orders, but they are often referred to generically 'domestic violence protection orders (DVPOs). Current/former spouses, current/former cohabitants, and people who share a child in common are eligible petitioners in all states. Most states also provide coverage for non-cohabiting dating partners, and some are more expansive, providing coverage up to the 4th degree of consanguinity[xvi] or beyond.[2]

There are typically two phases in the issuance of a DVPO. In the first phase, a survivor petitions the court to issue a protective order *ex parte*; an order thus issued is often referred to as an '*ex parte* protective order.' This order takes effect upon service of the order on the respondent. The duration of an *ex parte* order varies by state, but typically lasts for one-to-two weeks. In the second phase, a court holds a hearing at which the respondent has the opportunity to be heard. An order issued after a hearing is often referred to as a 'final protective order.'[3] Again, the duration differs by state, but final protective orders typically last between six months and two years.[4]

Ex parte protective order

Victim advocates know all too well that violence escalates as a survivor takes steps that threaten the abuser's ability to exert power and control over them. *Ex parte* protective orders are an important legal tool through which survivors can seek safety, although they are by no means a panacea, and enforcement is a key component to ensuring survivor safety.

Ex parte protective orders provide injunctive relief, which short-term and necessary to prevent irreparable harm. They are issued in emergency circumstances to prevent death – the most irreparable of irreparable harms – or severe bodily injury. Courts balance the impact of the

[2] See www.disarmdv.org for more detailed description of state laws.
[3] For the purpose of this testimony, a 'protective order' means a DVPO. It does not include non-intimate partner sexual assault protective orders, non-intimate partner stalking protective orders, extreme risk protective orders, or other types of protective orders.
[4] Colloquially, *ex parte* orders are sometimes referred to as 'temporary orders' and final orders are sometimes referred to as 'permanent orders.' However, these are misnomers, as both *ex parte* and final orders are temporary, with very few exceptions.

constraints placed on the respondent against the threat of serious injury or death to the petitioner. To issue an *ex parte* protective order, a court must find there is credible evidence of immediate danger of irreparable harm, based on the facts of the case. While the respondent is not immediately available during the emergency hearing to contest the facts, their due process rights are still protected in many ways.

First, *ex parte* protective orders are, as mentioned previously, of short duration, often a few days to two weeks. They protect the petitioner for the limited amount of time it takes for the court to schedule a full hearing at which both the petitioner and the respondent have the opportunity to be heard and to present evidence. Only after the respondent has the opportunity to make their case does the court issue the final, longer-term order.

Second, a court only issues an *ex parte* protective order based on credible evidence. This evidence can include testimony under oath, police reports, and other evidence such as photos and videos. Judges are statutorily required to consider the evidence presented to them and make findings concerning the danger to the petitioner and other family members. Only then does the court issue an *ex parte* order.

Third, *ex parte* court orders only take effect upon service. Many *ex parte* protective orders never go into effect – and final orders are never issued – because the agency or person serving the order (law enforcement, process servers, or other person) is unable to locate the respondent.

The relief provided by courts in *ex parte* DVPOs is focused on safety and preventing further harm. Provisions in these orders may require the respondent to temporarily vacate the family home, stay away from the petitioner and the children, give possession of the family car to the petitioner, as well as temporarily award child custody and child support to the non-violent parent. These provisions provide critical safety for the petitioner until the final hearing can take place. It is in the service of safety that courts should temporarily require the respondent to relinquish firearms and ammunition where the court has made findings that indicate the respondent may commit potentially severe or even lethal acts of violence.

Final protective orders

Final protective orders are issued after a hearing of which the respondent has notice and at which both the petitioner and the respondent have the opportunity to be heard. In all states, courts can and often do require respondents to relinquish their firearms and ammunition by a time certain (between 24 and 72 hours). Many jurisdictions have developed robust systems for ensuring that respondents comply with such orders, in the interest of securing the safety of the petitioner and the children. States should then enter information about the existence and terms of the final protective order in their state databases and also the federal National Crime Information Center (NCIC). This helps local and federal law enforcement ensure that valid final protection orders are enforced anywhere in the country.

Federal law

Armed abusers pose a clear, unique, and significant danger to their victims. Recognizing this, Congress has taken steps to protect victims of domestic violence from firearm homicide by restricting adjudicated abusers' access to firearms. Since the 1990s, federal law has restricted certain respondents to final domestic violence protective orders and certain domestic violence misdemeanants from possessing, receiving, transporting, or shipping firearms or ammunition and restricts the sale or transfer of firearms to such individuals.

The two federal firearms prohibitors (18 U.S.C. 922(g)(8) and (g)(9)) related to domestic violence are based on the prohibited person's status: either as a person subject to a protection order or a person who has a misdemeanor conviction for domestic violence. In the case of a respondent to a protective order, once the protection order expires, the prohibition against possessing or purchasing firearms and ammunition is lifted. In the case of a misdemeanor conviction for domestic violence, the prohibition exists regardless of when the misdemeanor conviction occurred, as the salient issue is whether that conviction is still on the person's record. States have processes for expunging such convictions, and many domestic violence misdemeanants will have these convictions removed from their records, either by operation of the law (sufficient time passed without re-offending) or by virtue of a pardon. The ban is not retroactive, therefore, and in many cases, does not last more than a certain number of years.

Domestic violence protective order prohibitor

In 1994, the first Violence Against Women Act[xvii] prohibited certain respondents to *final* domestic violence protective orders from possessing, receiving, shipping, or transporting firearms or ammunition.[xviii] It is also illegal to knowingly sell or transfer firearms to such respondents.[xix] This is commonly referred to as the 'DVPO prohibitor,' the 'protective order prohibitor,' or the '(g)(8) prohibitor' (referring to possession).

For a DVPO to trigger the protective order prohibitor, it must meet several requirements. First, it must be a final order – that is, issued after a hearing of which the respondent had notice and at which the respondent had the opportunity to participate. If the respondent has notice of the hearing and fails to appear and the court issues a default order in the respondent's absence, the DVPO prohibitor applies. Current federal law excludes *ex parte* DVPOs.

Second, the petitioner and the respondent must have a certain relationship. For the purposes of the (g)(8) prohibitor, the petitioner and respondent must be 1) current or former spouses; 2) current or former cohabitants; 3) share a child in common; or 4) the protected party must be the child of either the petitioner or the respondent. The (g)(8) prohibitor does not apply to non-cohabiting, non-co-parenting dating partners.

Finally, the order must restrain the respondent from harassing, stalking, or threatening the intimate partner or child or engaging in conduct that would place the intimate partner in reasonable fear of bodily injury to the partner or child. The order must also *either* include a finding that the respondent represents a credible threat to the physical safety of the intimate partner or the child *or* explicitly prohibit the use, attempted use, or threatened use of physical force against the intimate partner or the child that would reasonably be expected to cause bodily injury.

The DVPO prohibitor lasts for the duration of the protective order. Once the individual is no longer subject to the order – and thus no longer has the status of a respondent subject to a qualifying order – the prohibitor no longer applies.

Misdemeanor crime of domestic violence prohibitor

In 1996, Congress further prohibited certain domestic violence misdemeanants from possessing, receiving, shipping or transporting firearms or ammunition.[xx] It is also illegal to knowingly sell or transfer a firearm to such a person.[xxi] This is commonly referred to as the 'MCDV prohibitor,' the 'misdemeanor domestic violence prohibitor,' the '(g)(9) prohibitor'

(referring to possession), or the 'Lautenberg Amendment' (for its original sponsor, the late Senator Frank Lautenberg).

All too often, prosecution of domestic violence crimes results in plea agreements, reduced charges, or diversion programs that end up treating felony-level violence as a misdemeanor offense, due to the relationship between the victim and the perpetrator. This allowed individuals who had by their actions proved themselves to pose a significant danger to others to circumvent federal law intended to prevent them from accessing firearms. Senator Lautenberg sought to close this loophole with the language that ultimately became 18 U.S.C. 922(g)(9).[xxii]

Similarly to the DVPO prohibitor, for a misdemeanor domestic violence conviction to trigger the MCDV prohibitor, it must meet certain requirements. First, the defendant must have been convicted of or pleaded guilty to a misdemeanor crime under federal, state, tribal, or local[5] law involving the use or attempted use of physical force or a threat with a deadly weapon.

Second, the defendant and the victim must have a certain relationship. The MCDV prohibitor applies to a defendant who, to the victim, is one of the following: current/former spouse, current/former cohabitant, shares a child in common, parent, guardian, or is similarly situated to a spouse, parent, or guardian. The (g)(9) prohibitor does not currently apply to non-cohabiting, non-co-parenting dating partners.

Third, the defendant must have been afforded appropriate due process protections. They must have either been represented by counsel in the case or knowingly and intelligently waived their right to counsel. Moreover, if under the laws of the jurisdiction, they were entitled to a jury trial, they must have either had their case been tried by a jury or they must have knowingly and intelligently waived their right to a jury trial.

Although the MCDV prohibitor is often characterized as a lifetime ban, that is not entirely accurate. As with the other prohibitors, the prohibition rests on the individual's status as a domestic violence misdemeanant. The statute explicitly stipulates that the prohibitor no longer applies if the conviction is expunged or set aside or if the individual is pardoned or has their civil rights restored, unless the pardon, expungement, or restoration of rights expressly provides otherwise. Most states have a process by which misdemeanants who do not reoffend can have their convictions expunged or set aside after a certain amount of time.[6]

United States Supreme Court Rulings

Undergirding all restrictions on firearm access is the United States Supreme Court's ruling in *District of Columbia v. Heller.*[xxiii] In *Heller*, and subsequently in *MacDonald v. Chicago*,[xxiv] the Supreme Court found that the Second Amendment of the United States Constitution protects an individual's right to possess a firearm for lawful purposes, such as self-defense within the home. However, writing for the majority in *Heller*, the late Justice Antonin Scalia noted that ". . . the right secured by the Second Amendment is not unlimited . . . the Court's opinion should not be taken to cast doubt on longstanding prohibitions on the possession of firearms . . ."

[5] While the Bureau of Alcohol, Tobacco, Firearms, and Explosives has long interpreted the (g)(9) prohibitor as originally enacted to include convictions under local laws, a divergent 10th Circuit ruling led to the statutory addition of 'local' to the original text, which change takes effect October 1, 2023.
[6] State by state restoration of rights can be found at https://ccresourcecenter.org/restoration-2/.

The Supreme Court of the United States has considered and upheld the federal MCDV prohibitor in three cases: *United States v. Hayes*,[xxv] *United States v. Castleman*,[xxvi] and *Voisine v. United States.*[xxvii] In *United States v. Hayes*, the Court held that the state statute under which the defendant had been charged did not need to explicitly be called 'domestic violence;' as long as the elements of the statute were satisfied, the prohibitor applied. In *United States v. Castleman*, the Court ruled that the MCDV prohibitor was triggered by a crime involving the degree of force necessary for a common law battery conviction, which could include offensive touching. Most recently, in *Voisine v. United States*, the Court found that a conviction for reckless domestic assault constitutes a misdemeanor crime of domestic violence for the purpose of the (g)(9) prohibitor.

Gaps in Federal Law

The DVPO and MCDV prohibitors have been transformative in the lives of survivors in many ways. Since their enactment, spousal homicides have been halved. However, their impact is limited by several loopholes, including the dating partner loophole, the *ex parte* loophole, and the stalking loophole.

Dating Partner Loophole

While dating partners lack the legal relationship that exists between spouses, dating abuse is equally as serious a crime. Dating abuse involves the same dynamics as spousal abuse, and the threats and the level of violence used by abusive dating partners are on par with those used by spouses. Moreover, most intimate partner violence is committed by dating partners rather than by spouses.[xxviii] Recognizing this, in 2006, Congress added dating partners to the interstate crime of domestic violence and added dating partners throughout the grant programs in VAWA.[xxix] Dating partners were added to the Family Violence Prevention and Services Act (FVPSA) in 2010,[xxx] the first FVPSA reauthorization after the 2006 VAWA.

Thus, federal law provides the same protections and services to victims of dating violence and spousal violence, with one notable exception: adjudicated dating abusers are not prohibited from possessing, receiving, shipping, or transporting firearms, unless they either cohabit/cohabited with or share a child in common with their victim. Homicide numbers illustrate the impact of this gap: while spousal homicides have decreased by 50% since the federal DVPO and MCDV prohibitors were enacted, homicides of dating partners have decreased only 5% in this same period.[xxxi] In 2020, 60% of intimate partner homicides were committed by dating partners rather than spouses.[xxxii] State level data shows that closing the dating loophole decreases overall intimate partner homicides by 10%.[xxxiii] Victims of domestic violence who are dating partners are not less deserving of protection than spouses. But current federal firearms law treats them as second-class victims - and it shows.

Societal changes are magnifying the impact of the dating loophole. The median age of marriage has risen substantially since 1994.[xxxiv] The combined rate of young adults aged 18 - 24 who are either married or live together is substantially lower now than it was in 1994,[xxxv] and the average age of first birth is substantially higher.[xxxvi] As a result, a greater percentage of victims fall into this loophole.

Ex Parte Loophole

As described, courts issue *ex parte* protective orders at what is the most dangerous time for a survivor leaving an abusive partner. A ten-city study found that of intimate partner homicide

victims with only one restraining order, half of them were protected by an *ex parte* order, so they were unprotected by federal law. State laws closing the *ex parte* loophole are associated with a 12% decrease in intimate partner homicides.[xxxvii]

Stalking Loophole

Stalking is a course of conduct that includes intimidation, surveillance, or harassment that places a person in reasonable fear of material harm to their health or safety; stalking is a serious crime that is all too often a precursor to murder. Americans who experience stalking are at least two-hundred times as likely to be murdered than those who are not stalked; due to data limitations, the true magnitude of this increased risk is likely much higher.[xxxviii] 20% of stalking victims are physically assaulted by their stalker,[xxxix] and stalkers attack someone other than the direct victim in 15% of cases.[xl] Unfortunately, many states lack a felony crime of stalking for a first offense, and, like domestic violence, stalking is often minimized.

30% of stalking is directed at intimate partners.[xli] In the domestic violence context, stalking is a key indicator of lethality; one study found that 76% of women murdered by an intimate partner and 85% of women who survived intimate partner homicide attempts were stalked in the preceding year.[xlii] Intimate partner stalking is also specifically associated with gun threats, with 76% of women who were threatened by an intimate partner with a gun also experiencing stalking,[xliii] and one-third of women who were stalked but not threatened with a gun fearing their abuser would get a gun to harm them.[xliv]

However, stalking misdemeanants, including individuals who stalk their intimate partners, are not prohibited from possessing firearms under federal law.

State law

Many states have laws restricting adjudicated domestic abusers' firearm access. Some state laws mirror federal law, some are more permissive, and some are more restrictive. Thirty-three states have taken steps to close the dating partner loophole,[xlv] and twenty-six have taken steps to close the *ex parte* loophole.[xlvi]

In the context of protective orders, even states that do not explicitly address restricting respondents' firearm access in their state code generally provide judges with the authority to order whatever relief they believe is necessary to protect the survivor. Unfortunately, too often, even in cases with very clear lethality indicators with a firearms nexus, judges do not restrict the abuser's firearm access.[xlvii]

Enforcement is a critical component of ensuring the effectiveness of the DVPO and MCDV prohibitors. This includes ensuring that prohibited abusers divest themselves of contraband firearms and ammunition. State laws requiring abusers to relinquish their firearms upon being prohibited are associated with a 12% decrease in intimate partner homicides.[xlviii] Law enforcement has highlighted policies and procedures to disarm adjudicated abusers as a key priority in protecting survivor safety.[xlix]

The Lori Jackson – Nicolette Elias Domestic Violence Survivor Protection Act (S.2169)

S.2169, the Lori Jackson – Nicolette Elias Domestic Violence Survivor Protection Act,[l] partially or fully closes the aforementioned loopholes. Before addressing the contents of the bill, we must make a very clear distinction between this and other bills that close loopholes related to

domestic violence and so-called ‘red flag laws.’ Red flag laws, also known as ‘extreme risk protection orders’ (ERPOs) are separate and distinct from laws regulating firearm access by adjudicated domestic abusers. Whereas ERPOs are issued by courts primarily to prevent suicide by temporarily restricting the firearm access of a person who may pose a more generalized threat to ‘self or others,’ DVPOs are issued by courts to prevent domestic violence by an individual who has a demonstrable history of abusive behavior or threats and who poses a particularized risk to an identifiable victim, and DVPOs provide a variety of forms of relief. S.2169 is not a ‘red flag law,’ nor does it include any ‘red flag’ provisions.

Dating loophole

S.2169 closes the dating loophole by adding ‘dating partner (as defined in section 2266)’ to the definition of ‘intimate partner’ and to the definition of ‘misdemeanor crime of domestic violence’ in 18 USC 921(a), so the existing DVPO and MCDV prohibitors also apply to adjudicated abusive dating partners. Section 2266 defines ‘dating partner’ for the purposes of the interstate felony crime of domestic violence as “. . . a person who is or has been in a social relationship of a romantic or intimate nature with the abuser. The existence of such a relationship is based on a consideration of – (A) the length of the relationship; (B) the type of relationship; and (C) the frequency of interaction between the persons involved in the relationship.” [li]

This definition balances the need for specificity with the recognition that every relationship is different, and arbitrary milestones and markers such as a specific duration, whether the parties have engaged in sexual relations, etc. cannot alone accurately describe a dating relationship. It very clearly excludes people who, for example, go on a single date or have a ‘one-night stand.’ At the same time, it recognizes that a long-term friendship that occasionally involves sexual contact but no romantic attachment might not constitute a dating relationship. The interstate crime of domestic violence against a dating partner has been in the federal code since 2006;[lii] there is now more than 16 years of case law clarifying this definition. Definitions of dating relationship in state law either mirror or are based on this definition.

Opposition to closing the dating loophole is typically rooted in a fundamental misunderstanding of what doing so actually means. For example, we have heard people claim that closing the dating loophole would mean that someone who was accused of committing domestic violence would lose their firearm access permanently without any adjudication. This clearly is not true, as all of the due process requirements in existing law would to dating partners in the same way as they currently apply to spouses. And, as addressed above, neither the (g)(8) nor the (g)(9) prohibitors are inherently permanent. In fact, the language of the MCDV prohibitor explicitly describes how persons subject to this restriction can expunge or otherwise clear their record of the misdemeanor conviction. Similarly, we have heard people claiming that closing the dating loophole is a violation of the 2nd Amendment. The (g)(8) and (g)(9) prohibitors are, as previously discussed, entirely consistent with the 2nd Amendment, and adding adjudicated dating abusers to the existing prohibitors in no way changes that.

As explored previously, the prohibitors apply to an individual based on their status as prohibited person, regardless of when they acquired that status. Just as none of the existing firearms prohibitors are ‘retroactive,’ closing the dating loophole does not create a ‘retroactive’ crime. This is, again, based on a fundamental misunderstanding of what activity is being criminalized. Closing the dating loophole does not impose a criminal punishment for conduct that occurred before the loophole was closed - a criminal penalty would only accrue to adjudicated dating abusers who illegally possess a firearm after the loophole is closed, not to adjudicated dating abusers who possess a firearm legally before the loophole is closed. They can only be charged

for possessing a firearm after it became illegal for someone of their status as an adjudicated dating abuser to do so. Federal courts have ruled multiple times that the MCDV does not violate the ex post facto clause of the Constitution.[liii] Adding dating partners to existing, constitutional, non-retroactive prohibitors does not somehow make those existing prohibitors unconstitutional or retroactive.

Ex parte loophole

S.2169 expands the DVPO prohibitor to include *ex parte* protective orders with appropriate due process protections that are replicated from elsewhere in the federal code. The due process protections mirror those in the 1994 full faith and credit provisions in the Violence Against Women Act,[liv] which have been tested in court over the past almost thirty years and found to provide sufficient due process. Consistent with this, courts already have the mechanisms in place to issue *ex parte* orders that uphold the due process rights of respondents, which will likewise uphold their due process rights pertaining to firearms restrictions. This includes requiring the respondent to be served with the *ex parte* order and receive notice of the scheduling of a full hearing within the very short time frame required by state law, at which the respondent has the opportunity to be heard, and after which, if a final protective order is not issued, the respondent's firearms rights are restored.

Ex parte orders can temporarily touch on a number of Constitutional rights. For example, in ordering a respondent to stay away from a petitioner when the petitioner attends faith services, a court may be temporarily constraining the respondent's right to worship. *Ex parte* orders also temporarily impact the respondent's property rights when they exclude the respondent from a shared family home or give temporary possession of the family car to the petitioner. Even parental rights can be constrained in an *ex parte* order, as courts often temporarily grant custody of children to the petitioner. Courts have found that on balance, if the life or physical safety of the petitioner or children is at risk, it is worth temporarily restricting the rights of the respondent. To put it simply, a court can restore possession of firearms to the respondent if the court decides there is not enough evidence to issue a final order after a hearing; a court cannot restore life to a victim or child who was murdered by an abuser. Death is irreparable.

Intimate partner stalking loophole

S.2169 also corrects a longstanding misalignment between the DVPO and MCDV prohibitors by adding 'stalking' to the definition of a misdemeanor crime of domestic violence in 18 U.S.C. 921(a). While the DVPO prohibitor applies to respondents who are ordered not to stalk their intimate partner or child, the MCDV does not include individuals convicted of stalking an intimate partner or child. S.2169 does not fully close the stalking loophole, in that this change applies only to intimate partners, but as discussed previously, intimate partner stalking is a key indicator of lethality, and such a step is necessary.

Grants to disarm adjudicated abusers

Enforcement of firearms prohibitors is key to protecting victims, survivors, and their children from further terror, injury, and homicide at the hands of a domestic abuser wielding a firearm. Many state laws prescribe a process by which an individual who is prohibited from having a firearm due to a state domestic violence prohibitor must relinquish their firearms. These state laws are associated with a 12% decrease in intimate partner homicide.[lv] Many localities have also developed such processes independent of state law. These processes include not only policies and protocols for the relinquishment of firearms and proving relinquishment, they also

address the storage of firearms and the safe return of firearms once the individual is no longer restricted from possessing them.

These policies are beneficial not only to survivors and to public safety, but also to the adjudicated abuser. Without such policies in place, adjudicated abusers may not know how to safely and lawfully divest themselves of contraband firearms. They may want to comply but be unsure how to do so. Moreover, they may be unsure about their rights, particularly as pertains to their right against self-incrimination – they need to know, for example, that if they transport their firearms to a law enforcement agency to store, they will not be charged with transporting firearms illegally.

Many jurisdictions want to develop and implement policies and protocols for firearms relinquishment, storage, and return, but lack the resources to do so. This is particularly the case in poorly-resourced jurisdictions such as rural communities. S.2169 provides federal grants to help these constituents ensure adjudicated abusers subject to a DVPO actually dispossess themselves of their firearms.

Streamlining the statute

S.2169 also streamlines the statute by moving the definition of a qualifying domestic violence protective order to the definitions. The definitions for the federal firearms code reside in 18 U.S.C. 921(a), with the notable exceptions of the definition of a domestic violence protective order in 18 USC 922(d)(8) and (g)(8). S.2169 replaces the text at 18 USC 922(g)(8) with 'covered domestic violence court order' and moves the definition in current statute to 18 U.S.C. 921(a) with the modifications discussed elsewhere.

Conclusion

At NCADV, we have a project to memorialize victims of intimate partner homicide, Remember My Name. Every year, people send us the names of their loved ones who were murdered by a domestic abuser, and every year we create a poster with their names, their ages, and the state where they lived. Although it is painful, we feel it is important to bear testament to their deaths and celebrate their too-short lives. While every intimate partner homicide is a tragedy, it is particularly heartbreaking to see the names of the children – the infants, toddlers, and kindergarteners who have been murdered by a parent's abusive partner. The 12-year-olds who should have had long lives ahead of them. The surviving grandparents who have lost not only their daughters but also their grandchildren. Domestic abusers target their victims' children, because they know their victims will do anything to protect their children. Too often, abusers exert the ultimate power and control – the power to take a life. We call on Congress to take a stand against domestic abusers and for victims, survivors and their families by passing S.2169. Every life saved is a world saved.

For more information, contact Rachel Graber, Director of Public Policy, at rgraber@ncadv.org.

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[i] Smith, S. G., Zhang, X., Basile, K. C., Merrick, M. T., Wang, J., Kresnow, M., Chen, J. (2018). *The national intimate partner and sexual violence survey (NISVS): 2015 data brief – updated release.* National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/2015data-brief508.pdf

[ii] Ibid.

[iii] Adhia, A., Lyons, V. H., Moe, C. A., Rowhani-Rahbar, A., & Rivara, F. P. (2021). Nonfatal use of firearms in intimate partner violence: Result of a national survey. *Preventive Medicine*. https://doi.org/10.1016/j.ypmed.2021.106500

[iv] National Domestic Violence Hotline (2014). *Firearms and domestic violence.* http://www.thehotline.org/resources/firearms-dv/#tab-id-2

[v] Petrosky, E., Blair, J. M., Betz, C. J., Fowler, K. A., Jack, S. P. D., & Lyons, B. H. (2017). Racial and ethnic differences in homicides of adult women and the role of intimate partner violence—United States, 2003–2014. *Morbidity and Mortality Weekly Report, 66*(28), 741–746. https://doi.org/10.15585/mmwr.mm6628a1

[vi] Kivisto, A.J. & Porter, M. (2020). Firearm use increases risk of multiple victims in domestic homicides. *Journal of the American Academy of Psychiatry and the Law, 48*(1), 26-34. doi: 10.29158/JAAPL.003888-20

[vii] Saltzman, L. E., Mercy, J. A., O'Carroll, P. W., Rosenberg, M. L., & Rhodes, P. H. (1992). Weapon involvement and injury outcomes in family and intimate assaults. *JAMA, 267*(22), 3043-3047.

[viii] Spencer, C. M. & Stith, S. M. (2020). Risk factors for male perpetration and female victimization of intimate partner homicide: A meta-analysis. *Trauma, Violence, & Abuse, 21*(3), 527-540. doi: 10.1177/1524838018781101

[ix] Smith, S., Fowler, K. & Niolon, P. (2014). Intimate partner homicide and corollary victims in 16 states: National violent death reporting system, 2003-2009. *American Journal of Public Health*, *104*(3), 461-466. https://doi.org/10.2105/AJPH.2013.301582

[x] Geller, L. B., Booty, M., & Crifasi, C. K. (2021). The role of domestic violence in fatal mass shootings in the United States, 2014-2019. *Injury Epidemiology, 8*(38). https://doi.org/10.1186/s40621-021-00330-0

[xi] Fridel, E. E. & Fox, J. A. (2019). Gender differences in patterns and trends in U.S. homicide, 1976-2017. *Violence and Gender, 6*(1), 27-36. doi: 10.1089/vio.2019.0005

[xii] Indiana Coalition Against Domestic Violence. (2021). *Domestic violence fatalities: July 1, 2020 – June 20, 2021.* https://icadvinc.org/domestic-violence-fatalities-2020-21/

[xiii] Chow, C. (2021, October 6). Ohio Domestic Violence Network reports 161 deaths from domestic violence situations over last year. *The Statehouse News Bureau.* https://news.wosu.org/news/2021-10-06/ohio-domestic-violence-network-reports-161-deaths-from-domestic-violence-situations-over-last-year

[xiv] Texas Council on Family Violence. (2021). *Honoring Texas victims: Family violence fatalities in 2020.* https://2mg7g749lu2112sis323nkkn-wpengine.netdna-ssl.com/wp-content/uploads/tcfv_htv_rprt_2020.pdf

[xv] Lynch, K. & Logan, T. K. (2021). *Assessing challenges, needs, and innovations of gender-based violence services during the COVID-19 pandemic: Results summary report.* https://ncadv.org/assets/2497/covid__gender_based_violence_final_report.pdf

[xvi] Alaska Stat. Ann. § 18.66.990.

[xvii] Pub. L. 103–322, title IV

[xviii] 18 U.S.C. 922(g)(8)

[xix] 18 U.S.C. 922(d)(8)

[xx] Pub. L. 104–208, §101(f); 18 U.S.C.922(g)(9)

[xxi] 18 U.S.C. 922(d)(9)

[xxii] 142 Cong. Rec. S11872-01

[xxiii] *District of Columbia v. Heller*, 554 U.S. 570 (2008)

[xxiv] *MacDonald v. Chicago*, 561 U.S. 742 (2010)

[xxv] *United States v. Hayes*, 555 U.S. 415 (2009)

[xxvi] *United States v. Castleman*, 134 S. Ct. 1405 (2014)

[xxvii] *Voisine v. United States*, 136 S.Ct. 2272 (2016)

[xxviii] Truman, J.L. and Morgan, R.E. (2014). *Nonfatal domestic violence: 2003-2012*. U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics. https://www.bjs.gov/content/pub/pdf/ndv0312.pdf

[xxix] 18 U.S.C. 2261 as amended by Pub. L. 109–162, title I

[xxx] Pub. L. 111–320, title II

[xxxi] Federal Bureau of Investigation. (2021). *Expanded homicide data*. Crime Data Explorer. https://crime-data-explorer.app.cloud.gov/pages/explorer/crime/shr

[xxxii] Ibid.

[xxxiii] Zeoli, A. M., McCourt, A., Buggs, S., Frattaroli, S., Lilley, D., & Webster, D. W. (2017). Analysis of the strength of legal firearms restrictions for perpetrators of domestic violence and their association with intimate partner homicide. *American Journal of Epidemiology.* doi: 10.1093/aje/kwx362

[xxxiv] United States Census Bureau, United States Department of Commerce (2022). *Figure MS-2: Median age at first marriage: 1890 to present.* https://www.census.gov/content/dam/Census/library/visualizations/time-series/demo/families-and-households/ms-2.pdf

[xxxv] Gurrentz, B. (2018, November 5). *Living with an unmarried partner now common for young adults.* United States Department of Commerce, United States Census Bureau. https://www.census.gov/library/stories/2018/11/cohabitation-is-up-marriage-is-down-for-young-adults.html

[xxxvi] Mathews, T. J. & Hamilton, B. E. (2016). *Mean age of mothers is on the rise: United States, 2000 – 2014.* National Center for Health Statistics, Centers for Disease Control and Prevention. https://www.cdc.gov/nchs/products/databriefs/db232.htm

[xxxvii] Ibid.

[xxxviii] Meloy, J. R. (1999). Stalking: An old behavior, a new crime. *Forensic Psychiatry, 22*(1), 85-99.

[xxxix] Baum, K., Catalon, S., Rand, S., & Rose, K. (2009). Stalking victimization in the United States. *Bureau of Justice Statistics Special Report.* http://www.bjs.gov/index.cfm?ty=pbdetail&iid=365.
[xl] Ibid.
[xli] Ibid.
[xlii] McFarlane, J. M., Campbell, J. C., Wilt, S., Sachs, C. J., Ulrich, Y. & Xu, X. (1999). Stalking and intimate partner femicide. *Homicide Studies, 3*(4), 300-316.
[xliii] Logan, T. & Lynch, K. R. (2018). Dangerous liaisons: Examining the connection of stalking and gun threats among partner abuse victims. *Violence and Victims, 33*(13), 399-416. http://dx.doi.org/10.1891/0886-6708.VV-D-17-00134
[xliv] Ibid.
[xlv] CA, CT, DE, DC, HI, IL, IN, KS, LA, ME, MD, MA, MI, MN, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OR, PA, RI, TX, UT, VT, WA, WV, WI
[xlvi] AZ, CA, CO, CT, DE, DC, HI, IL, ME, MD, MA, MI, MT, NE, NH, NJ, NY, NC, OH, PA, TX, UT, VT, VA, WA, WV
[xlvii] Gollan, J. (2021, October 6). Armed and abusive: How America's gun laws are failing domestic violence victims. *Reveal News*. https://revealnews.org/when-abusers-keep-their-guns/
[xlviii] Zeoli, A. M., McCourt, A., Buggs, S., Frattaroli, S., Lilley, D., & Webster, D. W. (2017). Analysis of the strength of legal firearms restrictions for perpetrators of domestic violence and their association with intimate partner homicide. *American Journal of Epidemiology.* doi: 10.1093/aje/kwx362
[xlix] Police Executive Research Forum. (2019). *Reducing gun violence: What works, and what can be done now.* https://www.policeforum.org/assets/reducinggunviolence.pdf
[l] Lori Jackson-Nicolette Elias Domestic Violence Survivor Protection Act, S.2169, 117th Cong. (2021).
[li] 18 U.S.C. 2266
[lii] Pub. L. 109–162, title I
[liii] *Hiley v. Barrett*, 155 F.3d 1276 (11th Cir. 1998); *United States v. Mitchell*, 209 F.3d. 319 (4th Cir. 2000).
[liv] 18 U.S.C. 2265
[lv] Zeoli, A. M., McCourt, A., Buggs, S., Frattaroli, S., Lilley, D., & Webster, D. W. (2017). Analysis of the strength of legal firearms restrictions for perpetrators of domestic violence and their association with intimate partner homicide. *American Journal of Epidemiology.* doi: 10.1093/aje/kwx362

Appendix – Selected Publications

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Nonfatal use of firearms in intimate partner violence: Results of a national survey

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ABSTRACT

Research on intimate partner violence (IPV) and firearms has typically focused on homicide, so there is limited information on how firearms are used in nonfatal ways, particularly in community samples. We sought to estimate the prevalence of nonfatal firearm abuse in the context of IPV, understand how and against whom firearms are used, and examine consequences of this abuse. Using a national web-based survey of US adults who experienced IPV ($n = 958$), we asked respondents about experiences with nonfatal firearm abuse, including the frequency of firearm behaviors and consequences. Based on screening data weighted to be nationally representative, we estimated that 9.8% (95% CI: 9.0%, 10.6%) of US adults – or nearly 25 million – have experienced nonfatal firearm abuse by an intimate partner (i.e., were threatened with a firearm, had a firearm used on them, or were threatened by a partner who possessed or had easy access to a firearm). IPV victims who experienced nonfatal firearm abuse commonly reported experiencing other forms of IPV. The most common behaviors included the partner displaying a firearm (67.5%) and threatening to shoot the victim (63.0%). The majority (80.5%) of perpetrators were male, and 49.2% of respondents had a child at home at the time of abuse. The most common consequences of nonfatal firearm abuse were concerns for safety (86.2%) and feeling fearful (82.7%). Additionally, 43.1% of respondents reported physical injury, and 37.4% missed days of work or school. Practice and policy around firearm access for IPV perpetrators should attend to nonfatal firearm use against intimate partners.

1. Introduction

Intimate partner violence (IPV), including physical, sexual, and emotional harm, is a major public health issue (Breiding et al., 2015). Among US adults, 36.4% of women and 33.6% of men report experiencing sexual violence, physical violence, and/or stalking by an intimate partner in their lifetime (Smith et al., 2018). The estimated lifetime economic burden of IPV in the US is more than $3.6 trillion for the 43 million adults reporting any lifetime victimization (Peterson et al., 2018). In abusive relationships, firearms increase the risk of IPV-related morbidity and mortality (Sorenson and Schut, 2018; Campbell et al., 2007).

Studies of firearms in the context of IPV have typically focused on homicide. Intimate partner homicides are captured in vital statistics, medical examiner reports, and police records, making them more easily identifiable for research compared to nonfatal outcomes. National estimates indicate that 55% of all homicides of women are related to IPV (Petrosky et al., 2017) and that firearms are used in nearly 60% of intimate partner homicides (Kivisto and Porter, 2020). For women in abusive relationships, the risk of homicide is greater than for men and increases five-fold when the partner has access to a firearm (Campbell et al., 2007; Fridel and Fox, 2019; Cooper and Smith, 2011).

Outside of the extreme outcome of homicide, firearms can be used in several nonfatal ways that harm individuals. Nonfatal firearm use is challenging to study because these incidents are not necessarily easily recognized or clearly defined or as routinely recorded as fatal events.

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The most recent national IPV survey that asked about nonfatal firearm abuse was conducted over 20 years ago, in 1995–1996 (Tjaden and Thoennes, 2000). Based on that survey, it was estimated that 4.5 million women in the U.S. have been threatened by an intimate partner with a firearm, and that nearly 1 million have had a partner use a firearm on them (Sorenson and Schut, 2018; Tjaden and Thoennes, 2000). Firearms can be used to threaten the partner, brandished or displayed, used in pistol whipping (i.e., hitting the victim with a firearm), or used to shoot the partner (Sorenson, 2017; Sorenson and Spear, 2018).

IPV victims perceive firearms to be uniquely dangerous in the context of abuse, contributing to high levels of intimidation and fear (Lynch and Logan, 2018). Firearms can perpetuate coercive control – the "strategic course of oppressive conduct that is typically characterized by frequent, but low-level physical abuse and sexual coercion in combination with tactics to intimidate, degrade, isolate, and control victims" (Stark, 2013) – which plays a critical role in the micromanagement of victims' daily lives and chronic abuse (Sorenson and Schut, 2018; Lynch et al., 2019). Prior research also highlights the strong connection between firearm threats and stalking, which is particularly common after victims leave their abusers and during periods of separation when abusers may feel a loss of control (Logan and Lynch, 2018). Compared to non-stalkers, intimate partner stalkers are more likely to threaten the victim with a firearm (often during a stalking episode) and more likely to perpetrate physical violence (Logan and Lynch, 2018). Indeed, the majority of women murdered by intimate partners are stalked prior to a homicide (McFarlane et al., 1999).

A 2018 systematic review identified 10 studies that reported the prevalence of the nonfatal use of firearms against an intimate partner among US women (Sorenson and Schut, 2018). Prevalence estimates varied widely based on the sample, time frame, and behaviors assessed (e.g., <1% reported a hostile firearm display by an intimate partner in the past five years compared to 37% of women in domestic violence shelters reporting that a firearm had been used against them in their most recent relationship) (Sorenson and Wiebe, 2004; Azrael and Hemenway, 2000). Importantly, six of the 10 studies were based on data collected 15 or more years ago (Sorenson and Schut, 2018). In addition, several studies were among samples living in shelters or accessing services (Sorenson and Wiebe, 2004; Rothman et al., 2005; Berrios and Grady, 1991), which provide an understanding of potentially more severe IPV contexts but are not necessarily representative of broader populations. Only two studies were conducted among national community samples (Tjaden and Thoennes, 2000; Azrael and Hemenway, 2000).

Additional research on the nature and scope of nonfatal firearm use against an intimate partner, particularly among community samples, is needed (Sorenson and Schut, 2018). Examining specific kinds of threats and abuse victims experience is essential to understanding the context and far-reaching consequences of IPV. The purpose of this study was to estimate the prevalence of nonfatal firearm abuse, understand how and against whom firearms are used, and examine the consequences of nonfatal firearm abuse in a large national sample.

2. Methods

2.1. Sampling and design

We designed a cross-sectional survey administered by the survey research firm YouGov from April 8th to May 1st, 2020 (About YouGov, 2018). YouGov maintains a proprietary opt-in survey panel comprised of 1.8 million US residents who participate in web surveys. This panel has been used widely for academic studies as well as public opinion and election polling (Cohn, 2014; Enamorado and Imai, 2019; Rydberg et al., 2018; Lindhiem et al., 2020). Participants did not receive any specific incentive to complete the survey, although YouGov has a point-based system through which participants accrue points for completing surveys and can redeem them later for gift cards, donations, or prepaid cash cards.

This study included women and men in the US aged ≥18 years. We determined eligibility for the full survey based on responses to two screening questions. The first question asked if respondents ever had a romantic or sexual partner. Those who answered affirmatively were asked if a partner ever perpetrated a series of items capturing different types of IPV (e.g., physical, sexual). Respondents who endorsed any of the IPV items were deemed eligible for the full survey.

Of the 12,068 panel members who were invited to take the survey, 8048 (66.7%) completed the screening questions, and 1743 (21.7%) were eligible for the full survey. Of eligible respondents, 1152 (66.1%) completed the survey. After fielding the survey, YouGov conducted validity checks and did a sample match of all participants who started the survey down to a smaller sampling frame to improve the representativeness of the unweighted sample (Appendix A) (Rivers, 2006). The final sample consisted of 1000 respondents who experienced IPV, of whom 600 experienced nonfatal firearm abuse. Respondents were considered to have 'experienced nonfatal firearm abuse' if they endorsed either of two items: if a partner "threatened [the respondent] and also possessed or had easy access to a gun" ($n = 561$) or "threatened [the respondent] with a gun or used a gun on [the respondent]" ($n = 288$), with 249 respondents endorsing both. We included both items given prior research documenting that firearm presence can be an implicit threat and that knowing a partner has access to a firearm instills fear regardless of explicit use of the firearm (Sorenson and Schut, 2018; Lynch and Logan, 2018; Tutty, 2015). Respondents who experienced nonfatal firearm abuse were oversampled to examine the specific ways that firearms are used in IPV.

Sampling weights provided by YouGov were applied such that estimates from the survey are representative of all US adults aged ≥18 years based on demographics from the 2017 American Community Survey (Appendix A), but not a nationally representative sample of IPV victims. This study was deemed exempt by the University of Washington Institutional Review Board since data were de-identified.

2.2. Measures

To our knowledge, there are no validated measures about nonfatal firearm abuse, so we developed questions using an iterative process informed by findings in existing literature (Sorenson, 2017; Logan and Lynch, 2018; Sorenson and Wiebe, 2004) and consultation with subject matter experts and former IPV advocates. All survey questions related to this analysis are provided in Appendix B. Respondents answered yes or no to 10 items on lifetime experiences of types of IPV (Smith et al., 2018; Chapman and Gillespie, 2019). Physical violence included being hit, slapped, kicked, and strangled or choked. Sexual violence included rape, sexual coercion, and unwanted sexual contact. Psychological/emotional abuse and controlling behaviors included stalking, tracking the respondent, and controlling access to money and finances.

IPV victims who experienced nonfatal firearm abuse based on the screening question were asked about the frequency of nine specific firearm-related behaviors by their *current or most recent partner* who threatened them with a firearm, so the behaviors are limited to a single relationship. These included the partner displaying the firearm; hitting the respondent's body with a firearm; threatening to shoot the respondent, a pet, themselves, or someone else; shooting the gun but not hitting anyone; and shooting the respondent or someone else. Response options for each item were collapsed into three categories: never, ≤ once per year (includes less than once/year and once/year), and > once per year (includes more than once/year, monthly, weekly, and daily).

For consequences of firearm use, participants were asked if they experienced any of a list of 19 items resulting from their partner's firearm use including feeling fearful, splitting up with partner, moving out of their home, going to a shelter, physical injury, contacting a crisis hotline, and missing days of work or school (Smith et al., 2018).

Demographic characteristics included age, gender, race/ethnicity,

sexual orientation, relationship status, household income, highest level of education, and region.

2.3. Statistical analysis

For this analysis, we excluded 42 participants who reported that they were shot more than once a year but did not endorse physical injury as a consequence ($n = 27$) and participants who reported that their partner shot them or someone else weekly or daily ($n = 15$). This proportion of respondents with invalid responses is in line with prior survey research quantifying careless or insufficient effort responders (Curran, 2016). The final sample size for this analysis was 958, including 558 IPV victims who experienced nonfatal firearm abuse.

We calculated weighted prevalence of IPV and experiences of nonfatal firearm abuse based on the 8048 respondents who completed the screener. Subsequent analyses were based on the 958 respondents described above. We calculated weighted percentages and their corresponding 95% confidence intervals (CIs) for each variable. We described sociodemographic characteristics and types of IPV reported by IPV victims by whether they experienced nonfatal firearm abuse. Among IPV victims who experienced nonfatal firearm abuse, we described the frequency of specific firearm behaviors and consequences of their partner's firearm abuse. All survey questions had a 'prefer not to say' response option. Percentages reported do not include these missing data; the amount of missing data is noted in the tables. All analyses were conducted using STATA 15.1 (StataCorp) using the SVY suite of commands.

3. Results

In the US in 2020, our data suggest that 46.7% (95% CI: 45.2%–48.2%) of adults experienced some form of IPV in their lifetime, and 9.8% of adults (95% CI: 9.0%–10.6%) experienced nonfatal firearm abuse by an intimate partner (i.e., were threatened with a firearm, had a firearm used on them, or were threatened by a partner who possessed or had easy access to a firearm). Among women, the prevalence of lifetime IPV was 52.2% (95% CI: 50.3%–54.1%) with 13.6% (95% CI: 12.3%–14.9%) experiencing nonfatal firearm abuse. Among men, the prevalence of lifetime IPV was 40.8% (95% CI: 38.7%–42.9%) with 5.9% (95% CI: 4.8%–7.0%) experiencing nonfatal firearm abuse. Compared with IPV victims who did not experience nonfatal firearm abuse, a greater proportion of those who did experience nonfatal firearm abuse were female, were Black or African American, were divorced or separated, had household income less than $35,000, had high school education or less, and lived in the Southern region of the US (Table 1).

IPV victims who experienced nonfatal firearm abuse were more likely to report experiencing other forms of IPV in their lifetime compared to those who did not experience nonfatal firearm abuse. For example, 78.9% (95% CI: 74.9%–82.4%) of IPV victims who experienced nonfatal firearm abuse reported that a partner hit, slapped, kicked, or otherwise physically hurt them, compared to 42.1% (95% CI: 37.1%–47.2%) of IPV victims who did not experience nonfatal firearm abuse (Table 2). Nearly two thirds (62.1%; 95% CI: 57.4%–66.5%) of IPV victims who experienced nonfatal firearm abuse reported that a partner tried to make them have sex, compared to 32.0% (95% CI: 27.5%–36.9%) of those who did not experience nonfatal firearm abuse. IPV victims who experienced nonfatal firearm abuse were also more likely to report controlling behaviors by partners. For example, over half (51.9%; 95% CI: 47.3%–56.4%) of IPV victims who experienced nonfatal firearm abuse reported that a partner controlled their ability to access money and finances, compared to 20.2% (95% CI: 16.4%–24.7%) of those who did not experience nonfatal firearm abuse.

One in five IPV victims who experienced nonfatal firearm abuse reported they were threatened with a firearm by more than one partner (20.6%; 95% CI: 16.9%–24.8%). The weighted mean age of respondents at first threat was 26.1 years (SD: 10.5). The current or most recent partner who perpetrated nonfatal firearm abuse was most often male

Table 1
Characteristics of intimate partner violence victims by experience of nonfatal firearm abuse.

	Experienced nonfatal firearm abuse ($n = 558$)		Did not experience nonfatal firearm abuse ($n = 400$)		Total IPV victims ($n = 958$)	
	Weighted Proportion, % (95% CI)					
Age, years						
18–29	15.2	(11.7, 19.5)	14.5	(11.1, 18.6)	14.9	(12.4, 17.9)
30–44	25.2	(21.6, 29.2)	28.2	(23.9, 32.9)	26.4	(23.6, 29.5)
45–59	31.3	(27.2, 35.6)	24.4	(20.4, 29.0)	28.4	(25.5, 31.6)
60+	28.3	(24.5, 32.5)	32.9	(28.2, 38.0)	30.2	(27.2, 33.4)
Mean	48.9	(47.4, 50.4)	49.4	(47.6, 51.2)	49.1	(48.0, 50.3)
Gender						
Male	23.4	(19.4, 27.9)	41.9	(36.9, 47.0)	31.1	(27.9, 34.4)
Female	75.9	(71.3, 79.9)	55.4	(50.3, 60.4)	67.4	(64.0, 70.6)
Different identity[a]	0.7	(0.3, 1.9)	2.7	(1.4, 5.3)	1.5	(0.9, 2.7)
Race/ethnicity[b]						
White	70.4	(65.6, 74.8)	79.3	(74.6, 83.3)	74.1	(70.7, 77.2)
Black or African American	15.0	(11.8, 18.8)	7.8	(5.4, 11.1)	12.0	(9.8, 14.6)
Hispanic	11.7	(8.3, 16.2)	12.4	(9.0, 16.7)	12.0	(9.5, 15.0)
Asian	4.4	(2.9, 6.5)	3.1	(1.8, 5.2)	3.8	(2.8, 5.3)
Native American/ Alaska Native	1.6	(0.9, 3.1)	1.5	(0.6, 3.6)	1.6	(0.9, 2.6)
All other races	1.1	(0.5, 2.3)	0.6	(0.2, 2.0)	0.9	(0.4, 1.7)
Sexual orientation						
Heterosexual, or straight	85.9	(82.2, 89.0)	86.3	(82.3, 89.5)	86.1	(83.4, 88.4)
Lesbian	1.7	(0.9, 3.1)	2.2	(1.2, 4.2)	1.9	(1.2, 3.0)
Gay	5.3	(3.3, 8.6)	3.0	(1.7, 5.3)	4.4	(3.0, 6.4)
Bisexual	6.0	(4.2, 8.4)	6.5	(4.4, 9.5)	6.2	(4.8, 8.0)
Other identity or unknown	1.1	(0.5, 2.7)	1.9	(0.8, 4.6)	1.5	(0.8, 2.7)
Current relationship status						
Married	38.5	(34.0, 43.1)	44.9	(39.9, 50.0)	41.2	(37.8, 44.6)
Divorced	21.2	(17.8, 25.0)	15.7	(12.3, 19.7)	18.9	(16.4, 21.6)
Single/never married	16.9	(13.9, 20.4)	24.0	(19.8, 28.8)	19.9	(17.3, 22.7)
Cohabitating, unmarried	12.6	(9.6, 16.4)	10.0	(7.4, 13.4)	11.5	(9.4, 14.1)
Widowed	5.8	(4.1, 8.3)	4.7	(2.9, 7.5)	5.3	(4.0, 7.1)
Separated	5.0	(3.1, 8.1)	0.8	(0.3, 2.4)	3.3	(2.1, 5.1)
Annual household income						
Less than $20,000	24.7	(20.8, 29.2)	16.9	(13.2, 21.4)	21.6	(18.7, 24.8)
$20,000 to $34,999	20.8	(17.0, 25.1)	16.9	(13.2, 21.3)	19.2	(16.5, 22.3)
$35,000 to $49,999	15.1	(12.1, 18.7)	20.4	(16.4, 25.1)	17.2	(14.7, 20.0)
$50,000 to $74,999	16.7	(13.6, 20.3)	17.4	(13.7, 21.8)	17.0	(14.6, 19.7)
$75,000 to $99,999	10.4	(8.1, 13.2)	12.9	(9.8, 16.8)	11.4	(9.5, 13.6)
Over $100,000	12.2		15.5		13.6	

(continued on next page)

Table 1 (*continued*)

	Experienced nonfatal firearm abuse (n = 558)		Did not experience nonfatal firearm abuse (n = 400)		Total IPV victims (n = 958)	
	Weighted Proportion, % (95% CI)					
		(9.5, 15.6)		(12.1, 19.7)		(11.4, 16.1)
Highest level of education						
No HS	6.4	(3.9, 10.2)	1.3	(0.5, 3.3)	4.3	(2.7, 6.6)
High school graduate	30.8	(26.5, 35.5)	27.8	(23.4, 32.7)	29.6	(26.4, 32.9)
Some college	24.4	(20.9, 28.3)	23.8	(19.8, 28.4)	24.2	(21.5, 27.1)
2-year college	12.7	(10.2, 15.8)	13.6	(10.4, 17.7)	13.1	(11.0, 15.5)
4-year college	16.3	(13.5, 19.7)	20.8	(17.1, 25.2)	18.2	(15.9, 20.8)
Post-grad	9.4	(7.2, 12.0)	12.6	(9.6, 16.3)	10.7	(8.9, 12.8)
Region[c]						
Northeast	14.2	(11.2, 17.8)	18.0	(14.3, 22.4)	15.8	(13.4, 18.5)
Midwest	18.4	(15.3, 22.0)	23.4	(19.3, 27.9)	20.4	(17.9, 23.2)
South	43.2	(38.8, 47.8)	33.9	(29.2, 38.9)	39.3	(36.1, 42.7)
West	24.2	(20.3, 28.6)	24.8	(20.7, 29.4)	24.4	(21.5, 27.6)

Missing data (i.e., respondents chose 'prefer not to say'): gender (n = 4, <1%), race/ethnicity (n = 6, <1%), sexual orientation (n = 9, 1%), current relationship status (n = 16, 2%), annual household income (n = 62, 6%).

[a] Different identity includes trans male/trans man, trans female/trans woman, genderqueer/gender nonconforming, or different identity.

[b] Does not sum to 100% since respondents could select all that apply.

[c] Region was assigned based on the U.S. Census Bureau statistical regions. Northeast includes Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. Midwest includes Illinois, Indiana, Iowa, Kansas, Michigan, Ohio, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wisconsin. South includes Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, District of Columbia, and West Virginia. West include Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Table 2
Types of intimate partner violence (IPV) by experience of nonfatal firearm abuse.

	Experienced nonfatal firearm abuse (n = 558)		Did not experience nonfatal firearm abuse (n = 400)		Total (n = 958)	
	Weighted Proportion, % (95% CI)					
Types of IPV Experienced in Lifetime						
Physical						
Hit, slapped, kicked, or physically hurt you	78.9	(74.9, 82.4)	42.1	(37.1, 47.2)	63.7	(60.3, 66.9)
Strangled or choked you	45.7	(41.2, 50.3)	12.0	(8.9, 15.9)	31.8	(28.6, 35.1)
Sexual						
Tried to make you have sex or do something sexual you did not want to do	62.1	(57.4, 66.5)	32.0	(27.5, 36.9)	49.7	(46.2, 53.1)
Fondled, groped, grabbed, or touched you in a way that made you feel unsafe	56.3	(51.7, 60.9)	22.5	(18.5, 27.1)	42.3	(39.0, 45.8)
Psychological/ Emotional & Controlling Behaviors						
Deliberately made you feel afraid	78.1	(73.7, 81.9)	35.5	(30.7, 40.6)	60.5	(57.0, 63.8)
Made you feel emotionally abused (e.g., insulted, yelled at, degraded, humiliated)	88.6	(84.7, 91.6)	73.5	(68.8, 77.8)	82.4	(79.4, 85.0)
Tried to keep you from talking to family or friends	66.1	(61.7, 70.3)	36.0	(31.3, 41.1)	53.7	(50.2, 57.0)
Controlled your ability to access money and finances	51.9	(47.3, 56.4)	20.2	(16.4, 24.7)	38.8	(35.5, 42.2)
Kept track of you by demanding to know where you were & what you were doing	80.6	(76.8, 84.0)	52.7	(47.6, 57.7)	69.1	(65.8, 72.1)
Stalked you	66.0	(61.5, 70.3)	28.8	(24.4, 33.6)	50.6	(47.2, 54.0)

(80.5%; 95% CI: 76.3%–84.1%). Approximately half of respondents (49.2%; 95% CI: 44.6%–53.8%) had a child in the home at the time. The weighted mean duration of the relationship with this partner was 8.3 (SD: 9.2) years; the unweighted median was 4.8 (IQR: 2.1–12.0) years. The weighted mean duration of nonfatal firearm abuse was 3.7 (SD: 5.4) years; the unweighted median was 2.0 (IQR: 0.5–5.0) years.

For IPV victims who experienced nonfatal firearm abuse, the most common behaviors reported included the partner displaying a firearm (37.7% reported this occurring more than once per year; 95% CI: 33.2%–42.4%) and partner threatening to shoot the victim (27.4% reported this occurring more than once per year; 95% CI: 23.4%–31.7%) (Fig. 1). In addition to threats, 12.6% (95% CI: 9.7%–16.1%) of victims reported that their partner shot the firearm but did not hit anyone and 8.7% (95% CI: 6.3%–11.8%) reported that their partner hit their body with a firearm more than once per year.

Among IPV victims who experienced nonfatal firearm abuse, the most common consequences were concerns for safety (86.2%; 95% CI: 82.6%–89.2%), feeling fearful (82.7%; 95% CI: 78.8%–85.9%), feeling on guard/watchful/easily startled (72.5%; 95% CI: 68.1%–76.5%), and splitting up with partner (71.0%; 95% CI: 66.5%–75.1%) (Table 3). In addition, 43.1% (95% CI: 38.5–47.9%) of victims reported physical injury, 37.4% (95% CI: 33.0%–42.0%) missed days of work or school, 29.8% (95% CI: 25.7%–34.3%) called the police, 27.9% (95% CI: 23.8%–32.3%) sought legal services, 22.6% (95% CI: 18.7%–26.9%) sought medical care, 16.1% (95% CI: 12.8%–20.0%) sought victim's advocate services, and 12.8% (95% CI: 9.8%–16.6%) contacted a crisis hotline as a result of their partner's firearm use.

4. Discussion

Findings from this national community sample reveal that that the prevalence of nonfatal firearm abuse is substantial and concerning. Approximately 1 in 10 (9.8%) – or nearly 25 million – adults in the US have experienced nonfatal firearm abuse by an intimate partner (i.e., were threatened with a firearm, had a firearm used on them, or were threatened by a partner who possessed or had easy access to a firearm). While lifetime prevalence of IPV from this survey generally aligns with prior estimates (Smith et al., 2018; Smith et al., 2017), the prevalence of nonfatal firearm abuse from this survey is higher than the last national data from the mid-1990s, which estimated that 3.5% of women and 0.4% of men were threatened with a firearm and 0.7% of women and 0.1% of men had a firearm used on them (Tjaden and Thoennes, 2000). Our findings are higher in part due to broader survey questions that encompassed threats while the partner possessed or had easy access to a firearm in addition to threats with the firearm or use of a firearm against the victim. Indeed, when restricted to a more conservative definition of nonfatal firearm abuse (i.e., including only those who report their

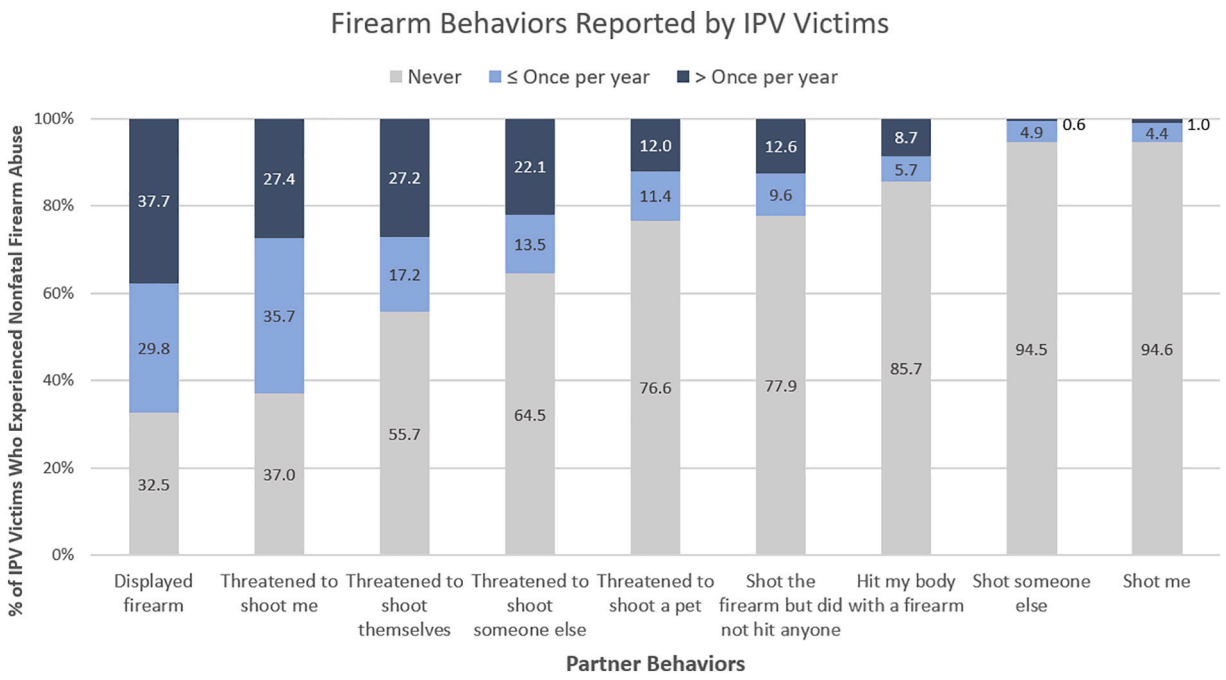

Fig. 1. Types of firearm behaviors reported by IPV victims (n = 558).
Note: 95% confidence intervals for these items are provided in Supplementary Table 1.

partner threatening them with a gun or using a gun on them), our prevalence estimate was 4.8% (95% CI: 4.2%–5.4%). Our findings also potentially reflect increased perpetrator access to firearms, in line with the increase in firearm-related intimate partner homicides in the past decade (Fridel and Fox, 2019). We also found that the prevalence of nonfatal firearm abuse was 13.6% among women and 5.9% among men. Consistent with prior IPV studies, results suggest that women are disproportionately impacted over their lifetimes (Smith et al., 2018; Breiding et al., 2008; Addington and Perumean-Chaney, 2014; Wiebe, 2003). Given the considerable difference in prevalence of nonfatal firearm abuse between women and men, future research should investigate the gender differences for both victims and perpetrators in demographics, specific firearm behaviors, and consequences of this abuse.

We found that victims who experience nonfatal firearm abuse are more likely than those who do not to report experiencing other types of IPV, including physical, sexual, and psychological/emotional abuse, in their lifetimes. These findings align with prior research highlighting that firearms are often used to facilitate coercive control (Logan and Lynch, 2018; Johnson, 2006; Stark, 2006), resulting in a frightening and controlling context that enables the occurrence and continuation of physical and sexual abuse (Sorenson and Schut, 2018; Tutty, 2015). Qualitative research with women in IPV shelters has similarly shown that firearms are simply one tool used to harm victims and that abusers are often violent in other ways (Lynch and Logan, 2018; Sorenson and Wiebe, 2004). Since respondents reported these IPV experiences over their lifetimes, these behaviors may have been perpetrated by a single or multiple partners. Prior research has underscored that individuals often experience IPV, and even co-occurring types (e.g., coercive control and physical IPV) in multiple relationships (Thompson et al., 2006; Kennedy et al., 2018). Future research should examine patterns of nonfatal firearm abuse using relationship-level data.

Among IPV victims who experienced nonfatal firearm abuse, approximately two thirds reported that their partner displayed a firearm, and 63% reported that their partner threatened to shoot them. Threats by the abuser to shoot themselves (44%), someone else (35%), or a pet (23%) were also fairly common in our sample. These findings align closely with a prior study among women who contacted the National Domestic Violence Hotline (Logan and Lynch, 2018). These threats underscore that the burden of IPV may extend beyond the partner involved and affect children, other family members, friends, and pets. Indeed, these other individuals are sometimes killed in intimate partner homicide incidents (Smith et al., 2014), and the use of firearms increases the risk of multiple victims by 70% in domestic homicides (Kivisto and Porter, 2020). Moreover, victims commonly reported that these firearm behaviors occurred more than once per year, further highlighting these behaviors as part of a recurring pattern of abuse rather than isolated incidents of violence.

Nonfatal firearm abuse has direct and damaging consequences for IPV victims. In our sample, most IPV victims who experienced nonfatal firearm abuse felt concerned about safety and were fearful, constantly on guard, or easily startled (Sorenson, 2017). In addition to the multiple and potentially long-lasting psychological consequences of nonfatal firearm abuse (Sullivan and Weiss, 2017), many victims reported physical injury, seeking medical care, and missing days of work or school. Given that the broader health consequences of IPV are well-established (Smith et al., 2018) and that firearm threats have been identified as a unique predictor of posttraumatic stress disorder symptom severity (Sullivan and Weiss, 2017), further research examining the specific adverse health consequences of nonfatal firearm abuse is needed. In addition, consequences of firearm abuse such as splitting up or moving out may be complicated by the fact that firearm threats and stalking are common during separation (Lynch et al., 2019; Logan and Lynch, 2018). More granular information about the timing of these consequences (e.g., immediately or several months after firearm abuse) should be assessed in future research to identify intervention points. Importantly, many victims also reported seeking help from the police, legal services, victim's advocate services and crisis hotlines, pointing to the need for investment in services for IPV victims. The 2019 National Census of Domestic Violence Services showed that while more than 77,000 victims were served in a single 24-h period, there were more than 11,000 requests for services that were unmet due to a lack of resources (National Network to End Domestic Violence, 2020). Taken with our findings, this demonstrates a critical need for resources for community-based programs that provide help and care to IPV victims.

Federal and state laws have been enacted to prohibit possession of firearms by individuals convicted of an IPV-related felony or

Table 3
Consequences of partner's firearm use for IPV victims who experienced nonfatal firearm abuse ($n = 558$).

Consequences of nonfatal firearm abuse	Weighted proportion % (95% CI)
Was concerned for safety	86.2 (82.6, 89.2)
Was fearful	82.7 (78.8, 85.9)
Felt constantly on guard, watchful, or easily startled	72.5 (68.1, 76.5)
Split up with partner	71.0 (66.5, 75.1)
Tried hard not to think about it or avoided situations/ reminders	71.0 (66.6, 75.0)
Felt numb or detached from others, activities, or surroundings	63.2 (58.6, 67.6)
Had nightmares or thought about it when you did not want to	60.8 (56.2, 65.2)
Moved out of home	54.8 (50.2, 59.4)
Felt guilty or unable to stop blaming yourself or others for the event(s)	54.4 (49.8, 59.0)
Physical injury	43.1 (38.5, 47.9)
Missed days of work or school	37.4 (33.0, 42.0)
Called the police	29.8 (25.7, 34.3)
Sought a protective order (e.g., a restraining order)	28.6 (24.6, 33.0)
Sought legal services	27.9 (23.8, 32.3)
Reduced or eliminated internet presence (e.g., took down social media)	26.3 (22.3, 30.7)
Sought medical care	22.6 (18.7, 26.9)
Sought victim's advocate services	16.1 (12.8, 20.0)
Contacted a crisis hotline	12.8 (9.8, 16.6)
Went to a shelter	11.1 (8.1, 14.9)
How distressing partner's use of firearm was	
Not distressing	9.1 (6.7, 12.4)
Mildly distressing	16.9 (13.5, 20.9)
Moderately distressing	26.9 (22.9, 31.3)
Severely distressing	47.0 (42.3, 51.8)

Missing data (i.e., respondents chose 'prefer not to say'): concerned for safety ($n = 11$, 2%), fearful ($n = 10$, 2%), constantly on guard ($n = 13$, 2%), avoid situation ($n = 14$, 3%), split up with partner (n = 15, 3%), numb ($n = 22$, 4%), nightmares ($n = 13$, 2%), guilty (n = 13, 2%), moved out (n = 16, 3%), physical injury ($n = 20$, 4%), missed days ($n = 17$, 3%), called police ($n = 7$, 1%), protective order ($n = 11$, 2%), legal services ($n = 12$, 2%), internet presence ($n = 18$, 3%), medical care ($n = 15$, 3%), victim's advocate services ($n = 14$, 3%), crisis hotline ($n = 12$, 2%), shelter ($n = 13$, 2%), how distressing partner's use of firearm was ($n = 42$, 7%).

misdemeanor (Zeoli et al., 2019; Diez et al., 2017). Current state laws vary greatly in the breadth of conditions that prohibit firearm possession and in the implementation of recovering firearms from prohibited individuals (Zeoli et al., 2019). These firearm restrictions have been found to reduce intimate partner homicide (Diez et al., 2017; Zeoli et al., 2018). The frequency of nonfatal firearm abuse and adverse consequences for IPV victims in this study lends urgency to the need to consider expanding laws to prohibit possession among broader groups of IPV perpetrators (e.g., dating partners) (Sorenson and Spear, 2018), to explicitly address relinquishment or seizure of firearms from those who are prohibited from possessing them (Diez et al., 2017; Gerney and Parsons, 2014), and to enhance implementation of these laws (Zeoli et al., 2018). More robust surveillance of nonfatal firearm use in IPV (e.g., with more granular questions added to CDC's National Intimate Partner and Sexual Violence Survey or DOJ's National Crime Victimization Survey) would also allow for future research to evaluate the impact of such laws on relevant nonfatal outcomes.

4.1. Limitations

As with any self-reported survey, recall and social desirability bias may exist. Recall bias may be of particular concern for respondents answering questions about relationships or experiences occurring long ago in their lifetimes. However, many of these firearm-related incidents are salient and memorable and, to mitigate recall bias, we asked about behaviors perpetrated by the current or most recent partner. While these were sensitive questions, online panel surveys may be less biased due to social desirability compared to telephone surveys (Chang and Krosnick, 2009). Due to this sensitivity, all questions had a 'prefer not to say' response option, so the amount of missing data varied across questions. Most questions in this analysis were missing $\leq$5% of responses. Our survey questions about nonfatal firearm abuse have not been subjected to psychometric testing. Methodologic research that yields valid and reliable measures for nonfatal firearm abuse would greatly benefit the field. While the survey asked sensitive questions that may have resulted in a lower survey completion proportion, the completion proportion of 66% is in line with or greater than that of other non-probabilities, opt-in, online surveys (Callegaro and Disogra, 2008), including a previous national survey that included questions about firearms (Miller et al., 2017). Nevertheless, panel members who chose not to participate in the survey may have differed from those who chose to participate with respect to IPV victimization, firearm abuse, and severity. Finally, although sampling weights were applied to enhance representativeness and YouGov augments the panel by soliciting panelists by telephone and mail, there may be coverage error in non-probability online samples which may not be fully representative of the national population (Chang and Krosnick, 2009; Hays et al., 2015).

5. Conclusions

This study provides contemporary, national estimates of nonfatal firearm abuse prevalence in the US and detailed information on specific behaviors and consequences among a community sample. While there is substantial evidence that firearms increase the risk of homicide in abusive relationships, these findings underscore that firearms do not need to be fired to harm an intimate partner. Firearms can enable controlling behaviors by heightening fear and often co-occur with other forms of IPV within and across relationships. This study sheds light on the magnitude of nonfatal firearm abuse and adverse consequences for victims, indicating the crucial need to focus attention and resources on the prevention of IPV.

Declaration of Competing Interest

The authors have no conflicts of interest to disclose.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ypmed.2021.106500.

References

About YouGov, 2018. Published. Accessed June 23, 2020. https://today.yougov.com/about/.

Addington, L.A., Perumean-Chaney, S.E., 2014. Fatal and non-fatal intimate partner violence: What separates the men from the women for victimizations reported to police? Homicide Stud. 18 (2), 196–220. https://doi.org/10.1177/1088767912471341.

Azrael, D., Hemenway, D., 2000. "In the safety of your own home": Results from a national survey on gun use at home. Soc. Sci. Med. 50 (2), 285–291. https://doi.org/10.1016/S0277-9536(99)00283-X.

Berrios, D.C., Grady, D., 1991. Domestic violence: Risk factors and outcomes. West J. Med. 155 (2), 133–135.

Breiding, M.J., Black, M.C., Ryan, G.W., 2008. Prevalence and risk factors of intimate partner violence in eighteen U.S. states/territories, 2005. Am. J. Prev. Med. 34 (2), 112–118. https://doi.org/10.1016/j.amepre.2007.10.001.

Breiding, M.J., Basile, K.C., Smith, S.G., et al., 2015. Intimate Partner Violence Surveillance: Uniform Definitions and Recommended Data Elements, Version 2.0. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.

Callegaro, M., Disogra, C., 2008. Computing response metrics for online panels. Public Opin. Q. 72 (5), 1008–1032. https://doi.org/10.1093/poq/nfn065.

Campbell, J.C., Glass, N., Sharps, P.W., Laughon, K., Bloom, T., 2007. Intimate partner homicide: Review and implications of research and policy. Trauma Violence Abuse. https://doi.org/10.1177/1524838007303505. Published online.

Chang, L., Krosnick, J.A., 2009. National surveys via RDD telephone interviewing versus the internet: comparing sample representativeness and response quality. Public Opin. Q. 73 (4), 641–678. https://doi.org/10.1093/poq/nfp075.

Chapman, H., Gillespie, S.M., 2019. The Revised Conflict Tactics Scales (CTS2): a review of the properties, reliability, and validity of the CTS2 as a measure of partner abuse in community and clinical samples. Aggress. Violent Behav. 44, 27–35. https://doi.org/10.1016/j.avb.2018.10.006.

Cohn, N., 2014. Explaining online panels and the 2014 midterms. In: The New York Times. Published July 27, 2014. https://www.nytimes.com/2014/07/28/upshot/explaining-online-panels-and-the-2014-midterms.html.

Cooper, A., Smith, E., 2011. Homicide Trends in the United States, 1980–2008. Bureau of Justice Statistics. https://www.bjs.gov/content/pub/pdf/htus8008.pdf.

Curran, P.G., 2016. Methods for the detection of carelessly invalid responses in survey data. J. Exp. Soc. Psychol. 66, 4–19. https://doi.org/10.1016/j.jesp.2015.07.006.

Diez, C., Kurland, R.P., Rothman, E.F., et al., 2017. State intimate partner violence-related firearm laws and intimate partner homicide rates in the United States, 1991 to 2015. Ann. Intern. Med. 167 (8), 536–543. https://doi.org/10.7326/M16-2849.

Enamorado, T., Imai, K., 2019. Validating self-reported turnout by linking public opinion surveys with administrative records. Public Opin. Q. 83 (4), 723–748. https://doi.org/10.1093/poq/nfz051.

Fridel, E.E., Fox, J.A., 2019. Gender differences in patterns and trends in U.S. homicide, 1976–2017. Violence Gend. 6 (1), 27–36. https://doi.org/10.1089/vio.2019.0005.

Gerney, A., Parsons, C., 2014. Women Under the Gun: How Gun Violence Affects Women and 4 Policy Solutions to Better Protect Them. Center for American Progress.

Hays, R.D., Liu, H., Kapteyn, A., 2015. Use of Internet panels to conduct surveys. Behav. Res. Methods 47 (3), 685–690. https://doi.org/10.3758/s13428-015-0617-9.

Johnson, M.P., 2006. Conflict and control: Gender symmetry and asymmetry in domestic violence. Viol. Against Women. 12 (11), 1003–1018. https://doi.org/10.1177/1077801206293328.

Kennedy, A.C., Bybee, D., McCauley, H.L., Prock, K.A., 2018. Young women's intimate partner violence victimization patterns across multiple relationships. Psychol. Women Q. 42 (4), 430–444. https://doi.org/10.1177/0361684318795880.

Kivisto, A.J., Porter, M., 2020. Firearm use increases risk of multiple victims in domestic homicides. J. Am. Acad. Psychiatry Law. 48 (1) https://doi.org/10.29158/JAAPL.003888-20.

Lindhiem, O., Vaughn-Coaxum, R.A., Higa, J., Harris, J.L., Kolko, D.J., Pilkonis, P.A., 2020. Development and validation of the parenting skill use diary (PSUD) in a nationally representative sample. J. Clin. Child Adolesc. Psychol. https://doi.org/10.1080/15374416.2020.1716366. Published online.

Logan, T., Lynch, K.R., 2018. Dangerous liaisons: Examining the connection of stalking and gun threats among partner abuse victims. Violence Vict. 33 (3), 399–416. https://doi.org/10.1891/0886-6708.v33.i3.399.

Lynch, K.R., Logan, T.K., 2018. "You better say your prayers and get ready": Guns within the context of partner abuse. J. Interp. Violence 33 (4), 686–711. https://doi.org/10.1177/0886260515613344.

Lynch, K.R., Jackson, D.B., Logan, T.K., 2019. Coercive control, stalking, and guns: Modeling service professionals' perceived risk of potentially fatal intimate partner gun violence. J. Interpers Violence. https://doi.org/10.1177/0886260519839419. Published online.

McFarlane, J.M., Campbell, J.C., Wilt, S., Sachs, C.J., Ulrich, Y., Xu, X., 1999. Stalking and intimate partner femicide. Homicide Stud. 3 (4), 300–316. https://doi.org/10.1177/1088767999003004003.

Miller, M., Hepburn, L., Azrael, D., 2017. Firearm acquisition without background checks: Results of a national survey. Ann. Intern. Med. 66 (4), 233–239. https://doi.org/10.7326/M16-1590.

National Network to End Domestic Violence, 2020. 14th Annual Domestic Violence Counts Report. NNEDV.org/DVCounts.

Peterson, C., Kearns, M.C., McIntosh, W.L.K.W., et al., 2018. Lifetime economic burden of intimate partner violence among US adults. Am. J. Prev. Med. 55 (4), 433–444.

Petrosky, E., Blair, J.M., Betz, C.J., Fowler, K.A., Jack, S.P.D., Lyons, B.H., 2017. Racial and ethnic differences in homicides of adult women and the role of intimate partner violence—United States, 2003–2014. MMWR Morb. Mortal. Wkly Rep. 66, 741–746. https://doi.org/10.15585/mmwr.mm6628a1.

Rivers, D., 2006. Sample Matching: Representative Sampling from Internet Panels.

Rothman, E.F., Hemenway, D., Miller, M., Azrael, D., 2005. Batterers' use of guns to threaten intimate partners. J. Am. Med. Wom. Assoc. 60 (1), 62–68.

Rydberg, J., Dum, C.P., Socia, K.M., 2018. Nobody gives a #%&!: a factorial survey examining the effect of criminological evidence on opposition to sex offender residence restrictions. J. Exp. Criminol. 14 (4), 541–550. https://doi.org/10.1007/s11292-018-9335-5.

Smith, S.G., Fowler, K.A., Niolon, P.H., 2014. Intimate partner homicide and corollary victims in 16 states: National violent death reporting system, 2003-2009. Am. J. Public Health 104 (3), 461–466. https://doi.org/10.2105/AJPH.2013.301582.

Smith, S.G., Chen, J., Basile, K.C., et al., 2017. The National Intimate Partner and Sexual Violence Survey (NISVS): 2010–2012 State Report. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

Smith, S.G., Zhang, X., Basile, K.C., et al., 2018. The National Intimate Partner and Sexual Violence Survey (NISVS): 2015 Data Brief – Updated Release. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

Sorenson, S.B., 2017. Guns in intimate partner violence: comparing incidents by type of weapon. J. Women's Health 26 (3), 249–258. https://doi.org/10.1089/jwh.2016.5832.

Sorenson, S.B., Schut, R.A., 2018. Nonfatal gun use in intimate partner violence: a systematic review of the literature. Trauma Violence Abuse 19 (4), 431–442. https://doi.org/10.1177/1524838016668589.

Sorenson, S.B., Spear, D., 2018. New data on intimate partner violence and intimate relationships: implications for gun laws and federal data collection. Prev. Med. (Baltim). https://doi.org/10.1016/j.ypmed.2018.01.005. Published online.

Sorenson, S.B., Wiebe, D.J., 2004. Weapons in the lives of battered women. Am. J. Public Health 94 (8), 1412–1417. https://doi.org/10.2105/AJPH.94.8.1412.

Stark, E., 2006. Commentary on Johnson's "conflict and control: Gender symmetry and asymmetry in domestic violence.". Viol. Against Women. 12 (11), 1019–1025. https://doi.org/10.1177/1077801206293329.

Stark, E., 2013. The dangers of dangerousness assessment. Fam Intim. Partn. Violence Q. 6 (2), 13–22.

Sullivan, T.P., Weiss, N.H., 2017. Is firearm threat in intimate relationships associated with posttraumatic stress disorder symptoms among women? Violence Gend. 4 (2), 31–36. https://doi.org/10.1089/vio.2016.0024.

Thompson, R.S., Bonomi, A.E., Anderson, M., et al., 2006. Intimate partner violence: Prevalence, types, and chronicity in adult women. Am. J. Prev. Med. 30 (6), 447–457. https://doi.org/10.1016/j.amepre.2006.01.016.

Tjaden, Patricia, Thoennes, N., 2000. Extent, Nature, and Consequences of Intimate Partner Violence. https://doi.org/10.1037/e300342003-001.

Tutty, L., 2015. "I Didn't Know He Had It in Him to Kill Me": Nonlethal Firearms Use and Partner Violence Against Canadian Women. J. Forensic. Soc. Work. 5 (1–3), 130–149. https://doi.org/10.1080/1936928X.2015.1092906.

Wiebe, D.J., 2003. Sex differences in the perpetrator-victim relationship among emergency department patients presenting with nonfatal firearm-related injuries. Ann. Emerg. Med. 42 (3), 405–412. https://doi.org/10.1016/S0196-0644(03)00509-2.

Zeoli, A.M., McCourt, A., Buggs, S., Frattaroli, S., Lilley, D., Webster, D.W., 2018. Analysis of the strength of legal firearms restrictions for perpetrators of domestic violence and their associations with intimate partner homicide. Am. J. Epidemiol. https://doi.org/10.1093/aje/kwx362. Published online.

Zeoli, A.M., Frattaroli, S., Roskam, K., Herrera, A.K., 2019. Removing firearms from those prohibited from possession by domestic violence restraining orders: a survey and analysis of state laws. Trauma Violence Abuse 20 (1), 114–125. https://doi.org/10.1177/1524838017692384.

Review Manuscript

Risk Factors for Male Perpetration and Female Victimization of Intimate Partner Homicide: A Meta-Analysis

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Abstract

Intimate partner homicide (IPH) is a serious problem throughout the world. Research has identified the continued need to examine risk factors for IPH to identify individuals who may be at a greater risk of IPH perpetration or victimization. In this study, we conducted a meta-analysis on risk factors for male IPH perpetration and female IPH victimization. This meta-analysis examined results from 17 studies, which included 148 effect sizes used in the analysis. Primary findings from this research suggest the strongest risk factors for IPH were the perpetrator having direct access to a gun, perpetrator's previous nonfatal strangulation, perpetrator's previous rape of the victim, perpetrator's previous threat with a weapon, the perpetrator's demonstration of controlling behaviors, and the perpetrator's previous threats to harm the victim. Implications for law enforcement personnel, medical professionals, victim advocates, mental health professionals, and other professionals who may be in contact with potential IPH perpetrators and victims are discussed.

Keywords

intimate partner homicide, meta-analysis, risk factors

Intimate partner homicide (IPH) is a serious problem throughout the world. Approximately 13.5% of all homicides worldwide are committed by a current or former intimate partner (Stöckl et al., 2013). When examining gender differences in global IPH victimization, approximately 38.6% of homicides committed against women and 6.3% of homicides committed against men are committed by an intimate partner (Stöckl et al., 2013). Examining rates of IPH in the United States, in 2010, 39% ($n = 1{,}192$) of homicides committed against women and 3% ($n = 305$) against men were committed by an intimate partner (Catalano, 2013)—which is similar to global rates of IPH. The Centers for Disease Control and Prevention recently released a report that examined homicides from 18 states from 2003 to 2014 and found that over half (55.3%) of the homicides committed against women in the United States involved an intimate partner (Petrosky et al., 2017). These high rates of IPH highlight the importance of examining risk factors related to IPHs. It is important to note that these prevalence rates are of completed homicides and information on attempted homicides is missing from these rates—which would undoubtedly increase the number of individuals who have experienced this type of extreme violence.

One of the most recognized predictors attempted or completed IPH is a previous history of intimate partner violence (IPV) (Block, 2000; Campbell, Glass, Sharps, Laughon, & Bloom, 2007; Campbell et al., 2003; Garcia, Soria, & Hurwitz, 2007). There has been a growing body of research that examines risk markers for IPV perpetration and victimization (e.g., Cafferky, Mendez, Anderson, & Stith, 2018; Spencer, Cafferky, & Stith, 2016; Spencer et al., 2017; Stith, Smith, Penn, Ward, & Tritt, 2004), yet less is known about the risk factors for IPH. Although previous IPV is regarded as the number one risk factor for IPH (Campbell et al., 2007), research has highlighted the importance of examining risk factors for IPH extensively in order to aid in identifying IPV victims who may be at a greater risk of IPH (Campbell, 1986; Campbell et al., 2003; Nicolaidis et al., 2003; Sheehan, Murphy, Moynihan, Dudley-Fennessey, & Stapleton, 2015). Examining IPH risk factors in populations who have experienced IPV can help professionals in the community (i.e., first responders, victim's advocates, therapists, and those working at domestic violence shelters) identify victims of IPV that are at an increased risk of IPH, which can ultimately aid in the reduction of rates of IPH or attempted IPH.

The proposed study seeks to systemically integrate findings on risk factors for attempted and completed IPH through the use of a meta-analysis. There have been literature reviews on

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the topic of risk factors for IPH (Campbell et al., 2007), but there has yet to be a meta-analytic review of quantitative data on the topic of risk factors for IPH. With less research published on the topic of IPH, due to it being a rarer phenomenon than IPV, it is important to synthesize these results in one comprehensive meta-analysis. Through the use of a meta-analysis, research can "overcome limits of size or scope in individual studies to obtain more reliable information" (Berman & Parker, 2002, p. 1). Since IPH is considered to be a rare event, sample sizes in studies that examine risk factors for IPH perpetration and victimization are often small, thus highlighting the importance of using a meta-analysis to integrate all findings of risk factors for IPH in one, comprehensive study. The purpose of this study is to aid in synthesizing our current knowledge of risk factors for IPH, which can ultimately aid in the identification of, and intervention with, individuals who have been victims or perpetrators of IPV and who may be at a greater risk of IPH perpetration or victimization.

Trends in IPH

It is clear from the literature and the IPH prevalence rates that IPH is a gendered phenomenon. When looking at global homicide rates in general, males make up 80% of homicide victims (United Nations Office on Drugs and Crime [UNODC], 2013). However, when examining IPH victimization, females make up approximately two thirds of IPH victims (UNODC, 2013). Research has also found that women are 6 times more likely to be murdered by an intimate partner than are men (Stöckl et al., 2013). This highlights the importance of examining IPH through a gendered lens, separating males and females and perpetrators and victims.

Research focusing on homicides has historically failed to separate IPH from other types of homicide, although recent research on the topic has recognized the importance of examining IPH as a separate entity (Ioannou & Hammond, 2015). This shift may explain why most of the literature examining IPH trends over time begins in the 1990s. When examining homicide in general, global homicide rates drastically increased between 1970 and 1990 but have continued to decline since the 1990s (Caman, Kristiansson, Granath, & Sturup, 2017; Lappi-Seppälä & Lehti, 2014; UNODC, 2013). However, when examining global IPH trends, it has been found that the decline in IPH does not follow the overall homicide trends, as rates of IPH remain relatively stable (UNODC, 2013). There have been several studies that found a decline in IPH in the United States and other Western countries (Corradi & Stöckl, 2014; Fox & Zawitz, 2007). However, in both the United States and Canada, the overall decline reflects a steady decline in female-perpetrated IPH, but not in male-perpetrated IPH (Dawson, Bunge, & Balde, 2009; Fox & Zawitz, 2007). Research has found previous IPV victimization is a risk factor for female-perpetrated IPH, which supports a theory that female-perpetrated IPH may be the result of self-defense (Serran & Firestone, 2004). Some researchers have suggested that the increase in domestic violence resources aided in this decrease of female-perpetrated IPH, but not male-perpetrated IPH (Browne & Williams, 1989; Dugan, Nagin, & Rosenfeld, 1999). This suggests that these resources designed to help women leave violent relationships have created an effect where women do not have to resort to murdering abusive intimate partners. This further highlights the gendered nature of IPH and the importance of examining risk factors for IPH perpetration and victimization separately for both males and females.

Theory

Two theories have guided this research. First, male sexual proprietariness theory, in addition to previous studies that have clearly indicated that men are more likely to kill their female intimate partners than are women to kill their male intimate partners, leads to our choice to focus this study of male IPH perpetration and female victimization. The second theory that guided this research is exposure reduction hypothesis which emphasizes the importance of identifying the most important risk factors for IPH, so that victims can be alerted, policies can be changed, and exposure to potential IPH can be reduced. Exposure reduction hypothesis guided our decision to include studies comparing individuals who experienced violence in their relationship with cases of IPH. This was decided in order to gain a better understanding of risk factors that may differentiate individuals who experience IPV in their relationship from those who also have a history of experiencing IPV but eventually perpetrate or become victims of IPH. This may aid in identifying individuals in violent relationships that may be at a greater risk of IPH.

Male Sexual Proprietariness Theory

Male sexual proprietariness theory is an evolutionary psychological perspective that has attempted to explain the gendered nature of IPH (Daly & Wilson, 1988; Wilson & Daly, 1993). According to this theory, the likelihood of violence, as well as IPH, increases when men believe they have a right to control, and believe that they are at risk of losing control, over their female partners' reproductive capacities (Daly & Wilson, 1988; Serran & Firestone, 2004). Wilson and Daly (1993) state that "cues of an imminent threat of loss of sexual exclusivity may be manifested in violent action" (p. 283). This threat of losing sexual exclusivity, or entitlement over their partner's reproductive capacities, could be through suspicions or actual events of infidelity, or the woman wishing to end the relationship entirely. Male sexual proprietariness theory would suggest that risk factors for IPH would be factors related to sexual jealousy and the risk of losing control over one's partner. Previous research has found that sexual jealousy, desire for control over one's partner, estrangement in the relationship, and young age (which is linked to reproductive capabilities) have all been found to be risk factors for male-perpetrated IPH (Serran & Firestone, 2004).

Exposure Reduction Hypothesis

The exposure reduction hypothesis refers to the idea that IPH is the most extreme form of IPV, and IPH often occurs after prolonged violence in a relationship (Reckdenwald & Parker, 2012). Exposure reduction hypothesis views IPH as the end result on a continuum of escalating violent behaviors. This suggests that by shortening the duration in which someone is in contact with a violent partner, decreases the likelihood that IPH will occur (Dugan, Nagin & Rosenfeld, 2003). According to this theory, providing resources that allow victims of IPV to leave abusive relationships, such as protection orders and domestic violence resources, may aid in decreasing rates of IPH (Dugan et al., 2003; Reckdenwald & Parker, 2012).

Previous violence in a relationship is a documented risk factor for IPH (Campbell et al., 2007; Garcia et al., 2007), which corresponds with the exposure reduction hypothesis. However, one critique of this theory is that leaving an abusive relationship has also been found to put individuals at an increased risk of escalated violence and IPH (Campbell et al., 2007; Dutton, 2002; Garcia et al., 2007; Johnson & Hotton, 2003; Stout, 1993; Wilson & Daly, 1993). Proponents of this theory have urged policy changes that would help protect victims leaving a relationship and have found that "more aggressive arrest policies are related to fewer deaths of unmarried intimates" (Dugan et al., 2003, p. 191). This suggests that although leaving an abusive relationship may put individuals at risk of increased violence, with proper resources to protect victims from retaliation, a victim's decision to leave an abuser could lead to a decrease in IPH rates.

Background on Risk Factors for IPH

Previous research has highlighted the importance of continued focus and attention on identifying risk factors for IPH (Campbell, 1986; Campbell et al., 2003; Nicolaidis et al., 2003; Sheehan et al., 2015). According to Campbell and colleagues (2007), approximately 67–75% of cases of IPH included a history of IPV in the relationship. Although there is a need for continued research on risk factors for IPH, several risk factors have been identified that appear to warrant serious attention when investigating factors that put an individual at risk of IPH victimization or perpetration. Two prominent risk assessment tools for *risk* of future violence are the Danger Assessment (Campbell, Webster, & Glass, 2009) and the Spousal Assault Risk Assessment (SARA; Kropp, Hart, Webster, & Eaves, 1995). Risk factors that overlap between the two measures include escalation of violence (i.e., increased frequency, increased severity of violence, such as strangulation), stalking/violating no contact orders, relationship problems/separation, jealousy, the perpetrator's substance use, and the perpetrator's mental health issues including threatening or attempting suicide.

Nonfatal Strangulation

In Campbell and colleagues' (2007) literature review, nonfatal strangulation was listed as one of the major risk factors for IPH, although this is a topic where further research is needed. Glass and colleagues (2007) conducted a study comparing female victims of completed IPH, attempted IPH, and IPV. In this study, they found that victims of attempted IPH were 6.70 times more likely to have been strangled by the perpetrator compared to victims of IPV and that victims of completed IPH were 7.48 times more likely to have been strangled by the perpetrator compared to victims of IPV. This suggests that nonfatal strangulation should be examined as a risk factor of IPH that could possibly aid in the identification of IPV victims who may be at risk of IPH.

Stalking

Stalking has been hypothesized to be a stronger risk factor for IPH than other types of IPV (Campbell et al., 2007). McFarlane and colleagues (1999) examined stalking behaviors experienced by 208 women who had been murdered or who had experienced attempted murder by an intimate partner. This study found that 76% of IPH victims and 85% of victims of attempted IPH were previously stalked by the perpetrator. In another study, McFarlane, Campbell, and Watson (2002) compared victims of completed and attempted IPH with women who had been abused and found that victims of completed or attempted IPH were more than 2 times more likely to have been stalked by the perpetrator than were women who were abused by their partners.

Separation/Estrangement

It has been established in the literature that relationship estrangement, or separation, is a risk factor for IPH (Campbell et al., 2007; Dutton, 2002; Garcia et al., 2007; Johnson & Hotton, 2003; Stout, 1993; Wilson & Daly, 1993). It is important to note that the increased risk of an occurrence of IPH is for the time period shortly after the separation, with studies reporting that the majority of IPH murders, where estrangement was a factor, occurred the day of the separation or within the first 3 months after the separation (Banard, Vera, Vera, & Newman, 1982; Wilson & Daly, 1993). Although the victim leaving the perpetrator may increase the immediate risk of IPH, research guided by the exposure reduction hypothesis (Reckdenwald & Parker, 2012) suggests that leaving an abusive relationship will decrease the risk of IPH overall (Dugan et al., 2003).

Jealousy

Jealousy, especially sexual jealousy, has been identified as a motive for IPH perpetration (Aldridge & Browne, 2003; Belfrage & Rying, 2004; Campbell et al., 2003). The impact of male jealousy on IPH is guided by male sexual proprietariness theory (Daly & Wilson, 1988; Wilson & Daly, 1993). Jealousy may be related to the offender believing that the victim has

been involved in a perceived or actual affair (Block & Christakos, 1995; Chimbros, 1998) or due to the victim wanting to leave the relationship (Crawford & Gartner, 1992; Wilson & Daly, 1993). Dobash and colleagues (2007) conducted a study comparing men who had perpetrated IPH to men who perpetrated IPV and found that male perpetrators of IPH were approximately 5 times more likely to have been jealous or possessive at the time of the event compared to men who perpetrated nonlethal violence.

Mental Illness

A history of mental illness by male IPV perpetrators has been linked to IPH (Belfrage & Rying, 2004; Dobash, Dobash, Cavanaugh, & Lewis, 2004; Dutton & Kerry, 1999; Kivisto, 2015; Sharps, Campbell, et al., 2001). Belfrage and Rying (2004) found that 95% of their sample of 164 male IPH perpetrators had at least one mental illness diagnosis, with the most common diagnoses being personality disorders. It is also important to note that when the perpetrator of IPH commits suicide after the murder, it may be more difficult for researchers to examine retrospectively whether or not the perpetrator could be diagnosed with a mental illness.

Substance Abuse

Research has linked IPH perpetration with both alcohol and drug abuse/use (Campbell et al., 2003; Oram, Flynn, Shaw, Appleby, & Howard, 2013). Campbell and colleagues (2003) found that drug use was a stronger predictor of IPH perpetration than alcohol use. However, Dobash and colleagues (2004) found that 37.9% of IPH perpetrators in their sample had problems with alcohol and 14.7% had problems with drug use. Although it may be unclear if drug use or alcohol use are stronger predictors of IPH perpetration, the literature has found a connection between substance abuse and IPH perpetration.

The Present Study

The present study aims to build on previous literature examining risk factors for IPH by systematically integrating quantitative findings regarding IPH risk factors through the use of a meta-analysis. Previous research has identified IPV is a major risk factor for IPH, with approximately 67–75% of cases of IPH having a history of IPV in the relationship (Campbell et al., 2007). This meta-analysis examines additional risk factors for IPH that may help identify individuals who have experienced IPV in their relationship and may be at risk of IPH. This study compares IPV samples and IPH samples to assist in identifying risk factors that may place individuals who are victims or perpetrators of IPV at a greater risk of IPH perpetration or victimization. Another unique contribution of this study will be calculation of overall odds ratios (*OR*s) for the risk factors for IPH, which can help us understand how much these risk factors increase the likelihood of IPH. This study examines IPH risk factors for male perpetration and female victimization due to the gendered nature of IPH as informed by the male sexual proprietariness theory (Daly & Wilson, 1988; Wilson & Daly, 1993) which guided this study, as well as the lack of studies examining male victimization and female perpetration of IPH.

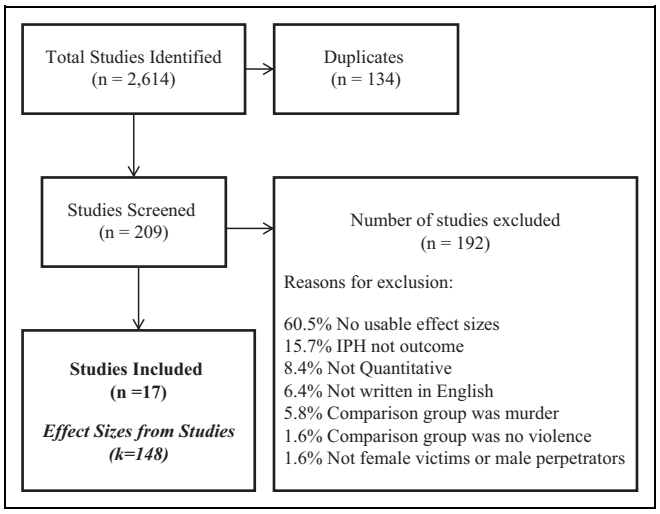

Figure 1. Flowchart of study selection.

Method

Literature Search

Studies used in this analysis were identified using standard procedures for gathering bivariate effect sizes for risk factors for IPH perpetration and victimization (Borenstein, Hedges, Higgins, & Rothstein, 2009; Card, 2012). Our search ultimately yielded 17 unique studies and 148 effect sizes. Studies were found through database searches (PsycINFO, ERIC, ProQuest, Sociological Abstracts, Social Sciences Citation Index, Social Services Abstracts, ProQuest Dissertations and Theses, and PubMed) using search terms related to intimate relationships (marital, spouse, husband, intimate partner, wife, dating, boyfriend, girlfriend, or same-sex partner), homicide (homicide, femicide, murder, fatality, IPH, or kill), and risk factors (predictor, risk, factor, marker, pathway, or correlate). The search examined studies from 1980 to May 2017.

Included Studies

Studies were included if they met the following criteria: (a) the outcome variable measured completed or attempted IPH victimization or perpetration, (b) statistical information allowing the calculation of one or more bivariate effect sizes was reported in the study, and (c) the study was written in English. Studies were excluded if the comparison group in the study were non-IPH murders or no abuse comparison samples.

A total of 2,614 studies were identified through database searches (see Figure 1). In the first round of screening, 2,271 studies were excluded based on the original inclusion criteria. This provided 343 studies for further examination. There were 134 duplicates, leaving a total of 209 studies for

further screening. Ultimately, 192 of these studies were excluded. Of these studies, 60.5% of studies were excluded because no usable effect sizes were included in the study ($n = 116$), 15.7% were excluded because IPH or attempted IPH was not the outcome ($n = 30$), 8.4% were excluded because they were not quantitative ($n = 16$), 6.4% were excluded because they were not written in English ($n = 12$), 5.8% were excluded because the comparison group in the study were other types of murders ($n = 11$), 1.6% were excluded because they used individuals who experienced no violence as comparison samples ($n = 3$), and 1.6% were excluded because the examined male victimization or female perpetration of IPH ($n = 3$). The final sample included 17 unique studies, with 79 effect sizes examining male IPH perpetration and 69 effect sizes examining female IPH victimization.

Coding Procedures

Recommended coding procedures were followed in this study (Card, 2012; Hunter & Schmidt, 2004). A 19-item code sheet was used by the research team to gather information from each study included in the analysis. Information gathered from the study included the sample size from the study, the gender of the perpetrator and/or victim, the country where the data were collected, if the study examined homicide and/or attempted homicide, who the comparison sample in the study was, if homicides in the study were described as self-defense, and statistical information that allowed for the calculation of bivariate effect sizes. All studies included in the analysis were cross-coded by two separate research team members, one of which was the project leader, with a 99.27% agreement rate. When there were discrepancies in the coding, the research team members met and came to an agreement on the correct coding (Hawkins, Blanchard, Baldwin, & Fawcett, 2008). Comprehensive Meta-Analysis 3.0 software (Borenstein, Hedges, Higgins, & Rothstein, 2014) was used to enter data and analyze effect sizes for IPH perpetration and victimization.

Statistical Approach and Analyses

A random-effects approach was used in this meta-analysis. A random-effects approach is used when it would seem theoretically appropriate to assume that there were real population differences between studies. Since samples in the studies used in this meta-analysis came from different countries around the world, came from different time periods, and had different samples, it would be theoretically sound to assume that there were population differences between studies. The random-effects approach also accounts for within-study and between-study variance, which also allows for greater generalizability of the results obtained in this meta-analysis (Card, 2012).

One potential problem that all meta-analyses face is the "file drawer problem," which refers to the fact that insignificant studies often go unpublished and thus are not able to be used in the study (Hunter & Schmidt, 2004). To combat this limitation, standard tests were conducted in order to evaluate the potential impact that publication biases could have on our effect sizes. First, Duval and Tweedie's (2000) trim and fill test was conducted to analyze any asymmetrical distributions of effect sizes included in the current meta-analysis. Duval and Tweedie's trim and fill test uses a funnel plot to evaluate whether there is an asymmetrical distribution in the studies included in the meta-analysis, and then imputes and plots any potential missing studies onto the funnel plot (Duval & Tweedie, 2000). Next, fail-safe *N*s for each risk factor were calculated to examine the number of potential missing studies with insignificant findings needed to pull the mean effect size above the significance level of $p < .05$ (Rosenthal, 1979). The recommended number of studies for the classic fail-safe *N* is determined by multiplying the number of effect sizes by 5 and then adding 10 to that number (Rosenthal, 1979). If the classic fail-safe *N* exceeds this number, it can be determined that the effect size for that particular risk factor is robust against publication bias. Lastly, Orwin's fail-safe *N*s were calculated in order to test the number of potential missing studies with an effect size of $r = .00$ needed to reduce the mean effect size of each risk factor in the study below the lower limit of what is a small effect size of $r = .10$ (Cohen, 1992; Orwin, 1983).

Comprehensive Meta-Analysis 3.0 software (Borenstein et al., 2014) was used to analyze the effect sizes for male IPH perpetration and female IPH victimization. Only bivariate effect sizes were used in the analysis (such as unadjusted *OR*s, correlations, and independent groups' means and standard deviations). Unadjusted *OR*s were calculated to examine which risk factors increased the odds of IPH at the highest levels. Unadjusted *OR*s were calculated for the following risk factors for male IPH perpetration that had three or more effect sizes: abused the victim while she was pregnant, controlling behaviors, direct access to guns, having less than a high school education, jealousy, mental health issues, previously strangled the victim, previously raped the victim, previously stalked the victim, prior criminal charges, substance use, threatened the victim with a weapon, threatened to harm the victim, unemployment, violence toward nonfamily members, and young age. The unadjusted *OR*s were calculated for risk factors of female IPH victimization that had three or more effect sizes: children from a previous relationship, children with the perpetrator, employed, higher level of income, having less than a high school education, length of relationship with the perpetrator, married to the perpetrator, separation from the perpetrator, substance use, and young age. In addition to the unadjusted *OR*s, the confidence intervals were calculated for each risk factor, which provides the range in which the mean effect size could fall 95% of the time within the studies in the analysis.

Results

Study Characteristics

A total of 17 studies with 148 effect sizes were used in the current analysis (see Table 1 for details). Studies included in the analysis examined risk factors for male perpetration or

Table 1. Study Characteristics by Risk Factor.

Risk Factor	Study	Sample Size	Intimate Partner Homicide (IPH) Only or Combined Attempted and Completed IPH	Odds Ratio
Perpetrator risk factors				
Abused victim while pregnant	Campbell et al. (2003)	1,126	Homicide only	4.62
	Glass, Laughon, Rutto, Bevacqua, and Campbell (2008)	76	Homicide only	3.24
	Koziol-McLain et al. (2006)	575	Homicide only	3.71
	McFarlane, Campbell, and Watson (2002)	687	Combined	3.72
Controlling behaviors	Campbell et al. (2003)	1,126	Homicide only	5.96
	Dobash, Dobash, Cavanaugh, and Medina-Ariza (2007)	228	Homicide only	5.09
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	4.10
	Koziol-McLain et al. (2006)	575	Homicide only	5.59
Direct access to guns	Alford (1995)	98	Homicide only	2.95
	Campbell et al. (2003)	1,126	Homicide only	68.06
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	30.55
	Koziol-McLain et al. (2006)	575	Homicide only	5.56
	Wiltsey (2008)	218	Homicide only	9.79
Employed	Campbell et al. (2003)	1,126	Homicide only	0.31
	Campbell, Webster, and Glass (2009)	828	Combined	0.34
	Cunha and Goncalves (2016)	172	Homicide only	1.36
	Cunha and Goncalves (2016b)	187	Combined	1.51
	Dobash et al. (2007)	228	Homicide only	0.53
	Koziol-McLain et al. (2006)	575	Homicide Only	0.32
	Sharps, Campbell, et al. (2001)	2,280	Combined	0.38
	Wiltsey (2008)	218	Homicide only	0.80
Jealousy	Alford (1995)	98	Homicide only	0.58
	Campbell et al. (2003)	1,126	Homicide only	3.05
	Echeburua, Fernandez-Montalvo, de Corral, and Lopez-Goni (2009)	1,081	Combined	2.58
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	3.08
	Koziol-McLain et al. (2006)	575	Homicide only	3.40
Education (low)	Cunha and Goncalves (2016)	172	Homicide only	1.05
	Cunha and Goncalves (2016b)	187	Combined	1.38
	Dobash et al. (2007)	228	Homicide only	1.04
	Echeburua et al. (2009)	1,081	Combined	1.27
	Koziol-McLain et al. (2006)	575	Homicide only	3.58
	Sharps, Campbell, et al. (2001)	2,280	Combined	2.37
Mental health issues	Cunha and Goncalves (2016)	172	Homicide only	0.96
	Dutton and Kerry (1999)	140	Homicide only	0.72
	Echeburua et al. (2009)	1,081	Combined	1.45
	Eke, Hilton, Harris, Rice, and Houghton (2011)	146	Homicide only	1.47
	Koziol-McLain et al. (2006)	575	Homicide only	1.38
Nonfatal strangulation	Campbell et al. (2003)	1,126	Homicide only	11.77
	Dobash et al. (2007)	228	Homicide only	3.27
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	4.36
	Glass, Laughon, Campbell, et al. (2008)	737	Homicide only	7.48
	Koziol-McLain et al. (2006)	575	Homicide only	9.92
Perpetrated stalking	Campbell et al. (2003)	1,126	Homicide only	4.19
	Koziol-McLain et al. (2006)	575	Homicide only	3.94
	McFarlane, Campbell, and Watson (2002)	687	Combined	3.23
	McFarlane, Campbell, and Watson (2002)	821	Combined	2.62
Prior criminal charges	Alford (1995)	98	Homicide only	1.66
	Campbell et al. (2003)	1,126	Homicide only	2.14
	Cunha and Goncalves (2016)	172	Homicide only	0.88
	Dobash et al. (2007)	228	Homicide only	0.41
	Eke et al. (2011)	146	Homicide only	1.23
	Koziol-McLain et al. (2006)	575	Homicide only	2.00

(continued)

Table 1. (continued)

Risk Factor	Study	Sample Size	Intimate Partner Homicide (IPH) Only or Combined Attempted and Completed IPH	Odds Ratio
Perpetrated forced sex	Campbell et al. (2003)	1,126	Homicide only	7.60
	Dobash et al. (2007)	228	Homicide only	23.11
	Echeburua et al. (2009)	1,081	Combined	2.72
	Koziol-McLain et al. (2006)	575	Homicide only	7.63
Substance abuse	Campbell et al. (2003)	1,126	Homicide only	3.24
	Cunha and Goncalves (2016)	172	Homicide only	0.48
	Dobash et al. (2007)	228	Homicide only	0.87
	Echeburua et al. (2009)	1,081	Combined	2.06
	Koziol-McLain et al. (2006)	575	Homicide only	3.10
	Sharps, Campbell, et al. (2001)	2,280	Combined	2.61
Threatened to harm victim	Alford (1995)	98	Homicide only	1.46
	Campbell et al. (2003)	1,126	Homicide only	16.31
	Echeburua et al. (2009)	1,081	Combined	1.71
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	9.49
	Koziol-McLain et al. (2006)	575	Homicide only	14.71
	McFarlane, Campbell, and Watson (2002)	687	Combined	4.58
	McFarlane, Campbell, and Watson (2002)	821	Combined	4.56
	Wiltsey (2008)	218	Homicide only	2.08
Threatened with a weapon	Echeburua et al. (2009)	1,081	Combined	3.36
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	6.71
	Koziol-McLain et al. (2006)	575	Homicide only	23.30
	McFarlane, Campbell, and Watson (2002)	821	Combined	6.74
	Wiltsey (2008)	218	Homicide only	5.67
Violent toward others	Cunha and Goncalves (2016)	172	Homicide only	0.62
	Echeburua et al. (2009)	1,081	Combined	1.66
	Koziol-McLain et al. (2006)	575	Homicide only	2.21
Young age	Campbell et al. (2003)	1,126	Homicide only	1.83
	Cunha and Goncalves (2016)	172	Homicide only	2.48
	Cunha and Goncalves (2016b)	187	Homicide only	1.95
	Echeburua et al. (2009)	1,081	Combined	0.92
	Koziol-McLain et al. (2006)	575	Homicide only	1.87
Victim risk factors				
Children with perpetrator	Campbell et al. (2009)	828	Combined	1.49
	Cunha and Goncalves (2016)	172	Homicide only	0.75
	Taylor and Nables (2009)	743	Homicide only	1.09
Children from previous relationship	Campbell et al. (2003)	1,126	Homicide only	2.98
	Koziol-McLain et al. (2006)	575	Homicide only	3.02
	Taylor and Nables (2009)	743	Homicide only	0.95
	Wiltsey (2008)	218	Homicide only	1.49
Employed	Alford (1995)	98	Homicide only	2.80
	Campbell et al. (2003)	1,126	Homicide only	0.98
	Campbell et al. (2009)	828	Homicide only	0.86
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	0.23
	Glass, Laughon, Campbell, et al. (2008)	737	Homicide only	1.20
	Koziol-McLain et al. (2006)	575	Homicide only	1.00
	McFarlane, Campbell, and Watson (2002)	687	Combined	0.58
	McFarlane, Campbell, and Watson (2002)	821	Combined	0.56
	Sharps, Campbell, et al. (2001)	2,280	Combined	0.84
	Taylor and Nables (2009)	743	Homicide only	0.49
Higher income level	Campbell et al. (2003)	1,126	Homicide only	0.47
	Koziol-McLain et al. (2006)	575	Homicide only	0.87
	Taylor and Nables (2009)	743	Homicide only	0.85
Length of relationship	Campbell et al. (2003)	1,126	Homicide only	1.63
	Cunha and Goncalves (2016)	172	Homicide only	1.13
	McFarlane, Campbell, and Watson (2002)	687	Combined	1.67
	McFarlane, Campbell and Watson (2002)	821	Combined	0.53

(continued)

Table 1. (continued)

Risk Factor	Study	Sample Size	Intimate Partner Homicide (IPH) Only or Combined Attempted and Completed IPH	Odds Ratio
Education (low)	Alford (1995)	98	Homicide only	17.93
	Campbell et al. (2003)	1,126	Homicide only	2.28
	Campbell et al. (2009)	828	Combined	2.24
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	2.44
	Koziol-McLain et al. (2006)	575	Homicide only	2.26
	McFarlane, Campbell, and Watson (2002)	687	Combined	2.26
	McFarlane, Campbell, and Watson (2002)	821	Combined	2.30
	Sharps, Campbell, et al. (2001)	2,280	Combined	2.40
	Taylor and Nables (2009)	743	Homicide only	2.00
Married to perpetrator	Alford (1995)	98	Homicide only	0.55
	Campbell et al. (2009)	828	Combined	1.40
	Cunha and Goncalves (2016)	172	Homicide only	1.27
	Cunha and Goncalves (2016b)	187	Combined	0.96
	Dobash et al. (2007)	228	Homicide only	0.79
	Eke et al. (2011)	146	Homicide only	2.47
	Koziol-McLain et al. (2006)	575	Homicide only	1.52
	Taylor and Nables (2009)	743	Homicide only	0.57
Separated from perpetrator	Campbell et al. (2003)	1,126	Homicide only	3.09
	Campbell et al. (2009)	828	Combined	4.69
	Dobash et al. (2007)	228	Homicide only	2.37
	Echeburua et al. (2009)	1,081	Combined	1.38
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	1.63
	Koziol-McLain et al. (2006)	575	Homicide only	3.89
	McFarlane, Campbell, and Watson (2002)	687	Combined	1.65
	McFarlane, Campbell, and Watson (2002)	821	Combined	1.54
	Wiltsey (2008)	218	Homicide only	2.66
Substance abuse	Alford (1995)	98	Homicide only	6.95
	Campbell et al. (2003)	1,126	Homicide only	2.36
	Koziol-McLain et al. (2006)	575	Homicide only	2.30
	Sharps, Campbell, et al. (2001)	2,280	Combined	2.05
Young age	Alford (1995)	98	Homicide only	2.02
	Campbell et al. (2003)	1,126	Homicide only	1.81
	Glass, Laughon, Rutto, et al. (2008)	76	Homicide only	0.67
	Glass, Laughon, Campbell, et al. (2008)	737	Homicide only	3.19
	Koziol-McLain et al. (2006)	575	Homicide only	1.81
	McFarlane, Campbell, and Watson (2002)	687	Combined	2.33
	McFarlane et al. (2002)	821	Combined	2.58
	Taylor and Nables (2009)	743	Homicide only	1.75
	Wiltsey (2008)	218	Homicide only	1.03

female victimization of completed or attempted IPH. From all studies, there is a combined sample size of 10,143. Most of the studies are from peer-reviewed academic journals ($n = 15$) and the other studies are dissertations ($n = 2$). The majority of the studies are located in the United States ($n = 11$), and the rest are from international samples ($n = 6$), which included Canada, Portugal, Spain, and Britain. For most of the studies, the outcome is IPH ($n = 14$), and in the rest of the studies, the outcome is a combined sample of IPH and attempted IPH ($n = 6$). All studies examined female victims of IPH and/or male perpetrators of IPH.

Analyses of Publication Bias

In order to combat the "file drawer problem" that impacts all meta-analyses (Hunter & Schmidt, 2004), Duval and Tweedie's trim and fill test (Duval & Tweedie, 2000), the classic fail-safe *N* test (Rosenthal, 1979), and Orwin's fail-safe *N* test (Orwin, 1983) were utilized to evaluate the possibility of publication biases impacting the significant results in this meta-analysis. All risk factors were found to be robust against publication bias, with the exception of the perpetrator's employment and the perpetrator's mental health issues (see Table 2). This is predominately due to the fact that these risk factors are weaker than the other risk factors examined in this meta-analysis, making them more vulnerable to potential publication bias.

Risk Factors for Male IPH Perpetration

The risk factor that increased the odds of IPH occurring the *most* was the perpetrator's direct access to guns, meaning that

Table 2. Duval and Tweedie's Trim and Fill (Random Effects), Classic Fail-Safe *N*, and Orwin's Fail-Safe *N* Tests for Risk Factors for Intimate Partner Homicide.

Risk Factor	*k*	Trim and Fill: Imputed Studies	Classic: Fail-Safe *N*	Orwin's Fail-Safe *N*: *r* to .10
Male perpetration				
Abused victim while pregnant	4	1	93	11
Age (young age)	5	1	36	3
Controlling behaviors	4	2	187	15
Direct access to guns	5	0	263	22
Education (low)	6	1	48	5
Employed[a]	8	0	10	4
Jealousy	5	1	91	9
Mental health issues[a]	5	1	10	0
Perpetrated nonfatal strangulation	5	2	395	23
Perpetrated stalking	4	2	184	9
Raped victim/perpetrated forced sex	4	1	208	15
Substance abuse	6	0	206	9
Threatened to harm victim	8	1	1,041	27
Threatened victim with a weapon	5	2	295	20
Female victimization				
Children from previous relationship	4	1	35	7
Education (low)	9	3	399	13
Separated from partner	9	0	527	15
Substance abuse	4	2	219	12

[a] Indicates risk factors were not robust against possible publication bias.

Table 3. Risk Factors for Male Perpetration and Female Victimization of Intimate Partner Homicide.

Risk Factor	*k*	*OR*	95% CI
Male perpetration			
Direct access to guns	5	**11.17*** **	[4.31, 28.94]
Threatened victim with a weapon	5	**7.36*** **	[2.99, 18.11]
Perpetrated nonfatal strangulation	5	**7.23*** **	[4.61, 11.34]
Raped victim/perpetrated forced sex	4	**5.44*** **	[2.79, 10.61]
Controlling behaviors	4	**5.60*** **	[4.41, 7.13]
Threatened to harm victim	8	**4.83*** **	[2.61, 8.97]
Abused victim while pregnant	4	**3.93*** **	[2.99, 5.18]
Perpetrated stalking	4	**3.13*** **	[2.58, 3.81]
Jealousy	5	**2.58*** **	[1.81, 3.70]
Substance abuse	6	**1.85*** **	[1.19, 2.86]
Less than high school education	6	**1.70***	[1.11, 2.62]
Young age	5	**1.68*** **	[1.25, 2.25]
Violent toward nonfamily members	3	1.53	[0.94, 2.48]
Prior criminal charges	6	1.32	[0.84, 2.05]
Mental health issues	5	**1.30***	[1.06, 1.61]
Employed	8	**0.50*** **	[0.36, 0.70]
Female victimization			
Substance abuse	4	**2.56*** **	[1.78, 3.67]
Less than a high school education	9	**2.45*** **	[2.02, 2.99]
Separated from perpetrator	9	**2.33*** **	[1.64, 3.30]
Children from previous relationship	4	**2.29*** **	[1.48, 3.53]
Young age	9	1.30	[0.96, 1.77]
Children with perpetrator	5	1.17	[0.80, 1.71]
Length of relationship with perpetrator	4	1.17	[0.89, 1.54]
Married to perpetrator	8	0.84	[0.52, 1.38]
Employed	10	0.82	[0.65, 1.04]
Higher income level	3	0.71	[0.48, 1.03]

Note. *k* = number of effect sizes; *OR* = unadjusted odds ratio of the effect size; CI = confidence interval.
Boldface identifies statistical significance: *$p < .05$. **$p < .01$. ***$p < .001$.

the perpetrator had guns in their home or could readily access a gun ($OR = 11.17$, $p < .001$; see Table 3). The perpetrator's direct access to guns increased the likelihood of IPH compared to IPV by 11 times. If the perpetrator had previously threatened the victim with a weapon ($OR = 7.36$, $p < .001$) or if the perpetrator had previously nonfatally strangled the victim ($OR = 7.23$, $p < .001$), the likelihood of IPH increased by approximately 7 times. If the perpetrator had forced the victim to have sex with him ($OR = 5.44$, $p < .001$), the likelihood of IPH increased by over 5 times. Other significant risk factors for IPH included the perpetrator's controlling behaviors ($OR = 4.25$, $p < .001$), if the perpetrator previously threatened to harm the victim ($OR = 4.83$, $p < .001$), if the perpetrator abused the victim while she was pregnant ($OR = 3.93$, $p < .001$), if the perpetrator had stalked the victim ($OR = 3.13$, $p < .001$), and if the perpetrator exhibited jealous behaviors ($OR = 2.32$, $p < .01$). The perpetrator's substance abuse, which includes both drug and alcohol abuse, increased the likelihood of IPH by 85% ($OR = 1.85$, $p < .001$). If the perpetrator had less than a high school education ($OR = 1.70$, $p < .05$), the likelihood of IPH increased by 70%. If the perpetrator was younger in age ($OR = 1.68$, $p < .01$), the likelihood of an IPH increased by 68%, and the perpetrator's history of mental health problems ($OR = 1.30$, $p < .01$) increased the likelihood of an IPH by 30%. If the male was employed, the likelihood of IPH decreased by 50% ($OR = 0.50$, $p < .001$). Having a history of violence toward nonfamily members and prior criminal charges were not significant risk factors for male IPH perpetration.

Risk Factors for Female IPH Victimization

The following risk factors for female IPH victimization all increased the likelihood of IPH compared to IPV by over 2 times: if the victim had less than a high school education ($OR = 2.67$, $p < .001$), if the victim was separated from the perpetrator ($OR = 2.59$, $p < .001$), if the victim abused substances ($OR = 2.58$, $p < .001$), and if the victim had children from a previous relationship/not sired by the abuser ($OR = 2.37$, $p < .001$). Having children with the perpetrator, the victim being younger in age, the length of the relationship with the perpetrator, being married to the perpetrator, and having a high

level of income were not significant risk factors for female IPH victimization.

Discussion

This meta-analysis examined risk factors for male IPH perpetration and female IPH victimization. This study compared IPH perpetrators and victims versus IPV perpetrators and victims to examine risk factors that may put individuals who have experienced violence in their relationship at a greater risk of IPH. The risk factor that increased the likelihood of IPH the highest was if the male perpetrator had direct access to guns. Other significant risk factors for male IPH perpetration included if he had previously threatened the victim with a weapon, had previously strangled the victim, had threatened to harm the victim, had perpetrated forced sex, exhibited controlling behaviors, had threatened to harm the victim, abused the victim while she was pregnant, previously stalked the victim, was jealous, abused substances, had less than a high school education, was younger in age, had anger problems, and had a history of mental health issues. This meta-analysis also found that if the perpetrator was employed, the likelihood of IPH decreased. The perpetrator having a history of violence toward nonfamily members or having prior criminal charges were not significant risk factors for IPH perpetration.

If the female victim had less than a high school education, was separated from the perpetrator, abused substances, and/or had children from a previous relationship the likelihood of IPH increased. Being younger in age, having children with the perpetrator, the length of the relationship with the perpetrator, being married to the perpetrator, being employed, and having a higher income were not significant risk factors for IPH victimization. It is also important to note that overall, perpetrator risk factors were more strongly related to an increase in the odds of an IPH occurring compared to victim risk factors. This suggests that it may be more important to examine *and intervene with* factors related to the perpetrator than the victim when assessing for the potential occurrence of an IPH.

One of the major findings from this study is that when comparing male IPV offenders to male IPH offenders, having direct access to a gun increased the likelihood of IPH by more than 11 times or over 1,000%. This number warrants serious attention. Previous research has identified previous IPV as one of the most important risk factors for IPH (Campbell et al., 2007), and results from this study support the importance of making sure IPV perpetrators do not have access to guns. According to 18 U.S.C. § 922(g)(9), an individual who has been convicted of a misdemeanor-level crime of domestic violence is prohibited from possessing, shipping, transporting, or receiving ammunition or firearms. Results from this study support the necessity of enforcing this law. *Previous research has found an association between limiting IPV perpetrators' access to firearms and a reduction in IPH* (Vigdor & Mercy, 2006; Zeoli & Webster, 2010; Zeoli, Malinski & Brenner, 2017). Limiting potential IPH offenders' access to lethal means by enforcing laws prohibiting IPV perpetrators from owning guns is a way to decrease incidences of IPH.

According to exposure reduction hypothesis, providing resources that allow victims of IPV to leave abusive relationships may also aid in decreasing rates of IPH (Dugan et al., 2003; Reckdenwald & Parker, 2012). The importance of the exposure reduction hypothesis is supported by our findings. Many of the risk factors for IPH that increased the likelihood of IPH by the highest percentages are instances of certain acts of previous violence toward the victims, such as threatening to harm the victim, threatening the victim with a weapon, perpetrating nonfatal strangulation, perpetrating forced sex, perpetrating stalking, and if perpetrator previously abused the victim while she was pregnant. Previous research has found that survivors of attempted IPH generally underestimated the dangerousness of the situation (Farr, 2002; Nicolaidis et al., 2003). Many victims of attempted homicide did not think their partner was capable of trying to kill them. These IPV-related risk factors for IPH highlight the importance of law enforcement personnel, first responders, victim advocates, and mental health professionals knowing the seriousness of these risk factors and educating survivors of IPV of the dangerousness of the situation they are currently in as means to potentially reduce the likelihood of IPH. Nonfatal strangulation is a risk factor of particular concern, as there may not be any external signs of strangulation (such a bruising) or the victim may not remember what had happened due to a lack of oxygen during the attack (Wilbur et al., 2001). Another explanation for the importance of nonfatal strangulation as an IPH risk factor of particular concern is that compared to women who had not been strangled by an intimate partner, women who were strangled by an intimate partner were more likely to report other significant risk factors for IPH in their relationship, such as sexual violence and the perpetrator threatening them with a weapon (Messing, Patch, Wilson, Kelen, & Campbell, 2018). It is necessary that helping professionals who are working with survivors of IPV assess whether or not they had been strangled and educate survivors of the seriousness of the situation they are or were in. This also suggests the importance of serious consequences for perpetrators of strangulation, as well as other forms of IPV, who may be escalating in their level and frequency of violence.

We also identified several risk factors associated with male sexual proprietariness theory (Daly & Wilson, 1988; Wilson & Daly, 1993) as significant risk factors for IPH. If the perpetrator is controlling toward the victim, is sexually jealous of the victim, is stalking the victim, has perpetrated forced sex; if the woman has children from a previous relationship; or if she is separated from the perpetrator, it is important to take the potential for IPH very seriously. This level of control and jealousy may increase the likelihood of the occurrence of IPH, and it is imperative to warn the victim of the potential dangerousness of the situation. Also, it is important for professionals to take these signs seriously when working with or in contact with IPV perpetrators. This also highlights the importance of providing safe ways for women to exit abusive relationships. Although research has found that separation is a risk factor for IPH, as did this study, previous research

suggests that the risk of IPH decreases after 3 months of leaving the abuser (Banard et al., 1982; Wilson & Daly, 1993). Research still supports that leaving an abusive relationship will decrease the long-term risk of IPH (Dugan et al., 2003) and providing safe ways to exit abusive relationships is necessary to help protect women leaving abusive relationships.

The factors examined in this meta-analysis that were not significant risk factors for IPH may be just as important for helping professionals to be aware of. Our study found that many of the factors that were related to the relationship between the perpetrator and victim (i.e., length of relationship, if the perpetrator and victim were married, and whether or not the victim and perpetrator had children together) were not significant risk factors for IPH. This suggests that IPH may occur in all types of relationships (i.e., short- and long-term relationships, married and dating relationships, as well as whether or not the couple had children); and it is important that those working with potential perpetrators and victims do not stereotype who may be more at risk due to their relationship characteristics. Although demographic characteristics were significant risk factors for male IPH perpetration, age, employment status, and income level were not significant risk factors for female IPH victimization. This may indicate that examining the perpetrator's demographic factors may be more important than examining the potential female victim's demographic factors or that IPH impacts women from all social classes and statuses. It is also important to note that the perpetrator's prior criminal charges or if they were violent toward nonfamily members were not statistically significant risk factors for IPH. Again, this suggests that law enforcement personnel, medical professionals, victim advocates, or mental health professionals must not believe that an individual may be at less risk to perpetrate IPH due to a lack of criminal or violent history.

The results from this study offer support for risk factors identified in *recognized* risk assessment tools currently being used in the field. The Danger Assessment (Campbell et al., 2009) identifies owning a gun, separation, threatening to harm victim, unemployment, having a child from a previous relationship, perpetration of forced sex/rape, nonfatal strangulation, perpetrator substance use, controlling behaviors, jealousy, perpetrator abusing victim while she was pregnant, and stalking as risk factors to assess for, all of which our meta-analysis found to be significant risk factors for male-perpetrated IPH. The Spouse Abuse Risk Assessment (SARA) (Kropp et al., 1995) identifies relationship problems (which can include separation), employment problems, perpetrator substance use, perpetrator mental illness, sexual assault, jealousy, threats of harm or death, escalation of assault (which can include nonfatal strangulation), and past violations of "no contact" orders (which could be considered stalking), all of which were found to be significant risk factors in this meta-analysis.

Implications for Practice, Policy, and Research

The results from this meta-analysis can aid in informing practitioners of many different disciplines regarding the strength of risk factors for IPH that are most commonly found in the empirical literature. However, it is still *critically* important that practitioners and professionals incorporate their own professional judgment when conducting risk assessments (Kropp, 2008). Researchers have pointed out that there may be risk factors *commonly referred to in case studies and narratives* that may be difficult to empirically test for, and have not been examined through quantitative studies, which highlights the importance of practitioners and professionals balancing assessment of risk factors with empirical support and using professional discretion *when* assessing for risk of violence or homicide (Douglas & Kropp, 2002; Kropp & Cook, 2013). Structured professional judgment *is* an approach to risk assessment that combines the importance of professionals' and practitioners' *professional* judgment/discretion combined with a focus on empirically supported risk factors (Douglas & Kropp, 2002; Kropp, 2008; Messing & Thaller, 2015). The results from this meta-analysis can aid professionals in identifying empirically supported risk factors for IPH, but professional discretion is still needed in risk assessment.

Limitations and Future Research

The major limitation of this study is the lack of studies we were able to include in this meta-analysis, as well as the limited number of effect sizes found for each risk factor. This suggests the continued need to research risk factors for IPH. The majority of the studies excluded in our analysis were excluded because they did not use comparison samples in their studies, which did not allow for us to examine true risk factors of IPH. Future research would benefit from the use of comparison samples in order to truly examine what would put individuals at a greater risk of IPH, rather than reporting solely on prevalence rates. Also, there were several risk factors of interest identified for this meta-analysis that we were not able to be included due to not having three or more effect sizes to analyze. This suggests that future research may benefit from examining less known risk factors for IPH to determine whether there are other possible important risk factors missing from the current literature. There were also several risk factors included on the Danger Assessment (Campbell et al., 2009) and the SARA (Kropp et al., 1995) that we did not find enough effect sizes for to include in the analysis, which would be of interest to examine in future research. Lastly, this analysis only examined bivariate relationships between risk factors and IPH. Future research would benefit from continued examination of covariates and how risk factors may relate to one another, or how certain combinations of risk factors may increase the risk of IPH perpetration or victimization.

Conclusion

This was the first meta-analysis conducted examining risk factors for male IPH perpetration and female IPH victimization. Results from this study found that the perpetrator's direct access to guns was the risk factor that increased the likelihood of IPH by the highest percent. Other significant risk factors of male IPH perpetration included: threatening the victim with a

weapon, perpetrating nonfatal strangulation, perpetrating forced sex, controlling behaviors, threatening to harm the victim, abusing the victim while pregnant, stalking, jealousy, substance abuse, having less than a high school education, perpetrator's young age, and a history of mental health issues. Significant risk factors for IPH victimization were substance abuse, having less than a high school education, separation, and having children from a previous relationship. Overall, it is necessary for policy makers who develop gun-related laws when there has been an IPV conviction, law enforcement personnel, first responders, medical professionals, mental health professionals, and victim advocates understand risk factors for IPH. This may aid in identifying individuals who have experienced IPV in their relationship and may be at a greater risk of perpetrating or being victims of IPH and may prevent future IPH.

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References

*References marked with an asterisk indicate studies included in the meta-analysis.

Aldridge, M. L., & Browne, K. D. (2003). Perpetrators of spousal homicide: A review. *Trauma, Violence & Abuse*, *4*, 265–276.

*Alford, P. A. (1995). A comparative study of women in abusive situations who have been battered or victims of homicide and the perceptions of professional groups working with abused women (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses.

Banard, G. W., Vera, H., Vera, M. I., & Newman, G. (1982). Till death do us part: A study of spouse murder. *The Bulletin of the American Academy of Psychiatry and the Law*, *10*, 271–280.

Belfrage, H., & Rying, M. (2004). Characteristics of spousal homicide perpetrators: Study of all cases of spousal homicide in Sweden 1990–1999. *Criminal Behavior & Mental Health*, *14*, 121–133.

Berman, N. G., & Parker, R. A. (2002). Meta-analysis: Neither quick nor easy. *BMC Medical Research Methodology*, *2*, 1–9.

Block, C. R. (2000). *The Chicago Women's Health Study: Risk of serious injury or death in intimate violence: A collaborative research project*. Final Report to the National Institute of Justice. Retrieved from http://www.icjia.state.il.us/public/pdf/cwhrs/cwhrs.pd

Block, C. R., & Chistakos, A. (1995). Intimate partner homicide in Chicago over 29 years. *Crime & Delinquency*, *41*, 496–526.

Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. West Sussex, England: John Wiley.

Borenstein, M., Hedges, L., Higgins, J., & Rothsteine, H. (2014). Comprehensive Meta-Analysis (Version 3) [Computer software]. Englewood, NJ: Biostat.

Browne, A., & Williams, K. R. (1989). Exploring the effect of resource availability and the likelihood of female-perpetrated homicides. *Law & Society Review*, *23*, 75–94.

Cafferky, B. M., Mendez, M., Anderson, J. R., & Stith, S. M. (2018). Substance use and intimate partner violence: A meta-analytic review. *Psychology of Violence*, *8*, 110–131. doi:10.1037/vio0000074

Caman, S., Kristiansson, M., Granath, S., & Sturup, J. (2017). Trends and characteristics of intimate partner homicide between 1990 and 2013. *Journal of Criminal Justice*, *49*, 14–21.

Campbell, J. C. (1986). Nursing assessment for risk of homicide with battered women. *Advances in Nursing Science*, *8*, 36–51.

Campbell, J. C., Glass, N., Sharps, P. W., Laughon, K., & Bloom, T. (2007). Intimate partner homicide: Review and implications of research and policy. *Trauma, Violence & Abuse*, *8*, 246–269.

*Campbell, J. C., Webster, D. W., & Glass, N. (2009). The danger assessment validation of a lethality risk assessment instrument for intimate partner femicide. *Journal of Interpersonal Violence*, *24*, 653–674.

*Campbell, J. C., Webster, D., Koziol-McLain, J., Block, C., Campbell, D., Curry, M. A. . . . Kathryn Laughon, M. P. H. (2003). Risk factors for femicide in abusive relationships: Results from a multisite case control study. *American Journal of Public Health*, *93*, 1089–1097.

Card, N. A. (2012). *Applied meta-analysis for social science research*. New York, NY: Guilford Press.

Catalano, S. (2013). Intimate partner violence: Attributes of victimization, 1993–2011. *U.S. Department of Justice, Bureau of Justice Statistics*. Retrieved from https://www.bjs.gov/content/pub/pdf/ipvav9311.pdf

Chimbros, P. D. (1998). Spousal homicides in contemporary Greece. *International Journal of Comparative Sociology*, *39*, 213–223.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*, 155–159. doi:10.1037/0033-2909.112.1.155

Corradi, C., & Stockl, H. (2014). Intimate partner homicide in 10 European countries: Statistical data and policy development in a cross-national perspective. *European Journal of Criminology*, *11*, 601–618. doi:10.1177/1477370814539438

Crawford, M., & Gartner, R. (1992). *Woman killing: Intimate femicide in Ontario 1974–1990*. Toronto, Canada: The Women We Honour Action Committee.

*Cunha, O. S., & Goncalves, R. A. (2016). Predictors of intimate partner homicide in a sample of Portuguese male domestic offenders. *Journal of Interpersonal Violence*. doi:10.1177/0886260516662304

*Cunha, O. S., & Goncalves, R. A. (2016b). Severe and less severe intimate partner violence: From characterization to prediction. *Violence and Victims*, *31*, 235–250.

Daly, M., & Wilson, M. (1988). *Homicide*. New York, NY: Aldine de Gruyter.

Dawson, M., Bunge, V. P., & Balde, T. (2009). National trends in intimate partner homicides: Explaining declines in Canada, 1976 to 2001. *Violence Against Women*, *15*, 276–306. doi:10.1177/1077801208330433

Dobash, R. E., Dobash, R. P., Cavanaugh, K., & Lewis, R. (2004). Not an ordinary killer—Just an ordinary guy: When men murder an intimate woman partner. *Violence Against Women*, *10*, 577–605.

*Dobash, R. E., Dobash, R. P., Cavanaugh, K., & Medina-Ariza, J. (2007). Lethal and nonlethal violence against an intimate partner: Comparing male murderers to nonlethal abusers. *Violence Against Women*, *13*, 329–353.

Douglas, K. S., & Kropp, P. R. (2002). A prevention-based paradigm for violence risk assessment: Clinical and research applications. *Criminal Justice & Behavior*, *29*, 617–658.

Dugan, L., Nagin, D. S., & Rosenfeld, R. (1999). Explaining the decline in intimate partner homicide: The effects of changing domesticity, women's status, and domestic violence resources. *Homicide Studies*, *3*, 187–214.

Dugan, L., Nagin, D. S., & Rosenfeld, R. (2003). Exposure reduction or retaliation? The effects of domestic violence resources on intimate-partner homicide. *Law and Society Review*, *37*, 169–198.

Dutton, D. G. (2002). The neurobiology of abandonment homicide. *Aggression and Violence Behavior*, *7*, 407–421.

*Dutton, D. G., & Kerry, G. (1999). Modus operandi and personality disorder in incarcerated spousal killers. *International Journal of Law and Psychiatry*, *22*, 287–299.

Duval, S., & Tweedie, R. (2000). Trim and fill: A simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics*, *56*, 455–463.

*Echeburua, E., Fernandez-Montalvo, J., de Corral, P., & Lopez-Goni, J. (2009). Assessing risk markers in intimate partner femicide and severe violence: A new assessment instrument. *Journal of Interpersonal Violence*, *24*, 925–939.

*Eke, A. W., Hilton, N. Z., Harris, G. T., Rice, M. E., & Houghton, R. E. (2011). Intimate partner homicide: Risk assessment and prospects for prediction. *Journal of Family Violence*, *26*, 211–216.

Farr, K. A. (2002). Battered women who were" being killed and survived it": Straight talk from survivors. *Violence and Victims*, *17*, 267.

Fox, J. A., & Zawitz, M. W. (2007). *Homicide trends in the United States*. Washington DC. Retrieved from http://bjs.ojp.usdoj.gov/content/pub/pdf/htius.pdf

Garcia, L., Soria, C., & Hurwitz, E. (2007). Homicides and intimate partner violence: A literature review. *Trauma, Violence, & Abuse*, *8*, 370–383.

*Glass, N., Laughon, K., Campbell, J. C., Block, C. R., Hanson, G., Sharps, P. W., & Taliaferro, E. (2008). Non-fatal strangulation is an important risk factor for homicide of women. *The Journal of Emergency Medicine*, *35*, 329–335.

Glass, N., Laughon, K., Campbell, J. C., Wolf Chair, A. D., Hanson, G., Sharps, P. W., & Taliaferro, E. (2007). Non-fatal strangulation is an important risk factor for homicide of women. *Journal of Emergency Medicine*, *35*, 329–335.

*Glass, N., Laughon, K., Rutto, C., Bevacqua, J., & Campbell, J. C. (2008). Young adult intimate partner femicide: An exploratory study. *Homicide Studies*, *12*, 177–187.

Hawkins, A., Blanchard, V., Baldwin, S., & Fawcett, E. (2008). Does marriage and relationship education work? A meta-analytic study. *Journal of Consulting and Clinical Psychology*, *76*, 723–734.

Hunter, J. E., & Schmidt, F. L. (Eds.). (2004). *Methods of meta-analysis: Correcting error and bias in research findings*. London, England: Sage.

Ioannou, M., & Hammond, L. (2015). The changing face of homicide research: The shift in empirical focus and emerging research trends. *Journal of Criminal Psychology*, *5*, 157–162. doi:10.1108/JCP-06-2015-0019

Johnson, H., & Hotton, T. (2003). Losing control: Homicide risk in estranged and intact intimate relationships. *Homicide Studies*, *7*, 58–84.

Kivisto, A. J. (2015). Male perpetrators of intimate partner homicide: A review and proposed typology. *Journal of the American Academy of Psychiatry and the Law*, *43*, 300–312.

*Koziol-McLain, J., Webster, D., McFarlane, J., Block, C. R., Ulrich, Y., Glass, N., & Campbell, J. C. (2006). Risk factors for femicide-suicide in abusive relationships: Results from a multisite case control study. *Violence and Victims*, *21*, 3–21.

Kropp, P. R. (2008). Intimate partner violence risk assessment and management. *Violence and Victims*, *23*, 202–220.

Kropp, P. R., & Cook, A. (2013). Intimate partner violence, stalking, and femicide. In J. R. Meloy & J. Hofmann (Eds.), *The international handbook of threat assessment* (pp. 178–194). New York, NY: Oxford University Press.

Kropp, P. R., Hart, S. D., Webster, C. D., & Eaves, D. (1995). *Manual for the spousal risk assessment guide* (2nd ed.). British Columbia, Canada: The British Columbia Institute on Family Violence.

Lappi-Seppälä, T., & Lehti, M. (2014). Cross-comparative perspectives on global homicide trends. *Crime and Justice*, *43*, 135–230.

*McFarlane, J., Campbell, J. C., Sharps, P., & Watson, K. (2002). Abuse during pregnancy and femicide: Urgent implications for women's health. *Obstetrics and Gynecology*, *100*, 27–36.

McFarlane, J. M., Campbell, J. C., Wilt, S., Sachs, C. J., Ulrich, Y., & Xu, X. (1999). Stalking and intimate partner femicide. *Homicide Studies*, *3*, 300–316.

*McFarlane, J., Campbell, J. C., & Watson, K. (2002). Intimate partner stalking and femicide: Urgent implications for women's safety. *Behavioral Sciences and the Law*, *20*, 51–68.

Messing, J. T., Patch, M., Wilson, J. S., Kelen, G., & Campbell, J. C. (2018). Differentiating among attempted, completed, and multiple nonfatal strangulation in women abused by an intimate partner. *Women's Health Issues*, *28*, 104–111.

Messing, J. T., & Thaller, J. (2015). Intimate partner violence risk assessment: A primer for social workers. *British Journal of Social Work*, *45*, 1804–1820.

Nicolaidis, C., Curry, M. N., Ulrich, Y., Sharps, P., McFarlane, J., Campbell, D., & . . . Campbell, J. (2003). Could we have known? A qualitative analysis of women who survived an attempted homicide by an intimate partner. *Journal of General Internal Medicine*, *18*, 788–794.

Oram, S., Flynn, S. M., Shaw, J., Appleb, L., & Howar, L. M. (2013). Mental illness and domestic homicide: a population-based descriptive study. *Psychiatry Services*, *64*, 1006–1011.

Orwin, R. G. (1983). A fail-safe N for effect size in meta-analysis. *Journal of educational statistics*, *8*, 157–159.

Petrosky, E., Blair, J. M., Betz, C. J., Fowler, K. A., Jack, S., & Lyons, B. H. (2017). Racial and ethnic differences in homicides of adult women and the role of intimate partner violence—United States, 2003–2014. *MMWR Morbidity and Mortality Weekly Report*, *66*, 741–746.

Reckdenwald, A., & Parker, K. F. (2012). Understanding the change in male and female intimate partner homicide over time: A policy- and theory-relevant investigation. *Feminist Criminology*, *7*, 167–195. doi:10.1177/1557085111428445

Rosenthal, R. (1979). The file drawer problem and tolerance for null results. *Psychological Bulletin*, *86*, 638–641.

Serran, G., & Firestone, P. (2004). Intimate partner homicide: A review of the male proprietariness and the self-defense theories. *Aggression and Violence Behavior*, *9*, 1–15.

*Sharps, P. W., Campbell, J., Campbell, D., Gary, F., & Webster, D. (2001). The role of alcohol use in intimate partner femicide. *The American Journal on Addictions*, *10*, 122–135.

Sharps, P. W., Koziol-McLain, J., Campbell, J. C., McFarlane, J., Sachs, C. J., & Xu, X. (2001). Health care provider's missed opportunities for preventing femicide. *Preventive Medicine*, *33*, 373–380.

Sheehan, B. E., Murphy, S. B., Moynihan, M. M., Dudley-Fennessey, E., & Stapleton, J. G. (2015). Intimate partner homicide: New insights for understanding lethality and risks. *Violence Against Women*, *21*, 269–288.

Spencer, C., Cafferky, B., & Stith, S. M. (2016). Gender differences in risk markers for perpetration of physical partner violence: results from a meta-analytic review. *Journal of Family Violence*, *31*, 981–984.

Spencer, C., Mallory, A. B., Cafferky, B. M., Kimmes, J. G., Beck, A. R., & Stith, S. M. (2017). Mental health factors and intimate partner violence perpetration and victimization: A meta-analysis. *Psychology of Violence*. Advance online publication. doi:10.1037/vio0000156

Stith, S. M., Smith, D. B., Penn, C. E., Ward, D. B., & Tritt, D. (2004). Intimate partner physical abuse perpetration and victimization risk factors: A meta-analytic review. *Aggression and Violent Behavior*, *10*, 65–98.

Stöckl, H., Devries, K., Rotstein, A., Abrahams, N., Campbell, J., Watts, C., & Moreno, C. G. (2013). The global prevalence of intimate partner homicide: A systematic review. *The Lancet*, *382*, 859–865.

Stout, K. (1993). Intimate femicide: A study of men who have killed their mates. *Journal of Offender Rehabilitation*, *19*, 81–94.

*Taylor, R., & Nabors, E. L. (2009). Pink or blue Black and blue? Examining pregnancy as a predictor of intimate partner violence and femicide. *Violence Against Women*, *15*, 1273–1293.

United Nations Office on Drugs and Crime. (2013). *Global Study on Homicide 2013. Statistics and survey section. United Nations Office on Drugs and Crime*. Vienna, Australia: United Nations (Sales No. 14.IV.1).

Vigdor, E. R., & Mercy, J. A. (2006). Do laws restricting access to firearms by domestic violence offenders prevent intimate partner homicide? *Evaluation Review*, *30*, 313–346.

Wilbur, L., Higley, M., Hatfield, J., Surprenant, Z., Taliaferro, E., Smith, D. J., & Paolo, A. (2001). Survey results of women who have been strangled while in an abusive relationship. *The Journal of Emergency Medicine*, *21*, 297–302. doi:10.1016/S0736-4679(01)00398-5

Wilson, M., & Daly, M. (1993). Spousal homicide risk and estrangement. *Violence and Victims*, *8*, 3–16.

*Wiltsey, M. T. (2008). Risk factors for intimate partner homicide (Doctoral dissertation). Drexel University, Philadelphia.

Zeoli, A. M., & Webster, D. W. (2010). Effects of domestic violence policies, alcohol taxes and police staffing levels on intimate partner homicide in large US cities. *Injury Prevention*, *16*, 90–95.

Zeoli, A. M., Malinski, R., & Brenner, H. (2017). The intersection of firearms and intimate partner homicide in 15 nations. *Trauma, Violence, & Abuse*. Advance online publication. doi:10.1177/1524838017738725

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Firearm Use Increases Risk of Multiple Victims in Domestic Homicides

Aaron J. Kivisto, PhD, and Megan Porter, MS

Domestic homicides account for more than one in four homicides in the United States and frequently involve multiple victims. This study examined the prevalence of firearm use in domestic homicides in the United States and the associated risk of a multiple homicide event. We used weighted negative binomial regression to model the effects of firearm use on the number of additional victims in domestic and nondomestic homicides using data from the Federal Bureau of Investigation's Supplementary Homicide Reports. Results showed that firearms were used in 54.1 percent of domestic homicides. Firearm use was associated with a 70.9 percent and 38.7 percent increased incidence of additional victimization in domestic and nondomestic homicides, respectively. Whereas male and female perpetrators differed minimally in the likelihood of additional victims in domestic homicides committed with a non-firearm (3.6% versus 2.5%), males were nearly three times more likely to have multiple victims in domestic homicides involving a firearm (6.9% versus 2.4%). Interaction tests showed that the risk of additional victims associated with firearm use was stronger in domestic situations than in nondomestic situations and among male perpetrators. These findings highlight the risk of multiple homicides in domestic homicide situations and the role of firearms in expanding the risk of victimization beyond a single victim.

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Intimate partner homicides (IPH) account for nearly one in seven homicides worldwide, with the proportion of female homicide victims killed by intimate partners six times higher than male homicide victims (38.6% versus 6.3%).[1] In the United States, more than half of female homicide victims are killed by intimate partners.[2] Domestic homicide, which includes homicides perpetrated by either an intimate partner or other family member, account for more than a quarter of all homicides.[3,4] Among the most robust risk factors for domestic homicide, the presence of a firearm in the home has been shown to increase the risk of death in domestic violence situations as much as five-fold,[5-8] and more than half of domestic homicide victims die by firearms.[9-14]

The burden of domestic homicide frequently extends to additional victims linked to the primary perpetrator or victim, either through a preexisting relationship or simply through physical proximity to the violence.[5,12,15,16] Research shows that male-perpetrated IPH results in multiple fatalities in approximately 40 percent of cases, whether through perpetrator suicide or additional homicides.[17] For example, Bourget and Gagne[18] found that, in male-perpetrated IPH in Quebec, approximately 61 percent of such incidents resulted in a single death, 32 percent resulted in one additional death (often perpetrator suicide), 4 percent resulted in two additional deaths, and 3 percent resulted in three additional deaths. Focusing specifically on multiple homicides in 16 states, excluding suicides, Smith *et al.*[12] found that 20 percent of homicide victims linked to an act of partner homicide from 2003 through 2009 were not the perpetrator's current or former partner. In a study of 813 intimate partner homicides in North Carolina from 2004 through 2013, Smucker *et al.* found that 6.3 percent ($n = 51$) of all cases

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included one or more additional homicide victims beyond the intimate partner victim.[5] Across the study period, 58.6 percent of all IPH involved a firearm. IPHs with at least one additional victim were significantly more likely to involve a firearm than cases with a single victim (74.5% versus 59.4%, $p < .05$). Research demonstrates that common additional victims include biological children, other family members, and victims' new romantic partners.[5,12,18-20]

The available research thus suggests that firearms are a risk factor for domestic homicide, and that cases of domestic homicide commonly include multiple victims. Data from a sample of 622 male IPH perpetrators from North Carolina has shown a nonsignificant ($p < .10$) trend between firearm use and increased odds of additional victims. To date, however, the role of firearm use in domestic homicide situations on the risk of multiple victimization has not been examined in a nationally representative sample of male and female perpetrators. There is little data regarding whether the risk of multiple homicide is relatively unique to domestic homicides versus other victim–offender relationships.

This study sought to examine the role of firearms in domestic homicide and the associated risk of multiple homicide. The study used a nationally representative sample from the United States to address four questions. First, the study examined whether the incidence of additional homicide victims was higher in cases of domestic versus nondomestic homicide. Second, the study examined whether firearm use was associated with an increased incidence of additional victims, both across and within distinct victim–offender relationships. Third, the study examined whether gun use was more strongly associated with the incidence of multiple victims in cases of domestic versus nondomestic homicide. Fourth, the study sought to understand whether the association between firearm use and additional victims differed between male and female perpetrators. Given the lack of research to guide directional hypotheses, these objectives were addressed in an exploratory manner.

Methods

Data Sources

The present study utilized the Supplementary Homicide Reports (SHR) of the Federal Bureau of Investigation's Uniform Crime Reports,[21] which is the only national data source with incident-level information on the relationship between homicide victims and perpetrators. The SHR also includes information on victim and perpetrator sex, weapon use, and the number of victims associated with each homicide event. Data from 1976 through 2016 were utilized. The SHR categorizes victim–offender relationships as intimate partner, other family, friend/acquaintance, and stranger. Intimate partners are defined as spouses, common-law spouses, former spouses, and dating partners. Former dating partners are not included, thus underestimating the true number of IPH. Other family relationships are defined as parents, children, stepparents, stepchildren, in-laws, and other family members. Friends/acquaintances are defined as neighbors, acquaintances, employees, employers, and friends, and strangers are defined for cases in which victims did not know offenders or knew them only by sight. For the present study, we defined domestic homicides as those categorized as either intimate partner or other family relationships, and we defined nondomestic homicides as those categorized as friend/acquaintance or stranger relationships. The study was determined by the Institutional Review Board of the University of Indianapolis to be non-human participant research.

Homicide events with multiple victims were defined as those in which there were two or more victims. Binary indicator variables were generated for the present study to indicate whether a homicide event involved a single victim (0) or at least one additional victim (1); was committed with a nonfirearm (0) or with a firearm (1); and whether the perpetrator was female (0) or male (1). The primary outcome variable was a count of the number of additional homicide victims beyond one for each homicide event.

Missing Data

Research has shown that approximately one third of homicides reported to the FBI by local law enforcement do not include data on the victim–offender relationship.[22] Fox and Swatt[23,24] developed the multiply imputed SHR to address this limitation by modeling annual homicide rates by matching to the Uniform Crime Reports estimated national totals and demographic characteristics reported to the National Center for Health Statistics

Table 1 Demographic Characteristics of Homicide Perpetrators by Domestic Status and Firearm Use

	Total Homicide			Domestic Homicide			Nondomestic Homicide		
	All-Cause	Gun	Non-Gun	All-Cause	Gun	Non-Gun	All-Cause	Gun	Non-Gun
Age, y									
< 18	7.8	8.5	6.4	4.4	4.6	4.2	9.0	9.7	7.5
18–24	32.1	34.0	28.7	19.3	17.2	21.8	36.8	39.0	32.2
25–34	30.0	28.7	32.4	29.5	27.4	32.1	30.2	29.0	32.6
35–49	20.6	19.1	23.4	29.5	30.2	28.6	17.4	15.9	20.7
50+	9.5	9.7	9.1	17.3	20.6	13.3	6.6	6.5	6.9
Sex									
Male	89.1	91.2	85.4	73.7	75.5	71.6	94.7	95.8	92.6
Female	10.9	8.8	14.6	26.3	24.5	28.4	5.3	4.2	7.4
Race									
White	45.8	42.5	51.9	56.1	57.7	54.2	42.1	38.1	50.7
Black	51.5	55.3	44.7	40.8	39.9	42.0	55.4	59.8	46.0
Other	2.6	2.2	3.4	3.1	2.4	3.8	2.5	2.1	3.2

All values are percentages.

using log-linear models to impute missing case data and a weighting scheme for unit missingness.[25]

Statistical Analysis

Weighted negative binomial regression was utilized to model the incidence of additional victimization as a function of firearm use and domestic status to account for overdispersion in the outcome data and the multiply imputed structure of the dataset. To test whether the risk of additional victimization associated with firearm use differed across domestic and nondomestic victim–offender relationships, weighted negative binomial regression was utilized to examine the full factorial interaction between firearm use and domestic status. Similarly, to test whether the risk of additional victimization associated with firearm use differed across male and female perpetrators, weighted negative binomial regression was utilized to test the interaction between firearm use and perpetrator sex, stratified by victim–offender relationship. Following prior research, we entered year as a fixed effect in all models to account for secular trends in homicide over time,[26] and we included region (Northeast, Midwest, South, West) and urban classification (large city, small city, suburban, rural) as covariates. Clustered robust error estimators were used to relax the assumption of independence within states. All analyses were conducted using Stata version 15 (StataCorp, College Station, Texas).

Results

Firearms were used in 64.3 percent of all criminal homicides during the study period (Table 1). Perpetration of nondomestic homicide peaked between the ages of 18–34 years and decreased substantially after age 35. Domestic homicide perpetration, by contrast, peaked between the ages of 25–49 years. Whereas only 6.6 percent of nondomestic homicides were perpetrated by individuals 50 years or older, more than one in six (17.3%) domestic homicides were committed by individuals at least 50 years of age. Males committed a large majority of the total criminal homicides during the study period, although the gender difference was narrower for domestic (73.7% male) than nondomestic (94.7% male) homicides. Whereas black offenders committed more all-cause nondomestic homicides (55.4% versus 42.1% black and white offenders, respectively), white offenders were responsible for a greater proportion of domestic all-cause homicides (56.1% versus 40.8% white and black offenders, respectively). The odds of firearm use were 42.1 percent lower in domestic (54.1%) versus nondomestic (67.9%) homicides (odds ratio = 0.58, 95% CI 0.53–0.63, $P < .001$). Whereas male perpetrators used firearms in a higher proportion of nondomestic versus domestic homicides (66.6% versus 57.1%, respectively), female perpetrators used firearms at similar rates across nondomestic (46.0%) and domestic (48.2%) homicides.

There was at least one additional victim in 3.6 percent of all homicides during the study period; 4.6 percent of domestic homicides involved at least one additional victim compared with 3.3 percent of nondomestic homicides (Table 2). This corresponds to a 31.4 percent increased incidence of multiple

Table 2 Incidence of Multiple Homicide Victims by Firearm Use and Victim–Offender Relationship, United States, 1976–2016

	Total Sample					
		% Multiple Victim Homicides				
	% Gun Use	All Means	Gun	Non-Gun	IRR (95% CI)	*P*
Total homicides	64.3	3.6	4.2	2.7	1.427 (1.246–1.636)	< .001
Domestic homicides	54.1	4.6	5.8	3.3	1.709 (1.553–1.879)	< .001
Intimate partner homicides	58.4	2.8	1.7	3.7	2.110 (1.913–2.328)	< .001
Family homicides	47.8	7.3	9.6	5.2	1.748 (1.540–1.985)	< .001
Nondomestic homicides	67.9	3.3	3.7	2.3	1.387 (1.165–1.652)	< .001
Friend/acquaintance homicides	66.8	3.2	3.7	2.3	1.453 (1.251–1.687)	< .001
Stranger homicides	70.1	3.3	3.7	2.5	1.270 (0.991–1.628)	.06
	Male Perpetrators					
		% Multiple Victim Homicides				
	% Gun Use	All Means	Gun	Non-Gun	IRR (95% CI)	*P*
Total homicides	64.0	3.8	4.4	2.8	1.460 (1.268–1.681)	< .001
Domestic homicides	57.1	5.4	6.9	3.6	1.885 (1.706–2.084)	< .001
Intimate partner homicides	61.2	3.7	4.9	2.1	2.228 (1.975–2.513)	< .001
Family homicides	51.7	7.6	9.7	5.3	1.995 (1.741–2.285)	< .001
Nondomestic homicides	66.6	3.4	3.8	2.4	1.470 (1.252–1.726)	< .001
Friend/acquaintance homicides	65.4	3.3	3.8	2.4	1.571 (1.371–1.801)	< .001
Stranger homicides	69.3	3.4	3.7	2.5	1.273 (1.003–1.616)	.05
	Female Perpetrators					
		% Multiple Victim Homicides				
	% Gun Use	All Means	Gun	Non-Gun	IRR (95% CI)	*P*
Total homicides	47.5	2.2	2.2	2.2	0.913 (0.769–1.085)	.30
Domestic homicides	48.2	2.4	2.4	2.5	0.884 (0.712–1.097)	.26
Intimate partner homicides	59.4	0.9	1.0	0.6	2.470 (1.400–4.356)	.002
Family homicides	23.2	6.0	9.0	4.9	1.968 (1.559–2.485)	< .001
Nondomestic homicides	46.0	1.8	2.0	1.6	0.757 (0.540–1.062)	.11
Friend/acquaintance homicides	45.6	1.7	1.8	1.5	0.757 (0.529–1.082)	.13
Stranger homicides	50.4	2.7	2.8	2.4	0.822 (0.493–1.370)	.45

Incidence rate ratio (IRR) models show incidence of multiple victims with guns (1) versus without (0) guns and include fixed effects for year. Errors are adjusted for clustering within states, and are controlled for region and level of urban classification.

victims in cases of domestic compared with nondomestic homicide (incidence rate ratio [IRR] = 1.314, 95% CI 1.254–1.378, $p < .001$). Stratified by perpetrator sex, male-perpetrated domestic homicides were associated with a 54.7 percent increased incidence of multiple victims relative to nondomestic homicides (IRR = 1.547, 95% CI 1.471–1.626, $p < .001$). For female perpetrators, the incidence of multiple victims increased a nonsignificant 23.9 percent in domestic situations (IRR = 1.239, 95% CI 0.932–1.646, $p = .14$).

The use of firearms was associated with a significantly increased incidence of additional victims when domestic and nondomestic homicides were aggregated in the combined sample (Table 2). In the aggregated sample, the incidence of additional victims was 42.7 percent higher in homicides involving a firearm than homicides without a firearm. Domestic homicides involving a firearm were associated with a 70.9 percent increased incidence of additional victims and firearm use was associated with a 38.7 percent increased incidence of multiple victims for nondomestic homicides.

Stratified by offender sex, the association between firearm use and an increased incidence of multiple victims in domestic and nondomestic situations was evident only for male perpetrators. Firearm use in male-perpetrated domestic and nondomestic homicides was associated with an 88.5 percent and 47.0 percent increased incidence of additional victims, respectively. By contrast, no significant differences in the incidence of additional victimization

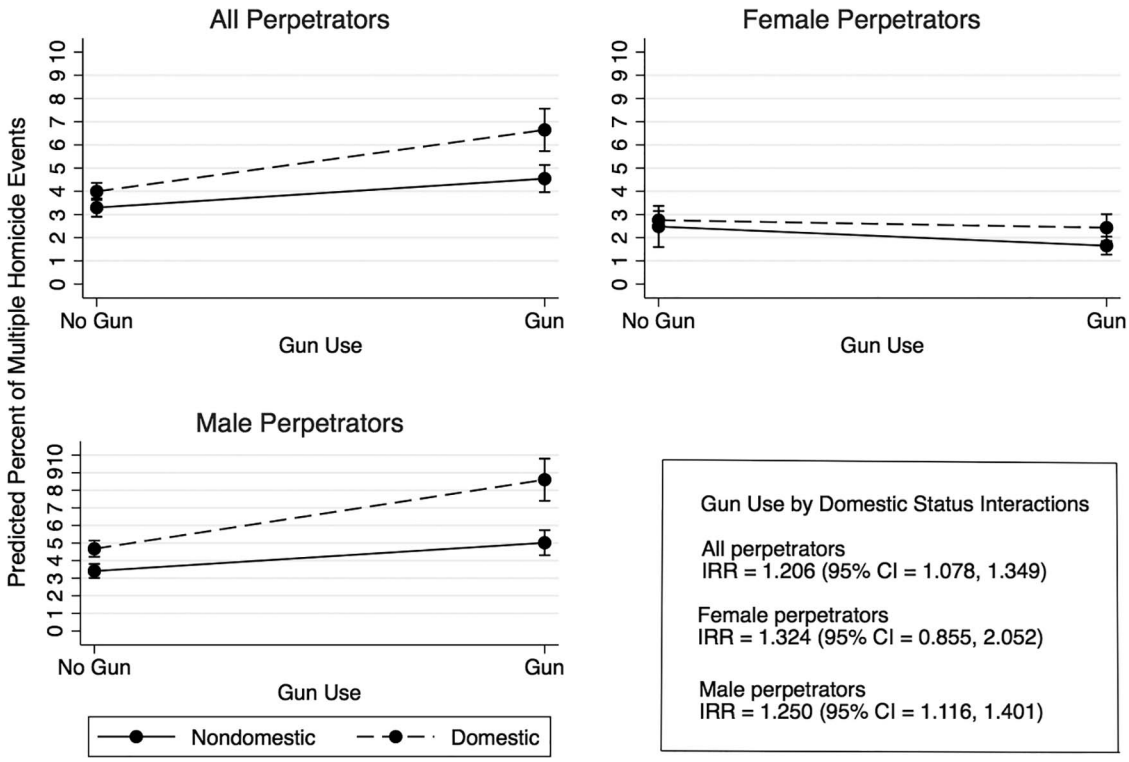

Figure 1. Interaction between gun use and victim–offender relationship on incidence of multiple victim homicides, United States, 1976–2016. IRR, incidence rate ratio.

were observed among female perpetrators of domestic or nondomestic homicides as a function of firearm use. Whereas males and females differed minimally in the likelihood of additional victims in domestic homicides committed with a non-firearm (3.6% versus 2.5%), males were nearly three times more likely than females to have multiple victims in domestic homicides involving a firearm (6.9% versus 2.4%). Male domestic homicide perpetrators were nearly twice as likely to have at least one additional victim when they used a firearm compared with a non-firearm.

Interaction tests were utilized to assess whether the increased risk of multiple victims associated with firearm use differed across domestic and nondomestic victim–offender relationships. As shown in Figure 1, the firearm use by domestic status interaction term was significant in the combined sample (IRR = 1.206, 95% = 1.078, 1.349, $p = .001$), such that firearm use was more strongly associated with multiple victims in domestic versus nondomestic situations. Stratified by perpetrator sex, the interaction between firearm use and domestic status was significant for male perpetrators (IRR = 1.250, 95% CI 1.116–1.401, $p < .001$) but not for female perpetrators (IRR = 1.324, 95% CI 0.855–2.052, $p = .21$). Thus, firearm use was associated with an increased incidence of multiple victims for both domestic and nondomestic homicides in the combined and male perpetrator samples, although the increased incidence associated with gun use was stronger in domestic situations.

Figure 2 shows the interaction between gun use and perpetrator sex, stratified by victim–offender relationship. The interaction between gun use and perpetrator sex on the incidence of multiple victims was significant for domestic (IRR = 2.132, 95% CI 1.825–2.490, $p < .001$) and nondomestic (IRR = 2.391, 95% CI 1.550–3.688, $p < .001$) homicides, showing that gun use is more strongly associated with an increased incidence of multiple victims in domestic and nondomestic homicides for male compared with female perpetrators. The interaction term was nonsignificant for intimate partner homicides (IRR = 1.058, 95% CI 0.584–1.919, $p = .85$) and family homicides (IRR = .962, 95% CI 0.812–1.140, $p = .82$), marginally significant for stranger homicides (IRR = 1.741, 95% CI 0.965–3.140, $p = .07$), and significant for friend/acquaintance homicides (IRR = 2.667, 95% CI 1.672–

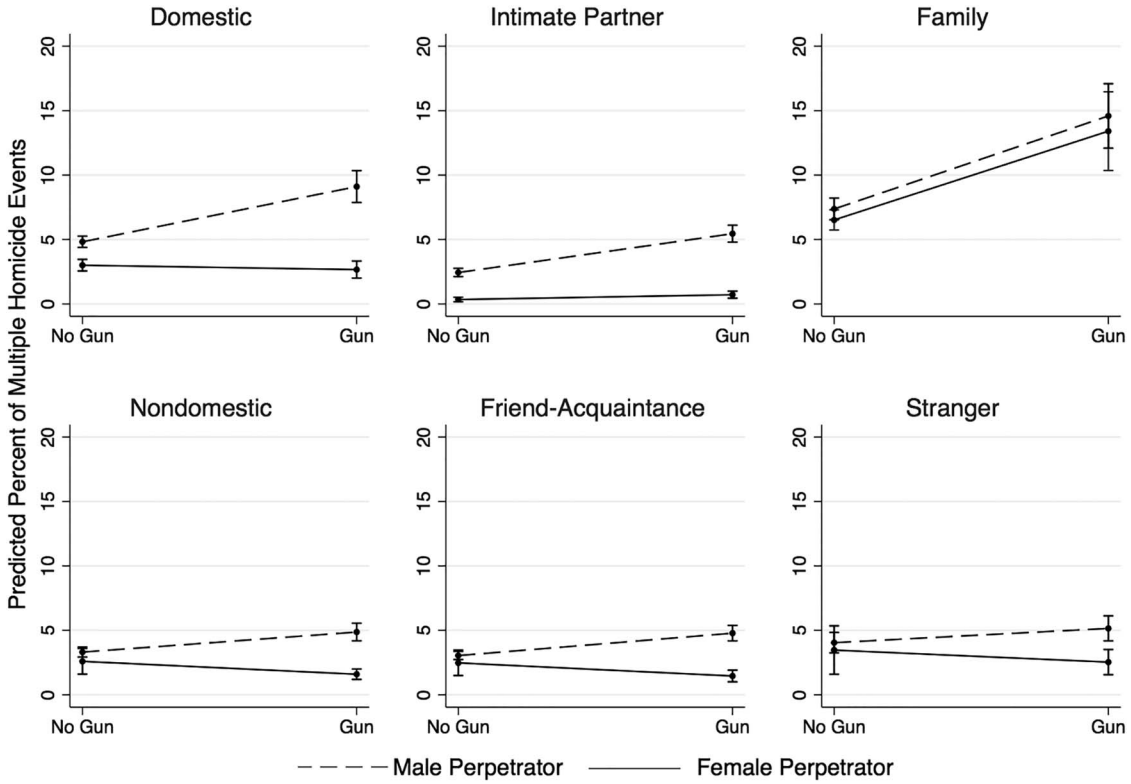

Figure 2. Interaction between gun use and perpetrator sex on incidence of multiple victim homicides, stratified by victim–offender relationship, United States, 1976–2016.

4.254, $p < .001$). As shown in Figure 2, the likelihood of additional victims is relatively unchanged for female perpetrators regardless of whether a firearm is used across victim–offender relationships. The exception is seen for family homicides, where both females and males showed a sharp increase in the likelihood of multiple victims for firearm versus non-firearm homicides. By contrast, male perpetrators demonstrated an increased likelihood of additional victims when firearms were used across victim–offender relationships, although the slope was stronger in domestic situations.

Discussion

More than one in four homicides in the United States occurs at the hands of an intimate partner or other family member,[3] and firearm access increases the risk of domestic homicide.[7] Prior research has shown that multiple victims are not uncommon in domestic homicide situations,[5,12] but the factors contributing to the risk of multiple homicide have received little attention. The present study suggests that the use of firearms in a homicide event increases the risk of additional victimization and that this risk is higher in the context of domestic homicides relative to nondomestic homicides. These data also indicate that the association between firearm use and multiple victimization in domestic homicides is stronger for male perpetrators. Male perpetrators who used a firearm in a domestic homicide were nearly three times more likely to have one or more additional victims than their female counterparts (6.9% versus 2.4%). Among males, the use of a firearm in domestic homicide situations was associated with a nearly two times higher likelihood of having at least one additional victim compared to domestic homicide situations not involving a firearm (6.9% versus 3.6%).

These findings have implications for forensic practice and public policy. Forensic psychiatrists are routinely engaged in cases involving family violence to evaluate the risk of ongoing or escalating violence and to develop appropriate risk-management strategies. In addition to addressing intrapersonal factors contributing to risk, a comprehensive risk assessment and management plan must also consider the exam-

inee's access to highly lethal means, most prominently firearms. Although state legislatures have occasionally enacted barriers to health care professionals' ability to carry out this task (e.g., Florida's 2011 law that placed restrictions on health care providers' ability to inquire about firearm ownership), it is the position of the American Psychiatric Association that physicians and other health care professionals should be "free to make clinically appropriate inquiries of patients and others about possession of and access to firearms and [to] take necessary steps to reduce the risk of loss of life by suicide, homicide, and accidental injury" (Ref. 27, p 196). This position aligns with evidence supporting the necessary role of psychiatrists in reducing firearm fatalities. For example, there exists a clear relationship between domestic homicide, particularly IPH, and suicide.[18,28] Given the fluidity between acts of suicide and homicide, risk assessment for the former should necessarily entail considerations of the latter.

Highlighting the importance of evaluating risk for domestic homicide, Oram and colleagues[29] reported that 14 percent of IPH perpetrators and 23 percent of family homicide perpetrators had been in contact with mental health services in the year prior to the offense. Moreover, they found that the perpetrators of intimate partner and family homicides displayed symptoms of mental illness at the time of arrest in 23 percent and 34 percent of cases, respectively. Compared with the 10 percent of cases of general homicide in which perpetrators showed symptoms of mental illness at the time of arrest, domestic homicide perpetrators appear relatively more likely to exhibit and seek services for symptoms of mental illness.

At the public policy level, a variety of federal and state laws are aimed at reducing access to firearms for individuals with a history of domestic violence. At the federal level, the 1994 Violence Against Women Act and the Gun Control Act of 1968 prohibit firearm possession by individuals subjected to permanent domestic violence restraining orders and convicted of felony intimate partner violence, respectively. Yet because these laws do not require individuals to surrender firearms already in their possession, they are ill equipped to respond to individuals with a history of domestic violence who own firearms prior to their legal involvement.

In response, a growing number of states have enacted "red flag" laws that permit the temporary seizure of firearms from individuals determined to be at risk of harm to themselves or others.[30] Further, many states have enacted laws specific to domestic violence perpetrators that require the surrender of firearms in their possession under certain circumstances. These laws have been shown to be associated with reductions in state-level rates of IPH.[6,31]

Although such laws are intended to protect a specific, targeted victim, the current findings raise the possibility that such laws might be associated with reductions in additional homicides that occur in the context of domestic homicide situations. One key variation in the firearm-seizure laws enacted at the state level concerns who is eligible to petition the court to initiate the seizure. Some states, such as Indiana, allow only law enforcement to initiate temporary firearm seizures, whereas several other states permit family members or others to petition the court.[32] Given the risk of multiple victimization in domestic homicide situations, along with research showing that other family members are common additional victims,[12,18,20] the present findings highlight the heightened risk faced by family members in proximity to domestic violence situations. These findings are relevant to policy makers considering such procedural issues related to firearm removal laws.

Firearm removal laws are beginning to intersect more clearly with the practice of psychiatrists, as Maryland's recent "red flag" law expands those who can petition for firearm removal to include health care professionals. While it is too early to know what impact such laws will have on psychiatrists and other mental health providers, concerns have been raised about the possibility that psychiatrists who fail to address the topic of firearm ownership and removal with patient's families could be held liable.[33] As described in the American Psychiatric Association's Position Statement on Firearm Access, Acts of Violence, and the Relationship to Mental Illness and Mental Health Services, laws that remove flexibility in favor of mandated reporting to law enforcement could prove counterproductive and deter individuals in need of treatment from seeking services.[27]

Several limitations warrant consideration. First, as a result of missing data regarding the victim–offender relationship as reported to the FBI by local law enforcement, the current estimates were derived from statistically modeled data developed by Fox and Swatt.[23] Prior research, however, has supported the

consistency between estimates derived from raw and multiply imputed SHR data.[6,26] Related to the data available in the FBI's SHR, the exclusion of ex-dating partners from classification in the intimate partner category resulted in an underestimate of the true count of intimate partner and domestic homicides. Additional research is necessary to better understand the relationships between perpetrators and additional victims. Despite these limitations, the present study is novel in showing an association between firearm use and the distinctly increased risk of additional victimization in domestic homicide in a nationally representative sample from the United States.

Conclusions

Firearm use is associated with an increased incidence of multiple homicide victimization, particularly in domestic situations. Male perpetrators of domestic homicide are nearly twice as likely to have at least one additional victim when they use a firearm compared to homicide situations involving a nonfirearm. Among all domestic homicides involving a firearm, male perpetrators are nearly three times more likely than females to have at least one additional victim. These findings highlight the risk of additional victimization in domestic homicide situations and the role of firearms in expanding the risk of victimization beyond a single victim. Policy efforts to reduce domestically violent individuals' access to firearms represent one means of reducing domestic homicide.

References

1. Stöckl H, Devries K, Rotstein A, *et al*: The global prevalence of intimate partner homicide: a systematic review. Lancet 382:859–65, 2013
2. Petrosky E, Blair JM, Betz CJ, *et al*: Racial and ethnic differences in homicides of adult women and the role of intimate partner violence–United States, 2003–2014. MMWR Morb Mort Wkly Rep 66:741–6, 2017
3. Bureau of Justice Statistics. Family violence statistics: including statistics on strangers and acquaintances. Washington, DC: U.S. Department of Justice, 2005. Available at: https://www.bjs.gov/content/pub/pdf/fvs02.pdf. Accessed October 26, 2018
4. Mouzos J, Rushforth C. Family Homicide in Australia. Canberra: Australian Institute of Criminology, 2003
5. Smucker S, Kerber RE, Cook PJ: Suicide and additional homicides associated with intimate partner homicide: North Carolina 2004–2013. J Urban Health 95:337–43, 2018
6. Diez C, Kurland RP, Rothman EF, *et al*: State intimate partner violence-related firearm laws and intimate partner homicide rates in the United States, 1991 to 2015. Ann Intern Med 167:536–43, 2017
7. Campbell JC, Webster D, Koziol-McLain J, *et al*: Risk factors for femicide in abusive relationships: results from a multisite case control study. Am J Public Health 93:1089–97, 2003
8. Kellermann AL, Rivara FP, Rushforth NB, *et al*: Gun ownership as a risk factor for homicide in the home. N Engl J Med 329:1084–91, 1993
9. Durose MR, Harlow CW, Langan PA, *et al*: Family violence statistics: including statistics on strangers and acquaintances. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, 2005. Available at: https://www.bjs.gov/content/pub/pdf/fvs03.pdf. Accessed January 9, 2019
10. Gollub EL, Gardner M: Firearm legislation and firearm use in female intimate partner homicide using national violent death reporting system data. Prev Med 118:216–19, 2018
11. Sivaramen JJ, Ranapurwala SI, Moracco KE, Marshall SW: Association of firearm legislation with female intimate partner homicide. Am J Prev Med 56:125–33, 2019
12. Smith SG, Fowler KA, Niolon PH: Intimate partner homicide and corollary victims in 16 states: National Violent Death Reporting System, 2003–2009. Am J Public Health 104:461–66, 2014
13. United States Department of Justice, Federal Bureau of Investigation: Uniform Crime Reporting Program Data: Supplementary Homicide Reports, 2013. Ann Arbor, MI: Inter-university Consortium for Political and Social Research, 2015. Available at: https://doi.org/10.3886/ICPSR36124.v1. Accessed January 9, 2019
14. Zeoli AM, Malinski R, Brenner H: The intersection of firearms and intimate partner homicide in 15 nations. Trauma Violence Abuse, published online November 2, 2017. Available at: https://journals.sagepub.com/doi/pdf/10.1177/1524838017738725. Accessed March 18, 2019
15. Yousuf S, McLone S, Mason M, *et al*: Factors associated with intimate partner homicide in Illinois, 2005–2010: findings from the Illinois Violent Death Reporting System. J Trauma Acute Care Surg (5S Suppl 2) 83:S217–21, 2017
16. Zeoli AM: Multiple victim homicides, mass murders, and homicide-suicides as domestic violence events. The Battered Women's Justice Project, 2018. Available at: https://www.preventdvgunviolence.org/multiple-killings-zeoli-updated-112918.pdf. Accessed January 10, 2019
17. Kivisto AJ: Male perpetrators of intimate partner homicide: a review and proposed typology. J Am Acad Psychiatry Law 43:300–12, 2015
18. Bourget D, Gagne P: Women who kill their mates. Behav Sci & L 30:598–614, 2012
19. Dutton DG, Kerry G: Modus operandi and personality disorder in incarcerated spousal killers. Int'l J L & Psychiatry 22:287–99, 1999
20. Liem M, Koenraadt F: Familicide: a comparison with spousal and child homicide by mentally disordered perpetrators. Crim Behav Ment Health 18:306–18, 2008
21. Federal Bureau of Investigation: Supplementary Homicide Reports. Washington, DC: Government Printing Office, 2016
22. Bureau of Justice Statistics: The Nation's Two Measures of Homicide. 2014. Available at: https://www.bjs.gov/content/pub/pdf/ntmh.pdf. Accessed October 25, 2018
23. Fox JA, Swatt ML: Multiple imputation of the Supplementary Homicide Reports, 1976–2005. J Quant Criminology 25:51–77, 2009
24. Fox JA: Multiply-Imputed Supplementary Homicide Reports File, 1976–2016. Boston: Northeastern University, 2017
25. Fox JA, Fridel EE: Codebook for the Multiply-Imputed Supplementary Homicide Reports File, 1976–2016. Boston: Northeastern University, School of Criminology and Criminal Justice, 2018
26. Siegel M, Ross CS, King C: Examining the relationship between the prevalence of guns and homicide rates in the USA using a new and improved state-level gun ownership proxy. Inj Prev 20:424–26, 2014

27. Pinals DA, Appelbaum PS, Bonnie R, *et al*: American Psychiatric Association: position statement on firearm access, acts of violence and the relationship to mental illness and mental health services. Beh Sci & L 33:195–98, 2015
28. Liem M, Roberts DW: Intimate partner homicide by presence or absence of a self-destructive act. Hom Studies 13:339–54, 2009
29. Oram S, Flynn SM, Shaw J, *et al*: Mental illness and domestic homicide: a population-based descriptive study. Psychiatr Serv 64:1006–11, 2013
30. Consortium for Risk-Based Firearm Policy: Guns, Public Health and Mental Illness: An Evidence-Based Approach for Federal Policy. December 11, 2013. Available at: https://www.issuelab.org/resources/18225/18225.pdf. Accessed March 29, 2019
31. Zeoli AM, McCourt A, Buggs S, *et al*: Analysis of the strength of legal firearms restrictions for perpetrators of domestic violence and their associations with intimate partner homicide. Am J Epidemiol 187:1449–55, 2018
32. Kivisto AJ, Phalen PL: Effects of risk-based firearm seizure laws in Connecticut and Indiana on suicide rates, 1981–2015. Psychiatr Serv 69:855–62, 2018
33. Frizzell W, Chien J: Extreme risk protection orders to reduce firearm violence. Psychiatr Serv 70:75–77, 2019

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Original Articles

Gender Differences in Patterns and Trends in U.S. Homicide, 1976–2017

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Abstract

In the research literature on homicide, gender has typically received far less attention than other demographic characteristics, specifically the age and race of victims and offenders. To some extent this is understandable given that the overwhelming majority, almost three-quarters, of homicides in the United States involve a male killing another male. Therefore, the usual patterns of homicide mirror for the most part the patterns of male homicide. However, there are substantial differences in the trends and patterns of female offending and victimization that should not be obscured in the aggregate. In this article, we replicate previous work with updated data by using a national homicide database (the Federal Bureau of Investigation's Supplementary Homicide Reports) from 1976 through 2017, multiply imputed for missing data, to examine gender differences among victims and offenders in terms of characteristics such as age, race, weapon, circumstances, and victim–offender relationship.

Keywords: homicide, gender, intimate partner homicide

Introduction

AFTER DECLINING FOR more than two decades, the U.S. homicide rate increased by 11.4% in 2015 over 2014 and then by another 8.2% in 2016, before dropping back by a modest 1.4% in 2017. Some observers questioned the reliability of the reported spike in killings and the forces underlying it (e.g., Bialik 2015; Fox 2015). Whether the surge reflected a troubling turnabout in homicide trend or just a 2-year aberration remains to be seen. Still, the increase translated into thousands more Americans losing their lives to violence and became political fodder for Donald Trump's campaign for the presidency and subsequent calls for enhanced border security.

To make sense of shifts in the overall U.S. homicide rate, be they short term or long term, it is important to probe deeper and identify the components of such changes. In this article, we disaggregate homicide patterns and trends in both homicide victimization and offending with an eye toward the role of gender. Moreover, this article replicates and updates our earlier analysis (Fox and Fridel 2017) particularly focusing on more recent data.

Research on Homicide and Gender

Notwithstanding the usual preference for gender-neutral language, the Latin root of the word ''homicide'' is somewhat fitting as the study of murder is essentially the study of men who kill or who are killed. As Steffensmeier and Allan (1996, p. 459) note concerning the nearly universal gender gap, ''Women are always and everywhere less likely than men to commit criminal acts,'' a phenomenon most evident in the extreme case of murder. Although criminologists have not ignored women as offenders, female criminality has often been given secondary attention or considered to be of a special nature. Over a century ago, for example, Cesare Lombroso, widely regarded as the ''father of criminology,'' characterized the female offender as possessing a latent ''fund of immorality,'' reflected in such crimes as prostitution and lasciviousness (Lombroso and Ferrero 1898, p. 216).

Wolfgang (1958), in his classic study of homicide patterns in Philadelphia, emphasized the need to disaggregate homicide data by gender, demonstrating that women are involved as the perpetrator of victim-precipitated homicides twice as often as in other murderous situations. In addition, he reported that women and men were equally represented as offenders and victims in intimate partner homicides. With few exceptions, however, the majority of early homicide research failed to examine the role of gender, thus obscuring the differences in offending and victimization between men and women (Dobash and Dobash 2017).

A large body of criminological research has focused on the wide variety of situations, settings, and precipitants for

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offenders, overwhelmingly men, who commit murder, including sexual homicide, profit-motivated murder, and thrill killing. Recent work on female offending and victimization (so-called ''femicide'') has centered instead on intimate partner violence, infanticide, and sexual victimization (Seal 2010). In many of these cases, the female offender is viewed as less culpable, with her crimes often being blamed on the influence of a male accomplice, hormonal imbalances (such as premenstrual syndrome or postpartum depression), hysteria or other mental illnesses, or seen as a response to victimization (Fox et al. 2012; Pearson 1998). According to Steffensmeier and Allan (1996, p. 480), ''For women to kill, they generally must see their situation as life-threatening, as affecting the physical or emotional well-being of themselves or their children.'' Overall, it is often noted that men and women tend to see the utility of violence in radically different ways. Whereas men tend to use violence as an offensive move to establish superiority, women typically view violence as a defense of last resort.

Although violent women may benefit from the stereotype of mitigated responsibility, feminist criminologists suggest that women may actually be punished doubly for their offenses—once for breaking the law, and once for violating traditional gender roles (Nagel and Hagan 1983; Seal 2010). Much of the homicide literature focusing on women is, therefore, related to the social construction of gender and violence. A related line of inquiry is the impact of gender (in)equality on female homicide victimization, with some scholars claiming that increases in the social status of women have helped to lessen their vulnerability, particularly with regard to the risk of intimate partner homicide (Vieraitis et al. 2015), whereas others assert there to be no relationship between measures of (in)equality and female homicide victimization (Chon 2016). However, regardless of whether women are judged too leniently or too harshly or whether advances in gender equality differentially impact female homicide, there is agreement that their overall offending and victimization patterns substantially diverge from those of their male counterparts, warranting a close examination of gender differences.

In this article, we focus specifically on those differences—the trends and patterns of homicide offending and victimization for men and women separately by replicating our previous work with updated data (see Fox and Fridel 2017). A number of scholars have attempted to draw conclusions about gender differences in homicide based on relatively small samples (see, e.g., Jurik and Winn 1990) or datasets specific to a single jurisdiction (see, e.g., Block and Christakos 1995). However, we explore the role of gender along with other demographic and situational correlates of homicide using a large-scale database on victims and offenders that is national in scope and spans a fairly lengthy time frame.

Data and Methods

For the purpose of exploring gender differences in patterns and trends among homicide victims and offenders, we used a national database of murder and non-negligent manslaughter spanning the years 1976–2017, derived from the Supplementary Homicide Reports (SHR) of the Federal Bureau of Investigation (FBI). As part of its Uniform Crime Reporting Program, the FBI receives incident-based reports from state and local law enforcement agencies containing a range of information about each homicide and all victims and offenders involved. Specifically, the SHR includes details on the jurisdiction in which the incident occurred, victim and offender demographics, victim–offender relationship, the weapon used, and circumstances of the crime.

Although the SHR represents the best source of national data on victims and offenders, it is not without its limitations. By far the most problematic issue surrounds the substantial amount of missing data. Unit missingness occurs when agencies fail to report some or all their homicide incidents to the FBI. Item missingness, on the contrary, exists when data records for submitted cases are incomplete, lacking certain details on victim(s) or offender(s), most often resulting from the fact that the crime had not been solved.

Judging from estimates generated by the FBI, SHR records are unavailable for $\sim$7% of the nation's homicides (unit missingness). Moreover, for the existing SHR records, $\sim$2% are missing victim information, 35% are missing offender information, and $\sim$40% are missing the victim–offender relationship (item missingness). Without taking steps to overcome these gaps, attempts to analyze the data will not only undercount homicide prevalence, but likely reflect a nonrepresentative subset of the population. For example, studies of intimate partner homicide based only on cases identified as such understate the extent of the problem (e.g., Greenfeld et al. 1998), whereas studies that distribute unsolved cases to intimate partner homicide in proportion to solved cases overstate the prevalence of homicide involving intimate partners (e.g., Catalano et al. 2009). More generally, analyses of offender characteristics are similarly biased by uneven clearance rates based on victim age, sex, and race.

To overcome these obstacles, we used a two-stage approach for filling in the gaps. First, we imputed missing data found in incomplete records and, second, we adjusted existing records to account for the share of homicides for which no data exist. When information is missing about an offender's age, sex, race, and relationship to the victim, one can make reasonable estimates based on whatever is known about the victim and the location. For example, if a black male teenager is fatally shot in a large city by an unknown assailant, it is far more probable that the perpetrator was also a young black man rather than, say, an elderly white woman. Of course, one cannot know for sure that the perpetrator has those more likely attributes, and any attempt to replace missing data with estimates, no matter how reasonable, would improperly treat the replacement values as if they were real when the data were analyzed. Instead, we used multiple imputations to generate several estimates of missing values based on a stochastic (probabilistic) process and data elements that are known about the incident to ensure that a set of multiple replacements properly reflects the extent of uncertainty.

Next, we used a weighting procedure to have the available records serve as proxies for the missing reports. Specifically, we matched the age, sex, and race distribution of the victims within the SHR data with that found in the more complete mortality records of homicide victims from the National Center for Health Statistics (NCHS), and then

Table 1. Offender–Victim Combinations by Homicide Type, 2010–2017

	M kills M (%)	*M kills F (%)*	*F kills M (%)*	*F kills F (%)*
All homicides	72.4	18.8	6.8	2.0
Victim–offender relationship				
Intimate	1.9	77.9	19.7	0.5
Family	52.8	27.8	10.0	9.4
Friend/acquaintance	80.1	13.7	3.8	2.4
Stranger	86.3	10.6	2.1	1.0
Weapon				
Gun	79.4	14.5	5.3	0.8
Knife	60.5	24.9	11.5	3.1
Other	53.3	31.5	9.6	5.6
Circumstances				
Felony	78.8	14.9	5.0	1.2
Argument	68.0	22.3	7.9	1.8
Other	72.1	18.0	7.1	2.8

F, female; M. male.

weighted the SHR cases so that the total conformed to FBI's published estimates of the number of homicides in the United States and each state for any given year.

In the analyses of trends in homicide counts and rates to follow, we used the entire range of years for which the SHR is available in its current form, from 1976 to 2017. However, when examining patterns not conditioned by time trend, we used only cases that occurred since 2010 to give a relatively current perspective of the role of gender in homicide victimization and offending.

Results

Although the killing of women, or ''femicide'' as it is often called, tends to receive intense media coverage (Pritchard and Hughes 1997), men are far more likely to be both perpetrators and victims of homicide. Over the past four decades, nearly three-fourths of all homicides have exclusively involved men. About 90% of all perpetrators are men, and ~81% of their victims are men. Moreover, 78% of the victims of female offenders are also men. Stated in terms of rates per 100,000 population, men commit murder ~10 times as often as women, and are victims nearly 4 times as often. The gender combination seen in homicide overall varies considerably based on weapon, circumstances, and the relationship between victim and offender. As given in Table 1, the percentage of murders in which the offender and victim both are men increases from 72% overall to ~80% for gun homicides and for felony murders, and is nearly as high as 85% and 90% when the victim is an acquaintance or a stranger, respectively. In contrast, the gender ratio tends to even out somewhat for infanticides, intimate partner homicides (i.e., spouses, ex-spouses, and boyfriends/girlfriends), and family murders.

Consistent with the overall predominance of men on both sides of the murder equation, the patterns of male offending and victimization rates parallel overall homicide trends in the United States over the past 40 years (Fig. 1). In contrast, homicides involving women have been somewhat more stable over time, although also exhibiting a general decline since the late 1970s with relatively minor fluctuations (Fig. 2). In addition to differences in these trends, the relative likelihood of killing or being killed is reversed between the sexes, such that women have a higher rate of victimization than offending, whereas men have a higher rate of offending than victimization.

Notwithstanding the long-term decline in victimization and offending rates, the past several years have witnessed a reversal of trend, although short term, impacting both men and women. The 26% surge in the rate of female offending from 2010 to 2017 is particularly pronounced, and three times greater than that among men although smaller in absolute numbers.

Demographic differences

Not only are women underrepresented among both assailants and victims of homicide, there are some noteworthy gender differences in terms of age and race. Figure 3 provides the offender age distribution by sex for the years 2010–2017 combined, revealing a distinct early-20s peak for both men and women. However, the abundance of young adults among female killers is not as pronounced, with a greater percentage of women committing murder during middle age than men. Although nearly half of all male killers are younger than 25 years, only 35% of female murderers are in that same age category (Table 2).

FIG. 1. Offending and victimization rates for men, 1976–2017.

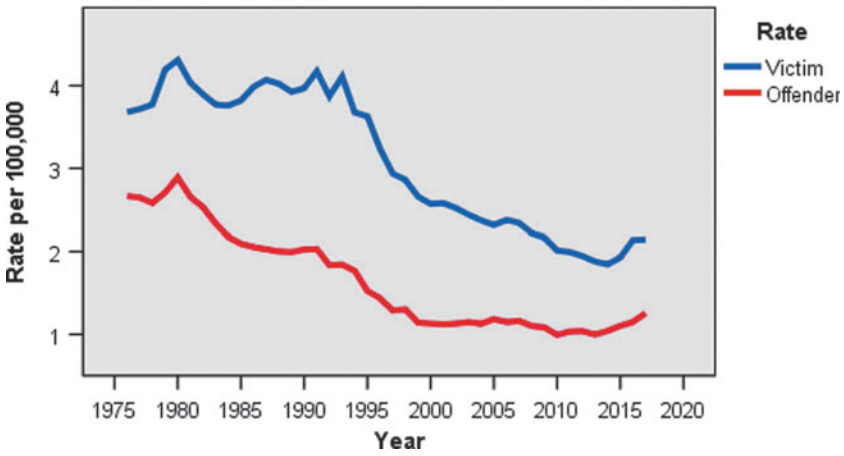

FIG. 2. Offending and victimization rates for women, 1976–2017.

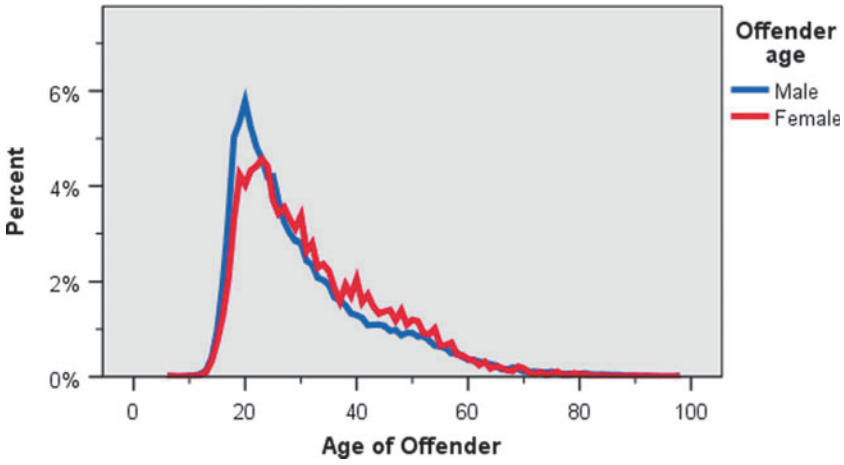

FIG. 3. Offender age distribution by sex, 2010–2017.

Besides differences in the age distributions among male and female offenders, there are sharp differences in trends since the mid-1970s in the rate of homicide by age group between the sexes. As given in Figure 4, murders committed by adolescent and young adult men peaked in the late 1980s and early 1990s, reflecting a surge in gang conflict and competition over drug markets (see Blumstein 1995). This spike in murder committed by young men prompted the controversial notion of the ''superpredator'' (see DiIulio 1995). However, as reflected in Figure 5, this was largely a single-sex phenomenon as there was only a modest rise in murders perpetrated by young women.

Regardless of gender, victim age tends to correspond closely to offender age. Female victims, however, are

Table 2. Percentage of Male/Female Victims, Offenders, and Population by Age and Race, 2010–2017

	Male			*Female*		
	Victims (%)	*Offenders (%)*	*Population (%)*	*Victims (%)*	*Offenders (%)*	*Population (%)*
Age, years						
<14	3.8		21.3	11.6		20.5
14–17	4.4	7.5	6.3	3.6	4.8	6.0
18–24	26.9	37.0	11.7	16.3	29.8	11.2
25–34	29.7	29.0	16.0	23.3	30.3	15.8
35–49	23.0	17.3	22.6	27.3	23.9	23.0
50+	12.2	9.1	22.0	17.9	11.2	23.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Race						
White	41.6	40.8	79.2	62.4	52.2	78.2
Black	55.3	56.5	13.5	32.9	43.9	14.2
Other	3.2	2.7	7.3	4.7	3.8	7.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

The percentage of offenders younger than 14 years is close to zero.

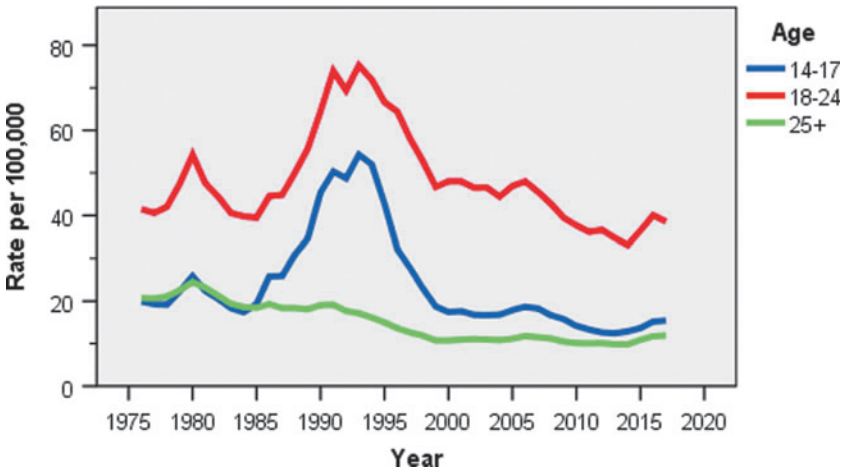

FIG. 4. Male homicide offending rate by age, 1976–2017.

disproportionately children, middle-aged, or older adults in comparison with men (Table 2). For example, ~12% of murdered women are younger than 14 years, with 69% older than of 25 years. Both the corresponding percentages are lower for male victims, however, because of the large share of 18- to 24-year-olds (27%) among male victims. Overall, the trends in offending and victimization relative to age among men and women are similar, yet the magnitude of these differences is quite dissimilar.

The role of race in terms of gender differences is even greater than that of age. Blacks are substantially overrepresented among homicide offenders and victims for both sexes, but to a far lesser extent among women (Table 2). Specifically, whereas blacks represent only 13% of the male population, they account for over half of all male murder victims and perpetrators. Although representing the same proportion of the female population, blacks account for one-third of murdered women and ~44% of female killers. Therefore, while blacks involved in homicide incidents vastly exceed their relative share of the population, the race differences in homicide are more pronounced among men than women.

Weapon and circumstances

Some of the largest gender differences are related to the weapon used to commit murder. Whereas both sexes use firearms most often because of their accuracy and lethality, men tend to rely on guns more so than women. As given in Table 3, nearly three-quarters of male offenders and nearly half of their female counterparts kill their victims with a firearm. Women often prefer more distant and cleaner means of committing murder. In fact, women are responsible for ~40% of homicides involving poison, drugs, drowning, and asphyxiation. Drownings and asphyxiations by women are especially prevalent in homicides of children.

Gun victimization varies by age for men and women alike (Fig. 6). The percentages of male and female victims who are shot to death increase sharply from childhood through late adolescence, peaking at ~90% for men and 70% for women, before gradually declining with increasing age.

In terms of the circumstances underlying the assault, men have a greater proportionate involvement in felony murder than do women. As given in Table 3, ~30% of male offenders and victims are involved in a felony-related incident compared with <25% for women. However, the share of felony-murder victimization tends to increase over life course for both men and women (Fig. 7). Older adults are especially vulnerable to assaults and robberies because their injuries are more likely to prove fatal than those of their younger counterparts (Fox and Levin 1991).

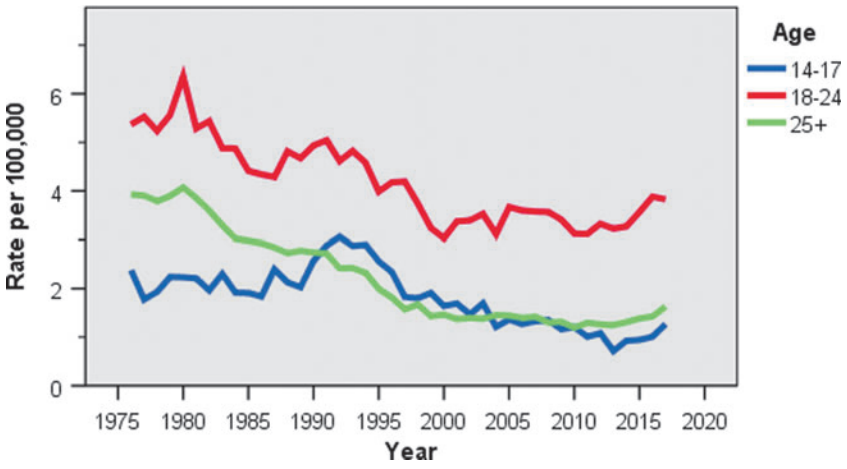

FIG. 5. Female homicide offending rate by age, 1976–2017.

Table 3. Incident Characteristics by Victim and Offender Sex, 2010–2017

	Victim sex		*Offender sex*	
	Male (%)	*Female (%)*	*Male (%)*	*Female (%)*
Victim–offender relationship				
Intimate family	5.0	44.3	9.9	26.9
Family	10.9	19.9	10.2	22.7
Acquaintance	54.9	26.2	51.4	37.2
Stranger	29.2	9.6	28.5	13.3
Total	100.0	100.0	100.0	100.0
Weapon				
Gun	74.8	51.5	72.4	50.7
Knife	10.8	16.0	10.7	17.9
Other	14.5	32.5	16.9	31.3
Circumstances				
Felony	29.8	21.9	30.4	24.2
Argument	37.8	45.7	37.9	41.1
Other	32.4	32.4	31.7	34.8
Total	100.0	100.0	100.0	100.0
Victim count				
Single	90.9	83.1	94.1	95.5
Multiple	9.1	16.9	5.9	4.5
Total	100.0	100.0	100.0	100.0
Offender count				
Single	84.5	91.7	72.4	62.9
Multiple	15.5	8.3	27.6	37.1
Total	100.0	100.0	100.0	100.0

In addition, as given in Table 3, there are some noteworthy gender differences in multiple-victim and multiple-offender homicides. Women as victims are nearly twice as likely to be murdered in a multiple-victim incident, many of which involve a domestic homicide of a woman and her children at the hands of a husband/father. The reverse is true for multiple-offender homicides, where men are nearly twice as likely to be killed in situations such as gang warfare and violence associated with drug trafficking. In terms of offending, there is only a marginal difference in the involvement of men and women in partner or team killings. Women often are implicated in killings as a subordinate accomplice of their husbands or boyfriends.

Victim–offender relationship

Despite the sizable overrepresentation of men among homicide victims and especially offenders, the gender gap narrows substantially when the perpetrator and victim share a close relationship. Although the vast majority (80%) of homicides committed by men involve an acquaintance or stranger as victim, more than half of female perpetrators kill intimate partners or family members (Table 3). In terms of victimization, 30% of men and only 10% of women are killed by a stranger. Victim age interacts with gender in the prevalence of murders committed by intimate partners or family members. For child victims, the percentage killed by a family member is 80% for boys and girls. The share of intimate and family homicides then declines during adolescence to ~30% for women and 10% for men. From that age forward, the percentage of murders committed by family members and especially intimate partners increase but with the proportion of women being killed by someone close to them greatly outnumbering that of men (Fig. 8).

When offender age is considered in conjunction with victim age, differences in victim–offender relationship by gender are even more pronounced. Figures 9 and 10 provide scatterplots of victim and offender age while controlling for victim–offender relationship among homicides committed by male and female offenders, respectively. For both sexes, intimate partner homicides (shown in blue) tend, as expected, to involve individuals of similar age. The similarity in victim and offender age generally holds for other types of murders committed by men, whereas there is greater age disparity in homicides perpetrated by women. Shown in red, women are often implicated in homicides of children, be it their own son or daughter or some other family relation.

Referencing the fact that female killers often target their husbands (or ex-husbands), some scholars have argued that the prevalence of homicide and nonlethal violence involving spouses is fairly equal across gender (Maxfield 1989; Steinmetz and Lucca 1988; Straus and Gelles 1986, 1990). The role of deadly weapons, especially firearms, has been cited as a possible explanation for this supposed phenomenon, as they reduce gender differences in physical strength (McNeely and Robinson-Simpson 1987; Steinmetz and Lucca 1988). However, these claims are not supported by recent data (see also Dobash et al. 1992). More than two-thirds of intimate partner homicides involve a male perpetrator and a female victim, in

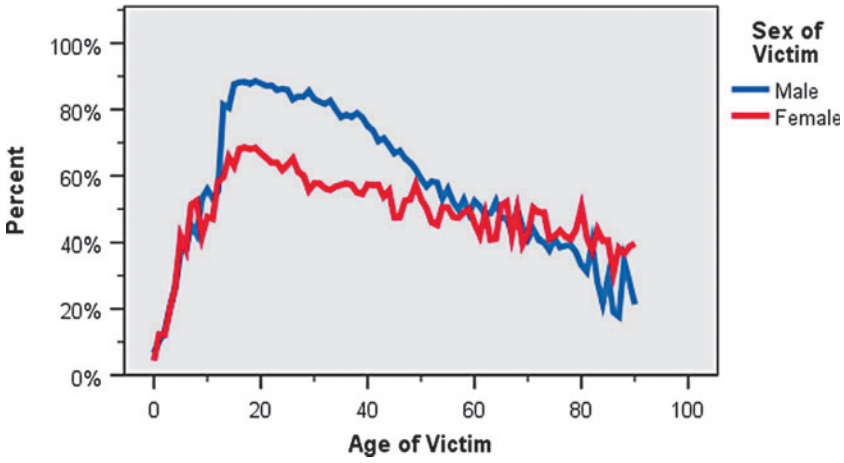

FIG. 6. Percent gun homicide by victim age, 2010–2017.

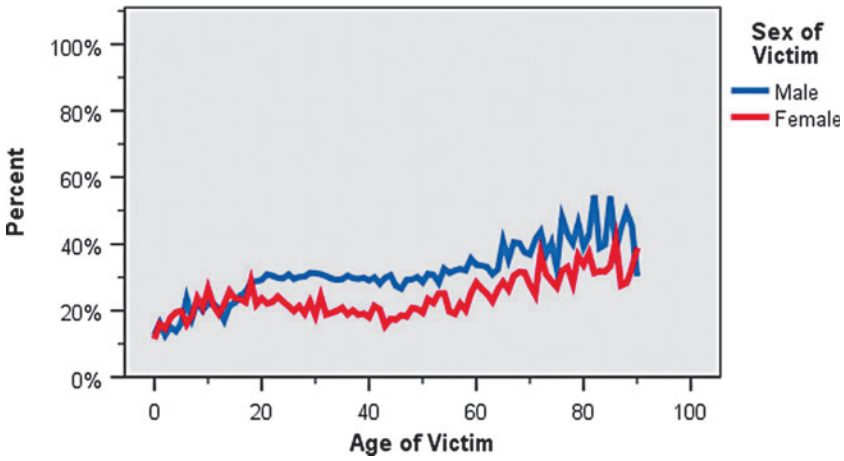

FIG. 7. Percent felony homicide by victim age, 2010–2017.

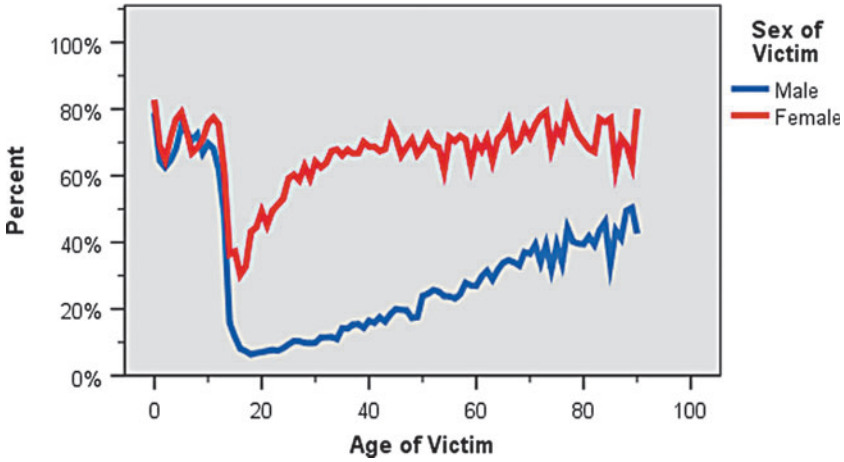

FIG. 8. Percent intimate/family homicide by victim age, 2010–2017.

comparison with the one-fifth of incidents in which the genders are reversed (Table 1). Moreover, nearly half of all female homicide victims are killed by an intimate partner, compared with only 5% of male homicide victims (Table 3).

It is likely that the conflicting results from earlier studies and more current research reflect substantial shifts in homicide patterns over time. Figure 11 gives intimate partner victimization trends by gender over the past 40+ years. Whereas the prevalence of intimate partner homicide in the late 1970s was similar for men and women, the number of male victims steadily declined until recently. In contrast, intimate partner homicides of women actually increased up until the early 1990s before experiencing a far modest decline.

There are some noteworthy differences in the long-term trends in intimate partner homicide depending on weapon

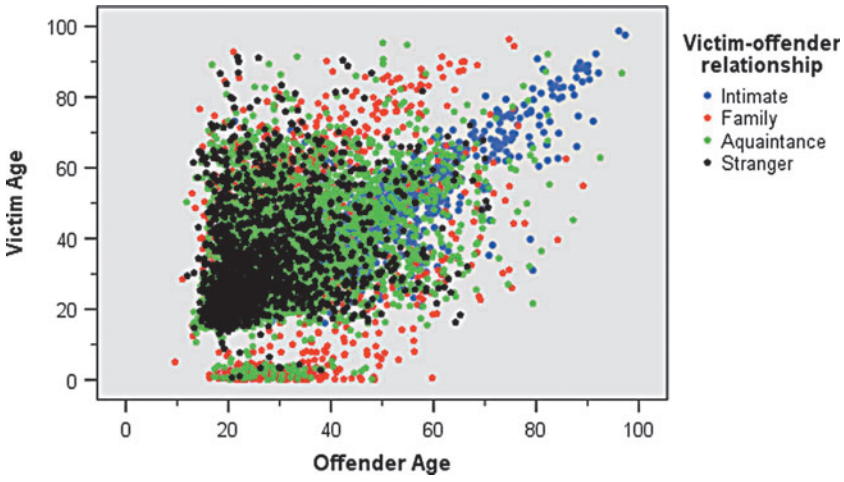

FIG. 9. Victim–offender age combination by relationship for male offenders, 2017.

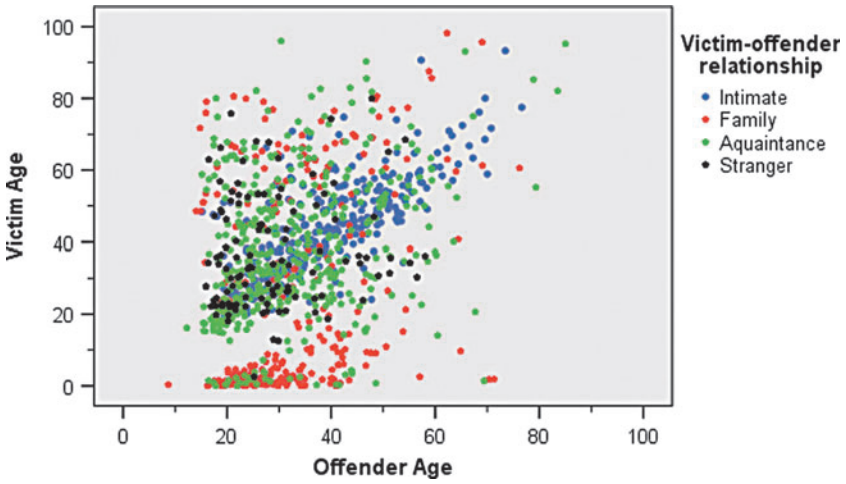

FIG. 10. Victim–offender age combination by relationship for female offenders, 2017.

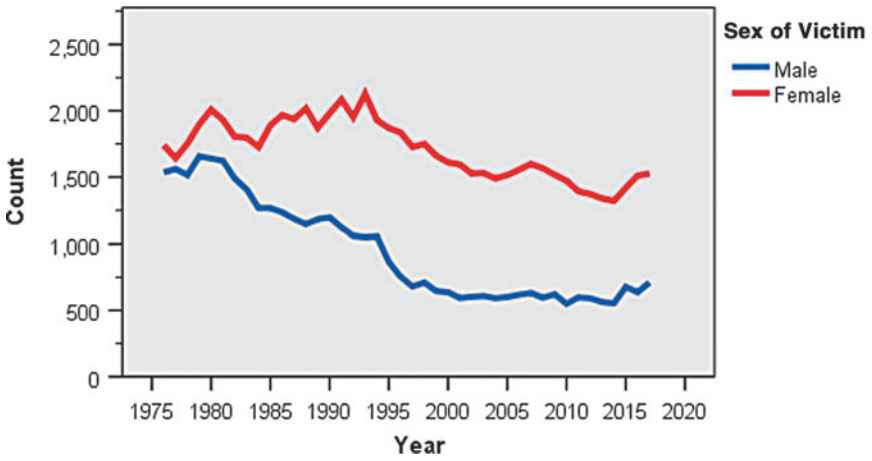

FIG. 11. Intimate partner homicide by victim sex, 1976–2017.

type. The drop in male victims was especially steep in gun-involved cases (Fig. 12). By contrast, the upward and then downward pattern in female victimization holds true regardless of weapon (Fig. 13).

Despite the welcome decline in intimate partner homicide especially during the 1990s, recent figures reveal a worrisome uptick, but only in cases involving guns. Since 2010, gun-related murders of intimate partners increased by 26%, whereas those involving all other weapons have continued to decline. In addition, most of the increase in intimate partner gun homicide has occurred very recently, since 2014, a pattern that cannot be explained by some popular, yet not necessarily valid explanations, such as the so-called ''Ferguson effect,'' the opioid crisis, or the actions of immigrant gangs. Indeed, even if purchased for the purpose of self-defense, all too often a gun in the home is used against a loved one, be it in the heat of an argument or a deliberate attempt to end a relationship in a way that is speedier and less expensive than divorce.

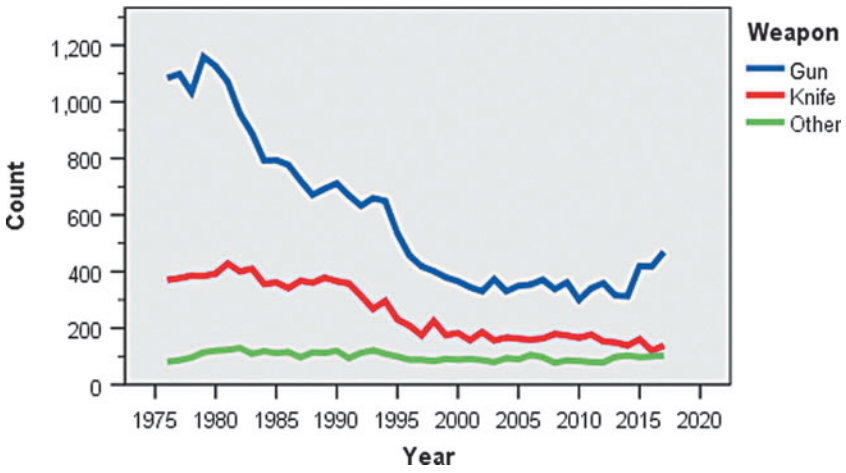

FIG. 12. Intimate partner homicide of men by weapon, 1976–2017.

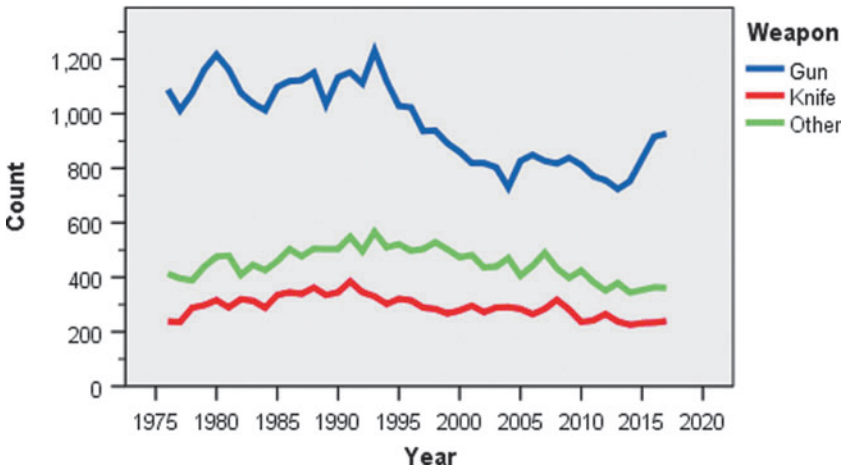

FIG. 13. Intimate partner homicide of women by weapon, 1976–2017.

Discussion and Conclusion

According to Dobash and Dobash (2017, p. 131), ''Unless the murders of women are examined separately from the murders of men, that is, disaggregated by gender, little can be known about this type of murder which is otherwise lost within the larger number of male-male homicides.'' The same holds true for women and men as perpetrators. Indeed, our analysis of national homicide data over a four decade time frame uncovered a number of significant gender differences in the prevalence and correlates of victimization and offending.

Among all the results reported here, perhaps the most striking surrounds the trends in intimate partner homicide, particularly in the context of ongoing efforts to curtail domestic violence. Some researchers argue that the reduction in male intimate partner victimization, a decline of $\sim$60% over the past four decades, is because of an increase in the availability of social and legal interventions, liberalized divorce laws, greater economic independence of women, and a reduction in the stigma of being the victim of domestic violence. Whereas at an earlier time, a woman may have felt compelled to kill her abusive spouse as her only defense, she now has more opportunities to escape the relationship through such means as protective orders and safe houses (Dugan et al. 1999; Fox et al. 2012). Access to domestic violence resources, however, had a differential effect on female homicide offending by race: although the white female offending rate decreased with enhanced domestic violence support, there is no evidence that it decreased violence perpetrated by black women (Parker and Hefner 2015).

As a tragic irony, the wider availability of support services for abused women did not seem to have quite the intended effect, at least through the 1980s, as only male victimization declined. However, the eventual passage of the Brady Handgun Prevention Act in 1993 (Pub.L. 103–159, 107 Stat. 1536) disqualified those who had had a conviction for misdemeanor domestic assault from purchasing a gun legally. Recent analyses of the National Violent Death Reporting System (NVDRS) data have found a significant relationship between intimate partner homicides of women and less restrictive gun control policies; the incidence of female intimate partner homicide is 56% lower in states with 40 or more legislative provisions in comparison with their laxer counterparts (Gollub and Gardner 2019; Sivaraman et al. 2019). These findings have been confirmed by work in Australia as well, with female—but not male—homicide victimization rates falling following the 1996 National Firearms Agreement (McPhedran 2018). Although it can only be speculated, the Brady Act, among other factors (e.g., mass incarceration of men), may indeed have helped to reduce the victimization of women by an intimate partner.

Despite the size of the database used here and the lengthy span of years covered, the range of variables available in the SHR is limited to demographic measures and a few incident characteristics. As databases such as the National Incident Based Reporting System (NIBRS) and NVDRS continue to expand, especially so as to include large urban areas where lethal violence is more prevalent, the study of national homicide patterns can be expanded to elements such as location, time of day, and day of week. That should advance our understanding of gender differences in homicide, potentially leading to improved prevention efforts.

Author Disclosure Statement

No competing financial interests exist.

References

Bialik C. (2015, September 11). Scare headlines exaggerated the U.S. crime wave. FiveThirtyEight. https://fivethirtyeight.com/features/scare-headlines-exaggerated-the-u-s-crime-wave/ (accessed January 10, 2019).

Block CR, Christakos A. (1995). Intimate partner homicide in Chicago over 29 years. Crime Delinq. 41, 496–526.

Blumstein A. (1995). Youth violence, guns, and the illicit drug industry. J Crim Law Criminol. 86, 10–36.

Catalano S, Smith E, Snyder H, Rand M. (2009). Female Victims of Violence. (US Department of Justice, Bureau of Justice Statistics, Washington, DC.)

Chon DS. (2016). A spurious relationship of gender equality with female homicide victimization: A cross-national analysis. Crime Delinq. 623, 397–419.

DiIulio JJ, Jr. (1995, November 27). The coming of the superpredators. Weekly Standard.

Dobash R, Dobash RE, Wilson M, Daly M. (1992). The myth of sexual symmetry in marital violence. Soc Probl 39, 71–91.

Dobash RE, Dobash RP. (2017). When women are murdered. In The Handbook of Homicide. F Brookman, ER Maguire, M Maguire, eds. (Wiley/Blackwell, Chichester, West Sussex, UK) pp. 131–148.

Dugan L, Nagin DS, Rosenfeld R. (1999). Explaining the decline in intimate partner homicide: The effects of changing domesticity, women's status, and domestic violence resources. Homicide Stud. 3, 187–214.

Fox JA. (2015, June 4). No, there's no new murder epidemic. USA Today.

Fox JA, Fridel EE. (2017). Gender differences in patterns and trends in U.S. homicide, 1976–2015. Violence Gend. 4, 37–43.

Fox JA, Levin J. (1991). Homicide against the elderly: A research note. Criminology. 28, 317–327.

Fox JA, Levin J, Quinet K. (2012). The Will to Kill: Making Sense of Senseless Murder. (Pearson, Boston, MA.)

Gollub EL, Gardner M. (2019). Firearm legislation and firearm use in female intimate partner homicide using National Violent Death Reporting System data. Prev Med. 118, 216–219.

Greenfeld LA, Rand MR, Craven D, et al. (1998). Violence by Intimates: Analysis of Data on Crimes by Current or Former Spouses, Boyfriends, and Girlfriends. (US Department of Justice, Bureau of Justice Statistics, Washington, DC.)

Jurik NC, Winn R. (1990). Gender and homicide: A comparison of men and women who kill. Violence Vict. 5, 227–242.

Lombroso C, Ferrero W. (1898). The Female Offender. (Philosophical Library, New York, NY.)

Maxfield MG. (1989). Circumstances in Supplementary Homicide Reports: Variety and validity. Criminology. 27, 671–695.

McNeely RL, Robinson-Simpson G. (1987). The truth about domestic violence: A falsely framed issue. Soc Work. 32, 485–490.

McPhedran S. (2018). An evaluation of the impacts of changing firearm legislation on Australian female firearm homicide victimization rates. Violence Against Women. 24, 798–815.

Nagel I, Hagan J. (1983). Gender and crime: Offense patterns and criminal court sanctions. In Crime and Justice: An Annual Review of Research, Vol. 4. M Tonry, N Morris, eds. (University of Chicago Press, Chicago, IL) pp. 91–144.

Parker KF, Hefner MK. (2015). Intersections of race, gender, disadvantage, and violence: Applying intersectionality to the macro-level study of female homicide. Justice Q. 32, 223–254.

Pearson P. (1998). When She Was Bad. (Penguin Books, New York, NY.)

Pritchard D, Hughes KD. (1997). Patterns of deviance in crime news. J Commun. 47, 49–67.

Seal L. (2010). Women, Murder, and Femininity: Gender Representations of Women Who Kill. (Palgrave Macmillan, New York, NY.)

Sivaraman JJ, Ranapurwala SI, Moracco KE, Marshall SW. (2019). Association of state firearm legislation with female intimate partner homicide. Am J Prev Med. 56, 125–133.

Steffensmeier D, Allan E. (1996). Gender and crime: Toward a gendered theory of female offending. Annu Rev Sociol. 22, 459–487.

Steinmetz SK, Lucca JS. (1988). Husband battering. In Handbook of Family Violence. VB Van Hasselt, RL Morrison, AS Bellack, M Hersen, eds. (Plenum Press, New York, NY) pp. 233–246.

Straus MA, Gelles RJ. (1986). Societal change and change in family violence from 1975 to 1985 as revealed by two national surveys. J Marriage Fam. 48, 465–480.

Straus MA, Gelles RJ, eds. (1990). Physical Violence in American Families. (Transaction Press, New Brunswick, NJ.)

Vieraitis LM, Britto S, Morris RG. (2015). Assessing the impact of changes in gender equality on female homicide victimization: 1980–2000. Crime Delinq. 61, 428–453.

Wolfgang ME. (1958). Patterns in Criminal Homicide. (University of Pennsylvania Press, Philadelphia, PA.)

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Injury Epidemiology

ORIGINAL CONTRIBUTION Open Access

The role of domestic violence in fatal mass shootings in the United States, 2014–2019

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Abstract

Background: Fatal mass shootings, defined as four or more people killed by gunfire, excluding the perpetrator, account for a small percentage of firearm homicide fatalities. Research has not extensively focused on the role of domestic violence (DV) in mass shootings in the United States. This study explores the role of DV in mass shootings in the United States.

Methods: Using 2014–2019 mass shooting data from the Gun Violence Archive, we indexed our data by year and mass shooting and collected the number of deaths and injuries. We reviewed news articles for each mass shooting to determine if it was 1) DV-related (i.e., at least one victim of a mass shooting was a dating partner or family member of the perpetrator); 2) history of DV (i.e., the perpetrator had a history of DV but the mass shooting was not directed toward partners or family members); or 3) non-DV-related (i.e., the victims were not partners or family members, nor was there mention of the perpetrator having a history of DV). We conducted descriptive analyses to summarize the percent of mass shootings that were DV-related, history of DV, or non-DV-related, and analyzed how many perpetrators died during the incidents. We conducted one-way ANOVA to examine whether there were differences in the average number of injuries or fatalities or the case fatality rates (CFR) between the three categories. One outlier and 17 cases with unknown perpetrators were excluded from our main analysis.

Results: We found that 59.1% of mass shootings between 2014 and 2019 were DV-related and in 68.2% of mass shootings, the perpetrator either killed at least one partner or family member or had a history of DV. We found significant differences in the average number of injuries and fatalities between DV and history of DV shootings and a higher average case fatality rate associated with DV-related mass shootings (83.7%) than non-DV-related (63.1%) or history of DV mass shootings (53.8%). Fifty-five perpetrators died during the shootings; 39 (70.9%) died by firearm suicide, 15 (27.3%) were killed by police, and 1 (1.8%) died from an intentional overdose.

Conclusions: Most mass shootings are related to DV. DV-related shootings had higher CFR than those unrelated to DV. Given these findings, restricting access to guns by perpetrators of DV may affect the occurrence of mass shootings and associated casualties.

Keywords: Domestic violence, Firearms, Mass shootings, Intimate partner violence

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Background

Mass shooting fatalities account for a small percentage (1%) of firearm homicide fatalities in the United States, but they receive a substantial amount of media attention and may drive political discourse on gun violence (Gun Violence Archive n.d.-a; Centers for Disease Control and Prevention, National Center for Health Statistics n.d.). In the wake of a mass shooting, people seek to understand why the incident occurred and how similar incidents could be prevented in the future. Risk factors for various forms of gun violence — including community gun violence and suicide — are well-known but, given the rarity of mass shootings, less information is known about why people carry out mass acts of violence. Recent research points to domestic violence (DV) as a precipitating factor for many mass shootings (Zeoli and Paruk 2019; Webster et al. 2020). According to the Centers for Disease Control and Prevention (CDC), an intimate partner is anyone with whom a person has a close, personal relationship. Specifically, this could include "current or former spouses, boyfriends or girlfriends, dating partners, or sexual partners," and can occur "between heterosexual or same-sex couples and does not require sexual intimacy" (Centers for Disease Control and Prevention 2018). The definition of DV, however, goes further, including not just intimate partners but also a person with whom the victim cohabitates or shares a child or family members (United States Department of Justice n.d.). For the purposes of this study, a fatal mass shooting was defined as four or more people killed by gunfire, not including the perpetrator.

Federal law prohibits purchase and possession of firearms for those who have been convicted of a misdemeanor crime of DV (Gun Control Act of 1968, 18 U.S.C. § 922(g)(9) 1968), yet misdemeanor crimes vary by state and some states do very little to prevent DV perpetrators from purchasing firearms nor do they take steps to remove guns from perpetrators who become prohibited. The relationship between DV and firearm violence is well established. Over half of all intimate partner homicides (IPH) are by firearm (Fox and Fridel 2017; Zeoli 2018). While firearms are used in intimate relationships to kill, they are also used to threaten and intimidate. Around 4.5 million women in the U.S. have been threatened with a firearm, and nearly 1 million women have been shot or shot at by an intimate partner (Sorenson and Schut 2018). When an abuser has access to firearms, the risk the female partner will be killed increases by 400% (Campbell et al. 2003). Risk for homicide is also elevated when a woman attempts to, or successfully does, leave her abusive partner (Campbell et al. 2003).

There is limited research on the role of DV in mass shootings and multiple victim homicides. Zeoli and Paruk (2019) analyzed mass shooters from 2014 to 2017 to assess 1) whether offenders had known histories of perpetrating DV or were suspected to have committed DV before the mass shooting, 2) were legal firearm purchasers, or 3) had been previously engaged in the criminal justice system in a way that would have resulted in a restriction on firearm purchase/possession. They found that 31.5% of mass shooters in their study had histories of perpetrating DV. Further, the authors found that mass shootings could be prevented if DV cases are known in the criminal justice system or offenders are prohibited from having guns under a domestic violence protective order (DVPO) and the law is effectively enforced. Zeoli and Paruk (2019) found that there were, on average, more fatal victims in cases where there was a mention of DV (average of 7.1 individuals killed) compared to where there was no mention of DV (average of 6.2 individuals killed). Their paper highlights the myriad of gaps in the system and potential for would-be mass shooters with a history of DV to fall through the cracks when laws are poorly implemented, leaving them capable of purchasing and possessing firearms.

Kivisto and Porter (2020) found that the use of a firearm in a domestic homicide (where the victims are either intimate partners or family members) increases the risk that there will be multiple fatalities, which was not the case when a firearm was used in a nondomestic homicide. When a male used a firearm in a domestic homicide, he was almost twice as likely to kill at least one other person compared to a male who did not use a firearm (Kivisto and Porter 2020). Furthermore, 4.6% of the domestic homicides in Kivisto and Porter's (2020) study had more than one victim, compared to 3.3% of non-domestic homicides, meaning that there was an increased incidence of multiple victims in domestic homicides compared to nondomestic homicides.

It is not uncommon for IPH events to result in multiple victims, including perpetrator suicide and the death of family, friends, new dating partners of the victim, coworkers, children of the victim or perpetrator, strangers, or police officers (Zeoli 2018). Research shows that around 40% of male-perpetrated IPHs result in multiple fatalities, either with the perpetrator dying by suicide or additional homicides (Kivisto 2015). A study of IPH events in 16 states from 2003 to 2009 found that nearly 30% of IPV-related incidents resulted in multiple deaths, with a median of 2 deaths per incident and a range of 2 to 7 deaths (Smith et al. 2014). Nearly 50% of the additional deaths were children or other family of the abused intimate partner, 27% of the additional deaths were new intimate partners of the targeted partner, 20% were

friends and acquaintances of the intimate partner, 3% were strangers, and 1% were law enforcement officers who were summoned to the scene (Smith et al. 2014).

Using the FBI's Supplementary Homicide Report (SHR) from 1999 to 2014 and a definition of four or more shot and killed, Reeping et al. (2019) classified mass shooting data by whether shootings were DV-related or not. They found that, during their study period, 23.5% of the mass shootings were related to DV. It's important to note that Florida data were excluded from their study because of nonparticipation in the FBI's reporting system. In addition, a main limitation of the FBI's definition of DV-related shootings is that it is driven by the relationship between the offender and the first victim, which could result in misclassification of a mass shooting if the intimate or domestic partner was not the first victim killed (Reeping et al. 2019).

There has been limited research focused on the role of DV in mass shootings or on the differences in case fatality rates (CFR) between mass shootings that are DV-related, history of DV, or non-DV related. In this study, we explored whether there was a correlation between DV and mass shootings and whether there were differences in the average number of injuries and fatalities for mass shootings that were DV, history of DV, or non-DV-related using data from the Gun Violence Archive (GVA).

Methods

Definition

As there is no legal definition of a "mass shooting" in the United States, disagreements exist over how best to operationalize the concept. However, the scholarly literature commonly defines mass shootings as shootings that result in four or more deaths by gunfire, excluding the perpetrator (Booty et al. 2019; Zeoli and Paruk 2019). For the purposes of this study, this is the definition of a fatal mass shooting that is used. The use of varying definitions results in different numbers of mass shootings being captured by different databases and may have affected the results of this study. For example, a 2019 analysis of five mass shooting databases found that there was little overlap in the number of shootings found across the five sources due to differences in definitions (Booty et al. 2019). While recent work has called for an expanded definition of mass shooting to include both fatal and non-fatal injuries, this work provides important information about the relationship between DV and mass shootings with four or more fatalities by gunfire, excluding the perpetrator (Booty et al. 2019).

Data and measures

For this analysis, we reviewed GVA data on mass shootings from 2014 to 2019. The GVA began collecting information about shootings in the United States in 2014, and the database tracks the date of the incident, city, state, and address of the incident, number killed, and number injured. The GVA defines a mass shooting as, "[Four] or more shot and/or killed in a single event [incident], at the same general time and location not including the shooter" (Gun Violence Archive n.d.-a, n.d.-b). However, as our focus was on mass shootings with four or more fatalities by gunfire, not including the perpetrator, we applied our definition to the GVA data. This resulted in a sample size of 128 mass shootings across the study period, with an average of 21.5 mass shootings per year (Gun Violence Archive n.d.-a).

We indexed our data by year and mass shooting and collected the number of deaths and injuries. Two authors independently reviewed news articles on each mass shooting and categorized whether it was DV-related (i.e., at least one victim of a mass shooting was a dating partner or family member of the perpetrator); 2) history of DV (i.e., the perpetrator had a history of DV but the mass shooting was not directed toward partners or family members); or 3) non-DV-related (i.e., the victims were not partners or family members, nor was there mention of the perpetrator having a history of DV). If there was discrepancy between the two authors in how an incident was coded, the case was discussed with the PI and the researchers came to a consensus. Of the 128 mass shootings, 120 incidents (94.0%) were coded exactly the same way by both coders. In the eight remaining mass shootings (6.0%), both coders met with the PI and a consensus was easily reached in all eight cases. While the 3/22/2017 shooting could have been coded as a history of DV mass shooting because the victims of the shooting did not include family or partners of the shooter, we have chosen to code it as a DV-related mass shooting because the perpetrator specifically targeted and intended to kill his wife.

Using a similar methodology outlined in Zeoli and Paruk's (2019) paper, we applied our definition of a mass shooting to the data in GVA and reviewed each shooting entry and the articles listed on GVA. In addition to providing articles, GVA codes shootings based on several characteristics, one of them being domestic violence. However, understanding that GVA may omit articles, or information regarding a given shooting may change as stories develop, we did a comprehensive Google search of articles relating to each shooting. Search terms used included the offender's name, the date of the shooting, the location of the shooting, as well as the words "domestic violence" to identify any mentions of domestic violence. For the higher-profile mass shootings, there were often dozens of news articles, including many articles in national news outlets that tended to have

thorough information about the offender and the victims of the mass shooting. For lower-profile shootings, we reviewed the top 5–10 news stories, which often came from local news sources, to identify if there were media mentions of either a history of DV or if the victims of the shooting were family or intimate partners of the offender.

If the news articles mentioned that the victims were current or former intimate partners or other family members, we coded that shooting as "DV-related." An "intimate partner" is a current or former spouse, dating partner, someone whom the offender had a child in common or lived with. A "family member" is someone related to the offender (either by blood, like a sister, brother, or cousin, or through the intimate partner, such as a mother-in-law) but who does not fall under the "intimate partner" category. If at least one news article mentioned that the offender had a known history of domestic violence (which could include a current or former partner mentioning that he or she was abusive), but the victims of the mass shooting were not intimate partners or family members, those cases were coded as a "history of DV" shooting. Actions falling under the "history of DV" category include violence (physical or otherwise) or threats of violence against a current or former intimate partner or family member (as defined above). When neither DV nor a history of DV was mentioned in any news stories, we classified the shooting as "non-DV related."

Following the methodology used in Zeoli and Paruk (2019), if any victims of shootings with multiple perpetrators were family and/or intimate partners of the perpetrator, the mass shooting was classified as DV-related. If at least one of the perpetrators for shootings with multiple perpetrators had a history of DV, it was classified as a history of DV shooting. All other shootings were classified as non-DV related. There were 17 cases where the perpetrator was unknown, and these cases were removed from our main analysis. It is possible that there was a bias in our results based on how these unknown cases were classified.

During our preliminary analysis, we assessed the data for potential outliers in the total victim, victim death, and victim non-fatal injury counts; the Pulse Nightclub shooting in 2016 and the Las Vegas shooting in 2017 were of particular concern. We identified the Las Vegas shooting as an outlier as there were 471 total victims which was greater than three standard deviations from the mean (139 total victims). However, Pulse only exceeded three standard deviations from the mean for victim deaths, so it remained in the main analysis. A secondary analysis including the Las Vegas shooting in the analysis is available as Supplemental Materials (see Supplemental Tables 1–4).

Analytic methods

We conducted descriptive analyses to summarize the percent of mass shootings that were DV-related, history of DV, or non-DV-related. We conducted one-way ANOVA to examine whether there were differences in the average number of injuries or fatalities or the CFR between DV, history of DV, and non-DV-related mass shootings. We calculated the CFRs by category to reflect the total number killed over the total number injured and killed. We then calculated 95% confidence intervals for each CFR; category CFRs were determined to be significantly different at the $p = 0.05$ level if the 95% confidence intervals did not overlap. We analyzed how many perpetrators died during the mass shootings and noted whether they died by suicide or were killed by police. Finally, we created a "hybrid" category that combined DV-related shootings with history of DV shootings. A two-sample t-test was then conducted to determine whether this new hybrid DV-category had significantly different average victim fatalities and injuries from the non-DV-related shootings.

Analyses were conducted using Stata version 16.1 (StataCorp 2019). Institutional Review Board approval was not required for this non-human subjects review of publicly available data.

Results

There were 128 mass shootings between January 1, 2014 and December 31, 2019. However, after removing the shootings where the perpetrator was unknown and after excluding the Las Vegas shooting as an outlier, we were left with 110 mass shootings in our study. These shootings resulted in 651 deaths, not including the perpetrators, and 283 non-fatal injuries. In 65 of the 110 shootings (59.1%) analyzed, at least one fatal or non-fatal victim was a partner or family member (Table 1). In 10 of the 110 shootings (9.1%), the perpetrator had a history

Table 1 Number of Mass Shootings by Year and by DV Category

	2014	2015	2016	2017	2018	2019	Total
Number of mass shootings	11	19	20	15	18	27	110
Number of DV-related mass shootings	9	11	10	11	10	14	65
Number of history of DV mass shootings	0	1	3	1	1	4	10
Number of non-DV-related mass shootings	2	7	7	3	7	9	35

of DV, but none of the victims of the 10 mass shootings were partners or family members. The remaining 35 mass shootings (31.8%) were non-DV-related (Table 1). Twelve of the mass shootings had multiple perpetrators. Of those 12 incidents, seven were non-DV-related, three were history of DV mass shootings, and two were DV-related mass shootings (results not shown). Eight of the mass shootings involved female perpetrators, with one of the eight shootings having two female perpetrators. Of those eight incidents, five were DV-related mass shootings, two were non-DV-related, and one was a history of DV mass shooting (although it involved two shooters and it was the male counterpart who had the history of DV, with the female having no known history of DV herself).

Fifty-five perpetrators of 53 mass shootings died during the incident; 39 (70.9%) died by firearm suicide, 15 (27.3%) were killed by police, and one (1.8%) died from an intentional overdose. Of the 39 mass shooting perpetrators who died by firearm suicide, 36 (92.3%) were perpetrators of DV-related mass shootings and three (7.7%) were perpetrators of non-DV mass shootings. Forty-two of the 65 perpetrators of DV-related mass shootings (64.6%) died during the incident, with 36 of the 42 perpetrators (85.7%) dying by firearm suicide. Of the 15 perpetrators who were killed by police, five (33.3%) were perpetrators of DV-related mass shootings, four (26.7%) were mass shooting perpetrators with histories of DV, and six (40.0%) were perpetrators of non-DV mass shootings. The remaining perpetrator who intentionally overdosed in the aftermath of the mass shooting was a perpetrator of a DV-related mass shooting (results not shown).

On average, there were 5.0 fatal injuries and 1.0 non-fatal injury for DV-related shootings. Perpetrators with a history of DV killed an average of 10.5 individuals and non-fatally injured 9.0 people. For non-DV-related mass shootings, there were an average of 6.3 fatalities and 3.7 non-fatal injuries (Table 2). There were statistically significant differences between the average number of fatalities, non-fatal firearm injuries, and total (fatal and non-fatal) injuries for DV-related and history of DV mass shootings. The difference between the average number of fatalities, non-fatal firearm injuries, and total injuries for history and non-DV related mass shootings approached significance. The CFR for DV mass shootings was 83.7%, compared to 53.8% for history of DV and 63.1% for non-DV-related mass shootings (Table 2). The CFR for the DV-related mass shootings were significantly different from both the history of DV and non-DV-related mass shootings.

In 75 of the 110 (68.2%) shootings analyzed, at least one fatal or non-fatal victim was a partner or family member of the perpetrator or the perpetrator had a history of DV (Table 3). Perpetrators of either DV or history of DV mass shootings killed an average of 5.7 people and non-fatally injured an average of 2.0 individuals. The CFR for this hybrid DV category was 73.7% compared to 63.1% for non-DV-related mass shootings (Table 4).

Discussion

This study provides insight into the role of DV in mass shootings in the U.S. and the lethality of such events. Between 2014 and 2019, in 68.2% of mass shootings, the perpetrator either shot or killed at least one partner or family member or had a history of DV. The CFR for DV-related mass shootings was 83.7%; put another way, only 16.3% of victims in DV-related mass shootings survived the incident compared to 46.2% of victims where the offender had a history of DV and 36.9% of victims in non-DV-related mass shootings. The CFR for the hybrid DV category was 73.7%. We found that DV-related mass shootings resulted in a 32.6% increase in the CFR when compared to non-DV related mass shootings. Using a hybrid CFR, we found that the hybrid DV-related and history of DV mass shootings resulted in a 16.8% increase in the CFR compared to non-DV related mass shootings. To our knowledge, this is the first paper to assess whether there are differences in CFR for mass shootings based on whether there was a connection to DV.

There are several potential explanations for why DV-related mass shootings have a higher CFR than incidents where the victims were not partners or family members.

Table 2 Average Mass Shooting Victims by DV Category

	DV-related	History of DV	Non-DV-related
Average fatalities per shooting (SD)*	5.0 (2.9)	10.5 (14.1)	6.3 (4.0)
Average non-fatal injuries per shooting (SD)*	1.0 (3.5)	9.0 (16.3)	3.7 (6.9)
Average total (fatal and non-fatal) victims (SD)*	6.0 (6.0)	19.5 (30.3)	10.1 (10.1)
Case Fatality Rate [95% CI]	83.7% [74.9, 93.4]	53.8% [44.0, 65.2]	63.1% [55.0, 71.9]
Total (fatal and non-fatal) victims	387	195	352

Non-DV related is the reference group for significance
* denotes significance at $p < 0.05$

Table 3 Number of Mass Shootings by Year (Hybrid DV and Non-DV categories)

	2014	2015	2016	2017	2018	2019	Total
Number of mass shootings	11	19	20	15	18	27	110
Number of DV and history of DV mass shootings	9	12	13	12	11	18	75
Number of non-DV-related mass shootings	2	7	7	3	7	9	35

The intent behind a perpetrator who kills a partner or a member of his or her family may differ from someone who kills people seemingly indiscriminately. This may result in a greater intent to make sure all victims in a DV-related mass shooting are killed (Zeoli 2018). The motive behind a DV-related mass shooting may be revenge, jealousy, a desire to assert power and control, divorce, financial problems, or even suicidality (Auchter 2010; Kelley 2009; Zeoli 2018). Given the intent of the perpetrator, DV-related mass shootings may be more targeted than non-DV-related mass shootings, which could increase likelihood that the victims involved would be killed.

For non-DV-related mass shootings, the intent may be less clear. An article in the *National Institute of Justice Journal* explains that, for mass shootings, the "underlying motive sometimes appears to be unknown. Typically, mass shootings occur in a public place, with a single shooter, and most victims are killed or wounded indiscriminately" (Lopez et al. 2020). For some of the deadliest mass shootings in recent history, like the Tree of Life Synagogue shooting (2018) and the El Paso Walmart shooting (2019), the motive driving these shootings was likely related to religion or race/ethnicity. These shootings did not target a specific person, as in a DV-related mass shooting, but rather targeted a specific group of people. The potentially unclear motive and/or indiscriminate shooting may be one explanation for why, on average, fewer victims of non-DV-related mass shootings died from their wounds. Indeed, there are likely a number of factors that could explain this that were not controlled for in the current study, including type of firearm used, location and density of the mass shooting venue, location of wounds, and emergency services and law enforcement response time. Future research should seek to further understand why DV-related mass shootings appear to have a higher CFR than other mass shootings.

This paper highlights the importance of including both "public" and "private" mass shootings in discussions around preventing these incidents. By only focusing on "public" mass shootings, many DV-related mass shootings may be left out of the discussion. This oversight may lead to an assumption that most mass shootings occur at random, leading to missed opportunities for intervention, either through policies or programs, that could help reduce the burden of mass shootings. The results of this paper, that most mass shootings are related to domestic violence, highlights the need to focus on mass shootings more broadly.

Prior research has found that restricting access to guns by perpetrators of DV reduces IPH. Civil domestic violence protective orders (DVPOs) that cover dating partners (13%), prohibit firearm possession for temporary orders (13%), or require firearm relinquishment (12%) are all associated with reductions in IPH (Zeoli et al. 2018). However, effective enforcement of these laws is key to ensure that those prohibited because of a DVPO cannot obtain guns. Additionally, some individuals at risk for interpersonal violence (including mass shootings) or self-harm may not be prohibited from purchasing or possessing firearms. To address elevated risk among individuals, 19 states and DC have passed extreme risk protection orders (ERPOs), an evidence-based mechanism to temporarily remove firearms from individuals who are a threat to themselves or others (Bloomberg American Health Initiative n.d.). This study shows that most perpetrators of DV-related mass shootings died by suicide, highlighting that DV-related mass shooting perpetrators may be at an elevated risk for suicide. ERPOs are a promising tool that could be used to

Table 4 Average Mass Shooting Victims: Hybrid DV and Non-DV Related

	Hybrid DV-related	Non-DV-related
Average fatalities per shooting (SD)	5.7 (5.9)	6.3 (4.0)
Average non-fatal injuries per shooting (SD)	2.0 (7.1)	3.7 (6.9)
Average total (fatal and non-fatal) victims (SD)*	7.8 (12.8)	10.1 (10.1)
Case Fatality Rate [95% CI]	73.7% [66.9, 81.0]	63.1% [55.0, 71.9]
Total (fatal and non-fatal) victims	582	352

Non-DV related is the reference group for significance
* denotes significance at $p < 0.05$

prevent suicides, and recent data shows that these laws have also been used in efforts to prevent mass shootings in California (Bloomberg American Health Initiative n.d.; Wintemute et al. 2019). However, ERPOs are a relatively new policy; future research should further explore the association between ERPOs and mass shootings and their potential impact on DV-related mass shootings in particular.

There are two main distinctions between this paper and Zeoli and Paruk's paper. First, as noted above, Zeoli and Paruk (2019) found that the average number of fatal victims was higher for cases where there was a mention of DV. We found the opposite. While the case fatality rate in our paper was higher for DV mass shootings, there were more fatal victims, on average, for non-DV mass shootings. Second, Zeoli and Paruk (2019) found that 31.5% of the shooters in their study had histories of domestic violence. By creating a hybrid category that included both DV-related and history of DV cases, we found that in 68.2% of mass shootings between 2014 and 2019, the perpetrator either killed a family member or intimate partner in the mass shooting incident or had a history of DV. The current paper's findings show that the vast majority of mass shootings in the United States are related to domestic violence and while, on average, DV-related mass shootings result in fewer fatalities, fewer victims of DV-related mass shootings survive compared to victims of non-DV related mass shootings.

This study has several limitations. This is a cross-sectional study that examines associations and cannot be used to assess causality. The GVA relies primarily on news reports to build its database. As a result, cases that do not receive media coverage, or do not show up in the other sources they pull from (e.g., local and state police reports), are unlikely to be captured by this database. This is likely to result in an undercounting of the true incidence of mass shootings in the U.S. However, GVA links to detailed information that may not be available in other datasets which allows for a richer analysis of the data. The relationship between the perpetrator of a mass shooting and the victims was not always known which could have introduced misclassification into our data. Further, we were unable to analyze cases where the perpetrator was unknown. Because of this limitation in the data, there is potential for measurement error that could have biased our findings. In addition, GVA updates data in real time and, as a result, there may be victims of mass shootings who did not die immediately and therefore were not recorded in the original death count of the shooting. Changes in the number of mass shooting deaths could affect how a mass shooting was classified for the purposes of this study. This paper did not explore whether the location of a mass shooting differed for DV compared to non-DV shootings. Future work should focus on differences in the location of shootings that are DV-related versus those that are not DV-related. The CFRs should be interpreted with caution because the definition of a mass shooting was restricted toward those where four or more people were killed, potentially inflating the CFRs. Future research should explore differences in CFRs across categories using an expanded definition of mass shootings. We did not assess how state firearm policies may affect the number of mass shootings or the likelihood that a mass shooting was DV-related in a state. Future research should continue to examine the role that policies that disarm or otherwise restrict access to guns by perpetrators of intimate partner violence (IPV) or DV have in reducing or preventing mass shootings. Future research should explore the role of DV in more broadly defined mass shootings (i.e., with multiple casualties, either fatal or non-fatal) to assess whether the findings in the paper hold true.

Conclusions

DV, whether directly related or through a perpetrator's history, plays an important role in mass shootings in the United States. DV-related mass shootings were associated with fewer casualties but a higher CFR; fewer victims survived the injuries sustained in a mass shooting that was associated with DV, highlighting the lethality of these events. Increased focus should be placed on disarming and restricting access to guns by perpetrators of IPV and DV.

Abbreviations

DV: Domestic violence; CDC: Centers for Disease Control and Prevention; IPH: Intimate partner homicide; DVPO: Domestic violence protective order; FBI: Federal Bureau of Investigation; SHR: Supplementary Homicide Report; GVA: Gun Violence Archive; CFR: Case fatality rate; ERPO: Extreme risk protection order; IPV: Intimate partner violence

Supplementary Information

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Additional file 1: Supplemental Table 1. Number of Mass Shootings by Year and by DV Category - Las Vegas Included. **Supplemental Table 2.** Average Mass Shooting Victims by DV Category - Las Vegas Included. Non-DV related is the reference group for significance. **Supplemental Table 3.** Number of Mass Shootings by Year and by DV Category ("unknown" included with "non-DV related," Las Vegas excluded). **Supplemental Table 4.** Average Mass Shooting Victims - ("unknown" included with "non-DV related," Las Vegas excluded). Non-DV related is the reference group for significance. * denotes significance at $p < 0.05$.

Additional file 2.

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Authors' contributions
LG obtained the data and drafted the manuscript. MB performed the analysis. All authors interpreted the data. MB and CC contributed to the revision of the manuscript. All authors read and approved the final manuscript.

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Availability of data and materials
The data analyzed in this study are available at Gun Violence Archive, https://www.gunviolencearchive.org/.

Declarations

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Not applicable.

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Not applicable.

Competing interests
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References
Auchter B. Men who murder their families: what the research tells us. NIJ Journal. 2010;(266):10–12. Available from: https://www.ncjrs.gov/pdffiles1/nij/230412.pdf.

Bloomberg American Health Initiative. n.d. Extreme risk protection order: a tool to save lives. Available from: https://americanhealth.jhu.edu/implementERPO. Accessed 12 June 2020.

Booty M, O'Dwyer J, Webster D, McCourt A, Crifasi C. Describing a "mass shooting": the role of databases in understanding burden. Inj Epidemiol. 2019;6(1):47. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6889601/. https://doi.org/10.1186/s40621-019-0226-7.

Campbell JC, Webster D, Koziol-McLain J, Block C, Campbell D, Curry MA, et al. Risk factors for femicide in abusive relationships: results from a multisite case control study. Am J Public Health. 2003;93(7):1089–97. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1447915/. https://doi.org/10.2105/AJPH.93.7.1089.

Centers for Disease Control and Prevention. Intimate partner violence. 2018. Available from: https://www.cdc.gov/violenceprevention/intimatepartnerviolence/index.html. Accessed 15 Aug 2019.

Centers for Disease Control and Prevention, National Center for Health Statistics. n.d. About underlying cause of death, 1999–2018. Available from: https://wonder.cdc.gov/ucd-icd10.html. Accessed 15 Aug 2019.

Fox JA, Fridel EE. Gender differences in patterns and trends in U.S. homicide, 1976–2015. Violence Gend. 2017;4(2):37–43 Available from: https://www.liebertpub.com/doi/abs/10.1089/vio.2017.0016?journalCode=vio.

Gun Control Act of 1968, 18 U.S.C. § 922(g)(9) (1968). Available from: https://www.justice.gov/archives/jm/criminal-resource-manual-1117-restrictions-possession-firearms-individuals-convicted. Accessed 15 Aug 2019.

Gun Violence Archive. n.d.-a Past summary ledgers. 2014–2019. Available from: https://www.gunviolencearchive.org/past-tolls.

Gun Violence Archive. n.d.-b General methodology. Available from: https://www.gunviolencearchive.org/methodology.

Kelley R. Why ordinary people murder their families: Newsweek; 2009. Available from: https://www.newsweek.com/why-ordinary-people-murder-their-families-82425. Accessed 22 June 2020

Kivisto A. Male perpetrators of intimate partner homicide: a review and proposed typology. J Am Acad Psychiatry Law. 2015;43(3):300–12 Available from: https://pubmed.ncbi.nlm.nih.gov/26438808/.

Kivisto A, Porter M. Firearm use increases risk of multiple victims in domestic homicides. J Am Acad Psychiatry Law. 2020;48(1):26–34 Available from: https://www.ncbi.nlm.nih.gov/pubmed/31753965.

Lopez BE, Crimmins DE, Haskins PA. Advancing mass shooting research to inform practice. NIJ J. 2020;(282):21–6. Available from: https://nij.ojp.gov/topics/articles/advancing-mass-shooting-research-inform-practice.

Reeping PM, Cerdá M, Kalesan B, Wiebe DJ, Galea S, Branas CC. State gun laws, gun ownership, and mass shootings in the US: Cross sectional time series. BMJ. 2019;364:l542 Available: https://www.ncbi.nlm.nih.gov/pubmed/30842105.

Smith SG, Fowler KA, Niolon PH. Intimate partner homicide and corollary victims in 16 states: National Violent Death Reporting System, 2003–2009. Am J Public Health. 2014;104(3):461–6. Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3953789/. https://doi.org/10.2105/AJPH.2013.301582.

Sorenson SB, Schut RA. Nonfatal gun use in intimate partner violence: A systematic review of the literature. Trauma Violence Abuse. 2018;19(4):431–42 Available from: https://www.ncbi.nlm.nih.gov/pubmed/27630138.

StataCorp. Stata Statistical Software: Release 16. College Station: StataCorp LP; 2019.

United States Department of Justice. n.d. Domestic violence. Available from: https://www.justice.gov/ovw/domestic-violence. Accessed 15 Aug 2019.

Webster DW, McCourt AD, Crifasi CK, Booty MD, Stuart EA. Evidence concerning the regulation of firearms design, sale, and carrying on fatal mass shootings in the United States. Criminol Public Policy. 2020;19(1):171–212 Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/1745-9133.12487.

Wintemute GJ, Pear VA, Schleimer JP, Pallin R, Sohl S, Kravitz-Wirtz N, et al. Extreme risk protection orders intended to prevent mass shootings: a case series. Ann Intern Med. 2019;171(9):655–8. Available from: https://annals.org/aim/fullarticle/2748711/extreme-risk-protection-orders-intended-prevent-mass-shootings-case-series. https://doi.org/10.7326/M19-2162.

Zeoli AM. Multiple victim homicides, mass murders, and homicide suicides as domestic violence events. Battered Women's Justice Project 2018. Available from: https://www.preventdvgunviolence.org/multiple-killings-zeoli-updated-112918.pdf

Zeoli AM, McCourt A, Buggs S, Frattaroli S, Lilley D, Webster DW. Analysis of the strength of legal firearms restrictions for perpetrators of domestic violence and their associations with intimate partner homicide. Am J Epidemiol. 2018;187:2365–71 Available from: https://www.ncbi.nlm.nih.gov/pubmed/30383263.

Zeoli AM, Paruk JK. Potential to prevent mass shootings through domestic violence firearm restrictions. Criminol Public Policy. 2019;19(1):129–45 Available from: https://onlinelibrary.wiley.com/doi/10.1111/1745-9133.12475.

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Original Contribution

Analysis of the Strength of Legal Firearms Restrictions for Perpetrators of Domestic Violence and Their Associations With Intimate Partner Homicide

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In this research, we estimate the association of firearm restrictions for domestic violence offenders with intimate partner homicides (IPHs) on the basis of the strength of the policies. We posit that the association of firearm laws with IPHs depends on the following characteristics of the laws: 1) breadth of coverage of high-risk individuals and situations restricted; 2) power to compel firearm surrender or removal from persons prohibited from having firearms; and 3) systems of accountability that prevent those prohibited from doing so from obtaining guns. We conducted a quantitative policy evaluation using annual state-level data from 1980 through 2013 for 45 US states. Based on the results of a series of robust, negative binomial regression models with state fixed effects, domestic violence restraining order firearm-prohibition laws are associated with 10% reductions in IPH. Statistically significant protective associations were evident only when restraining order prohibitions covered dating partners (−13%) and ex parte orders (−13%) and included relinquishment provisions (−12%). Laws prohibiting access to those convicted of nonspecific violent misdemeanors were associated with a 23% reduction in IPH rates; there was no association when prohibitions were limited to domestic violence. These findings should inform policymakers considering laws to maximize protections against IPH.

domestic violence; firearms; homicide; policy analyses

Abbreviations: CI, confidence interval; DVRO, domestic violence restraining order; IPH, intimate partner homicide; IRR, incidence rate ratio; MCDV, misdemeanor crimes of domestic violence.

Over the past 30 years, many states, with a goal of preventing intimate partner homicide (IPH), have enacted laws to prevent domestic violence offenders from accessing firearms. The rationale behind these laws is consistent with study results indicating a 5-fold increased risk of homicide when a violent intimate partner has access to a firearm (1). There has been great variation across states and over time in firearm policies relevant to IPH risk concerning the breadth of prohibiting conditions and in the level of authority given to courts and law enforcement to recover firearms from individuals prohibited from having them.

In the present study, we investigated whether firearm restrictions for domestic violence offenders are associated with IPH levels. There are various types of statutes that may limit a domestic violence offender's access to firearms. One common state statute restricts access for persons subject to certain domestic violence restraining orders (DVROs). Federal law prohibits the purchase or possession of firearms by individuals under final DVROs if the respondent is the current or former spouse, has a child with, or ever lived with the petitioner. Many states have enacted similar restrictions (some before the federal restriction went in effect) and some states extend the restrictions in federal law to those in dating relationships with victims and/or individuals under ex parte orders. Ex parte orders, also called temporary or emergency orders, apply before a court hearing that the respondent had the opportunity to attend. Despite these restrictions on firearm possession, many state laws do not specify requirements for firearm relinquishment or provide explicit authority for law enforcement seizure of firearms (2).

Federal law and some state laws prohibit persons convicted of misdemeanor crimes of domestic violence (MCDV) from accessing firearms. In addition, some states extend firearm prohibitions to individuals convicted of violent misdemeanors (with

varying degrees of specificity). Such prohibitions are usually time limited. Many domestic violence offenders are not convicted of crimes of domestic violence but often have criminal histories that include violent crimes other than domestic violence (3). Therefore, firearm restrictions for violent misdemeanor convictions not exclusive to domestic violence would prohibit a large group of domestic violence offenders from obtaining firearms.

In a few states, convictions for misdemeanor stalking are an additional firearms prohibitor relevant to domestic violence offenders. In addition, many states have felony stalking crimes that domestic violence offenders may be charged under, which would also prohibit them from accessing firearms. Finally, laws that authorize law enforcement to remove firearms from the scene of domestic violence incidents exist in some states; however, the criteria for removal vary widely among states (4).

Legal restrictions on firearm purchase are enforced, in part, through the federal requirement that firearm sales by licensed dealers be contingent upon purchasers passing a criminal background check. But federal law does not require background checks for firearm transfers by nonlicensed private sellers, nor is this a requirement in most states. This provides an avenue by which those prohibited from accessing firearms may acquire guns. Some states have universal background check laws that govern private sales by making prospective purchasers go to a licensed gun dealer who submits the background check application to law enforcement officials who, in turn, check the purchaser's criminal history. Other states have permit-to-purchase licensing laws that require prospective purchasers to apply for a permit from law enforcement agencies that initiate background checks and verify other requirements are met, such as safety training (5). One additional state variation in background check procedures is that some states, referred to as points-of-contact states, require the use of their own databases to identify persons prohibited from accessing firearms in addition to the Federal Bureau of Investigation's National Instant Criminal Background Check System, potentially locating disqualifying records not in the national system.

In ecological studies of the association of firearm laws with IPH, state DVRO firearm restrictions were associated with an 8% reduction in IPH rates (6); in a recent study, researchers reported that only states that specified the relinquishment of firearms already possessed in the DVRO law experienced associated reductions of approximately 10% (7). In a study of large US cities, the association of DVRO laws with reduced IPH rates (−19%) was greater than that found in state-level studies (8). MCDV firearm restrictions and laws on confiscating firearms at the scene of domestic violence have not been found, thus far, to be associated with IPH rates (6–9).

METHODS

This research advances the field by estimating the association of IPH with the following: potentially important yet unstudied expansions of the DVRO firearm restrictions, firearms laws not specific to domestic violence that may restrict domestic violence offenders' firearm access, and firearm laws for, to our knowledge, the longest period of any published study (34 years). On the basis of our findings, we considered temporal trends long before most of the laws were first introduced and estimated the laws' effects over longer periods than they have been in place. We tested 3 main hypotheses.

Hypothesis 1

Our first hypotheses was as follows: Firearm restrictions that include a broader set of domestic violence offenders are associated with larger reductions in IPH. Specifically, DVRO laws that extend firearm prohibitions to ex parte DVROs and situations involving dating relationships are associated with greater reductions in IPH than are weaker DVRO gun laws. Similarly, firearm prohibitions that cover violent misdemeanors convictions regardless of the victim-offender relationship are associated with greater reductions in IPH than laws that only prohibit firearms when someone is convicted of domestic violence.

Hypothesis 2

According to our second hypotheses, laws that explicitly require relinquishment of firearms or grant law enforcement authority to remove firearms from domestic violence offenders prohibited from having them are associated with larger reductions in IPH than when enforcement is not addressed in statutory language.

Hypothesis 3

Our third hypothesis was as follows: Laws establishing systems of accountability for transferring guns to persons prohibited from accessing firearms, specifically permit-to-purchase laws, universal background check laws, and point-of-contact background check systems, are associated with reductions in IPH.

Design and Data Sources

We conducted a pooled, cross-sectional, time-series analysis using annual state-level data from 1980 through 2013. We analyzed the data using generalized estimating equations with a negative binomial distribution and state fixed effects. We used 2 dependent variables: the count of IPH victims aged 14 years and older and a subset of those who were killed with a firearm. These data were obtained from the Federal Bureau of Investigation's Supplementary Homicide Reports—part of the larger Uniform Crime Reports system—to which local law enforcement agencies voluntarily submit incident-specific information on homicides, such as demographic and relationship data on the victim and suspect, and method of homicide.

The Supplementary Homicide Reports data set has multiple limitations, including that not all jurisdictions submit their homicide data every year. Because of failure to report several years of data, we excluded from our analysis Florida, Kansas, Kentucky, Montana, and Nebraska. In addition, some data on reported homicides may be missing (10). To guard against these limitations, we used a multiply imputed Supplementary Homicide Reports data set developed by James Fox (James Fox, Northeastern University, unpublished data, 2015). We pooled the item-imputed data and weighted it at the state level to match

the total homicides identified in a given state-year based on the more complete Crime in the United States report (11) from the Uniform Crime Reports totals. When a state reported less than one-third of its estimated homicides, it was dropped, resulting in the exclusion of 23 state-years (1.5%). As a sensitivity test, we also ran the analysis on the raw Supplementary Homicide Reports data and obtained similar results regarding the direction and magnitude of the incidence rate ratios (see Web Table 1, available at https://academic.oup.com/aje). In general, however, confidence intervals were wider with the unweighted data, suggesting decreased precision of estimates, and, in few cases, *P* values switched to greater than 0.05.

We included the following state-level statutes (which are defined in footnotes to Web Tables 2 and 3): DVRO firearm restrictions (i.e., any; covers dating partners; includes ex parte orders; has accompanying firearm relinquishment provision); restrictions for those convicted of violent misdemeanor crimes (i.e., only domestic; includes nondomestic); prohibitions for individuals convicted of stalking (i.e., felony stalking; misdemeanor stalking); laws authorizing law enforcement to remove firearms from the scene of domestic violence; permit-to-purchase laws; universal background check laws; and point-of-contact background check policies. We also included federal DVRO and MCDV firearm restrictions in the analyses.

Legal research was conducted to determine which states enacted which laws and their implementation dates. State statutes were retrieved from the Westlaw legal database (Thomson Reuters, Eagen, Minnesota) and analyzed. Implementation dates were determined from a statute's session laws, available in the WestlawNext database (Thomson Reuters) with legislative history available from LexisNexis (LexisNexis Group, New York, New York), HeinOnline (William S. Hein & Co., Buffalo, New York), and state-specific databases. Binary indicator variables reflected whether a law was in place in a given state-year provided the law had been in place for at least 6 months of that year. We lagged law variables by 1 year in the models to reflect the time it takes to implement a law.

Several control variables associated with IPH rates were included in our statistical models. These included the percentage of the population identified as black (12, 13), the percentage of the population that was married and divorced (separately) (13–16), and the ratio of women aged 25 years or older who had a college education to men in the same cohort (8, 13, 17). These data were obtained from the US Census and interpolated for intercensal years (17–20). Economic indicators (13) were also controlled for, including the percentage of the population below the poverty level (21); the level of monetary aid, adjusted for inflation to year 2000 dollars, to low-income families of 4 through Aid to Families with Dependent Children/Temporary Assistance to Needy Families (22); and unemployment levels (23).

Our models also controlled for the number of police officers per 100,000 population (8), obtained from the annual Uniform Crime Reports from 1979 through 2013 (11). Because the number of police officers is measured on October 1 each year, we lagged the measure by 1 year. From the Supplementary Homicide Reports, we also included the rate of nonintimate partner homicides for adults aged 25 years and older to control for general homicide trends in the states over time. We used a 5-year rolling average of the percentage of suicides committed with firearms as a proxy for the prevalence of firearm ownership (24, 25). Last, we obtained the amount of funding each state received, by year, from the federal STOP Violence Against Women Grant Program (26). Because these funds are used in numerous ways to protect women (e.g., improving law enforcement response to domestic violence, providing funding for victims' services agencies), it is plausible that they affect IPH.

Analysis

We used generalized estimating equations with a negative binomial distribution, robust standard errors specifying that intragroup correlation may occur by state, and state fixed effects. Our offset variable was the natural log of the count of the population aged 14 years and older in the state-year. Each model included linear and quadratic year trend terms. All models were estimated in Stata, version 14.2 (StataCorp, College Station, Texas) and 2-sided tests of significance were used (27).

RESULTS

There was a range of 16–29 states that adopted each of the domestic violence firearm restriction laws during the study period, 2–24 states that adopted laws related to implementation of purchase restrictions, and 11 states that adopted laws mandating firearm removal from the scene of domestic violence (see Web Tables 2 and 3). Any state DVRO prohibition was associated with a reduction in total IPH (incident rate ratio (IRR) = 0.90, 95% confidence interval (CI): 0.83, 0.97) and firearm IPH (IRR = 0.87, 95% CI: 0.78, 0.97) (Table 1). Violent misdemeanor prohibition laws were also associated with a reduction in total IPH (IRR = 0.77, 95% CI: 0.66, 0.91) and firearm IPH (IRR = 0.79, 95% CI: 0.63, 0.98); however, there was a statistically significant increase in IPH (IRR = 1.16, 95% CI: 1.04, 1.30) for firearm prohibitions exclusive to stalking misdemeanants.

Table 2 presents the results from the models that tested the associations of differing provisions of DVRO firearm restrictions with IPH. Compared with states with no DVRO firearm restrictions, states that included dating partners in their DVRO policy experienced an associated reduction in total IPH (IRR = 0.87, 95% CI: 0.80, 0.95) and firearm IPH (IRR = 0.84, 95% CI: 0.74, 0.95), whereas no significant association was found when a state did not cover dating partners. DVRO firearm restriction laws that included ex parte orders were associated with a decrease in total IPH (IRR = 0.87, 95% CI: 0.77, 0.98) and firearm IPH (IRR = 0.84, 95% CI: 0.71, 0.99). Laws that did not cover ex parte orders were not associated with IPH or firearm IPH. DVRO firearm relinquishment provisions were significantly associated with a decrease in IPH (IRR = 0.88, 95% CI: 0.81, 0.97) and firearm IPH rates (IRR = 0.84, 95% CI: 0.74, 0.96), but DVRO firearm restrictions without relinquishment provisions were not associated with IPH or firearm IPH.

DISCUSSION

This research was a comprehensive examination of the associations of laws designed to prevent domestic violence

Table 1. Associations Between Selected Firearm Laws and Intimate Partner Homicide in 45 US States, 1980–2013[a]

Law	Intimate Partner Homicide			Firearm Intimate Partner Homicide		
	IRR	95% CI	*P* Value	IRR	95% CI	*P* Value
Firearm restriction laws						
State DVRO	0.90	0.83, 0.97	0.009	0.87	0.78, 0.97	0.013
State MCDV	1.08	0.92, 1.27	0.331	1.13	0.94, 1.35	0.182
Violent misdemeanor	0.77	0.66, 0.91	0.002	0.79	0.63, 0.98	0.029
Stalking misdemeanor	1.16	1.04, 1.30	0.010	1.11	0.96, 1.29	0.161
Stalking felony	1.01	0.92, 1.11	0.854	0.98	0.86, 1.11	0.713
Federal DVRO	0.95	0.88, 1.03	0.206	0.99	0.91, 1.08	0.865
Federal MCDV	0.94	0.88, 1.01	0.085	0.91	0.84, 0.99	0.033
Purchase restriction implementation laws						
Permit to purchase	1.04	0.85, 1.28	0.680	1.06	0.83, 1.37	0.627
Background check	1.07	0.94, 1.21	0.288	1.13	0.94, 1.35	0.198
Point-of-contact state	0.98	0.91, 1.07	0.685	1.00	0.90, 1.11	0.956
Firearm confiscation from scene	0.95	0.85, 1.06	0.384	0.95	0.81, 1.10	0.478

Abbreviations: CI, confidence interval; DVRO, domestic violence restraining order; IRR, incidence rate ratio; MCDV, misdemeanor crime of domestic violence.

[a] Other factors controlled for were arrest laws for domestic violence; the percentages of the population divorced, married, and in poverty; average Temporary Assistance for Needy Families benefits for a family of 4; educational ratio of women to men; a 5-year rolling average of the percentage of suicides committed with firearms; the nondomestic violence homicide rate for adults aged 25 years and older; the ratio of full-time police officers to population; Violence Against Women Act STOP grant funding; state fixed effects; and a quadratic time trend.

offenders from accessing firearms with IPH rates at the state level over a 34-year study period. Our findings are consistent with those of prior studies showing protective effects of firearm restrictions for DVRO respondents in reducing IPHs (6, 8, 9). Indeed, the point estimates for this research and that of Vigdor and Mercy (6) are remarkably similar, at a 10% or 8% reduction in IPH at the state level in association with DVRO gun restriction laws, respectively.

Table 2. Associations Between Provisions of State Domestic Violence Restraining Order Firearm Restrictions and Intimate Partner Homicide in 45 US States, 1980–2013[a]

Law	Intimate Partner Homicide			Firearm Intimate Partner Homicide		
	IRR	95% CI	*P* Value	IRR	95% CI	*P* Value
Inclusion of dating partners						
No DVRO restriction	1.00	Referent		1.00	Referent	
DVRO restriction does not include dating partners	0.94	0.87, 1.03	0.178	0.92	0.82, 1.02	0.116
Dating partners included	0.87	0.80, 0.95	0.003	0.84	0.74, 0.95	0.006
Inclusion of ex parte DVROs						
No DVRO restriction	1.00	Referent		1.00	Referent	
DVRO restrictions do not cover ex parte orders	0.97	0.88, 1.07	0.543	0.95	0.84, 1.07	0.408
Ex parte orders covered	0.87	0.77, 0.98	0.025	0.84	0.71, 0.99	0.043
Inclusion of relinquishment law						
No DVRO restriction	1.00	Referent		1.00	Referent	
DVRO restriction without relinquishment law	0.93	0.85, 1.01	0.083	0.92	0.82, 1.03	0.143
Relinquishment law included	0.88	0.81, 0.97	0.008	0.84	0.74, 0.96	0.008

Abbreviations: CI, confidence interval; DVRO domestic violence restraining order; IRR, incidence rate ratio.

[a] Each of the 6 models controlled for all other firearm laws; arrest laws for domestic violence; the percentages of the population divorced, married, and in poverty; average Temporary Assistance for Needy Families benefits for a family of 4; educational ratio of women to men; a 5-year rolling average of the percentage of suicides committed with firearms; the nondomestic violence homicide rate for adults aged 25 years and older; the ratio of full-time police officers to population; Violence Against Women Act STOP grant funding; state fixed effects; and a quadratic time trend.

In this study, we went beyond prior research by estimating the association of IPH rates with specific provisions of DVRO firearm restriction laws, firearm restrictions resulting from convictions for violent misdemeanors not exclusive to domestic violence, and laws to prevent illegal acquisition of firearms (e.g., permit-to-purchase laws). The findings generally support our hypothesis that laws restricting firearms from a broader population of individuals who commit domestic violence are more effective at reducing IPHs than are more narrow laws. Specifically, DVRO firearm restrictions that cover dating partners, who constituted almost half of all IPH offenders in 2013 (28), were linked with a 13% reduction in IPH rates, compared with an estimated 6% reduction in IPH rates for such laws that exclude dating partners, with a confidence interval indicating no clear association. Ex parte DVRO firearm restrictions were associated with a 13% reduction in IPHs and a 16% reduction in firearm IPHs. Firearm restrictions limited to final DVROs were linked to a 3% reduction in IPHs relative to having no such laws; however, again the confidence interval indicated no clear association.

Consistent with prior research, the results of our main models indicate laws restricting access to firearms by those convicted of MCDV were not associated with IPH (6, 8, 9). However, laws restricting those convicted of violent misdemeanor crimes, regardless of the relationship between the offender and victim, were estimated to reduce IPH by 23% and firearm IPH by 21%. Although, to the best of our knowledge, domestic violence outcomes have not been assessed in association with this law, in a study of violent misdemeanants in California who sought to purchase handguns just before and just after California passed this type of law, researchers found that denial of legal handgun purchase was associated with lower risk for subsequent offending involving violence and/or guns (29).

There are several reasons why the broader violent misdemeanor prohibition may convey more protection than prohibitions focused on MCDV. First, the law affects those domestic violence offenders who were convicted of either domestic or nondomestic violent crimes and thereby disarms more violent offenders. Second, the purchase prohibition may be simpler to implement for violent misdemeanors generally than for MCDV. Many states do not have a misdemeanor crime statute that covers all or only violent crimes involving intimate partners. This may increase the difficulty of ensuring that all qualifying MCDV are flagged and included in criminal background checks. When violent misdemeanors are broadly covered, the uncertainty associated with identifying which convictions include intimate relationships is removed. People disqualified in this way may be more effectively prohibited from purchasing firearms.

Our results failed to provide support for our hypothesis that systems designed to prevent the transfer of guns to persons prohibited from having firearms are associated with reductions in IPH. There is mounting evidence, however, that laws requiring prospective firearm purchasers to pass a background check vetted directly by law enforcement under permit-to-purchase licensing laws reduce the diversion of guns to criminals (30, 31). Findings from studies of Missouri's repeal and Connecticut's adoption of a permit-to-purchase law suggest that they reduce homicides (32, 33). Permit-to-purchase laws often require a prospective gun buyer to apply for a permit directly from law enforcement regardless of whether they want to purchase from a licensed dealer or private seller. This may discourage those prohibited from attempting to purchase firearms and increase the likelihood of being denied a sale.

Possession of firearms already owned before a disqualifying event is arguably more difficult to prevent than new firearm purchases. Firearm relinquishment provisions for those disqualified because of DVROs are one way to promote dispossession. Support was found for our hypothesis that laws explicitly requiring surrender or granting law enforcement authority to remove firearms are associated with larger reductions in IPH than when enforcement is not addressed in the law. Compared with state-years without DVRO restrictions, presence of a DVRO firearm relinquishment law was associated with a 12% reduction in IPH, whereas there was no clear effect of DVRO laws without relinquishment provisions. Firearm relinquishment may be a critical part of firearm violence reduction strategies for domestic violence, when evaluated on the basis of our study results, paired with the results of recent research in which an associated reduction in IPH and firearm IPH in the presence of DVRO laws with relinquishment provisions (7) also was found. However, it is documented in published literature that relinquishment may not occur just because it is ordered (34), and that law enforcement efforts to assure implementation and enforcement of dispossession ordered by the court can be done effectively (35). There may be greater protective effects to be gained with better implementation.

Limitations

This research is similar to other policy evaluations in that we did not measure policy implementation or enforcement. It is likely that some states or local jurisdictions have taken steps to enforce the law and ensure that those restricted from purchase and possession do not have guns, whereas other jurisdictions may make no such effort. Attempts were made to develop proxies for implementation and enforcement, but these proved unfruitful.

Another limitation of this research is that we may not have adequately controlled for confounding influences. Although an interrupted time-series design with varying interruption points by state would require any confounders to act at the same times in the same states as the policies under study, this may still have occurred. Legislators often enact a host of laws about a topic at once. With our focus on firearm policy, we may have omitted nonfirearm programs or policies that may have improved safety for victims of domestic violence. We suspect that our contrary result regarding stalking misdemeanor firearm restriction laws is because these laws have been passed during times of increasing intimate partner violence problems but are hard to enforce. In addition, although we controlled for temporal trends across states, we did not control for within-state time trends in our analysis. It is possible that state-specific secular trends in IPH could vary and confound our estimates. We opted to exclude linear and quadratic state-specific time trends from our analysis, however, because adding so many parameters to our models would overfit the data.

26. US Department of Justice, Office of Violence Against Women. Grant programs to end violence against women. https://www.justice.gov/ovw/page/file/914451/download. Accessed April 13, 2018.
27. Stata Corporation. *Stata statistical software, release 14.2*. College Station, TX: Stata Corporation; 2015.
28. Federal Bureau of Investigation, US Department of Justice. Uniform crime reporting program data: Supplementary Homicide Reports. 2013. ICPSR36124-v1. http://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/36124?q=Supplementary+Homicide+Reports+2013. Accessed December 15, 2015.
29. Wintemute GJ, Wright MA, Drake CM, et al. Subsequent criminal activity among violent misdemeanants who seek to purchase handguns: risk factors and effectiveness of denying handgun purchase. *JAMA*. 2001;285(8):1019–1026.
30. Webster DW, Vernick JS, Bulzacchelli MT. Effects of state-level firearm seller accountability policies on firearms trafficking. *J Urban Health*. 2009;86(4):525–537.
31. Webster DW, Vernick JS, McGinty EE, et al. Preventing the diversion of guns to criminals through effective firearm sales laws. In: Webster DW, Vernick JS, eds. *Reducing Gun Violence in America: Informing Policy with Evidence and Analysis*. Baltimore, MD: The Johns Hopkins University Press; 2013:109–121.
32. Rudolph KE, Stuart EA, Vernick JS, et al. Association between Connecticut's permit-to-purchase handgun law and homicides. *Am J Public Health*. 2015;105(8):e49–e54.
33. Webster D, Crifasi CK, Vernick JS. Effects of the repeal of Missouri's handgun purchaser licensing law on homicides. *J Urban Health*. 2014;91(2):293–302.
34. Webster DW, Frattaroli S, Vernick JS, et al. Women with protective orders report failure to remove firearms from their abusive partners: results from an exploratory study. *J Womens Health (Larchmt)*. 2010;19(1):93–98.
35. Wintemute GJ, Frattaroli S, Claire BE, et al. Identifying armed respondents to domestic violence restraining orders and recovering their firearms: process evaluation of an initiative in California. *Am J Public Health*. 2014;104(2):e113–e118.

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Dangerous Liaisons: Examining the Connection of Stalking and Gun Threats Among Partner Abuse Victims

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Little is known about the scope and nature of how guns are used to threaten (ex)partners particularly during periods of stalking, which often occurs after victims leave their abusers. This study examines survey results from over 500 women from across the United States who contacted the National Domestic Violence Hotline. Specifically, this study (a) describes the prevalence and characteristics of partner abuse victims who were and were not stalked and who were and were not threatened with guns, (b) compares types of gun threats experienced by partner abuse victims who were and were not stalked, (c) examines worries about gun threats for those who were and were not stalked among partner abuse victims not threatened with a gun, and (d) assesses factors associated with advice to obtain a gun for personal safety. This article also provides open-ended comments selected to highlight themes from the quantitative information around participant fears and worries about gun threats and stalking. Findings from this study show one-third of the participants had experienced threats with guns, and one-fifth of those without gun threats worried their (ex)partner would harm them with a gun. Furthermore, there was a significant association between stalking and gun threats, as three-fourth of those who were threatened with a gun reported being stalked. Victims who experienced stalking were also more likely to report their (ex)partner threatened others with guns and were more likely to carry a firearm on their body or in their car, which suggests stalkers who threatened with guns may pose a significant risk to public safety. Implications for future research are discussed.

Keywords: partner abuse; gun threats; stalking; victim safety

Many people, including partner violence victims, believe that leaving an abusive partner will stop the controlling and abusive behavior, and that is certainly true for some but not all victims (Logan & Walker, 2009, 2010a; Logan & Walker, 2004; Logan, Walker, Jordan, & Campbell, 2004; Logan, Walker, Shannon, & Cole, 2008). In general, separation from intimate partners is a common life event that carries significant stress (Logan et al., 2004; Logan & Walker, 2004). However, when women separate from abusive partners, they often do so within the context of implicit and explicit threats

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of harm (Dutton & Goodman, 2005; Logan et al., 2004; Logan, 2017; Logan & Walker, 2004; Stark, 2007). A recent study found three-quarters of women who obtained a protective order against an abusive partner had been threatened with death, over 80% were threatened with serious physical harm, and over 40% were threatened with a knife or a gun (Logan, 2017). That same study found that a higher frequency of explicit threats was associated with increased concurrent abuse, violence, distress, and fear suggesting that the scope, frequency, and nature of threats along with the trajectory of those threats may be important to understanding victim fear and level of danger.

Additionally, about half of partner abuse victims are stalked during periods of separation, which means the threats, control, and abuse by the ex-partner continues during periods of separation (Logan & Walker, 2004, 2010a, 2017b; Logan, Cole, Shannon, & Walker, 2006; Logan, Shannon, & Cole, 2007; Logan et al., 2004). Stalking interferes with many aspects of one's life including social, financial, well-being, and quality of life, and the fear victims experience from stalking is pervasive and cumulative over time (Logan & Walker, 2017a; Logan et al., 2004). The fear from stalking is reasonable, given that the majority of women murdered or who were almost murdered by ex-partners were stalked (Campbell et al., 2003; McFarlane et al., 1999; McFarlane, Campbell, & Watson, 2002).

In addition, an abuser's access to a firearm is significantly associated with attempted and completed intimate partner homicide as well as with beliefs by partner abuse victims that their partner having access to guns increases their risk of lethality (Campbell, 1995; Campbell et al., 2003; Campbell, Glass, Sharps, Laughon, & Bloom, 2007; Kellermann et al., 1993; Lynch & Logan, 2018; McFarlane et al., 1999; 2002; Petrosky et al., 2017). One study found that an abuser's use of a gun in the worst incident of abuse was a significant predictor of a woman being murdered by an (ex)partner—even when controlling for other individual (e.g., employment, education), relationship (e.g., separation, children), and incident-level (e.g., substance use by victim and partner, protective order) risk factors for the homicide (Campbell et al., 2003). Consistent with that study, other research suggests guns are frequently used within the context of partner abuse to threaten, intimidate, and harass victims (Lynch & Logan, 2018; Rothman, Hemenway, Miller, & Azrael, 2005; Sullivan & Weiss, 2017). Sorenson and Weibe (2004) found that about two-thirds of women staying in a domestic violence shelter reported an abusive (ex)partner had used guns to scare, threaten, or harm them. Another study examined police reports of partner abuse incidents and found that a mention of guns in the incident report was associated with increased victim fear and reduced likelihood of physical assault compared to incidents without mention of guns, suggesting that guns are an effective way to intimidate and control an (ex)partner (Sorenson, 2017).

Investigating the specific kinds and features of the threats partner abuse victims experience may be important in understanding the larger context and consequences of partner abuse—particularly during periods of stalking, which often occurs after victims leave their abusers (Logan & Walker, 2017a, 2017b; Sorenson & Schut, 2016; Zeoli, Malinski, & Turchan, 2016). To date, there has been very limited documentation of the connection of stalking and threats with guns. Even with the significant negative consequences associated with stalking, stalking victim experiences are often minimized by friends, family members, victim advocates, counselors, police officers, and other criminal justice professionals (Cho, Hong, & Logan, 2012; Finch, 2001; Logan & Walker, 2017b; Logan et al., 2006; Logan, Walker, Stewart, & Allen, 2006; Spitzberg, 2002). Thus, documenting more spe-

cifically the threats and level of danger that stalking victims contend with is an important step in addressing both partner stalking and gun threats.

Within that context, this study examines survey results from over 500 women across the United States who contacted the National Domestic Violence Hotline to (a) describe the prevalence and characteristics of partner abuse victims who were and were not stalked and who were and were not threatened with guns, (b) compare types of gun threats experienced by partner abuse victims who were and were not stalked, (c) examine worries about gun threats for those who were and were not stalked among partner abuse victims not threatened with a gun, and (d) assess factors associated with advice to obtain a gun for personal safety. This article also provides open-ended comments selected to highlight themes from the quantitative information around participant fears and worries about gun threats and stalking.

METHOD

Participants

Data for this article were collected from individuals who contacted the National Domestic Violence Hotline by phone or through the chat line. Overall, 644 individuals agreed to participate in the survey. However, 14.9% (n = 96) indicated they had never been abused by a partner.[1] Of the remaining sample (n = 548), 6% were male, and 2.2% identified their gender as "other." These subsamples were too small for comparisons and were consequently dropped to include only those who identified as females with partner abuse experiences (n = 503). The overall average age was 32 years (range 14–70 years). With regard to race/ethnicity, participants identified as White (53.3%), Black (14.5%), Hispanic (11.7%), Asian (5.8%), biracial (5.8%), "other," or skipped the question (9%).

About one-third of participants (30.2%) reported their abusive partner was a dating or ex-dating partner, 27.6% reported they had lived with an abusive partner, 38.4% reported they were or had been married to the abusive partner, and 3.8% (n = 19) reported they had a child with the abuser but had not dated, lived with, or been married to the abuser. The majority of participants indicated most of the abuse took place in suburban (38.8%) or urban (30.8%) areas, while a smaller proportion indicated most of the abuse took place in rural areas (18.3%). A small proportion of participants indicated that they were unsure how to classify the area where most of the abuse took place (12.1%).

Measures

The measures for this study were developed in collaboration with staff at the National Domestic Violence Hotline for the explicit purpose of gaining more information about victims' experiences with gun threats.

Gun Threats. Participants were asked if an "abusive current partner, ex-partner, spouse, or ex-spouse ever made you afraid or concerned for your safety or the safety of others in any way because they had access to a gun or because they threatened you with a gun?" Among those that indicated they had felt threatened with a gun by their partner, a series of follow-up questions were asked about what kinds of threats they experienced including information about indirect and direct threats and whether other people were

threatened or shot at by their abusive partner. Participants threatened with a gun were also asked whether their partner carried the gun on their body or in their car.

Participants who indicated that they had not been threatened with a gun were asked why they thought they were not threatened with a gun and if they had ever been concerned that their partner might have a gun or get a gun to harm them (even though they had never been threatened with a gun).

Stalking. Participants were asked one question about stalking: "Has an abusive partner or ex-partner ever repeatedly followed, called, watched, contacted, or harassed you in ways that made you afraid or concerned for your safety or the safety of others (e.g., stalk you)?"

Protective Orders. Participants were asked whether they had ever obtained a protective order against an abusive (ex)partner, and if so, how the protective order impacted their safety. Participants who reported having a protective order against an abusive partner were also asked whether their partner was banned from having a gun in the protective order. Those who reported experiencing gun threats were asked about whether the protective order was violated with gun threats.

Advice to Obtain a Gun. Participants were asked if they were ever advised by anyone to get a gun for their safety.

Open-Ended Questions. All respondents were asked to share what they were most afraid of or concerned about when they felt threatened or stalked by their (ex)partner and why. Participants were also offered, at the conclusion of the survey, to add any other comments they wanted. Quotes were selected from both of these open-ended questions to highlight themes from the quantitative information.

Procedures

The National Domestic Violence Hotline and the companion Website loveisrespect.org provide information and support through phone calls, online chat, and text messaging although these contacts are not all from victims (National Domestic Violence Hotline, 2016). Potential participants were told about the survey during calls or through the chat line between March 27, 2017, and July 11, 2017. Those who agreed to do the survey either went to a provided survey link and completed the survey on their own or they completed the survey on the phone line with an advocate. Only participants who reported they had experienced abuse from a current partner, ex-partner, spouse, or ex-spouse were asked to participate in the survey. The survey was anonymous and voluntary. There were no incentives to participate, and all procedures were approved through the first author's University's Internal Review Board.

Analysis

Results were divided into two main parts. The first section of the article focuses on the quantitative survey results using analysis of variance and χ^2 to examine the data descriptively. Three logistic regressions were used to examine factors associated with (a) being threatened with a gun; (b) worries about being harmed with a gun for those who did not report gun threats; and (c) advice to obtain a gun for safety. Factors used as independent variables included age, race (non-White vs. White), partner type (dating vs. cohabitant or spouse), area (rural vs. nonrural), ever having obtained a protective order, and stalking status. For the logistic regression examining factors associated with advice to obtain for personal safety, being threatened with a gun by a partner was added as an independent

TABLE 1. Bivariate Differences for Those Stalked by Gun Threat

	No Stalking, No Gun Threat (n = 133)	No Stalking, Gun Threat (n = 44)	Stalking, No Gun Threat (n = 187)	Stalking, Gun Threat (n = 139)
Demographics				
Age (years)	32	33	31	34%
Dating partner (%)	34.6	27.9	36.1	22.9
Cohabitant or spouse (%)	65.4	72.1	63.9	77.1
White (%)	55.6	61.4	56.7	56.1
Rural (%)	18	27.3	11.8	24.5*
Ever obtained a protective order? (%)	12.8 (n = 17)	9.1 (n = 4)	26.7 (n = 50)	37.4*** (n = 52)
Banned from having guns (%)	29.4	25	22	50*
Don't know if banned from having guns (%)	29.4	0	48	25
Protective order				
Increased safety (%)	17.6	25	30	32.7
Had no impact on safety (%)	64.7	50	58	59.6
Decreased safety (%)	17.6	25	12	7.7
Ever advised to get a gun for safety (%)	8.3	18.2	16.6	36***

*$p < .05$. **$p < .01$. ***$p < .001$.

variable. Nineteen cases were dropped from the analysis because they did not indicate they had ever dated, cohabitated, or where married to their (ex)partner leaving a total of 484 cases included in the multivariate analysis. The second part of the article provides open-ended comments selected to highlight themes from the quantitative information around participant fears and worries about gun threats and stalking.

RESULTS

Stalking and Guns

Overall, over one-third (36.4%) of women reported being threatened with a gun, and two-thirds (64.8%) reported being stalked. Of those threatened with guns, 76% were also stalked. As shown in Table 1, 26.4% of the sample did not report being stalked or being threatened with guns, 37.2% were stalked but not threatened with guns, 8.7% were threatened with guns but not stalked, and 27.6% were both stalked and threatened with guns. The only significant demographic variable was the proportion who reported that most of

the abuse happened in a rural area, which was more prevalent particularly among those with both stalking and gun threats ($\chi^2(3) = 11.250$, $p < .05$).

Furthermore, more of those stalked but not threatened with a gun had obtained a protective order than those not stalked, regardless of gun threat status, and the largest proportion who obtained a protective order were those who experienced both stalking and gun threats ($\chi^2(2) = 28.588$, $p < .001$). Of those with protective orders, more of those who were experienced both stalking and gun threats reported their (ex)partner had been banned from having guns ($\chi^2(2) = 28.588$, $p < .001$). There were no significant differences by stalking or gun threat status on perceptions of protective order effectiveness with 29.3% indicating the protective order increased their safety, 11.4% saying it decreased their safety, and 59.3% reporting no difference in their safety.

Logistic regression analysis indicates that being from a rural area and being stalked were significantly associated with being threatened with a gun by an abusive (ex)partner (see Table 2).

Characteristics of Gun Threats

As Table 3 shows, the majority of women who were threatened with a gun, regardless of whether their (ex)partner had ever stalked them, reported that their (ex)partner's access to a gun increased their danger (69.4%), while just over one-quarter indicated it made no difference to their safety. Of those who were stalked and who experienced gun threats, over half (53.2%) were specifically threatened with a gun during a stalking episode.

In addition, the vast majority of women experienced indirect threats such as always having the gun around, talking about shooting others that made him mad, and threatening or actually shooting pets (overall 78.7% experienced any of these threats). Almost half reported being threatened with a gun, and almost half reported being shot at or held at gunpoint. Significantly, more stalking victims experienced threats to harm their friends and family ($\chi^2(1) = 4.324$, $p < .05$). Half reported their (ex)partner had threatened to shoot himself, and about 40% of participants reported their (ex)partner had directly or indirectly threatened others with a gun. In particular, one in three indicated their friends or family had been threatened with guns by their (ex)partner, one in eight reported their (ex)partner had threatened to randomly shoot people, and one in five reported their (ex)partner had actually threatened or actually shot at other people. When combining those three threats, significantly more stalking victims reported their (ex)partner threatened others than those not stalked (29.5% vs. 47.5%; $\chi^2(1) = 4.383$, $p < .05$).

Furthermore, almost half (44.6%) of stalking victims said their (ex)partner carried guns in public (in their car or on their body) compared to just over one-quarter (27.3%) of those not stalked ($\chi^2(1) = 4.168$, $p < .05$), and 20.8% reported they were not sure if their (ex) partner carried the gun in public. Regardless of stalking status, one-third (32.1%) of those with a protective order indicated the protective order was violated by gun threats.

Characteristics for Those Reporting No Gun Threat

Table 4 shows that almost one-third of those stalked were concerned that their (ex)partner might have a gun or might get a gun to harm them compared to 8% of those not stalked ($\chi^2(1) = 21.219$, $p < .001$). Logistic regression results indicated that being stalked was the only factor significantly associated with concern about the abuser getting a gun to harm them (see Table 2).

TABLE 2. Logistic Regression Results

	B	*OR*	Wald
Gun threats			
Age	.012	1.013	1.827
Race (non-White/White)	−.043	0.957	0.046
Rural	−.720	0.487	8.446**
Partner type (dating partner/cohabitant/spouse)	.339	1.404	1.959
Protective order	0.259	1.295	1.277
Stalking	.765	2.150	12.177***
Worry about guns			
Age	−.011	0.989	0.503
Race (non-White/White)	−.553	0.575	3.345
Rural	.880	2.410	2.476
Partner type (dating partner/cohabitant/spouse)	.386	1.471	1.155
Protective order	.292	1.338	0.730
Stalking	1.474	4.366	16.373***
Advice to get a gun for safety			
Age	.021	1.021	3.728
Race (non-White/White)	−.140	0.869	0.316
Rural	−.565	0.568	3.657
Partner type (dating partner/cohabitant/spouse)	.081	1.085	0.069
Protective order	1.078	2.938	17.295***
Stalking	.706	2.025	5.687*
Gun threat	.896	2.450	13.077***

*$p < .05$. **$p < .01$. ***$p < .001$.

Participants not threatened with a gun were also asked why they thought their (ex) partner had not threatened them, and responses are shown in Table 4. Overall, more than half, regardless of stalking status, indicated their (ex)partner did not have access to guns, and about 20% indicated their (ex)partner had access to guns but just didn't use them in a threatening way. Some participants reported they were not threatened with guns because their (ex)partner was just not interested in them; although this was a bigger reason among those who were not stalked ($\chi^2(1) = 7.037$, $p < .01$), while those being stalked were more likely to respond that they weren't sure why their (ex)partner never threatened them with guns ($\chi^2(1) = 11.358$, $p < .01$). Only a small proportion indicated their (ex)partner had been banned from owning a gun (6.3%).

TABLE 3. Characteristics of Gun Threats by Stalking Status

	Not Stalked (n = 44)	Stalked (n = 139)	Total (n = 183)
My partner having access to guns (%)			
Increased my danger	61.4	71.9	69.4
No impact on my danger	38.6	25.2	28.4
Threatened with a gun during a stalking episode (%)		53.2	
Among those with protective order, protective order violated with gun threats (%)	25	32.7	32.1
Specific gun threats (%)			
Always had a gun around or talked about guns	61.4	64.7	63.9
Talked about shooting others that made him mad or to get something he/she wanted	27.3	36	33.9
Made threats about or actually shot at pets or other animals	15.9	28.1	25.1
Threatened to harm you with the gun (e.g., threatened to shoot you, threatened to have others shoot you, or pointed the gun at you)	40.9	45.3	44.3
Held you at gun point or shot at/around you (e.g., held you at gun point, actually shot at or around you)	18.2	21.6	20.8
Threatened to harm him/herself with the gun	45.5	47.5	47
Made threats about harming other people with a gun? (e.g., friends, family, coworkers, other relatives, neighbors)	20.5	37.4*	33.3
Made threats about shooting people he/she did not know or shooting in public places	6.8	15.1	13.1
Actually threatened other people with a gun or shot at other people	13.6	23.7	21.3

*$p < .05$.

Advised to Get a Gun

As Table 1 shows, more of those who experienced stalking and gun threats were advised to obtain a gun for personal safety, while those who reported neither being stalked or threatened with a gun showing the lowest rates of advice to get a gun for safety ($\chi^2(3) = 35.209$, $p < .001$). Table 2 shows that having had a protective order against their (ex)partner, being stalked, and being threatened with a gun was significantly associated with receiving advice to obtain a gun for safety.

TABLE 4. Characteristics for Those Reporting No Gun Threat

	Not Stalked (n = 133)	Stalked (n = 187)	Total (n = 320)
Ever concerned partner would get a gun (%)	8.3	29.4***	20.6
Why not threatened with a gun? (%)			
No access	51.9	58.8	55.9
Was banned from owning a gun	6	6.4	6.3
Just wasn't interested in guns	31.6	18.7**	24.1
Had guns just didn't threaten me	19.5	17.1	18.1
Not sure	9.8	24.6*	18.4

*p < .05. **p < .01. ***p < .001.

Open-Ended Reponses: What's It Like Living With Stalking and Gun Threats?

Participants were asked to describe their biggest fears with regard to their abusive (ex) partner and, at the end of the survey, to provide any other information they thought others should know. The quotes below are responses from these open-ended questions that were selected to highlight themes from the quantitative portion of the survey. The quotes are organized into two sections: (a) living with stalking and gun threats; and, (b) biggest fears related to being harmed and/or threatened with a gun.

Living With Stalking and Gun Threats. One participant described, in detail, what it was like to live with stalking and gun threats as she was working toward leaving her abuser,

> I have been both threatened and stalked. . . When I tried to get a job after he moved out, my auto was vandalized by the loosening of all lugnuts on one tire. Fortunately, I felt it and stopped before the wheel came off. The police were notified, and my husband became the primary suspect. The police told me they believed he did it for several reasons, but they could do nothing. . .Recently there has been an escalation of emotional abuse and threatening behavior. I want a divorce, I am working with our local domestic abuse shelter and trying to get a plan. I am emotionally exhausted by the abuse and fear. He says he does not know why he does what he does, he implies roundabout that he is out of control which further raises my fear. I am totally afraid that he will try to kill me when (if I can keep up my courage) I try to leave. . .I feel certain he will find a way to kill me that he will not be able to be charged. My husband has a very high IQ and is very calculating. I believe he will find a more nefarious way to kill me than to outright shoot me, although shooting me with an illegal gun from the remote pasture that surround us could be called a hunting accident. I pray that I am wrong but the fear is, in itself, causing me physical harm. My blood pressure has been recorded over 180 after a confrontation and I am requiring higher and higher levels of medication for blood pressure. The stress is aggravating my arthritis and immune system. Death by a gun would be kinder than the path he is putting me through.

Other participants talked about being afraid of leaving their abuser and being stalked and or shot:

> I feel that stalking will occur once I end the relationship and get a divorce. My psychologist has advised me to obtain a protective order due to my spouse's current actions. I am afraid that in his desperation he will be violent, threatening, and generally trying to be disruptive and hurtful so that it's hard to function in my new life.

> I was afraid he was going to beat me or kill me. He used violence against me often, was verbally abusive, stalked me in that he would not stay away when I told him to–he would force himself in, and lately when I told him we were done he told me to "just wait and see what I do." He told me that guns are a big part of his family and I know a tiny bit of his past to know that he used guns, saw shootings, etc so I am very scared he will hurt me.

Biggest Fears Involving Harm and Threats With Guns. Below are selected quotes from participants regarding their biggest fears. One participant indicated,

> My biggest fear is that he will break into my home at night and use his gun to harm me.

And another one indicated her biggest fear was,

> Being shot in the face or having someone who knew my ex come up and shoot me.

Several other participants talked about their (ex)partner being unstable and having access to guns scared them:

> The uncertainty of his thought process and his access to guns. Even though he couldn't have guns with the restraining order, he had them hidden in different places where he could have access to them.

> He has a horrible past of alcohol, drugs and mental issues. He has three DUIs and violates his probation by continuing to drink. He also smokes weed openly when he works. He has possession of two guns that he did not buy legally. I was always concerned he would one day kill me with those guns. He has choked me in the past before, threw me down the stairs, and almost raped me.

Other participants discussed that their biggest fear involved having guns around children:

> My husband purchased two guns, a shotgun and handgun. He had one sitting in our closet and the other in his nightstand with the bullets right next to it. I moved them to a high shelf, almost like an attic space, so that my kids would not accidentally run into them. I was concerned for a long time that the shotgun would fall over in the closet and fire. I was not as upset that we had guns as I was concerned that a man like my husband could have access to a firearm, he was mentally unstable and drank a lot. His mood could change in a blink of an eye. He threatened my son with the gun. . .

Others talked about threats to harm children and others:

> I am most scared about his losing his temper and shooting me or my friend(s).

> I was, and still am, afraid he would/will follow through with numerous threats to hunt us down and kill us, (our three children and I), and anyone who helped us, including police.

> I worry about my own safety and the safety of others especially since he has a concealed carry permit. He is easily provoked and I do not feel it would take much for him to make a very bad choice.

Several participants expanded on both the concern about their (ex)partner's threat to hurt themselves:

> He had talked about killing himself in the past and in a prior relationship, had put the gun in his mouth. I was afraid that with the gun, because I wanted to leave that he would shoot me. He said he would not let me leave him.

Several participants who did not report experiencing gun threats described their fears of gun threats below:

> I am most afraid that my spouse will rape me again but next time, it will be actively violent. That he will have purchased a firearm and keep it in the home.

Others explained,

> He never used the gun as a threat. We just had it at the house and if he was really mad I would think "oh god what if he grabs the gun."

> Mostly he just throws things. He has never been near a gun when he has been angry that I have seen. But his temper does make me scared. . .I feel like he has moved his guns to a different room when we have been in a fight or made it visible to me as an intimidation tactic that he says is for my protection.

Several participants discussed owning a gun for safety to protect themselves against their fear for their lives; the quote below summarizes such sentiments:

> I would strongly encourage any possible ways to enhance awareness and education of domestic abuse in its emotional forms as well as physical and especially to rural police departments, church and such. In some ways, people like me who are above the poverty assistance level are at a disadvantage as I have had problems finding or feeling understood. If a person has the financial means to drive away, why don't they???? But, actually I am at higher risk of continued stalking and harm because my husband has the financial means to find me, he can hire people to find me. He can afford to track me down wherever I go. Without bruises and recent domestic violence reports, I am told there is a low chance of getting protective orders. How does a woman on her own these days hide when everyone's VIN numbers are online? Honestly, if I leave, I doubt I will live more than a few years before he gets to me. If I stay, I will likely die either as a direct result of his actions or secondarily. I am 60 years old. I don't qualify for elder abuse protection for 5 years. My husband is in excellent health and over 65. As far as additional thoughts on safety. . . my two cents worth might be to suggest free gun training for women who have been abused IF they want to own one. It takes training to safely use a gun and I strongly advocate safe gun handling, plenty of experience shooting, and psychological preparation. Otherwise, guns can be turned against a woman or she could go through a nightmare in the legal system if she were to use one improperly, or worse.

DISCUSSION

The overall goal of this article was to examine the connection of stalking and gun threats among partner violence victims. This study found that one-third of participants with partner abuse experiences also experienced gun threats, and two-thirds of the sample reported being stalked by an abusive (ex)partner. Furthermore, the results from this study clearly demonstrate a strong connection between gun threats and stalking. Three-quarters of those who experienced gun threats were also stalked. Even among those not directly threatened with a gun, close to one-third who were stalked said they were *worried* about their (ex)partner getting a gun to harm them compared to 8% of those not stalked. Although this is one of the first studies

to specifically examine the connection of stalking and gun threats, this study is consistent with some research on showing partner stalkers are more likely to threaten with weapons, including guns, knives, and other objects than nonpartner stalkers (Mohandie, Meloy, McGowan, & Williams, 2006).

This study's findings suggest that the connection of stalking and guns may pose a significant risk to the general public. Of those who were stalked, half (compared to one-third of those not stalked) indicated their (ex)partner had threatened to shoot others. When public threats are broken down more specifically, one in three reported their (ex)partner threatened to shoot the victim's friends or family (40% for the stalking victims vs. 21% of those without stalking), one in eight reported their (ex)partner had threatened to shoot at random people, and one in five reported their (ex)partner had directly threatened or actually shot at other people. These threats toward others should be taken seriously. One study found that 20% individuals killed in a partner violence–related homicide was someone associated with one or both members of the couple or who was in close proximity to the violence at the time, and that firearms were used in 70% of those instances (Smith, Fowler, & Niolon, 2014). Another study found that women were twice as likely to be murdered in multiple-victim incidents than men (Fox & Fridel, 2017). Other homicide analyses indicate that over half of all mass shootings are associated with domestic violence (Everytown for Gun Safety, 2017). The open-ended responses from participants provided insight into the terror victims feel for themselves as well as for the safety of others. Several quotes mentioned how victims feel their partner's unstable mental status, temper, and substance use adds to the concerns of victims, particularly around their (ex)partner making a very bad decision with their firearm. These high rates of threats to shoot others, particularly by stalkers, should be considered within the larger context of public safety. More research attention is needed to help facilitate a stronger response to stalking particularly when there have been threats with guns.

Adding to the victim and public safety risk is the fact that half of the abusers (regardless of stalking status) threatened to shoot themselves. At first glance, this may look less dangerous to some. However, a person who feels they have nothing to lose including their life may be even more dangerous than those who do not threaten to kill themselves. Although this study did not find differences on threats to shoot oneself and stalking status, several studies have found a connection (McEwan, Mullen, & MacKenzie, 2010; Mohandie, Meloy, McGowan, & Williams, 2006). Regardless of stalking status, when an abusive (ex)partner indicates "last resort" thinking, including not caring if they die or go to jail, it is a red flag for an increased likelihood of violence (Borum, Fein, Vossekuil, & Berglund, 1999; Connor-Smith, Henning, Moore, & Holdford, 2011; Fein, Vossekuil, & Holden, 1995; McEwan et al., 2010).

In this study, over half of those threatened with guns reported they were threatened with guns during periods of stalking. It is still unclear when threats with guns or concerns about guns and harm toward the victim are most likely to occur. It seems obvious that gun threats are occurring while the couple is together, but it is less obvious whether gun threats increase as victims prepare to leave or how gun threats during the relationship play out during separation and periods of stalking (Logan & Walker, 2004, 2017b; Logan et al., 2004). Furthermore, it is unclear how threats with guns impact or inhibit separation attempts or how the experience of stalking may be changed if there were gun threats during the relationship and/or during the course of stalking. The connection of guns and stalking are particularly concerning, given the long-lasting impact on mental health from stalking (Logan & Walker, 2009, 2017b) and gun threats (Sullivan & Weiss, 2017). Both stalking and threats with guns should be assessed when working with victims although strategies to improve safety can be limited for both stalk-

ing and gun threats and especially when the two are overlapping (Logan & Walker, 2017c, 2017d).

Protective orders are often suggested as one avenue for partner abuse victims, particularly those that experience abuse after leaving (Logan & Walker, 2010a; Logan, Shannon, & Walker, 2005; Logan et al., 2006). In this study, stalking victims were more likely to have reported obtaining a protective order than those not stalked, and the largest proportion of those with both stalking and gun threat experiences obtained protective orders. Furthermore, regardless of stalking status, one-third of participants with protective orders indicated the protective order was specifically violated with some kind of gun threat. Even so, there were no differences in perceived effectiveness of the protective order by stalking status or by gun threat. Of those that obtained a protective order, about one-third said they felt safer, about 60% said it didn't impact their safety negatively or positively, and only about 10% indicated that the protective order decreased their safety. These results are consistent with prior research that suggests protective orders do help increase perceptions of safety and reduce exposure to abuse in general (Logan & Walker, 2010b; Logan, Walker, & Hoyt, 2012). Specifically, studies have found that protective orders can be useful tools in intervening with stalking (Häkkänen, Hagelstam, & Santtila, 2003; Logan & Walker, 2010a, 2017b). For example, one study of stalkers who were referred to a forensic clinic found that close to one-third did not violate the protective order against them (Harmon, Rosner, & Owens, 1998). Some studies have also found that even among the stalkers who had violated protective orders, the frequency of abuse and contact was reduced after protective orders were issued (Häkkänen et al., 2003; Logan & Walker, 2010a, 2017b).

Furthermore, this study found that half of the women who experienced stalking and gun threats and who had protective orders said their (ex)partner was banned from having firearm compared to about one-quarter of the other groups. The protective order may be one option to ban abusers from having guns, and some research shows that may be a useful approach to addressing the lethality of partner abuse cases (Zeoli et al., 2016). Although many support the notion of gun restrictions on partner abusers, there has been less emphasis on gun restrictions among stalkers even though this study and others show stalking is dangerous and stalkers have access to and threat with guns (Gerney & Parsons, 2014; Logan & Walker, 2017b). However, because the typical orientation of the justice system is to focus more on physical harm rather than psychological harm, the terror that stalking causes is often minimized; and thus, stalking charges are a less frequent occurrence than the number of stalking cases, and protective orders in cases of stalking may be more difficult to obtain (Baum, Catalano, Rand, & Rose, 2009; Klein, Salomon, Huntington, Dubois, & Lang, 2009; Logan & Walker, 2009; Logan, Nigoff, Jordan, & Walker, 2002; Tjaden & Thoennes, 1998).

Although concern with public safety and gun violence is often thought of as an urban or city problem, gun violence is also very much an issue in rural areas (Branas, Nance, Elliott, Richmond, & Schwab, 2004). Consistent with this notion, this study found that gun threats, in general, were associated with living in rural areas. The rate of firearm-related suicide is actually higher in rural areas than urban areas of the United States (Branas et al., 2004). Rural areas also often have a deep gun culture, and guns can be associated with identity (Bellesiles, 1996; Ching & Creed, 1997; Parker, Horowitz, Igielnik, Oliphant, & Brown, 2017). Rural areas are typically have more pro-gun/anti-gun control beliefs, and rural residents are more likely to personally own a gun which may impact rural victim help-seeking (Celinska, 2007; Lynch & Logan, 2017b; Lynch, Logan, & Jackson, 2017; Parker et al., 2017; Pew Research Center, 2013). Research suggests that violence against women crimes are seen as a lower

priority than other crimes by rural community professionals (e.g., drug crimes) compared to urban communities which may make access to protective orders, and the gun ban that might go with a protective order, more difficult for rural women (Logan, Walker, Hoyt, & Faragher, 2009; Lynch & Logan, 2017b; Lynch et al., 2017; Walker & Logan, in press). In fact, several studies suggest that partner violence victims from rural areas may be deterred from even seeking a protective order if they believe their abusers' guns would be confiscated (Logan & Walker, 2017c; Lynch & Logan, 2018).

The present study found that twice as many women being stalked and threatened with a gun were advised to get a gun as those being stalked but not currently threatened with a gun or those threatened with a gun but not stalked. Having a protective order was also associated with being advised to get a gun for safety. It may be that informal and formal helpers struggle with how to help victims being stalked or threatened with guns making the suggestion of getting a gun for safety more likely. In fact, Zeoli and Bonomi (2015) found that states are continuously enacting laws to make it even easier for victims to carry guns. Additionally, other studies suggest that partner abuse victims feel owning a gun would make things worse for them (Lynch & Logan, 2018; Sorenson & Wiebe, 2004). One recent study found that victims felt that they would *not* want to be responsible for seriously harming or killing another person—even the person who may have tried to kill them (Lynch & Logan, 2018). On the other hand, victims in this study and in others suggest that owning a gun may be a legitimate safety strategy for the right person with the right support, training, and resources (Lynch & Logan, 2018; Logan & Walker, 2017c). More research is needed to expand safety strategies for stalking and gun threat victims particularly when they intersect (Logan & Walker, 2017c; 2017d).

This study has several limitations including that although the study included a broad representation of women from across the United States, it was a convenience sample and cannot be generalized to the population as a whole. Another limitation is that this survey was short, and the measures were all developed specifically for this study. Having a longer survey would have allowed for a more nuanced and contextual analysis of the scope, nature, and context of gun threats within the context of coercive control and stalking. Also, this study had a smaller representation of rural areas and of various racial/ethnic groups. Understanding more nuanced threats with guns in rural areas or within different race ethnicities could increase our understanding of coercive control within different contexts even further. However, this study provides a basis for gathering more information about gun threats, concerns about gun threats, and particularly in understanding the connection of gun threats and stalking.

Another potential limitation is the screening question regarding gun threats. There is no standard accepted way to measure gun threat at this time, and this study used a definition of gun threat that was broader than what other studies have used which can impact prevalence rates. In particular, this study assessed fear and concern for safety for themselves or others close to them because their (ex)partner had access to or because they were threatened with a gun. It is now clear that guns can be used to directly threaten but also can be used to indirectly threaten someone, and that victims of partner abuse fear for themselves and others. Threatening others, in fact, is a very powerful way to control and intimidate someone (Kwang, Crockett, Sanchez, & Swann, 2013; Lavoie, Miller, Conway, & Fleet, 2001; Logan, 2017; Logan & Walker, 2017b). This study also shows it is important to measure types of threats with guns beyond a dichotomy of yes/no; however, there are likely many other ways abusers use guns to threaten their victims and others close to them that should be explored (Logan, 2017). Furthermore, understanding more about the role of guns and public safety is crucial.

In summary, measuring instances of physical assault in abusive relationships only provide a small glimpse of the terror women experience from partner abuse (Logan, 2017; Logan & Walker, 2017b; Stark, 2007). This study suggests that not all women are stalked by their abusive (ex)partner and not all are threatened with a gun. By the same token, just measuring whether the abuser has access to weapons is not sufficient for a full understanding of the scope, nature, and trajectory of gun threats. Furthermore, explicit threats to hurt pets or friends and family and actual threats to friends and family may be especially key to understanding more about future risk of harm, risk of harm to others, victim distress and fear, and safety planning. Given the powerful impact of threats to harm friends and family on victims, it is critical that victim concerns about the safety of loved ones (and pets) be addressed in risk assessment and safety planning alongside her own safety. Additionally, the general threats to the public due to stalking and gun threats deserves more attention and research focus.

NOTE

1. These callers include friends and family, service providers, and other organization like schools wanting information (National Domestic Violence Hotline, 2016).

REFERENCES

Baum, K., Catalano, S., Rand, M., & Rose, C. (2009). *Stalking victimization in the United States (NCJ 224527). Bureau of Justice Statistics Special Report*. Washington, DC: US Department of Justice.

Bellesiles, M. A. (1996). The origins of gun culture in the United States, 1760-1865. *The Journal of American History*, *83*(2), 425–455. http://dx.doi.org/10.2307/2944942

Borum, R., Fein, R., Vossekuil, B., & Berglund, J. (1999). Threat assessment: Defining an approach for evaluating risk of targeted violence. *Behavioral Sciences & the Law*, *17*(3), 323–337. http://dx.doi.org/10.1002/(SICI)1099-0798(199907/09)17:3<323::AID-BSL349>3.0.CO;2-G

Branas, C. C., Nance, M. L., Elliott, M. R., Richmond, T. S., & Schwab, C. W. (2004). Urban-rural shifts in intentional firearm death: Different causes, same results. *American Journal of Public Health*, *94*(10), 1750–1755. http://dx.doi.org/10.2105/AJPH.94.10.1750

Campbell, J. (1995). Prediction of homicide of and by battered women. In J. Campbell (Ed.), *Assessing the risk of dangerousness: Potential for further violence of sexual offenders, batterers, and child abusers* (pp. 93–113). Newbury Park, CA: Sage.

Campbell, J. C., Glass, N., Sharps, P. W., Laughon, K., & Bloom, T. (2007). Intimate partner homicide: review and implications of research and policy. *Trauma, Violence & Abuse*, *8*(3), 246–249. http://dx.doi.org/10.1177/1524838007303505

Campbell, J. C., Webster, D., Koziol-McLain, J., Block, C., Campbell, D., Curry, M. A., . . . Laughon, K. (2003). Risk factors for femicide in abusive relationships: Results from a multisite case control study. *American Journal of Public Health*, *93*(7), 1089–1097. http://dx.doi.org/10.2105/AJPH.93.7.1089

Celinska, K. (2007). Individualism and collectivism in America: The case of gun ownership and attitudes toward gun control. *Sociological Perspectives*, *50*(2), 229–247. http://dx.doi.org/10.1525/sop.2007.50.2.229

Ching, B., & Creed, G. (1997). *Knowing your place: Rural identity and cultural hierarchy*. New York, NY: Routledge.

Cho, H., Hong, J., & Logan, T. (2012). An ecological understanding of the risk factors associated with stalking behavior: Implications for social work practice. *Affilia: Journal of Women and Social Work*, *27*(4), 381–390.

Connor-Smith, J. K., Henning, K., Moore, S., & Holdford, R. (2011). Risk assessments by female victims of intimate partner violence: Predictors of risk perceptions and comparison to an actuarial measure. *Journal of Interpersonal Violence*, *26*(12), 2517–2550. http://dx.doi.org/10.1177/0886260510383024

Dutton, M. A., & Goodman, L. A. (2005). Coercion in intimate partner violence: Toward a new conceptualization. *Sex Roles*, *52*(11-12), 743–756. http://dx.doi.org/10.1007/s11199-005-4196-6

Everytown for Gun Safety. (2017). Mass shootings in the United States: 2009-2019. Retrieved from https://everytownresearch.org/wpcontent/uploads/2017/04/Analysis_of_Mass_Shooting_062117.pdf

Fein, R., Vossekuil, B., & Holden, G. (1995). *Threat assessment: An approach to prevent targeted violence. (NCJ 155000)*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, National Institute of Justice.

Finch, E. (2001). *The criminalization of stalking: Constructing the problem and evaluating the solution*. London, UK: Cavendish Publishing Limited.

Fox, J. A., & Fridel, E. E. (2017). Gender differences in patterns and trends in U.S. homicide, 1976–2015. *Violence and Gender*, *4*(2), 37–43. http://dx.doi.org/10.1089/vio.2017.0016

Gerney, A., & Parsons, C., & Center for American Progress. (2014). Women under the gun: How gun violence affects women and 4 policy solutions to better protect them. Retrieved from http://cdn.americanprogress.org/wpcontent/uploads/2014/06/GunsDomesticViolencereport.pdf

Harmon, R. B., Rosner, R., & Owens, H. (1998). Sex and violence in a forensic population of obsessional harassers. *Psychology, Public Policy, and Law*, *4*(1-2), 236–249. http://dx.doi.org/10.1037/1076-8971.4.1-2.236

Häkkänen, H., Hagelstam, C., & Santtila, P. (2003). Stalking actions, prior offender-victim relationships and issuing of restraining orders in a Finnish sample of stalkers. *Legal and Criminological Psychology*, *8*(2), 189–206. http://dx.doi.org/10.1348/135532503322362960

Kellermann, A. L., Rivara, F. P., Rushforth, N. B., Banton, J. G., Reay, D. T., Francisco, J. T., . . . Somes, G. (1993). Gun ownership as a risk factor for homicide in the home. *New England Journal of Medicine*, *329*(15), 1084–1091. http://dx.doi.org/10.1056/NEJM199310073291506

Klein, A., Salomon, A., Huntington, N., Dubois, J., & Lang, D. (2009). *A statewide study of stalking and its criminal justice response. (Grant number 2007-WG-BX-003)*. Washington, DC: National Institute of Justice, U.S. Department of Justice.

Kwang, T., Crockett, E. E., Sanchez, D. T., & Swann, W. B. (2013). Men seek social standing, women seek companionship: Sex differences in deriving self-worth from relationships. *Psychological Science*, *24*(7), 1142–1150. http://dx.doi.org/10.1177/0956797612467466

Lavoie, K. L., Miller, S. B., Conway, M., & Fleet, R. P. (2001). Anger, negative emotions, and cardiovascular reactivity during interpersonal conflict in women. *Journal of Psychosomatic Research*, *51*(3), 503–512. http://dx.doi.org/10.1016/S0022-3999(01)00217-3

Logan, T. (2017). "If I can't have you nobody will": Explicit threats in the context of partner abuse. *Violence and Victims*, *32*(1), 126–140.

Logan, T., Cole, J., Shannon, L., & Walker, R. (2006). *Partner stalking: How women respond, cope, and survive*. New York, NY: Springer Publishing.

Logan, T., Nigoff, A., Jordan, C., & Walker, R. (2002). Stalker profiles with and without protective orders: Do protective orders make a difference in reoffending or criminal justice processing? *Violence and Victims*, *17*(5), 541–554.

Logan, T., Walker, R., Jordan, C., & Campbell, J. (2004). An integrative review of separation in the context of victimization: Consequences and implications for woman. *Violence, Trauma, & Abuse*, *5*(2), 143–193.

Logan, T. K., Shannon, L., & Cole, J. (2007). Stalking victimization in the context of intimate partner violence. *Violence and Victims*, *22*(6), 669–683. http://dx.doi.org/10.1891/088667007782793147

Logan, T., Shannon, L., & Walker, R. (2005). Protective orders process and barriers in rural and urban areas: a multiperspective study. *Violence Against Women*, *11*(7), 876–911.

Logan, T. K., & Walker, R. (2004). Separation as a risk factor for victims of intimate partner violence: Beyond lethality and injury: A response to Campbell. *Journal of Interpersonal Violence*, *19*(12), 1478–1486. http://dx.doi.org/10.1177/0886260504269699

Logan, T., & Walker, R. (2009). Partner stalking: Psychological dominance or business as usual? *Trauma, Violence, and Abuse*, *10*(3), 247–270.

Logan, T. K., & Walker, R. (2010a). Toward a deeper understanding of the harms caused by partner stalking. *Violence and Victims*, *25*(4), 440–455. http://dx.doi.org/10.1891/0886-6708.25.4.440

Logan, T. K., & Walker, R. (2010b). Civil protective order effectiveness: Justice or just a piece of paper? *Violence and Victims*, *25*(3), 332–348. http://dx.doi.org/10.1891/0886-6708.25.3.332

Logan, T., & Walker, R. (2017a). The impact of stalking victimization on separation: Assessing and addressing safety and economic security. *Domestic Violence Report*, *22*(5), 69–74.

Logan, T., & Walker, R. (2017b). Stalking: A multidimensional framework for assessment and safety planning. *Trauma, Violence, and Abuse: A Review Journal*, *18*(2), 200–222.

Logan, T., & Walker, R. (2017c). Looking into the black box of safety planning: Process and challenges. Manuscript submitted for publication.

Logan, T., & Walker, R. (2017d). *Advocate safety planning feedback, training, and personal challenges.* Manuscript submitted for publication.

Logan, T. K., Walker, R., & Hoyt, W. (2012). The economic costs of partner violence and the cost-benefit of civil protective orders. *Journal of Interpersonal Violence*, *27*(6), 1137–1154. http://dx.doi.org/10.1177/0886260511424500

Logan, T., Walker, R., Hoyt, W., & Faragher, T. (2009). *The Kentucky civil protective order study: A rural and urban multiple perspective study of protective order violation consequences, responses, & costs. NCJ 228350*. Washington, DC: US Department of Justice, National Institute of Justice.

Logan, T. K., Walker, R., Shannon, L., & Cole, J. (2008). Factors associated with separation and ongoing violence among women with civil protective orders. *Journal of Family Violence*, *23*(5), 377–385. http://dx.doi.org/10.1007/s10896-008-9164-9

Logan, T. K., Walker, R., Stewart, C., & Allen, J. (2006). Victim service and justice system representative responses about partner stalking: What do professionals recommend? *Violence and Victims*, *21*(1), 49–66. http://dx.doi.org/10.1891/0886-6708.21.1.49

Lynch, K., Logan, T., & Jackson, D. (2017). People will bury their guns before they surrender them: Implementing domestic violence gun control in rural, appalachian versus urban communities. *Rural Sociology*. Advance online publication. https://doi.org/10.1111/ruso.12206

Lynch, K. R., & Logan, T. K. (2018). "You better say your prayers and get ready": Guns within the context of partner abuse. *Journal of Interpersonal Violence*, *33*(4), 686–711. http://dx.doi.org/10.1177/0886260515613344

Lynch, K. R., & Logan, T. K. (2017b). Implementing domestic violence gun confiscation policy in rural and urban communities: Assessing the perceived risk, benefits, and barriers. *Journal of Interpersonal Violence*, *123*, 088626051771908. http://dx.doi.org/10.1177/0886260517719081

McEwan, T., Mullen, P., & MacKenzie, R. (2010). Suicide among stalkers. *Journal of Forensic Psychiatry & Psychology*, *21*(4), 514–520. http://dx.doi.org/10.1080/14789940903564370

McFarlane, J. M., Campbell, J. C., Wilt, S., Sachs, C. J., Ulrich, Y., & Xu, X. (1999). Stalking and intimate partner femicide. *Homicide Studies*, *3*(4), 300–316. http://dx.doi.org/10.1177/1088767999003004003

McFarlane, J., Campbell, J. C., & Watson, K. (2002). Intimate partner stalking and femicide: Urgent implications for women's safety. *Behavioral Sciences & the Law*, *20*(1-2), 51–68. http://dx.doi.org/10.1002/bsl.477

Mohandie, K., Meloy, J. R., McGowan, M. G., & Williams, J. (2006). The RECON typology of stalking: Reliability and validity based upon a large sample of North American stalkers. *Journal of Forensic Sciences*, *51*(1), 147–155. http://dx.doi.org/10.1111/j.1556-4029.2005.00030.x

National Domestic Violence Hotline. (2016). A year of impact: National domestic violence hotline & love is respect. Retrieved from http://www.thehotline.org/wp-content/uploads/2017/03/2016-Impact-Report.pdf

Parker, K., Horowitz, J., Igielnik, R., Oliphant, B., & Brown, A., & Pew Research Center. (2017). America's complex relationship with guns: An in-depth look at the attitudes and experiences of U.S. adults. Retrieved from http://www.pewsocialtrends.org/2017/06/22/americas-complex-relationship-with-guns

Petrosky, E., Blair, J. M., Betz, C. J., Fowler, K. A., Jack, S. P. D., & Lyons, B. H. (2017). Racial and ethnic differences in homicides of adult women and the role of intimate partner violence—United States, 2003-2014. *MMWR. Morbidity and Mortality Weekly Report*, *66*(28), 741–746. http://dx.doi.org/10.15585/mmwr.mm6628a1

Pew Research Center. (2013). Why own a gun? Protection is now top reason. Section 3: Gun ownership trends and demographics. Retrieved from http://www.people-press.org/2013/03/12/section-3-gun-ownership-trends-and-demographics

Rothman, E. F., Hemenway, D., Miller, M., & Azrael, D. (2005). Batterers' use of guns to threaten intimate partners. *Journal of the American Medical Women's Association*, *60*(1), 62–28.

Smith, S. G., Fowler, K. A., & Niolon, P. H. (2014). Intimate partner homicide and corollary victims in 16 states: National Violent Death Reporting System, 2003-2009. *American Journal of Public Health*, *104*(3), 461–466. http://dx.doi.org/10.2105/AJPH.2013.301582

Sorenson, S. B. (2017). Guns in intimate partner violence: Comparing incidents by type of weapon. *Journal of Women's Health*, *26*(3), 249–258. http://dx.doi.org/10.1089/jwh.2016.5832

Sorenson, S. B., & Schut, R. A. (2016). Nonfatal gun use in intimate partner violence: A systematic review of the literature. *Trauma, Violence, & Abuse*. Advance online publication. http://dx.doi.org/10.1177/1524838016668589

Sorenson, S. B., & Wiebe, D. J. (2004). Weapons in the lives of battered women. *American Journal of Public Health*, *94*(8), 1412–1417. http://dx.doi.org/10.2105/AJPH.94.8.1412

Spitzberg, B. (2002). In the shadow of the stalker: The problem of policing unwanted pursuit. In H. Giles (Ed.), *Law enforcement, communication and community* (pp. 173–200). Philadelphia, PA: John Benjamins North America.

Stark, E. (2007). *Coercive control: The entrapment of women in personal life*. New York, NY: Oxford University Press.

Sullivan, T. P., & Weiss, N. H. (2017). Is firearm threat in intimate relationships associated with post-traumatic stress disorder symptoms among women? *Violence and Gender*, *4*(2), 31–36. http://dx.doi.org/10.1089/vio.2016.0024

Tjaden, P., & Thoennes, N. (1998). *Stalking in America: Findings from the National Violence Against Women Survey (NCJ# 169592)*. Washington, DC: National Institute of Justice Centers for Disease Control and Prevention.

Walker, R., & Logan, T. (in press). Health disparities and Justice: Are they related? *Journal of Interpersonal Violence*.

Zeoli, A. M., & Bonomi, A. (2015). Pretty in pink? Firearm hazards for domestic violence victims. *Women's Health Issues*, *25*(1), 3–5. http://dx.doi.org/10.1016/j.whi.2014.09.005

Zeoli, A. M., Malinski, R., & Turchan, B. (2016). Risks and targeted interventions: Firearms in intimate partner violence. *Epidemiologic Reviews*, *38*(1), mxv007. http://dx.doi.org/10.1093/epirev/mxv007

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Women with Protective Orders Report Failure to Remove Firearms from Their Abusive Partners: Results from an Exploratory Study

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Abstract

Aims: The purpose of this study was to describe the perceptions of women who sought court protection orders for domestic violence (PODV) about actions to implement laws intended to disarm their abusers.
Methods: We identified female victims of intimate partner violence (IPV) in New York and Los Angeles primarily through family courts and records of police calls for domestic violence. Of these, 782 were surveyed and asked about their experiences seeking PODV from courts, judges ordering the removal of firearms from defendants, and if firearms were actually surrendered or confiscated.
Results: Of the 542 victims who had obtained a PODV and knew whether their abuser owned a firearm, 82 (15%) reported that their abuser owned a firearm. Although state law either allowed or mandated judges issuing PODVs to require abusers to surrender their firearms, 21 victims (26%) reported that judges used this authority. Ten victims (12% of victims with armed abusers) reported that their abuser had either surrendered all of his firearms or had the firearms seized. When victims reported that the judge ordered their abuser to surrender his firearms, victims were more likely to report that all firearms were either surrendered by the abuser or confiscated by law enforcement.
Conclusions: Based on the perceptions of the IPV victims in this study, laws designed to disarm domestic violence offenders were either poorly implemented or failed to inform victims when their abuser's firearms were surrendered or confiscated.

Introduction

Shootings are the most common method by which women are killed by an intimate partner in the United States. In 2005, 678 of the 1181 (57.4%) women killed by a boyfriend, spouse, or ex-spouse were killed with firearms.[1] This is an undercount because FBI data do not include a category for ex-boyfriends. Children are also at risk of being killed with a gun in incidents of domestic violence.[2] Perpetrators of intimate partner violence (IPV) also use firearms to threaten and intimidate their partners,[3,4] and such threats are predictors of subsequent homicides.[5] A study of risk factors for women being murdered by a current or former intimate partner after prior IPV found that the abusive partner's ownership of a firearm was associated with a 5-fold increased risk.[5] A separate study of risk factors for women being murdered in their homes, primarily by current or former intimate partners, found that the presence of a gun in the home increased the risk of femicide 3-fold.[6]

In recognition of the inherent danger posed by IPV offenders with ready access to firearms, as of 2002, federal law and 24 states prohibited firearm possession by individuals who are subject to certain court orders of protection for victims of IPV.[7] An evaluation of these laws found that firearm restrictions for defendants of protection orders for domestic violence (PODV) were associated with an 8% reduction in the rate of intimate partner homicide.[7]

In an attempt to ensure that IPV offenders are disarmed once prohibited from owning firearms, 16 states have passed laws that either allow or require judges issuing PODVs to order defendants to surrender any firearms in their possession.[8] The impact of these laws is likely to depend on effective

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enforcement. A study of the implementation of two Maryland laws designed to disarm IPV offenders revealed several challenges. For example, some law enforcement officers reported they had little or no recourse if, upon serving an order with a firearm surrender provision, a respondent denied possessing any firearms.[9]

California law requires judges issuing most types of PODVs to order defendants to surrender their firearms. Sorenson and Shen[10] examined implementation of this law by analyzing court administrative data for all PODVs in California in effect on June 6, 2003. Court documents indicated that 52% of the perpetrators were required to relinquish any firearm in their possession, and an additional 38% were prohibited from purchasing firearms. A subsequent study found that very few criminal justice agencies in California routinely confiscated firearms from PODV defendants when firearms were not voluntarily surrendered.[11]

Protective orders are often initiated by the victim and are intended to increase victim safety. However, there has been little research examining IPV victims' perceptions about whether judges issuing their protective orders included a provision for their abusers to surrender their firearms or whether the firearms were actually surrendered or confiscated by law enforcement. Moracco et al.[12] surveyed victims receiving *ex parte* PODV before and after a new North Carolina law went into effect that required judges to ask plaintiffs seeking *ex parte* PODV if defendants have any firearms and required defendants to surrender any firearms in their possession within 24 hours of being served with the order. Forty-five percent of the plaintiffs seeking *ex parte* PODVs after the new law went into effect reported that judges asked them about the defendant's ownership of firearms, a proportion similar to that during the prelaw period. Of the victims who reported that their abuser's restraining order prohibited their abuser from possessing a firearm, 14% said sheriff's deputies confiscated the weapons and another 5% reported that the defendant voluntarily surrendered the firearms to authorities.[12]

Victims who know whether their protective orders require the abuser to surrender his firearms and whether the abuser was indeed disarmed should (1) be better positioned to advocate for their abuser's adherence to court-ordered firearm prohibitions and (2) be better able to respond if the system fails to disarm proscribed abusers. However, this is an area that has received little research attention. Given this gap in the literature, the primary objectives of the present study were to describe for a sample of women who sought a PODV the frequency with which they reported (1) requesting that judges order the PODV defendants to surrender their firearms, (2) that judges asked PODV defendants if they possessed firearms, (3) if judges ordered PODV defendants to surrender firearms as a condition of their protective orders, and (4) if their abusers were disarmed in accordance with the orders.

Materials and Methods

Study sample

The data for this study were gathered as part of a larger effort to evaluate methods for predicting the risk of repeat assault among IPV victims. Baseline interviews were conducted in 2002–2003 with a convenience sample of 1307 adult female victims of IPV recruited in New York City and Los Angeles County. Most participants were recruited from either the New York City Family Courts ($n = 630$) or from 911 calls to the Los Angeles Sheriff's Department for IPV incidents ($n = 397$). Additional participants were recruited from shelters for victims of domestic violence ($n = 233$), hospital emergency departments ($n = 30$), and a service agency for crime victims ($n = 17$). Additional details of the recruitment methods have been published previously.[13]

Laws to disarm domestic violence offenders

New York and California each have laws restricting firearm ownership by individuals subject to IPV protective orders. In California, except for some emergency orders, judges are required to order respondents (abusers) to both temporary and final orders to surrender any firearms in their possession. Judges in New York are required by state law to order abusers to surrender their firearms if the incident that prompted the protective order involved the use or threatened use of a deadly weapon or if the abuser had a prior felony conviction involving violence, stalking, or failure to obey prior protective orders.[8] New York law also allows judges to order abusers to relinquish their firearms if there is a substantial risk the abuser might use a firearm against the victim.

Data collection and measures

Two thirds (867 of 1307) of the baseline interviews were conducted in person (almost all from New York City), and one third (440 of 1307) were by telephone (almost all from Los Angeles County). We used the same survey instrument for both in-person and telephone interviews. During the baseline interview, each study participant completed one of two longer risk assessment protocols (Danger Assessment[14] or DV-MOSAIC[15]). Each of these protocols included a question about whether the abuser owns a gun. We were able to reinterview 782 (60%) of the participants by telephone an average of 8.8 months after the baseline interview. Items pertaining to abusers' surrender of firearms were included in the follow-up interview only. Women who obtained protective orders against their abusers were asked: (1) Did you or your attorney ask the court to have the police take [abuser's name]'s guns from him? (2) Did a judge order [abuser's name] to give his guns to the police or sheriff's department, or did the judge order the police or sheriff's department to take [abuser's name]'s guns from him? (3) Did he [abuser] give his guns to the police or sheriff's department or did the police or sheriff's department take his guns from him?

To ascertain abusers' gun ownership at the time of a protective order, we assumed that any abuser who owned a firearm at baseline also owned one at the time of the protective order. We also assumed that the abuser owned a firearm if the participant reported that she had asked the court to order the abuser to surrender his firearms at the time of the protective order or that the abuser surrendered a firearm after the order.

Data analysis

We calculated the prevalence of victims' reports of actions taken by the court to remove firearms from IPV offenders subject to protective orders and their perceptions of whether these firearm surrender provisions were carried out. We used Pearson's chi-square statistic to determine the statistical sig-

nificance of bivariate associations between categorical variables.

Results

Characteristics of study sample

Of the 782 women interviewed at follow-up, 595 (76%) reported ever obtaining a protective order against their abusive partner. Forty-three of these 595 reported they did not know whether or not their abuser had a firearm. Of the remaining 542, we identified 82 cases (29 of 146 from California and 53 of 398 from New York) in which there was a protective order involving an abuser with a firearm. Table 1 details selected characteristics of the women involved in these 82 cases compared with the 513 victims who obtained a protective order against abusers who victims reported did not possess guns. Demographically, both groups were similar with respect to marital status, presence of children in the home, race/ethnicity, education, employment status, and prevalence of experiencing severe physical abuse by a current or former partner. Victims with abusers who had firearms, however, were more likely to report no intimate or cohabitating relationship with the abuser at baseline (92.7% vs. 71.0%, $p = 0.0001$) and less likely to be foreign born (24.4% vs. 43.1%, $p = 0.001$). Approximately two thirds of the victims whose abusers had guns (56 of 82) experienced severe forms of IPV (e.g., being beaten up, attacked with a knife or gun, burned, strangled) in the 6 months before the baseline interview. Although the frequency of recent, severe abuse did not differ between victims who reported their abusers owned firearms and those who did not, victims whose abusers owned a firearm were more likely to have

Table 1. Characteristics of Study Participants Who Obtained a Protective Order Against an Abusive Partner or Ex-partner at Baseline Interview ($N = 595$)

Victim characteristics at baseline	*Abuser possessed firearm* (n = *82*) n *(%)*	*Abuser did not possess firearm* (n = *513*) n *(%)*	p *value*
Race/ethnicity			
Black	26 (31.7)	159 (31.0)	0.931
Hispanic/Latina	45 (54.9)	270 (52.6)	
White non-Hispanic	6 (7.3)	45 (8.8)	
Other	5 (6.1)	39 (7.6)	
Nativity			
U.S. born	62 (75.6)	292 (56.9)	0.001
Foreign born	20 (24.4)	221 (43.1)	
Employment			
Full-time, outside home	28 (34.1)	175 (34.1)	0.951
Part-time or seasonal	15 (18.3)	87 (17.0)	
Not working outside the home/refused to answer	39 (47.6)	251 (48.9)	
Highest educational attainment			
Did not graduate from high school	24 (29.3)	164 (32.0)	0.599
High school graduate or GED	26 (31.7)	174 (34.3)	
Some college or vocational school	24 (29.3)	116 (22.6)	
College graduate	8 (9.7)	67 (11.1)	
Marital status			
Never married	41 (50.0)	243 (47.5)	0.337
Married/Common law	28 (34.1)	216 (42.2)	
Separated	6 (7.3)	21 (4.1)	
Divorced	7 (8.5)	32 (6.3)	
Children in home			
Yes	74 (90.2)	465 (90.6)	0.994
No	8 (9.8)	48 (9.4)	
Involvement with abuser			
Live in same household	4 (4.9)	107 (20.9)	0.001
Some intimacy but not living together	2 (2.4)	42 (8.2)	
Not cohabitating or intimate	76 (92.7)	364 (71.0)	
Suffered severe assault[a] by abuser			
Yes, occurred in past 6 months	56 (68.3)	344 (67.1)	0.311
Yes, occurred >6 months ago	11 (13.4)	97 (18.9)	
No	15 (18.3)	72 (14.0)	
Abuser used knife or gun against her			
Yes, once in past 6 months	12 (14.8)	45 (8.8)	0.003
Multiple times in past 6 months	13 (17.3)	31 (6.0)	
Yes, >6 months ago	8 (9.9)	42 (8.2)	
No	47 (58.0)	395 (77.0)	

[a]Severe assaults include being beat up, choked, burned, use of a gun or knife, attempt to kill, or received serious injuries, such as broken bones, loss of consciousness from blow to head.

been victimized by a gun or knife and to have been victimized multiple times (Table 1).

Victims' reports of firearm removal provision of protective order

Among the 82 cases in which the victim had obtained a protective order and reported that the abuser owned firearms, 37 women (45%) reported specifically asking the court during the protective order hearing to have their abusers' guns removed. Eighteen of these 37 respondents (49%) reported that the judge complied with their request, and 3 additional respondents reported that the judge ordered firearm removal without the victim requesting this relief. Thus, 26% (21 of 82) of victims whose abuser possessed a firearm reported that the judge ordered that these firearms be surrendered or removed from the abusers. Fourteen victims (17%) said that they did not know if the judge ordered the defendant to surrender his firearms. Victims were more likely to report judges ordering gun removal in Los Angeles (34%) than in New York City (21%). Victims were also more likely to report judges ordering firearm removal in cases in which the abuser had tried to kill the victim compared with less severe cases (35% vs. 18%, $p = 0.073$). However, prior threats or use of a weapon in abusive relationships were not associated with an increase in the likelihood that victims reported that judges ordered firearms removed (Table 2).

Ten of the 82 (12%) victims with armed abusers subject to a protective order reported that their abusers either surrendered their firearms to authorities or had firearms confiscated. The likelihood of reported compliance with the firearm surrender provision was associated with whether the victim reported that the judge issued an order for firearm removal (likelihood ratio $\chi^2 = 6.71$, $df = 2$, $p = 0.035$). Among the 21 cases in which the victim reported that the judge had ordered firearm removal, 5 (24%) reported that all firearms were surrendered or confiscated, 5 did not know, and 11 (52%) reported that the abuser retained at least one firearm. Among the 61 participants who reported that the judge did not order firearm removal, 5 (8%) reported that all firearms were surrendered or removed.

Discussion

California law mandates judges to include a firearm surrender provision in nonemergency domestic violence restraining orders. New York law requires judges to order firearm surrender if the incident prompting the protective order involved a firearm assault and allows (but does not require) judges to order firearm surrender if they deem a victim is at substantial risk of future gun assault. Yet in our sample, IPV victims from New York City and Los Angeles reported that judges issued orders for firearm surrender in only 26% of the cases involving protective orders against armed abusers. In some cases, victims reported that judges did not act despite their explicit request to have firearms removed.

There are many reasons why a judge might not order an IPV offender to surrender his firearms. Although New York and California laws have relatively broad inclusion criteria, some cases will not meet the legal requirements for judges to order firearm removal. In New York, judges have some discretion about when to order firearm removal in cases where guns were not part of the abuse. A recent study of court records in California found that about half of all PODV in the state included an order for the respondent to surrender any firearms in his possession.[10] Forty percent of our sample was drawn from Los Angeles County, and 34% of those respondents reported that the judge had ordered their abusers to surrender firearms.

The difference between the findings of this study and those found in the study of California court records[10] could be partly attributable to our relatively small sample drawn from a single jurisdiction in California compared with the prior analysis of the entire state. But our findings are more likely due to the different measures used in the two studies and to slightly different research questions being examined. In responding to interview questions about whether the judge

Table 2. Hypothesized Correlates of Victim Reports of Judicial Orders for Abusers to Relinquish Firearms

	Did judge order firearm surrender or removal?		
	Yes n *(row %)*	*No* n *(row %)*	p *value*
Site			
Los Angeles	10 (34.5)	19 (65.5)	0.173
New York City	11 (20.8)	42 (79.2)	
Abuser previously tried to kill victim			
Yes	13 (35.1)	24 (64.9)	0.073
No	8 (17.8)	37 (82.2)	
Prior use or threat with weapon against victim[a]			
Yes	10 (35.7)	18 (64.3)	0.643
No	4 (28.6)	10 (71.4)	
Abuser convicted for domestic assault			
Yes	8 (24.2)	25 (75.8)	0.816
No	13 (26.5)	36 (73.5)	

[a]Responses to this item do not sum to 82 because the item was part of a risk assessment instrument that was administered to half of study participants.

ordered firearm surrender or confiscation, some respondents may focus on what a judge said at the hearing or what they recall about the protective order rather than on what was written in the order. Firearm surrender provisions for restraining orders in California were a standard condition that judges could apply by checking a box on the order.[8] (These check boxes have since been eliminated, and firearm prohibition language is now a standard part of all California's PODV forms.) However, judges may not verbalize every condition of protective orders when explaining their decisions; thus, victims may not always know when judges check a box indicating that the abuser is not permitted to own firearms unless the victim carefully reads the protective order form itself.

Sorenson and Shen[10] examined how commonly judges checked defendant firearm prohibition boxes on the protection order forms. These designations have important legal consequences; however, legal restrictions concerning an abuser's possession of firearms may not result in the intended response if the judge does not verbally order the abuser to surrender his firearms. This is what was found in a recent evaluation of a new North Carolina law designed to mandate judicial actions to disarm PODV defendants.[12] Furthermore, because law enforcement agencies often do not take proactive steps to ensure that abusers have relinquished their firearms,[9,11] victims' knowledge of their abusers' firearms restrictions contained in orders of protection is necessary if victims or their advocates want to press law enforcement agencies to confiscate abusers' firearms.

We found that fewer than half of the victims who obtained protective orders against armed abusers affirmatively asked judges to order their abusers' firearms removed. There are several reasons why a victim might not request gun removal from her abuser. The circumstances of some of the cases may not have permitted court action to remove firearms. In addition, some victims may not feel it necessary to request firearm removal if they believe judges will take such action on their own. Some IPV victims believe removing guns from their abusers will increase the likelihood and severity of retaliation, or they think that such action is futile because it is relatively easy for their abusers to obtain another gun.[9] Despite information contained on the PODV form itself, some women may have been unaware that judges had the power to order firearm removal from their abuser. Further research is needed that explores victims' knowledge and beliefs concerning abusers' access to firearms and strategies for disarming them.

Relatively few (12%) participants seeking orders of protection against abusers who owned a firearm believed that the court order resulted in the removal of all of the abusers' firearms. Because few victims in our study continued to live with their abusers, they may not know for certain if their abuser surrendered his firearms to authorities. Of course, victims who are threatened or abused with a firearm while a protective order is in effect need not be living with their abuser to accurately report on the failed implementation of the firearm surrender provision. In addition, our results indicate that many victims may simply be uncertain about whether guns were removed, an uncertainty that can profoundly affect women's safety and sense of well-being. Despite these caveats, our findings indicating significant gaps in the enforcement of firearms surrender conditions of domestic violence restraining orders is consistent with other studies using other types of data[9,11] and similar to a recent study that also used data from interviews of victims.[12]

Changes to existing firearm removal policies could facilitate more effective disarming of batterers. For example, states could follow California's approach and require, rather than merely allow, judges to order firearm removal from IPV offenders. Victim reports of judicial orders for firearm removal were somewhat more common among women living in Los Angeles, where state law requires judges to include firearms prohibitions in court PODVs than among women living in New York City, which only requires firearm prohibitions in orders of protection in more narrow circumstances. These differences in victim's perceptions by state (although not statistically significant in our relatively small sample) may reflect actual differences in judicial use of this removal authority. In states that allow judicial discretion for ordering firearm removal,[8] it may be important to educate judges about the substantial increase in the risk of lethal violence when abusers have access to firearms.[5] This conclusion is reinforced by our data indicating that victims reported that judges were not more likely to order removal where there had been a prior threat with a weapon against the victim.

IPV victims and their advocates have a role and an interest in improving the implementation of firearm restrictions in protective orders. Victims and advocates can encourage law enforcement to follow up when firearms surrender orders are issued to enhance compliance with the orders and attempt to hold law enforcement accountable if they do not act to ensure that defendants have been disarmed. Medical practitioners screening women for IPV should also be aware of the risks associated with an abuser's firearm possession and legal options available to women to remove that firearm.

This study is subject to certain limitations. First, our data are based on a relatively small sample drawn from two urban areas. Whether the findings are generalizable to other settings is unknown; however, our findings are consistent with those of a similar study in North Carolina.[12] Differences in sample recruitment between New York and Los Angeles may also have influenced some study findings. Second, our data are based on victims' self-report and, as with all such data, are subject to recall biases. Some victims may not know of or be able to recall all restrictions imposed by the orders including firearm restrictions. As discussed, however, what victims believe to be the case may be critically important. Nevertheless, further research is needed that combines victim report of abuser firearm ownership with police or court records that show evidence of the surrender or confiscation of firearms from proscribed IPV offenders. Third, we did not always have data that definitively indicated whether an abuser was in possession of a firearm when a protective order was issued. Some abusers had multiple arrests for IPV and had been subject to multiple protective orders, some temporary and some long-term. We did not ask about the timing of each of these events, which may have taken place over many years, and our data indicate that abusers' firearm ownership can change over time. Finally, some abusers may have sold their firearms to comply with the PODV; some women may not have appreciated this distinction in responding to our interview questions about surrender of firearms to law enforcement.

Despite these limitations, this study fills a void in the literature about the implementation of laws designed to disarm

IPV offenders. Our and others' findings suggest that the courts and law enforcement agencies are failing some women. Although California and New York laws mandating or permitting judges to order firearm removal from IPV offenders are more comprehensive than most states' laws of this type, our findings suggest that there are important gaps in enforcement that should be closed to protect IPV victims from severe injury and death by armed abusers. Enforcement might also be improved if efforts were made to be sure that women know the firearm-related provision of their protective orders and if they have, in fact, been implemented.

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Disclosure Statement

The authors have no conflicts of interest to report.

References

1. Fox JA, Zawitz MW. Homicide trends in the U.S.: Intimate homicides. Washington, DC: Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice, 2007.
2. Websdale N. Understanding domestic homicide. Boston: Northeastern University Press, 1999.
3. Tjaden P, Thoennes N. Prevalence, incidence and consequences of violence against women: Findings from the National Violence Against Women Survey. Research in Brief from National Institute of Justice and the Centers for Disease Control and Prevention. Washington, DC: U. S. Department of Justice, 1998.
4. Sorenson SB, Wiebe DJ. Weapons in the lives of battered women. Am J Public Health 2004;94:1412–1417.
5. Campbell JC, Webster D, Koziol-McLain J, et al. Risk factors for femicide in abusive relationships: Results from a mulitsite case control study. Am J Public Health 2003;93: 1089–1097.
6. Bailey JE, Kellermann AL, Somes GW, Banton JG, Rivara FP, Rushforth FP. Risk factors for violent death of women in the home. Arch Intern Med 1997;157:777–782.
7. Vigdor ER, Mercy JA. Do laws restricting access to firearms by domestic violence offenders prevent intimate partner homicide? Eval Rev 2006;30:313–346.
8. Frattaroli S, Vernick JS. Separating batterers and guns: A review and analysis of gun removal laws in 50 states. Eval Rev 2006;30:296–312.
9. Frattaroli S, Teret SP. Understanding and informing policy implementation: A case study of the Domestic Violence Provisions of the Maryland Gun Violence Act of 1996. Eval Rev 2006;30:347–360.
10. Sorenson SB, Shen H. Restraining orders in California: A look at statewide data. Violence Women 2005;11:912–923.
11. Seave PL. Disarming batterers through restraining orders: The promise and the reality in California. Eval Rev 2006;30: 245–265.
12. Moracco KE, Clark KA, Espersen C, Bowling JM. Preventing firearm violence among victims of intimate partner violence: An evaluation of a new North Carolina law. Final report submitted to the National Institute of Justice by Pacific Institute for Research and Evaluation, Chapel Hill, NC, September 2006.
13. Campbell JC, Webster DW, O'Sullivan C, et al. Intimate Violence Risk Assessment Validation Study. Final report submitted to the National Institute of Justice, September 2005.
14. Campbell JC. Assessing dangerousness. Newbury Park, CA: Sage, 1995.
15. Gavin de Becker Associates. Domestic violence method (DV-MOSAIC). Studio City, CA: Author. Available at www .mosaicsystem.com/dv.htm Accessed July 20, 2006.

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Weapons in the Lives of Battered Women

Susan B. Sorenson, PhD, and Douglas J. Wiebe, PhD

Objectives. We assessed weapon use in intimate partner violence and perspectives on hypothetical firearm policies.

Methods. We conducted structured in-person interviews with 417 women in 67 battered women's shelters.

Results. Words, hands/fists, and feet were the most common weapons used against and by battered women. About one third of the battered women had a firearm in the home. In two thirds of these households, the intimate partner used the gun(s) against the woman, usually threatening to shoot/kill her (71.4%) or to shoot at her (5.1%). Most battered women thought spousal notification/consultation regarding gun purchase would be useful and that a personalized firearm ("smart gun") in the home would make things worse.

Conclusions. A wide range of objects are used as weapons against intimate partners. Firearms, especially handguns, are more common in the homes of battered women than in households in the general population. (*Am J Public Health.* 2004; 94:1412–1417)

More than 1.5 million physical or sexual assaults are committed by current or former intimate partners each year in the United States, and 1 in 4 women report having been harmed by an intimate partner during their lifetime.[1] About one half of the female victims sustain an injury, but only about 20% of those who are injured seek medical treatment.[2] Even so, US emergency departments treat nearly 250 000 patients—mostly women—annually for injuries inflicted by an intimate partner.[2] Women injured by intimate partners account for about 1 in 5 hospital emergency department visits for intentional injury.[2]

Because weapons increase the ability to inflict harm, it would be useful to know more about objects that are used as weapons against intimate partners. Far less is understood about the means than about the results (i.e., the medical outcomes) of weapon-related violence. Of particular interest are firearms, because they have a higher case fatality rate than other means of inflicting assaultive injury.[3,4] In addition, firearms are among the few weapons that are subject to purchase or possession restrictions.

The primary objectives of the present study were twofold: (1) to investigate the range of weapons used and the relative frequency with which weapons are used against intimate partners and (2) to describe firearm prevalence and use in intimate partner violence. In addition, we assessed battered women's perspectives on firearm-related policies that would affect them directly. To obtain such information, we interviewed residents of battered women's shelters—women who were likely to be representative of those who have experienced substantial amounts of violence and who have had various objects used against them by an intimate partner.

METHODS

Sample Recruitment and Data Collection

Structured in-person interviews were sought with women staying in 84 emergency shelters for battered women across California. The 84 shelters constituted the population of emergency shelters then funded by the California Department of Health Services. Permission to conduct interviews with residents of emergency shelters was first sought from each agency's executive director and then sought from shelter residents themselves. Shelters that agreed to participate were given a $125 certificate for domestic violence prevention training materials, regardless of whether residents of the shelter participated. Participating residents were offered a $25 grocery store certificate for their time.

Executive directors of 72 agencies (86%) gave permission for residents of their emergency shelters to be interviewed. Residents of 67 of the 72 shelters (93%) were eligible (i.e., were aged at least 18 years and spoke English or Spanish) and agreed to participate in the study. RoperASW (Princeton, NJ), a national survey research firm, conducted the 417 interviews during May through August 2001. Most (77.8%) were conducted in English, 18.1% were in Spanish, and 4.2% used a combination of both; interviews averaged 19 minutes each.

Interview Content

The first set of questions focused on the types of weapons that had ever been used against the respondent by an intimate partner, by the respondent to harm her partner, or by the respondent in self-defense. Because we were interested in both injury and noninjury outcomes, the questions specified weapon use intended to hurt, to scare, or to intimidate. After identifying the person of interest and motive for use (e.g., the respondent, use in self-defense), the interviewer read the same list of potential weapons, which included an "other" option.

The second area focused on firearms within the context of the woman's most recent relationship—that is, the relationship the woman was in before she entered the shelter. The questions included firearm ownership by the woman's partner, whether a firearm was kept in the home, and the use of guns within the context of the relationship. If the 2 partners had not lived together (and only 7.9% had not), we asked about guns in each residence and tabulated responses across the 2 households. In addition, the woman's perspective was sought regarding firearm-related manufacture and distribution innovations not currently available in the United States—that is, personalized firearms ("smart guns") and spousal notification/consultation regarding firearm purchases.

Survey development included refining questions with a focus group of battered women, pretesting, and pilot testing. The final question-

naire was translated into Spanish and translated back into English, and minor changes were made to ensure equivalency of the forms.

RESULTS

Respondent Characteristics

For two thirds (67.9%) of the respondents, this was their first stay at an emergency shelter for battered women; for 17.5%, it was their second stay. Most of the respondents (57.1%) had been at the shelter for 3 weeks or less. Most (69.6%) had children with them at the shelter; one third (31.4%) had children staying elsewhere.

Most of the respondents were members of minority groups: 36.9% were Hispanic, 15.7% were Black, 12.8% were of another ethnicity, and 34.7% were White. Two thirds (66.8%) were US natives, 20.4% were born in Mexico, and 12.8% were born elsewhere. The average age was 33 years (range: 18–69 years). About one third (36.2%) of the respondents were married, 42.3% were living with but not married to their partner, 13.5% were separated or divorced, and 8.0% reported another relationship status. About one third (36.4%) had less than a high school education, 27.7% had graduated from high school, 27.5% had some college education, and 8.4% had graduated from college. Almost half (44.4%) of the respondents were employed outside the home (28.0% full-time, 16.4% part-time), 37.4% were housewives, and 18.1% had another employment status. The typical respondent was poor. Almost half (42.4%) reported an annual household income of less than $15 000, 23.4% reported $15 000–$29 999, and 13.3% reported $25 000–$39 999; few (9.9%) reported an annual income of $40 000 or more. Eleven percent (11.1%) said that they did not know their household income.

Lifetime Weapons Use in Intimate Partner Violence

Against battered women. The first column of Table 1 lists objects that had ever been used as a weapon by an intimate partner to hurt, threaten, or scare the respondent. Almost all of the respondents had had words and hands or fists used against them. The majority had had a door (e.g., slammed against body or limb) or wall (e.g., they were shoved against a wall), feet, or some type of household object used against them. Household objects identified most often were telephones or telephone cords (19.9%), pots/pans (9.8%), and plates/dishes (9.4%). Other objects used against the respondents included, but were not limited to, ashtrays, brooms, furniture, knives (nonkitchen), pillows, scissors, bottles, and irons. Among the 22.8% who reported that an intimate partner had used a tool against them, hammers and screwdrivers were most commonly reported (41.1% and 36.8%, respectively). Wrenches, pliers, and axes were among the other tools specified. More than one third reported that an intimate partner had used a motor vehicle as a weapon against them.

Among the 36.7% who reported that a firearm had been used against them, victimization by a handgun was reported twice as often as that by a long gun. Whether a firearm was used against the respondent was positively associated with the number of weapons used (t test=17.1, $P<.001$). Women who had been victimized with a firearm and those who had never been victimized with a firearm reported that an average of 8.1 and 4.6 types of weapons had been used against them, respectively.

By battered women against an intimate partner. Battered women were substantially less likely to use a weapon against an intimate partner than to have it used against them (see the second column of Table 1). Words were the most common weapon used against a partner, followed by hands or fists, feet, and household objects. Few of the women had used a motor vehicle or a firearm against an intimate partner.

By battered women in self-defense. Although few women had used objects as weapons to harm an intimate partner, it was common for them to have used objects in self-defense (see the third column of Table 1). The use of words, hands or fists, and feet was common. A substantial minority had used a door or wall, household object, or motor vehicle in self-defense.

Few of the respondents reported having used a gun in self-defense. There was some overlap between using a gun in self-defense

TABLE 1—Objects Used by an Intimate Partner to Hurt, Scare, or Intimidate or in Self-Defense: 417 Residents of 67 California Battered Women's Shelters

	Used by Partner to Hurt Respondent, %	Used by Respondent	
		to Hurt Partner, %	to Defend Self, %
Weapon Type			
Hands or fists	96.9	19.2	79.3
Feet	65.7	7.7	54.2
Words	98.3	49.9	82.2
Door or wall	71.5	3.5	28.5
Belt	25.2	0.5	2.9
Kitchen knife	34.4	4.1	15.4
Other household object (e.g., telephone, pan, ashtray)	56.8	6.2	25.0
Machete	9.4	0.2	0.5
Tool (e.g., hammer, screwdriver)	22.8	0.7	5.1
Car, pickup truck, or other vehicle	37.4	4.6	18.2
Long gun	15.9	1.0	1.4
Handgun	32.1	1.2	3.1
Other	21.8	3.1	5.5
No. of types of weapons			
Mean ±SD	5.9 ±2.6	1.0 ±1.4	3.2 ±1.9
Range	1–13	0–11	0–11

Note. Objects are listed in the order that respondents were asked about them. Missing data were rare (<0.01% on each question).

and using a gun in aggression. Of the 15 women who had used a firearm in self-defense, 5 had also used a firearm aggressively against a partner. Of the 6 who had used a gun aggressively against a partner, 5 also had used the gun in self-defense.

Firearms in Most Recent Relationship

Firearm ownership by the partner. Two fifths (39.1%) of the respondents reported that their most recent partner owned a gun during the time of the relationship. (Few [3.8%] said that they did not know whether their partner owned a gun.) Among the 163 respondents whose partner owned a firearm, 53.4% reported that he obtained a firearm during the time of the relationship. Most respondents (66.9%) reported that the partner's having a gun made them feel less safe; 11.7% reported feeling more safe, and 8.0% reported feeling safer at first but less safe later. One third (35.0%) of the partners who had a gun had more than 1.

Firearm presence in the home. About one third (36.7%) of respondents reported that they had a gun in their home at some point during the time of the relationship with their most recent partner. Most reported that having a gun in the home made them feel less safe (79.2%), but some said that they felt safer (11.7%) or safer at first but less safe later (5.8%).

As shown in Table 2, only 2 of the measured respondent characteristics were associated with having a gun in the home. The odds of having a firearm in the home was higher for women with a college education than for those with a high school education (adjusted odds ratio=2.16, $P<.006$) and for US-born women than for immigrant women (adjusted odds ratio=1.84, $P<.03$). Adding the number of weapons used against the woman improved the fit of the model, and for every additional weapon ever used against the woman, the odds of having a gun in the home increased by 1.38.

TABLE 2—Predictors of Having a Firearm in the Home: 417 Residents of 67 California Battered Women's Shelters

	AOR (95% CI)	
	Model Incorporating Demographic Characteristics Only	Model Incorporating Demographic Characteristics and No. of Weapons
Ethnicity		
Hispanic (vs White)	1.07 (0.59, 1.93)	1.10 (0.58, 2.07)
Black	0.67 (0.35, 1.31)	0.63 (0.31, 1.29)
Other	0.78 (0.38, 1.58)	0.77 (0.36, 1.64)
US born (vs immigrant)	1.84* (1.05, 3.24)	1.25 (0.69, 2.27)
Relationship status		
Living with (vs married)	0.78 (0.47, 1.28)	0.84 (0.49, 1.43)
Separated or divorced	0.82 (0.41, 1.64)	0.69 (0.33, 1.44)
Other relationship	0.47 (0.18, 1.19)	0.41 (0.15, 1.10)
Education		
<High school (vs high school)	0.86 (0.49, 1.51)	0.72 (0.39, 1.31)
College	2.16** (1.25, 3.72)	2.21** (1.23, 3.95)
Workforce status		
Working part-time (vs full-time)	1.00 (0.52, 1.93)	1.17 (0.58, 2.35)
Housewife	0.85 (0.50, 1.47)	0.90 (0.51, 1.61)
Other working	1.21 (0.63, 2.32)	1.37 (0.68, 2.77)
Children in home during past year (vs no)	1.43 (0.81, 2.52)	1.47 (0.80, 2.68)
No. of weapons used against the woman (lifetime)		1.38* (1.25, 1.53)

Note. AOR = adjusted odds ratio; CI = confidence interval.
*$P<.05$; **$P<.01$.

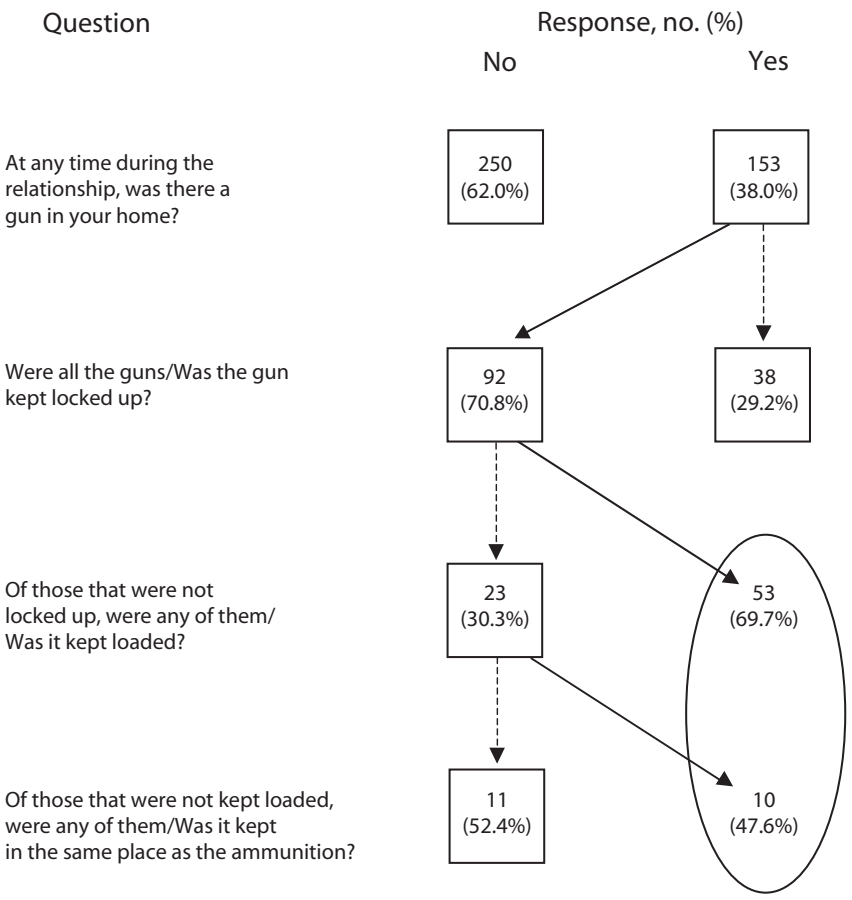
Handguns were more common than long guns. Among the 153 households containing a firearm, 54.3% had handguns only, 12.4% had long guns only, and 30.7% had both handguns and long guns. A few (4) respondents reported that they did not know what kind of gun was in the home.

The average number of firearms in homes with at least 1 gun was 3.8 (SD=9.2). The average number of handguns and long guns in a household was 2.5 (range: 0–50; median: 1) and 2.2 (range: 0–50; median: 1), respectively. Eleven (0.7%) of the women with a gun in the home reported that 10 or more guns were kept in the home. Most (78.0%) of the women with a gun in the home knew where the gun was kept (or where all guns were kept); 17.0% said that they did not know where the gun was kept (or where any guns were kept).

In a substantial minority of the households containing firearms, guns generally were easy to access and to fire (Figure 1). Of the 153 battered women who reported the presence of a gun or guns in the home, at least 41.2% lived where a gun was kept unlocked and loaded or unlocked and with ammunition.

Firearm use. If a gun was kept in the home, the respondent was asked whether she and her partner had used the gun(s) against each other. Nearly two thirds (64.5%) responded that the partner had used one of the guns to scare, threaten, or harm her. When asked what happened during the incident, 71.4% of these 98 women reported that the partner threatened to shoot or to kill her. Respondents also reported that the partner threatened to kill himself (4.1%) or to harm or to kill the children (3.1%). Five percent (5.1%) of the women reported that their partner had shot at them (16.3% did not answer the question). In most cases (74.5%), substances had been used by the partner just before the incident: 30.6% had used alcohol and other drugs, 27.6% had used alcohol only, and 16.3% had used other drugs only.

A small proportion (6.7%) of the women reported that they had used a gun in the home against their most recent intimate partner; most often, they "scared him away/ran him off" or threatened to kill or harm him.



Note. Solid arrows indicate responses leading to the observation that, among respondents reporting a gun or guns in the home, 41.2% said that at least 1 gun was kept unlocked and either already loaded or kept with ammunition. Some respondents said that they did not know how the guns were stored: 23 of 153 did not know whether the guns were locked up, 16 of 92 did not know whether the unlocked guns were kept loaded, and 2 of 23 did not know whether ammunition was kept with the unlocked and unloaded guns. These "do not know" responses were omitted from the figure.

FIGURE 1—Gun-keeping practices in the homes of 417 residents of 67 California battered women's shelters during their relationships with a violent partner.

Although few of the women had used a gun against her partner, 31.0% of those with firearms in the home said that they had thought about doing so. Among the reasons for considering using a gun, the most common ones focused on the partner—to defend against (20.8%), to kill (18.2%), to threaten or intimidate (6.5%), or to injure but not kill him (5.2%). To defend against an intruder (18.2%), to kill herself (9.1%), or to go hunting or target shooting (7.8%) were the remaining specified categories. Each of the women who used a gun against her partner reported that her partner had used a gun against her.

Perspectives on Hypothetical Options

Some countries (e.g., New Zealand) require that when a person wants to purchase a firearm or a certain kind of firearm, the opinion of the person's spouse or intimate partner be sought. Three fourths (74.3%) of the respondents thought that this would be a good law to have, 12.7% said that it would be a bad law, 11.8% were not sure, and a few (1.2%) did not answer. Among respondents who thought that it would be a good law, more than half liked the idea because it would help to protect them from the violent partner (28.3%) or because they would then know that he had or was getting a gun (23.8%). Another 30.5% liked it because "the spouse or partner is the one who knows that person best." The single other response category to this open-ended question was that the decision to obtain a gun should be a mutual decision (14.1%). Those opposing such a law expressed sentiments to the effect that guns should not be available at all (36.6%), while others expressed opinions such as "I don't like guns" (7.3%) or "it's no one's business" and "an adult should be able to buy a gun" (4.9%). Regardless of their perspective on such a law, 91.8% of the women reported that if their opinion were sought, they would say that it was not OK for their partner to get the gun.

Personalized or "smart" guns are in development.[5] Such weapons are designed so that only an authorized user (e.g., the owner of the gun) can fire them. Most respondents (67.9%) reported that having a personalized firearm in the home would make things worse for them, 11.5% reported that it would make "no difference," 5.5% said that it would make things better, and 14.8% were unsure what effect it would have. Among those who said that a personalized firearm would make things worse, it was evaluated negatively because the woman felt that the partner could use the gun against her or the children (43.9%), because only the partner could use the gun and she could not use it for self-defense (32.2%), because she was opposed to having guns in the home (11.8%), or because any kind of gun is unsafe (9.8%).

DISCUSSION

A wide range of objects were used to injure and intimidate battered women. Although hands, fists, feet, and common household objects were the most common means of inflicting harm, the use of vehicles and firearms, 2 mechanisms with high lethality potential, were reported by more than one third of the women in this study.

Having a firearm in the home appeared to be more common in homes in which battering occurs than in households in the general population. In California, a state where more than 620 000 women experience intimate-partner violence each year,[6] about 31.0% of households contain a firearm.[7] Our findings suggest that among households where vio-

lence has occurred that was sufficiently chronic or severe for the woman to have sought refuge at a battered women's shelter, the proportion of households with a gun or guns is 36.7%, or about 20% higher than in the general population. As is the case with US household gun ownership,[8] the prevalence of having a gun in the home increased with education level, ranging in this study from a low of 27.8% among respondents with less than high school education to 49.7% among those who had attended or graduated from college. The proportion of households with a long gun only or with both a long gun and a handgun was lower among the households of battered women than among the general population (4.6% vs 8.9% for a long gun only; 11.3% vs 15.6% for both types of gun). However, the proportion of households with a handgun only was much higher among the women in this study than among the general population (19.9% of respondents' households in this study vs 7.0% of households in the general population).

Study findings suggest that guns kept in a home in which there is violence are used to harm household members—specifically, an adult woman. This finding indicates 2 observations: (1) if a gun was present, its use in intimate partner violence was relatively common, and (2) the gun used against the respondent was a gun that was kept in the home. Previous research has found that keeping a gun in the home increased the risk for household members to be murdered at home; the risk for women was particularly high.[9–11] However, it was not reported in that research or in related research[12] whether the gun used was kept in the home.

Women who had been victimized by an intimate partner with a firearm also reported more types of weapons having been used against them during their lifetimes. Battering typically progresses from a relatively low level of violence to a level that is more frequent and severe. We cannot ascertain from these data when the firearm was first used in the course of the abuse: it may have been introduced early on and provided the tactical means by which other weapons were used against the woman or it could have been added later, after multiple other objects were used against her. We must caution that, aside from firearms use, relationship-specific weapon use was not assessed in this study; therefore, we cannot assume that the various weapons the woman reported were all used against her by the same partner, although such an assumption would seem logical. Thus, we acknowledge the possibility that a woman was in a relationship with one partner who used a firearm against her, another who used a household object against her, and so forth. Moreover, because these data share the limitations of all self-report data, we suggest that whenever possible, future research should access multiple data sources. In addition, replication of this study with other populations would be useful.

Implications for Health Care

Battered women make more visits to emergency departments than do other women[13] and are at risk for numerous adverse physical, psychological, and social sequelae.[14] Accurate identification of the underlying cause of patient-exhibited symptoms would likely benefit individuals' long-term health and reduce health service use.

Even if an injury is caused by battering, the use of common household objects to inflict injury may obscure that fact. For example, a woman who participated in the focus group that was part of the questionnaire development reported that her partner used a string trimmer (an electric or gas-powered lawn/garden tool) to injure her and that in the emergency room her injuries were treated as a common household accident. Incorporating information about the incident in addition to the injury type and anatomical site would likely increase the numbers of injuries accurately attributed to battering.[15]

Implications for Policy

Federal and state legislation has acknowledged and attempted to mediate the link between firearms and domestic violence.[16–18] As with other types of survivors or victims,[19] battered and formerly battered women have been effective advocates for policy change. To our knowledge, this study is the first to seek opinions regarding firearm policies directly relevant to their circumstances from a large number of women at high risk of sustaining serious injury caused by battering. Most of the women in our study thought that smart guns would worsen their situation, whereas most favored a policy requiring spousal notification/consultation for firearm purchases.

It is important to note that battered women may be reticent to disclose violence for fear of further abuse or other consequences. Evidence of such reticence emerged in our study: when posed with a hypothetical situation in which a violent partner had applied to purchase a gun and the respondent had been asked whether the partner had been violent to her, 71.4% of respondents answered that they would have said yes if asked during the time of the relationship; this percentage rose to 87.0% when the timing of the hypothetical situation was changed to after the relationship had ended, or at least while the respondent was residing at a battered women's shelter. Thus, although a substantial majority reported that they would have acknowledged the partner's violence in a gun purchase situation, 13.0% said that they would not have done so even if they were in a seemingly safe place away from the partner.

Conclusions

A wide range of objects are used against and by battered women. Firearms are more common in the households of battered women and their partners than among the general population, which is cause for concern, given the lethality of firearms. In addition, firearms can be used to intimidate a woman into doing something or allowing something to be done to her—such coercion would not necessarily result in physical injury or at least not in a gunshot wound. For this reason, firearms and injury research should go beyond gunshot wounds to examine the role of threat potential in facilitating harm.

The feasibility of implementing spousal notification/consultation in the United States merits discussion, particularly in light of technological advances such as personalized weapons. If battered women's views are more fully taken into account, unintended consequences of engineering and public policies may be foreseen and avoided. ■

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Contributors

S.B. Sorenson conceived the study, secured the funding, designed the questionnaire, recruited shelters, supervised data collection, conducted data analysis, and drafted parts of the article and edited others. D.J. Wiebe assisted in questionnaire development and shelter recruitment, conducted data analysis, and drafted parts of the article and edited others.

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Human Participant Protection

The study was approved after full review by the University of California, Los Angeles general campus institutional review board.

References

1. Tjaden P, Thoennes N. *Full Report of the Prevalence, Incidence, and Consequences of Violence Against Women.* Washington, DC: US Dept of Justice, Office of Justice Programs, National Institute of Justice; 2000. Publication NCJ 183781.

2. Rand M. *Violence-Related Injuries Treated in Hospital Emergency Departments: Bureau of Justice Statistics Special Report.* Washington, DC: US Dept of Justice; 1997. Publication NCJ 156921.

3. Zimring FE. Is gun control likely to reduce violent killings? *Univ Chic Law Rev.* 1968;35:721–737.

4. Beaman V, Annest JL, Mercy JA, Kresnow M, Pollock DA. Lethality of firearm-related injuries in the United States population. *Ann Emerg Med.* 2000;35:258–266.

5. Teret SP, DeFrancesco S, Hargarten SW, Robinson KD. Making guns safer. *Issues Sci Technol.* 1998;14:37–40.

6. Lund LE. *Incidence of Non-Fatal Intimate Partner Violence Against Women in California, 1998–1999.* Sacramento, Calif: California Dept of Health Services, Epidemiology and Prevention for Injury Control (EPIC) Branch; 2002. Report No. 4.

7. Smith TW, Martos L. Attitudes towards and experiences with guns: a state-level perspective. Chicago, Ill: National Opinion Research Center; 1999. Available at: http://cloud9.norc.uchicago.edu/dlib/gunst.htm. Accessed October 21, 2002.

8. Cook PJ, Ludwig J. *Guns in America: National Survey on Private Ownership and Use of Firearms.* Washington, DC: US Dept of Justice, National Institute of Justice; 1997. Publication NCJ 165476.

9. Kellermann AL, Rivara FP, Rushforth NB, et al. Gun ownership as a risk factor for homicide in the home. *N Engl J Med.* 1993;329:1084–1091.

10. Bailey JE, Kellermann AL, Somes GW, Banton JG, Rivara FP, Rushforth NP. Risk factors for violent death of women in the home. *Arch Intern Med.* 1997;157:777–782.

11. Wiebe DJ. Firearms in the home as a risk factor for homicide and suicide: a national case-control study. *Ann Emerg Med.* 2003;41:771–782.

12. Cummings P, Koepsell TD, Grossman DC, Savarino J, Thompson RS. The association between the purchase of a handgun and homicide or suicide. *Am J Public Health.* 1997;87:974–978.

13. Bergman B, Brismar B, Nordin C. Utilisation of medical care by abused women. *BMJ.* 1992;305:27–28.

14. Coker AL, Smith PH, McKeown RE, King MJ. Frequency and correlates of intimate partner violence by type: physical, sexual, and psychological battering. *Am J Public Health.* 2000;90:553–559.

15. Muelleman RL, Lenaghan PA, Pakieser RA. Battered women: injury locations and types. *Ann Emerg Med.* 1996;28:486–492.

16. Violent Crime Control and Law Enforcement Act of 1994. 18 USC §922(g)(8).

17. Lautenberg Amendment to the Gun Control Act of 1968. 18 USC §922(g)(9).

18. Domestic Violence (California's SB218, 1999). Available at: http://info.sen.ca.gov/pub/99–00/bill/sen/sb_0201–0250/sb_218_bill_19991010_chaptered.html. Accessed October 16, 2002.

19. Cwikel JG. After epidemiological research: what next? Community action for health promotion. *Public Health Rev.* 1994;22:375–394.

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Racial and Ethnic Differences in Homicides of Adult Women and the Role of Intimate Partner Violence — United States, 2003–2014

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Homicide is one of the leading causes of death for women aged ≤44 years.* In 2015, homicide caused the death of 3,519 girls and women in the United States. Rates of female homicide vary by race/ethnicity (*1*), and nearly half of victims are killed by a current or former male intimate partner (*2*). To inform homicide and intimate partner violence (IPV) prevention efforts, CDC analyzed homicide data from the National Violent Death Reporting System (NVDRS) among 10,018 women aged ≥18 years in 18 states during 2003–2014. The frequency of homicide by race/ethnicity and precipitating circumstances of homicides associated with and without IPV were examined. Non-Hispanic black and American Indian/Alaska Native women experienced the highest rates of homicide (4.4 and 4.3 per 100,000 population, respectively). Over half of all homicides (55.3%) were IPV-related; 11.2% of victims of IPV-related homicide experienced some form of violence in the month preceding their deaths, and argument and jealousy were common precipitating circumstances. Targeted IPV prevention programs for populations at disproportionate risk and enhanced access to intervention services for persons experiencing IPV are needed to reduce homicides among women.

CDC's NVDRS is an active state-based surveillance system that monitors characteristics of violent deaths, including homicides. The system links three data sources (death certificates, coroner/medical examiner reports, and law enforcement reports) to create a comprehensive depiction of who dies from violence, where and when victims die, and factors perceived to contribute to the victim's death (*3*). This report includes NVDRS data from 18 states during 2003–2014 (all available years).† Five racial/ethnic categories§ were used for this analysis: white, black, American Indian/Alaska Native

* CDC's Web-based Injury Statistics Query and Reporting System (WISQARS). https://www.cdc.gov/injury/wisqars/index.html.

† In 2003, the National Violent Death Reporting System (NVDRS) began data collection with six states (Maryland, Massachusetts, New Jersey, Oregon, South Carolina, and Virginia) participating; seven states (Alaska, Colorado, Georgia, North Carolina, Oklahoma, Rhode Island, and Wisconsin) joined in 2004, four (California, Kentucky, New Mexico, and Utah) in 2005, and two (Ohio and Michigan) in 2010. California did not collect statewide data and concluded participation in 2009. Ohio collected statewide data starting in 2011 and Michigan starting in 2014. CDC provides funding for state participation, and the ultimate goal is for NVDRS to expand to include all 50 states, U.S. territories, and the District of Columbia.

§ Information on race and ethnicity are recorded as separate items in NVDRS consistent with U.S. Department of Health and Human Services (HHS) and Office of Management and Budget standards for race/ethnicity categorization. HHS guidance on race/ethnicity is available at https://aspe.hhs.gov/datacncl/standards/ACA/4302/index.shtml.

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(AI/AN), Asian/Pacific Islander (A/PI), and Hispanic. Persons categorized as Hispanic might have been of any race. Persons categorized as one of the four racial populations were all non-Hispanic. Analyses were limited to female decedents aged ≥18 years. IPV-related deaths were defined as those involving intimate partner homicides (i.e., the victim was an intimate partner [e.g., current, former, or unspecified spouse or girlfriend] of the suspect), other deaths associated with IPV, including victims who were not the intimate partner (i.e., family, friends, others who intervened in IPV, first responders, or bystanders), or jealousy. Deaths where jealousy, such as in a lovers' triangle, was noted as a factor were included only when they involved an actual relationship (versus unrequited interest). Violence experienced in the preceding month refers to all types of violence (e.g., robbery, assault, or IPV) that was distinct and occurred before the violence that killed the victim; there did not need to be any causal link between the earlier violence and the death itself (e.g., victim could have experienced a robbery by a stranger 2 weeks before being killed by her spouse).

Rates were calculated using intercensal and postcensal bridged–race population estimates compiled by CDC's National Center for Health Statistics and were age-adjusted to the 2010 standard U.S. population of women aged ≥18 years (*4*). Sociodemographic characteristics and precipitating circumstances across racial/ethnic groups were examined using chi-square and Fisher's exact tests. Two-sided p-values <0.05 were considered statistically significant. Differences in victim and incident characteristics by race/ethnicity were examined using chi-square and Fisher's exact tests with posthoc pairwise comparisons of significant results; Bonferroni correction was applied to account for multiple comparisons.

From 2003 through 2014, a total of 10,018 female homicides were captured by NVDRS; among these, 1,835 (18.3%) were part of a homicide-suicide incident (i.e., suspect died by suicide after perpetrating homicide). Homicide victims ranged in age from 18 to 100 years. The overall age-adjusted homicide rate was 2.0 per 100,000 women. By race/ethnicity, non-Hispanic black women had the highest rate of dying by homicide (4.4 per 100,000), followed by AI/AN (4.3), Hispanic (1.8), non-Hispanic white (1.5), and A/PI women (1.2).

Approximately one third of female homicide victims (29.4%) were aged 18–29 years (Table 1); a larger proportion of non-Hispanic black and Hispanic victims were in this youngest age group than were non-Hispanic white and A/PI victims (p<0.01). The largest proportion of victims were never married or single at the time of death (38.2%); this proportion was highest among non-Hispanic black victims (59.2%; p<0.01). One third of victims had attended some college or more; history of college attendance was highest among non-Hispanic white (36.8%) and A/PI victims (46.2%; p<0.01). Approximately 15% of women of reproductive age (18–44 years) were pregnant or ≤6 weeks postpartum. Firearms were used in 53.9% of female homicides, most commonly among non-Hispanic black victims (57.7%; p<0.01). Sharp instrument (19.8%); hanging, suffocation, or strangulation (10.5%); and blunt instrument (7.9%) were other common

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TABLE 1. Number and percentage* of homicides of females aged ≥18 years, by victim and incident characteristics — National Violent Death Reporting System, 18 states,† 2003–2014

Characteristic	No. (%)					
	Total (N = 10,018)	White, non-Hispanic (n = 5,206)	Black, non-Hispanic (n = 3,514)	American Indian/ Alaska Native (n = 240)	Asian/Pacific Islander (n = 236)	Hispanic§ (n = 822)
Age group (yrs)						
18–29¶	**2,947 (29.4)**	1,113 (21.4)**,††,§§	1,359 (38.7)¶¶,***	87 (36.3)¶¶	59 (25.0)**,§§	329 (40.0)¶¶,***
30–39¶	**2,179 (21.8)**	990 (19.0)**,§§	829 (23.6)§§,¶¶	56 (23.3)	59 (25.0)	245 (29.8)**,¶¶
40–49¶	**2,071 (20.7)**	1,126 (21.6)	704 (20.0)	52 (21.7)	46 (19.5)	143 (17.4)
50–59¶	**1,293 (12.9)**	824 (15.8)**,§§	352 (10.0)¶¶	25 (10.4)	31 (13.1)	61 (7.4)¶¶
≥60¶	**1,528 (15.3)**	1,153 (22.1)**,††,§§	270 (7.7)¶¶,***	20 (8.3)¶¶,***	41 (17.4)**,††,§§	44 (5.4)¶¶,***
Marital status						
Married, civil union, or domestic partnership¶	**3,156 (32.0)**	1,999 (38.9)**,††,§§,***	751 (21.9)§§,¶¶,***	51 (21.4)¶¶,***	121 (51.7)**,††,§§,¶¶	234 (28.7)**,¶¶,***
Never married or single¶	**3,766 (38.2)**	1,183 (23.0)**,††,§§	2,035 (59.2)††,§§,¶¶,***	118 (49.6)**,¶¶,***	52 (22.2)**,††,§§	378 (46.4)**,¶¶,***
Separated, divorced or widowed¶	**2,938 (29.8)**	1,954 (38.0)**,††,§§,***	651 (18.9)††,§§,¶¶	69 (29.0)**,¶¶	61 (26.1)¶¶	203 (24.9)**,¶¶
Education†††						
<High school graduate or GED equivalent¶	**2,143 (24.5)**	982 (21.2)**,††,§§	749 (25.6)§§,¶¶	75 (32.5)¶¶,***	39 (18.6)††,§§	298 (39.8)**,¶¶,***
High school graduate or GED equivalent¶	**3,672 (41.9)**	1,952 (42.1)	1,261 (43.0)	105 (45.5)	74 (35.2)	280 (37.4)
Some college or more¶	**2,946 (33.6)**	1,707 (36.8)**,††,§§	921 (31.4)††,§§,¶¶,***	51 (22.1)**,¶¶,***	97 (46.2)**,††,§§	170 (22.7)**,¶¶,***
Pregnancy status§§§						
Pregnant or ≤6 weeks postpartum¶	**298 (15.2)**	120 (12.9)**	134 (18.6)¶¶	7 (13.2)	6 (14.3)	31 (14.6)
Method						
Firearm¶	**5,234 (53.9)**	2,681 (53.4)**,††,***	1,975 (57.7)††,§§,¶¶,***	90 (38.8)**,§§,¶¶	92 (40.0)**,¶¶	396 (49.4)**,††
Sharp instrument¶	**1,918 (19.8)**	878 (17.5)**,§§,***	715 (20.9)§§,¶¶,***	49 (21.1)	70 (30.4)**,¶¶	206 (25.7)**,¶¶
Hanging, suffocation, strangulation¶	**1,017 (10.5)**	542 (10.8)	325 (9.5)§§	15 (6.5)	32 (13.9)	103 (12.9)**
Blunt instrument¶	**770 (7.9)**	453 (9.0)**,††,§§	216 (6.3)††,¶¶	40 (17.2)**,§§,¶¶,***	16 (7.0)††	45 (5.6)††,¶¶
Other (single method)¶	**765 (7.9)**	467 (9.3)**,††	189 (5.5)††,¶¶	38 (16.4)**,§§,¶¶	20 (8.7)	51 (6.4)††
IPV¶¶¶						
IPV-related¶,****	**4,442 (55.3)**	2,446 (56.8)**	1,360 (51.3)§§,¶¶	112 (55.4)	118 (57.8)	406 (61.0)**

Abbreviations: GED = General Education Development; IPV = intimate partner violence.

* Excludes decedents with missing, unknown, and other race/ethnicity (n = 61). Percentages might not sum to 100% because of rounding.

† Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, Michigan, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.

§ Includes persons of any race.

¶ Characteristic with a statistically significant result.

** Significantly different from non-Hispanic black females.

†† Significantly different from American Indian/Alaska Native females.

§§ Significantly different from Hispanic females.

¶¶ Significantly different from non-Hispanic white females.

*** Significantly different from Asian/Pacific Islander females.

††† "<High school graduate/GED equivalent" includes 11th grade and below. "High school graduate/GED equivalent" includes 12th grade. "Some college or more" includes some college credit, associate's degree, master's degree, doctorate, and professional degrees.

§§§ Includes only females of reproductive age (18–44 years) with known pregnancy status (n = 1,957).

¶¶¶ Includes only decedents where circumstances were known (n = 8,028).

**** Includes cases with victim-suspect relationship of intimate partner (current, former, or unspecified spouse or girlfriend), other deaths associated with IPV, or IPV-related jealousy/lovers' triangle.

mechanisms. Over half of all female homicides (55.3%) for which circumstances were known were IPV-related. A larger percentage of IPV-related female homicides were perpetrated by male suspects than were non-IPV-related homicides (98.2% versus 88.5%, respectively; p<0.01).

Circumstance information was known for all 4,442 IPV-related homicides and 3,586 (64.3%) non-IPV-related homicides and was examined further. Among IPV-related homicides, 79.2% and 14.3% were perpetrated by a current or former intimate partner, respectively (Table 2). Approximately one in 10 victims experienced some form of violence in the month preceding their death. However, only 11.2% of all IPV-related homicides were precipitated by another crime; 54.4% of these incidents involved another crime in progress. The most frequently reported other precipitating crimes were assault/homicide (45.6%), rape/sexual assault (11.1%), and burglary

TABLE 2. Number and percentage* of homicides of females aged ≥18 years, by race/ethnicity, victim's relationship to suspect, and precipitating circumstances† for intimate partner violence (IPV)–related deaths — National Violent Death Reporting System, 18 states,§ 2003–2014

Characteristic	No. (%)					
	Total (N = 4,442)	White, non-Hispanic (n = 2,446)	Black, non-Hispanic (n = 1,360)	American Indian/ Alaska Native (n = 112)	Asian/Pacific Islander (n = 118)	Hispanic¶ (n = 822)
Victim-suspect relationship**						
Current intimate†† partner	**3,417 (79.2)**	1,927 (81.0)§§	1,007 (76.6)¶¶	88 (81.5)	94 (81.0)	301 (75.8)
Former intimate partner††	**618 (14.3)**	322 (13.5)	198 (15.1)	13 (12.0)	11 (9.5)	74 (18.6)
Other††,***	**278 (6.4)**	129 (5.4)§§	109 (8.3)¶¶	7 (6.5)	11 (9.5)	22 (5.5)
Circumstances						
Victim experienced violence in the past month†††	**265 (11.2)**	147 (10.8)	66 (9.9)	10 (16.7)	9 (12.9)	33 (15.6)
Precipitated by another crime	**496 (11.2)**	261 (10.7)	166 (12.2)	10 (8.9)	13 (11.0)	46 (11.3)
Crime in progress§§§	**270 (54.4)**	137 (52.5)	93 (56.0)	7 (70.0)	7 (53.8)	26 (56.5)
Argument preceded victim's death††	**1,320 (29.7)**	660 (27.0)¶¶¶	420 (30.9)¶¶¶	36 (32.1)	42 (35.6)	162 (39.9)§§,¶¶
Jealousy/lovers' triangle††	**516 (11.6)**	262 (10.7)¶¶¶	143 (10.5)¶¶¶	21 (18.8)	13 (11.0)	77 (19.0)§§,¶¶

* Includes only decedents with one or more circumstances present: n = 4,442 (100%) IPV-related female homicides.
† The sum of percentages in columns exceeds 100% because more than one circumstance could have been present per decedent.
§ Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, Michigan, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
¶ Includes persons of any race.
** Victim-suspect relationship known for 4,313 (97.1%) IPV-related female homicides.
†† Characteristic with statistically significant results.
§§ Significantly different from non-Hispanic black females.
¶¶ Significantly different from non-Hispanic white females.
*** Includes nonintimate partner victims of IPV-related female homicide (e.g., friend, family member, etc.).
††† Variable collected for homicides since 2009. Denominator is IPV-related female homicides during 2009–2014 (n = 2,369).
§§§ Denominator includes only those decedents involved in an incident that was precipitated by another crime.
¶¶¶ Significantly different from Hispanic females.

TABLE 3. Number and percentage* of homicides of females aged ≥18 years, by race/ethnicity, victim's relationship to suspect and precipitating circumstances† for nonintimate partner violence (IPV)–related deaths — National Violent Death Reporting System, 18 states,§ 2003–2014

Characteristic	No. (%)					
	Total (N = 3,586)	White, non-Hispanic (n = 1,859)	Black, non-Hispanic (n = 1,291)	American Indian/ Alaska Native (n = 90)	Asian/Pacific Islander (n = 86)	Hispanic¶ (n = 260)
Victim-suspect relationship**						
Acquaintance††	**439 (19.7)**	188 (14.9)§§	190 (29.0)¶¶	16 (24.2)	9 (14.3)	36 (20.7)
Stranger††	**349 (15.7)**	176 (13.9)***,†††	103 (15.7)	10 (15.2)	18 (28.6)¶¶	42 (24.1)¶¶
Other person, known to victim	**339 (15.2)**	195 (15.4)	103 (15.7)	9 (13.6)	8 (12.7)	24 (13.8)
Parent††	**337 (15.2)**	237 (18.7)§§,†††	79 (12.0)¶¶	4 (6.1)	7 (11.1)	10 (5.7)¶¶
Other††	**760 (34.2)**	469 (37.1)§§	181 (27.6)¶¶	27 (40.9)	21 (33.3)	62 (35.6)
Circumstances						
Precipitated by another crime††	**1,492 (41.6)**	788 (42.4)	526 (40.7)***	37 (41.1)	49 (57.0)§§,†††	92 (35.4)***
Crime in progress§§§	**1,002 (67.2)**	535 (67.9)	345 (65.6)	25 (67.6)	33 (67.3)	64 (69.6)
Argument preceded victim's death††	**1,357 (37.8)**	659 (35.4)§§	531 (41.1)¶¶,***	43 (47.8)***	22 (25.6)§§,¶¶¶	102 (39.2)

* Denominator includes only decedents with one or more circumstances present: n = 3,586 (64.3%) non-IPV related homicides.
† The sum of percentages in columns exceeds 100% because more than one circumstance could have been present per decedent.
§ Alaska, Colorado, Georgia, Kentucky, Maryland, Massachusetts, Michigan, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Utah, Virginia, and Wisconsin.
¶ Includes persons of any race.
** Victim-suspect relationship known for 2,224 (62.0%) non-IPV-related female homicide victims.
†† Characteristic with a statistically significant result.
§§ Significantly different from non-Hispanic black females.
¶¶ Significantly different from non-Hispanic white females.
*** Significantly different from Asian/Pacific Islander females.
††† Significantly different from Hispanic females.
§§§ Denominator includes only those decedents involved in an incident that was precipitated by another crime.
¶¶¶ Significantly different from American Indian/Alaska Native females.

(9.9%). In 29.7% of IPV-related homicides, an argument preceded the victim's death; this occurred more commonly among Hispanic victims than among non-Hispanic black and white victims. Approximately 12% of IPV-related homicides were associated with jealousy; this circumstance was also documented more commonly among Hispanic victims than among non-Hispanic black and white victims.

Among non-IPV related female homicides with known suspects, the victim's relationship to the suspect was most often that of acquaintance (19.7%), stranger (15.7%), another person known to the victim in which the exact nature of the relationship or prior interaction was unclear (15.2%), or parent (15.2%) (Table 3). Non-Hispanic black victims were significantly more likely to be killed by an acquaintance (29.0%) than were non-Hispanic white victims (14.9%). A/PI and Hispanic victims were significantly more likely to be killed by a stranger (28.6% and 24.1%, respectively) than were non-Hispanic white victims (13.9%). Fewer than 2% of non-IPV related homicide victims experienced violence during the preceding month (data not shown). However, a substantial percentage of these homicides (41.6%) were precipitated by another crime; 67.2% of these incidents involved another crime in progress. The type of other precipitating crime was most frequently robbery (31.1%), assault/homicide (21.3%), burglary (12.2%), or rape/sexual assault (11.2%). Female homicides involving A/PI victims were more likely to be precipitated by another crime (57.0%) than were homicides involving non-Hispanic black (40.7%) and Hispanic (35.4%) victims. In 37.8% of non-IPV related homicides, an argument preceded the victim's death, more commonly among AI/AN (47.8%) and non-Hispanic black (41.1%) victims than among A/PI (25.6%) victims.

Discussion

Homicide is the most severe health outcome of violence against women. Findings from this study of female homicides from NVDRS during 2003–2014 indicate that young women, particularly racial/ethnic minority women, were disproportionately affected. Across all racial/ethnic groups of women, over half of female homicides for which circumstances were known were IPV-related, with >90% of these women being killed by their current or former intimate partner.

Strategies to prevent IPV-related homicides range from protecting women from immediate harm and intervening in current IPV, to developing and implementing programs and policies to prevent IPV from occurring (*5*). IPV lethality risk assessments conducted by first responders have shown high sensitivity in identifying victims at risk for future violence and homicide (*6*). These assessments might be used to facilitate immediate safety planning and to connect women with other services, such as crisis intervention and counseling, housing, medical and legal advocacy, and access to other community resources (*6*). State statutes limiting access to firearms for persons under a domestic violence restraining order can serve as another preventive measure associated with reduced risk for intimate partner homicide and firearm intimate partner homicide (*7*). Approximately one in 10 victims of IPV-related homicide experienced some form of violence in the preceding month, which could have provided opportunities for intervention. Bystander programs, such as Green Dot,[¶] teach participants how to recognize situations or behaviors that might become violent and safely and effectively intervene to reduce the likelihood of assault (*8*). In health care settings, the U.S. Preventive Services Task Force recommends screening women of childbearing age for IPV and referring women who screen positive for intervention services.[**] Approximately 15% of female homicide victims of reproductive age (18–44 years) were pregnant or postpartum, which might or might not be higher than estimates in the general U.S. female population, requiring further examination.

Approximately 40% of non-Hispanic black, AI/AN, and Hispanic female homicide victims were aged 18–29 years. Argument and jealousy were common precipitating factors for IPV-related homicides. Teaching safe and healthy relationship skills is an important primary prevention strategy with evidence of effectiveness in reducing IPV by helping young persons manage emotions and relationship conflicts and improve their problem-solving and communication skills (*5*). Preventing IPV also requires addressing the community- and system-level factors that increase the risk for IPV; neighborhoods with high disorder, disadvantage, and poverty, and low social cohesion are associated with increased risk of IPV (*5*), and underlying health inequities caused by barriers in language, geography, and cultural familiarity might contribute to homicides, particularly among racial/ethnic minority women (*9*).

The findings in this report are subject to at least five limitations. First, NVDRS data are available from a limited number of states and are therefore not nationally representative. Second, race/ethnicity data on death certificates might be misclassified, particularly for Hispanics, A/PI, and AI/AN (*10*). Third, the female homicide victims in this dataset were more likely to be never married or single and less likely to have attended college than the general U.S. female population[††]; although this is likely attributable to the relatively younger age distribution of homicide victims in general,[§§] this requires further

[¶] http://www.livethegreendot.com.

[**] https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/intimate-partner-violence-and-abuse-of-elderly-and-vulnerable-adults-screening.

[††] https://www.census.gov/acs/www/data/data-tables-and-tools/.

[§§] https://www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65_04.pdf.

Summary

What is already known about this topic?

Homicide is one of the leading causes of death for women aged ≤44 years, and rates vary by race/ethnicity. Nearly half of female victims are killed by a current or former male intimate partner.

What is added by this report?

Homicides occur in women of all ages and among all races/ethnicities, but young, racial/ethnic minority women are disproportionately affected. Over half of female homicides for which circumstances were known were related to intimate partner violence (IPV). Arguments and jealousy were common precipitating circumstances among IPV-related homicides. One in 10 victims of IPV-related homicide were reported to have experienced violence in the month preceding their deaths.

What are the implications for public health practice?

Racial/ethnic differences in female homicide underscore the importance of targeting intervention efforts to populations at risk and the conditions that increase the risk for violence. IPV lethality risk assessments might be useful tools for first responders to identify women at risk for future violence and connect them with life-saving safety planning and services. Teaching young persons safe and healthy relationship skills as well as how to recognize situations or behaviors that might become violent are effective IPV primary prevention measures.

examination. Fourth, not all homicide cases include detailed suspect information; in this analysis, 85.3% of cases included information on the suspect. Finally, information about male corollary victims of IPV-related homicide (i.e., other deaths associated with IPV, including male victims who were not the intimate partner) were not included in this analysis. Therefore, the full scope of IPV-related homicides involving women is not captured.

The racial/ethnic differences in female homicide underscore the importance of targeting prevention and intervention efforts to populations at disproportionately high risk. Addressing violence will require an integrated response that considers the influence of larger community and societal factors that make violence more likely to occur.

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Conflict of Interest

No conflicts of interest were reported.

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References

1. Logan JE, Smith SG, Stevens MR. Homicides—United States, 1999–2007. MMWR Suppl 2011;60:67–70.
2. Catalano S, Smith E, Snyder H, Rand M. Selected findings: female victims of violence. Washington, DC: US Department of Justice, Bureau of Justice Statistics; 2009. https://www.bjs.gov/content/pub/pdf/fvv.pdf
3. Blair JM, Fowler KA, Jack SPD, Crosby AE. The National Violent Death Reporting System: overview and future directions. Inj Prev 2016;22(Suppl 1):i6–11. https://doi.org/10.1136/injuryprev-2015-041819
4. National Center for Health Statistics. Healthy people 2010: general data issues. Age adjustment. Hyattsville, MD: US Department of Health and Human Services, CDC, National Center for Health Statistics; 2011. https://www.cdc.gov/nchs/data/hpdata2010/hp2010_general_data_issues.pdf
5. Niolon PH, Kearns M, Dills J, et al. Preventing intimate partner violence across the lifespan: a technical package of programs, policies and practices. Atlanta, GA: US Department of Health and Human Services, CDC, National Center for Injury Prevention and Control; 2017. https://www.cdc.gov/violenceprevention/pdf/ipv-technicalpackages.pdf
6. Messing JT, Campbell J, Sullivan Wilson J, Brown S, Patchell B. The lethality screen: the predictive validity of an intimate partner violence risk assessment for use by first responders. J Interpers Violence 2017;32:205–26.
7. Zeoli AM, Webster DW. Effects of domestic violence policies, alcohol taxes and police staffing levels on intimate partner homicide in large US cities. Inj Prev 2010;16:90–5. https://doi.org/10.1136/ip.2009.024620
8. Coker AL, Bush HM, Fisher BS, et al. Multi-college bystander intervention evaluation for violence prevention. Am J Prev Med 2016;50:295–302. https://doi.org/10.1016/j.amepre.2015.08.034
9. Smedley BD, Stith AY, Nelson AR, eds.; Institute of Medicine (US) Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. Unequal treatment: confronting racial and ethnic disparities in health care. Washington, DC: National Academies Press; 2003.
10. Arias E, Schauman WS, Eschbach K, Sorlie PD, Backlund E. The validity of race and Hispanic origin reporting on death certificates in the United States. Vital Health Stat 2 2008;148:1–23.

NATIONAL COALITION AGAINST DOMESTIC VIOLENCE
NCADV

Dispelling the Firearms Self-Defense Myth

Myth

Supporters of arming survivors of domestic violence claim that firearms are the 'great equalizer' – that the best way for a survivor to protect themselves is to possess a firearm. Possessing a firearm puts survivors at ***increased risk*** of intimate partner homicide.

The Research

Several studies have found that not only does arming survivors not have a protective effect, it increases the risk of intimate partner homicide.

- A study of risk factors for intimate partner femicide shows that a victim's firearm possession does not reduce the rate of domestic violence. Abused women who are not killed by intimate partners, abused women who are killed by intimate partners, and women who do not experience abuse all possess firearms at the same rate.[1]
- A woman's purchase of a handgun increases the risk of homicide by 50% and doubles the risk of firearm homicide.[2] There is no change in non-intimate partner homicide risk, so this increased risk is due to the increased risk of intimate partner homicide.
- An abuser's access to a firearm increases the risk of intimate partner femicide by 1,000% – regardless of whether the firearm belongs to the perpetrator or the victim.[3]

Use of Firearms by Abusers

While firearm possession does not protect survivors, it does empower abusers. Abusers use firearms to terrorize survivors, to exert power and coercive control and to commit murder.

- An estimated 13.6% of American women alive today have been threatened by intimate partners with firearms; 43% of these reported having been physically injured.[4]
- A survey of contacts by the National Domestic Violence Hotline found, of respondents' whose abusers had access to firearms:
  - 10% said their abusers had fired a gun during an argument;
  - 67% believed their abusers were capable of killing them.[5]
- Most intimate partner homicides are committed with firearms. [6]
- Intimate partner homicides committed with firearms are increasing. Between 2010 and 2017, the number of intimate partner homicides committed with firearms increased 26%. Although intimate partner homicides committed with other weapons decreased, the increase in firearms homicide led to an overall increase in intimate partner homicides.[7]
- In 2018, 1,014 women were killed by male intimate partners, comprising 58% of all women killed by men that year.[8]
- 1 in 3 female murder victims and 1 in 20 male murder victims are killed by intimate partners.[9]
- Domestic violence incidents involving firearms are twelve times more likely to result in death than incidents involving other weapons or bodily force.[10]

Dynamics of Abuse

The dynamics of abuse complicate the potential use of firearms for self-defense. Survivors often have emotional ties to an abusive partner and may be unwilling to kill someone they love or with whom they share a child. The

abusive partner may be the sole breadwinner. Moreover, every person reacts to fear differently – fight, flight, or freeze. When a survivor has a gun and freezes, the gun can be taken and used against them. Abusers can also often physically overpower their victims, take their gun and use it on them.

Additionally, firearms cannot be used accurately without training and practice. Even NYPD officers, who train constantly, hit their targets less than half of the time from seven yards away.[11] Survivors are unlikely to be able to train with firearms without the abusive partner's knowledge, which increases the risk of escalating violence.

Case Studies

Christy Salters is the only woman boxer to be featured on the cover of *Sports Illustrated*. She is a world champion boxer and is known for knocking out her opponents.[12] She is the first woman boxer to be inducted into the Nevada Boxing Hall of Fame.[13] Despite her fighting prowess, her then-husband used her firearm to shoot her, narrowly missing her heart.[14]

Asia Lenore Plagman was murdered by her on-again-off-again boyfriend. Fearing for her safety after being robbed, Plagman purchased a firearm. When her boyfriend was physically abusive, Plagman took out her gun and told him to leave. When he told her to put the firearm down, she complied. Her boyfriend took her gun, shot her in the shoulder and the abdomen and then killed himself. Plagman died two weeks later.[15]

Legal Consequences for Survivors

In the rare cases in which survivors do use firearms to protect themselves, they are often charged with a violent crime. For example, a study by the New York State Division of Criminal Justice Services found that 93% of women who had been convicted of killing an intimate partner had previously experienced abuse at the hands of that partner.[16] One notable case is that of Marissa Alexander. Florida has a stand-your-ground law, which allows individuals to use deadly force if they are in danger.[17] Alexander fired a warning shot when threatened by her abusive then-husband. She was charged with aggravated assault with a deadly weapon and sentenced to 20 years in prison.[18]

Diminishing Perpetrator Responsibility

Survivors are not at fault for being abused; the responsibility rests entirely on the perpetrator. Putting the onus on the survivor to protect themselves rather than on the perpetrator to cease committing violence misplaces the responsibility and does not hold perpetrators accountable for their actions.

Promoting Victim Safety

The best way is to promote victim safety is not to arm victims; it is to ensure robust access to services, legal protections, and economic stability, and to prohibit firearms possession by adjudicated abusers. Federal law prohibits certain domestic violence misdemeanants and certain respondents to final protective orders from possessing firearms. However, these restrictions to not apply to dating partners or to ex parte protective orders. Some states have closed these loopholes, and the federal government must do the same to ensure equal protection for survivors regardless of where they live.

NATIONAL COALITION AGAINST DOMESTIC VIOLENCE

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Dispelling the Firearms Self-Defense Myth

- States that prohibit both domestic and dating abusers from possessing firearms have a 13% lower rate of intimate partner homicide than states that do not.[19]
- States that prohibit respondents to both ex parte and final protective orders have a 13% lower rate of intimate partner homicide than states that do not.[20]
- State laws requiring abusers prohibited from possessing firearms to relinquish their firearms are associated with a 12% decrease in intimate partner homicide.[21]

More information about state laws can be found at www.disarmdv.org

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[1] Campbell, J.C., Webster, D., Koziol-McLain, J., Block, C., Campbell, D., Curry, M. A., Gary, F., Glass, N., McFarlane, J., Sachs, C., Sharps, P., Ulrich, Y., Wilt, S., Manganello, J., Xu, X., Schollenberger, J., Frye, V., & Lauphon, K. (2003). Risk factors for femicide in abusive relationships: Results from a multisite case control study. *American Journal of Public Health, 93*(7), 1089-1097.

[2] Wintemute, G. J., Wright, M. A., & Drake, C. M. (2003). Increased risk of intimate partner homicide among California women who purchased handguns. *Annals of Emergency Medicine, 41(*2), 281-283. doi: https://doi.org/10.1067/mem.2003.66

[3] Spencer, C. M. & Stith, S. M. (2020). Risk factors for male perpetration and female victimization of intimate partner homicide: A meta-analysis. *Trauma, Violence, & Abuse, 21*(3), 527-540. DOI: 10.1177/1524838018781101

[4] Adhia, A., Lyons, V. H., Moe, C. A., Rowhani-Rahbar, A., & Rivara, F. P. (in press). Nonfatal use of firearms in intimate partner violence: Result of a national survey. *Preventive Medicine*. https://doi.org/10.1016/j.ypmed.2021.106500

[5] National Domestic Violence Hotline (2014). *Firearms and domestic violence.* Retrieved from http://www.thehotline.org/resources/firearms-dv/#tab-id-2.

[6] Violence Policy Center (2020). *When men murder women: An analysis of 2018 homicide data.* Retrieved from http://www.vpc.org/studies/wmmw2020.pdf.

[7] Fridel, E. E. & Fox, J. A. (2019). Gender differences in patterns and trends in U.S. homicide, 1976-2017. *Violence and Gender, 6*(1), 27-36. doi: 10.1089/vio.2019.0005

[8] Ibid.

[9] Bridges, F. S., Tatum, K. M., & Kunselman, J. C. (2008). Domestic violence statutes and rates of intimate partner and family homicide: A research note. *Criminal Justice Policy Review, 19*(1), 117-130.

[10] Saltzman, L. E., Mercy, J. A., O'Carroll, P. W., Rosenberg, M. L., & Rhodes, P. H. (1992). Weapon involvement and injury outcomes in family and intimate assaults. *JAMA, 267*(22), 3043-3047.

[11] Rostker, B. D., Hanser, L. M., Hix, W. M., Jensen, C., Morral, A. R., Ridgeway, G., & Schell, T. L. (2008). *Evaluation of the New York City Police Department firearm training and firearm-discharge review process.* Retrieved from http://www.nyc.gov/html/nypd/downloads/pdf/public_information/RAND_FirearmEvaluation.pdf.

[12] Glock, A. (202, June 17). The remarkable life (and near death) of boxer Christy Martin. *ESPN*. https://www.espn.com/boxing/story/_/id/29315414/the-remarkable-life-death-boxer-christy-martin

[13] Diaz, G. (2016, August 4). Christy Martin finally stands alone as boxing Hall of Famer. *Orlando Sentinel*. https://www.orlandosentinel.com/sports/os-christy-martin-george-diaz-0805-20160804-column.html

[14] Glock, A. (202, June 17). The remarkable life (and near death) of boxer Christy Martin. *ESPN*. https://www.espn.com/boxing/story/_/id/29315414/the-remarkable-life-death-boxer-christy-martin

[15] Garlich, L. (2021, May 2). Lost in the fight: As gun rights expand in Mo., domestic violence victims pay the price. *Missourian.* https://www.columbiamissourian.com/news/local/lost-in-the-fight-as-gun-rights-expand-in-mo-domestic-violence-victims-pay-the/article_b25c76d4-a94b-11eb-9a89-eb1cbb4798f4.html

[16] New York State Division of Criminal Justice Services (1996). *Homicide by women.* In Kraft-Stolar, (T.), Brundige E., Kalantry, S., & Kestenbaum, J. G. (2011). From protection to punishment: Conviction barriers to justice for domestic violence survivor-defendants in New York State. *Avon Global Center for Women and Justice and Dorothea S. Clarke Program in Feminist Jurisprudence.* Retrieved from https://scholarship.law.cornell.edu/cgi/viewcontent.cgi?article=1001&context=avon_clarke.

[17] Stand your ground laws have been associated with a substantial increase in homicides. See Gasparrini, A., Humphreys, D., & Wiebe, D. (2017). Evaluating the impact of Florida's "stand your ground" self-defense law on homicide and suicide by firearm. *JAMA Internal Medicine, 177(1)*, 44-50. doi:10.1001/jamainternmed.2016.6811

[18] Peoples, L. (2017, March 29). Marissa Alexander fired a warning shot at her abusive husband and was sentences to 20 years. Now she's free. *The Cut.* https://www.thecut.com/2017/03/marissa-alexander-case-stand-your-ground-florida.html

[19] Zeoli, A. M., McCourt, A., Buggs, S., Frattaroli, S., Lilley, D., & Webster, D. W (2017). Analysis of the strength of legal firearms restrictions for perpetrators of domestic violence and their association with intimate partner homicide. *American Journal of Epidemiology.* doi: 10.1093/aje/kwx362

[20] Ibid.

[21] Ibid.

ASSESSING CHALLENGES, NEEDS, AND INNOVATIONS OF GENDER-BASED VIOLENCE SERVICES DURING THE COVID-19 PANDEMIC

RESULTS SUMMARY REPORT

PREPARED BY: KELLIE LYNCH, PHD & TK LOGAN, PHD

FEBRUARY 2021

"Conflict and turmoil often result in direct action and direct results and sweeping ***changes for the better.***"

- RESPONDENT

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EXECUTIVE SUMMARY

The goal of this project was to document the impact of the COVID-19 pandemic on the dynamics of gender-based violence in addition to the challenges, needs, and innovations that service providers experienced.

Professionals who serve survivors of gender-based violence across the United States were recruited to complete an online survey between September 2020 and December 2020.

The 25 minute survey consisted of questions across a variety of areas, including: the impact of the pandemic on forms of gender-based violence, risks and challenges for survivors, challenges for agencies, interactions with law enforcement, innovations for agencies in going forward, and survey respondent information.

This report summarizes key findings based on N = 222 respondents.[1] The vast majority of respondents were White (non-Hispanic) and the sample was mostly women who served intimate partner violence and/or sexual assault survivors. The average respondent age was 43 years old and over half (54.4%) were working in rural areas of the United States. Although respondents represented over 40 states, about one-third were professionals from Kentucky and Ohio.

About 50% of respondents were advocates or employees with shelters, the criminal justice system, or rape crisis agencies and 61% of respondents worked at their current position for less than 5 years. Twenty-seven percent of respondents have been working with gender-based violence survivors for over 15 years. Respondents rated the following as the highest concerns for their agency that hinder service of gender-based violence survivors:

- survivors are less likely to seek help because they are isolated with their abuser
- survivors are less likely to leave their home due to health concerns
- providing safe alternative housing for survivors
- survivors are not aware of the services agencies are providing
- distrust regarding public information about the virus

Nearly 58.6% of respondents reported issues in serving survivors seeking help because the agency was closed or functioning at limited capacity at least some of the time during the pandemic.

About half of respondents viewed the following as major areas of financial strain for their agency:

- technology/infrastructure to work remotely
- personal protective equipment or other sanitation
- limited availability of grant funding

In their open-ended responses, respondents highlighted a myriad of barriers to serving survivors, such as maintaining staff and victim health/safety, statewide mandates restricting access to services, limited resources, shelter capacity, and reduced criminal justice system operations.

About **84% reported they believed the incidence of IPV increased**, while 31% reported that the help-seeking of IPV has decreased

[1] Some information, such as respondent characteristics, are only available for N = 172 respondents. Please see methods for more details

Most respondents believed Intimate Partner Violence (IPV, 83.7%), child abuse (70.2%), and sexual assault (60.2%) have increased during the pandemic.

Nearly 40% of respondents reported that gun sales have increased in their community since the start of the pandemic and about 50% of respondents reported that abusers threatening to shoot survivors has become a bigger problem since the start of the pandemic.

About two-thirds of respondents reported that abusers have interfered with survivors' work/ employment as a control tactic during the pandemic

The law enforcement response to White survivors was perceived as more positive than that to survivors of color despite over 50% of respondents reporting that female survivors of color are at more risk than White female survivors to experience most forms of violence.

About one-quarter of respondents reported that law enforcement's response to meeting the needs of survivors got worse during the pandemic.

Respondents rated the following as the largest barriers facing their agency in the next 12 months:

- general economic strain in society
- agencies need more resources to provide services
- survivor risk for homelessness if unable to pay rent
- survivors are unable to get away from abuser or seek help

Overall, 70% of respondents felt their agency was quite or very prepared to enter another societal shutdown if needed, however that means about one-third did not feel prepared for another shutdown.

Respondents highlighted several areas of need for future training, such as diversity and inclusion, trauma-informed care, self-care for workers, effective collaborations with law enforcement, grief counseling, and technological skills training.

In conclusion, the results highlight challenges that victim service agencies face during a global pandemic and perceptions of the impact the pandemic has had on dynamics of gender-based violence. Clearly, concerns regarding available funding and resources for service agencies, homelessness and financial insecurity of survivors, health and wellness of both staff and clients, and continued isolation and safety of survivors are key challenges that face those who serve victims of gender-based violence. However, these results also underscore the resilience and dedication of agency staff to serving survivors of gender-based violence during an unprecedentedly challenging time.

The consequences of the COVID-19 pandemic are far-reaching and we still have much to learn about how this pandemic has impacted and will continue to impact gender-based violence. This report is an interim step in documenting the resiliency in agency responses to gender-based violence and harnessing the creativity, determination, and passion of staff to navigate this pandemic.

The results underscore the resilience and dedication of agency staff to serving survivors of gender-based violence during an unprecedentedly challenging time

INTRODUCTION

Gender-based violence, including intimate partner abuse and dating violence (IPV), child abuse, elder abuse, sexual assault, stalking and human trafficking impacts millions of individuals each year (United Nations Population Fund, 2020). Although the COVID-19 pandemic presents a global public health crisis resulting in millions of deaths thus far, the full impact of the pandemic on gender-based violence is still being assessed (United Nations Development Programme, 2020). The pandemic has exacerbated risk factors for gender-based violence, such as unemployment/financial strain, substance use, isolation, depression, anxiety, and general stress (American Psychological Association, 2020; Czeisler et al., 2020), with mounting evidence that instances of familial (partner and child abuse) have particularly increased since the start of the pandemic globally (Peterman & O'Donnell, 2020; United Nations Development Programme, 2020; Usher, Bhullar, Durkin, Gyamfi, & Jackson, 2020) as well as in the United States. (Boxall, Morgan, & Brown, 2020; Gosangi et al., 2021; Leslie & Riley, 2020; Lindberg, VandeVusse, Mueller, & Kirstein, 2020; Peterman & O'Donnell, 2020; Piquero et al., 2020). There are also concerns that conditions of the pandemic are facilitating human trafficking victimization (particularly vulnerable youth; Todres & Diaz, 2020) and sexual assault (Janse van Rensburg & Smith, 2020) in light of evidence that rates of sexual violence increase during states of emergency (Klein, 2008). Procedures, such as shelter in place and school closures, which are designed to help protect the community from the spread of COVID-19, further isolate survivors and hinder victim help-seeking.

Further, during the COVID-19 pandemic, the United States continues to experience the massive impact of racial and structural inequalities. Persons of color not only experience disproportionately higher levels of violence (Black et al., 2011; Petrosky et al., 2017) but are also more likely to die and/or have serious complications from COVID-19 (Baptiste et al., 2020; Kawachi, 2020). Many cities across the United States experienced protests for racial equality and justice for police brutality, which can further strain the already tenuous relationship between communities of color and law enforcement (Bailey, Feldman, & Bassett, 2020; Galea & Abdalla, 2020). However, little is known if and how such circumstances impacted the law enforcement response to gender-based violence during the pandemic.

> *"The awareness of power-based violence has grown because not everyone is 'safe at home.'"*
>
> -RESPONDENT

Given the expansive negative consequences of gender-based violence, victim advocates and specialized agencies help survivors with a wide range of needs. However, the COVID-19 pandemic has forced many agencies to quickly adapt their policies and/or manage with limited resources in these unprecedented times. In addition, agencies that serve minority or under-served populations are likely to experience additional barriers given the already limited resources available, discrimination faced by survivors, and ongoing tensions in the community during protests for racial equality.

One critical step in helping victim service agencies become better equipped is to document the issues that these agencies face to prioritize needs and facilitate better service to victims of gender-based violence. This report summarizes key findings from a survey that aimed to document the perceived impact of the COVID-19 pandemic on the dynamics of gender-based violence, in addition to the challenges, needs, and innovations that service providers experienced while working with survivors during the pandemic.

METHOD

SURVEY DEVELOPMENT AND DATA COLLECTION

The goal of this project was to document the challenges and needs that service providers experienced and/or are currently experiencing during the COVID-19 pandemic by administering an online survey to professionals who serve survivors of gender-based violence across the United States. Specifically, this survey targeted professionals who work with intimate partner abuse and dating violence, child abuse, elder abuse, sexual assault, stalking and human trafficking survivors. The survey was developed in collaboration with National Coalition Against Domestic Violence (NCADV) over the course of late spring and summer 2020. Upon piloting the survey using a group of domestic violence professionals, the final version of the survey consisted of questions that spanned across a variety of areas, including: the impact of the pandemic on forms of gender-based violence, risks and challenges for survivors, challenges for agencies, interactions with law enforcement, innovations for agencies in going forward, and survey respondent information. The survey took about 25 minutes to complete.

Respondent recruitment efforts occurred in two primary ways. First, the survey was advertised through the NCADV by sending two recruitment emails via the NCADV email listserv in September 2020 and October 2020. Specifically, the survey recruitment email was circulated to members of the NCADV in addition to NCADV-affiliated shelters and/or programs across the United States. Additionally, the NCADV advertised the study on social media platforms, such as Twitter and LinkedIn.

> *"Compassion and care do not always come across through technology."*
>
> -RESPONDENT

> *"We won't know the true impact of the pandemic on IPV until the pandemic is over, because I'm certain that some survivors are currently not able to reach out for help and, some could, but probably have other concerns that they prioritize such as their economic struggles during these terrible times."*
>
> -RESPONDENT

Second, state and local agencies across the country were emailed individually by the authors and asked if they would disseminate the survey recruitment email within their networks. These individual state recruitment efforts also targeted agencies that worked with survivors of sexual victimization, human trafficking, and child abuse, in addition to minority/under-served survivors of domestic violence to ensure professionals who worked with a broad range of survivors of gender-based violence were reached. Data collection via the online survey occurred from September 2020 to December 2020.

SURVEY RESPONSES

A total of 464 individuals opened the survey upon reading the recruitment email and 403 completed the initial screener question asking potential respondents which population(s) of gender-based violence survivors they served. Twenty-six individuals who completed the filter question (6.5%) indicated that they did not serve survivors of gender-based violence and were therefore, ineligible to complete the survey. Another 91 individuals (22.6%) exited the survey following the filter question.

There appeared to be a significant drop-off in survey participation (i.e., those who exited the survey before full completion) following the first two sections of questions. To maximize the number of individuals

included in the analyses who provided survey responses, two sample sizes were utilized: before and after participation drop-off. However, to ensure that those included in the analyses did not contain significant issues of missing survey responses, only respondents who completed all survey questions in each section were included in the analyses.

Therefore, a total of N = 222 individuals completed all questions in the initial two sections of questions and a total of N = 172 individuals completed all questions in the remainder of the survey. Respondents represented over 40 states cross the nation.

Based on the initial filter question, the populations of gender-based violence served by survey respondents are as follows:

Population of Survivor Served (N = 222)	%
Intimate partner Violence	86.0%
Sexual assault	83.1%
Other domestic violence (e.g., elder abuse)	64.0%
Stalking	63.4%
Child abuse	58.1%
Human trafficking	49.4%

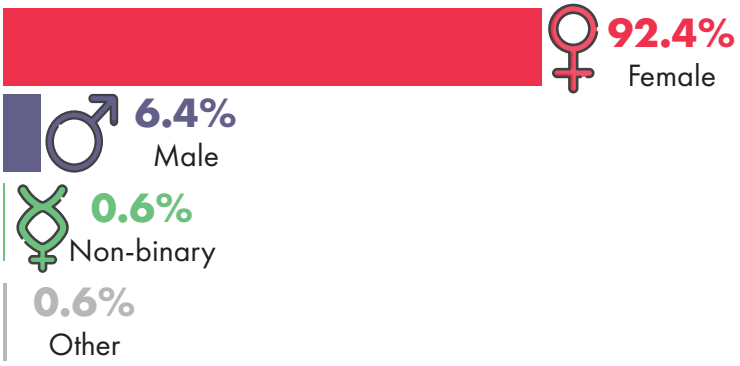
Note: respondents selected all that apply

PART 1: RESPONDENT CHARACTERISTICS

Respondent characteristics are available for N = 172 respondents who completed the final section of the survey.

DEMOGRAPHIC CHARACTERISTICS

GENDER IDENTITY

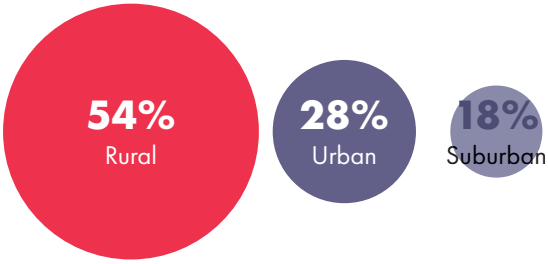


RACE/ETHNICITY	%
White (non-Hispanic)	87.8%
Hispanic	6.4%
Black (non-Hispanic)	2.9%
Asian/Pacific Islander	2.3%
Other race/ethnicity	1.7%
American Indian	1.2%

AVERAGE AGE

43
With ages ranging from 20 to 74

AREA RESPONDENT WORKS



JOB CHARACTERISTICS

Current position

Shelter advocate/employee	24.0%
Criminal justice agency advocate	14.6%
Rape crisis advocate/employee	11.1%
Mental health/substance use professional	9.4%
Court advocate/employee	5.8%
Hotline advocate/employee	1.2%
Other advocate/employee serving victims not listed	33.9%

Over **80%** of respondents worked with IPV or sexual assault survivors

Length of time current position

< year	19.9%
1-2 years	22.2%
3-5 years	18.7%
6-10 years	19.3%
11-15 years	5.3%
16-20 years	5.3%
> 20 years	9.4%

61% of respondents worked at their current position for <5 years

Length of time working with gender-based violence survivors

< year	7%
1-2 years	9.9%
3-5 years	17.5%
6-10 years	24.6%
11-15 years	14.0%
16-20 years	9.9%
> 20 years	17.0%

27% of respondents have been working with gender-based violence survivors for over 15 years

50% of respondents were advocates or employees with shelters, the criminal justice system, or rape crisis agencies

13% of respondents worked for an agency whose sole purpose was to serve specific racial, ethnic, religious or underserved populations

> *"There wasn't much the agency could do other than tell victims someone would call them back."*
>
> -RESPONDENT

PART 2: CHALLENGES FOR AGENCIES

How much of a problem are the following issues for your agency when serving survivors of gender-based violence during the pandemic (1 = less of a problem to 10 = more of a problem)?

N = 172	Average
Survivors are less likely to seek help because they are isolated with their abuser and/or their abuser can more closely monitor their behavior	8.59
Survivors are less likely to seek help or leave their home due to concerns for their health	7.49
Providing safe, alternative housing for survivors	7.48
Survivors are not aware that agencies are providing services during the pandemic	7.43
Distrust of and/or confusion regarding public information about the virus/public safety	7.30
Staff stress due to childcare limits or school age children being home	7.06
Difficulties or lack of technological infrastructure to communicate remotely for work and/or help survivors via technology/without direct face-to-face contact	7.05
Survivors do not trust or want to interact with law enforcement	7.03
Transportation to needed services (e.g., to shelters, substance use programs, court, etc.)	6.94
Money and resources to provide services	6.92
Confidentiality/privacy concerns with technological platforms and/or communicating with survivors remotely	6.78
Fewer agency staff and/or volunteers to provide services due to layoffs, reduced hours, or availability	6.58
Local or statewide coordination between agencies to provide needed services	6.42
Keeping up with adequate sanitation and/or personal protective equipment	6.37
Low morale/support for agency staff	6.29
Staff are unable to work or fear for their health to come to work	6.16
System (e.g., protective orders) are not being provided or only being provided in limited capacity	6.10
Confidentiality/privacy concerns for survivors when conducting contact tracing investigations	5.91
Agency unpreparedness for an emergency/crisis	5.66
Noncompliance or resistance to wear masks	4.99

Higher concerns above midpoint	Medium concerns above midpoint	Lower concerns above midpoint

About half of respondents viewed each of the following as major areas of financial strain for their agency:

- Technology/infrastructure to work remotely
- Personal protective equipment or other sanitation
- Limited availability of grant funding

EXAMPLES OF CHALLENGES AGENCIES ARE FACING[2]

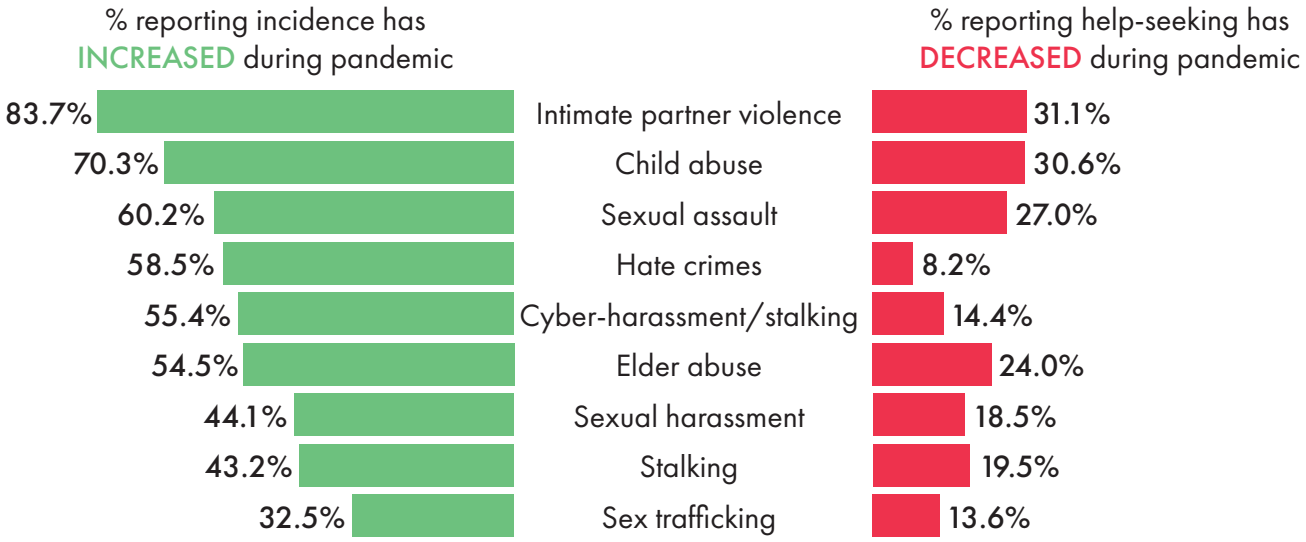
- "Keeping the shelter sanitized as clients have refused to wear masks, practice social distancing in common areas."
- "Safely contacting and providing services to survivors via phone, computer without alerting the abuser."
- "Dealing with personnel stress about the virus makes it easier for providers to fall victim to secondary/vicarious trauma."
- "Going to a shelter isn't easy during non-pandemic times much less during a pandemic. Beds were sparse, hotel rooms were temporary and not conducive to children's needs, and sometimes if a survivor called a local agency hotline, there wasn't much the agency could do other than tell victims someone would call them back."

59%
of respondents encountered issues with survivors who have tried to seek help, but the agency was unable to provide services because it was closed or functioning at limited capacity

- "Protection Orders are not being provided/enforced/or only provided in limited capacity during certain hours and with restrictions in place."
- "Maintain client confidentiality while using technology to work remotely/virtually with survivors."
- "Safe housing options for shelter and for quarantine for shelter residents."
- "Providing efficient court advocacy while not being allowed to accompany clients to court proceedings."
- "Reduced number of staff (out sick, no childcare); Low staff morale."
- "Lack of readiness for emergency such as a pandemic (especially technology needs)."
- "People of color not wanting to get the police involved in their situation for fear of the abuser being killed, they just want to get away from the abuse."
- "Staff's ability to meet with survivors face to face."
- "Racial injustices have been highlighted more during the pandemic, which has caused an additional burden on the mental health of persons of color."
- "Sexual assault survivors have had a hard time obtaining rape crisis advocacy services due to closures of offices and the removal of advocates from hospitals. Sexual assault survivors have also seen spiking barriers in obtaining rape kits due to health concerns and hospital resources related to COVID-19."
- "Inability to meet in person. Compassion and care do not always come across through technology."
- "Our legal community was shut down. Our clients also had difficulty with law enforcement going on calls."

[2] Based on open-ended responses.

PART 3: EXPERIENCES OF SURVIVORS



38%
of respondents reported that gun sales have increased in their community since the start of the pandemic

About **50%**
of respondents reported abusers threatening to shoot survivors has become a bigger problem since the start of the pandemic

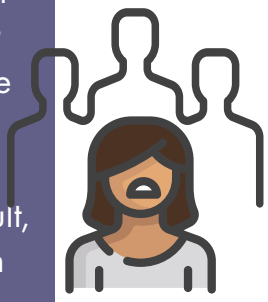
33%
of respondents reported that intimate partner homicides have increased in their communities

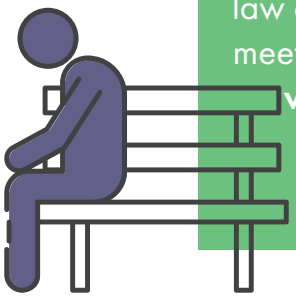
> *"Concealed carry licenses in my county have gone up as well as gun and ammo sales. I think abusers are more stock piling weapons and are concealed carrying more than before the pandemic."*
>
> -RESPONDENT

EXPERIENCES OF SURVIVORS OF COLOR AND INTERACTIONS WITH LAW ENFORCEMENT

Over 50%
of respondents reported that the law enforcement response to White survivors was "good" compared to **only 36% who reported the law enforcement response to Black survivors was "good"**

Over 50%
of respondents reported that **female survivors of color are at more risk** than White female survivors in their community to experience physical assault, sexual assault, sexual harassment, and gun violence





About 25%
of respondents reported that law enforcement's response to meeting the needs of survivors **worsened during the pandemic**

"I know a policeman's job difficult, but until they regain the trust from the community, their job won't get any easier. And the only way to regain trust is by re-imagining the police system into a system that helps communities and works even more closely and seamlessly with all community resources."

-RESPONDENT

"Racial injustices have been highlighted more during the pandemic, which has caused an additional burden on the mental health of persons of color."

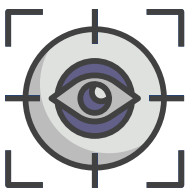
-RESPONDENT

"Inability to have access to safe, trusted, and equitable services, because those -mostly- government systems that are still working (e.g. police, child welfare) are not always wanted or helpful to women of color."

-RESPONDENT

EXAMPLES OF SURVIVOR POPULATIONS AT PARTICULAR RISK DURING PANDEMIC[3]

- "People who are in intimate partner violence situations because they have less ability to leave or access help or even get a break."
- "Children are at an increased risk during the pandemic as many of them live with their abusers or are continuously exposed due to having to function in all aspects from home. There is also a decrease in the access to needs/resources that were being provided from schools."
- "Marginalized communities that are likely to be in quarantine around people of the same communities. There is already a defensive mechanism to reporting when survivors feel that reporting may damage the reputation of their community or group, and now they are likely quarantined around those folks."
- "The social safety net for immigrants, particularly those with tenuous or no documentation, is unstable in a best-case scenario. The pandemic has exacerbated that."
- "Survivors with mental health issues and homelessness."
- "Young mothers with multiple children...younger mothers seem to have partners who are most impacted by job loss during the pandemic. They also have less resources."
- "Elderly in facilities where families can not physically check on them; Elderly at home with caregivers due to added stress on caregivers of the pandemic and less oversight to ensure they are caring for the victim."
- "Indigenous groups, an already under served population of people who have been hit hardest by the pandemic on reservations and in places of work outside their reservations."
- "Extremely rural survivors are at the greatest risk in our service area because they have no way to get away from the abuser."
- "The intersection of collective racial trauma and IPV has had a profound impact on the functioning of survivors of color. Additionally, there is another layer of threat by the pandemic to make communities of color at a higher risk of infection rate and death."



58%
of respondents reported that abusers monitoring of survivors' activities has increased "very much" during the pandemic

About two thirds
of respondents reported that abusers have interfered with survivors' work/employment as a control tactic during the pandemic

[3] Based on open-ended responses.

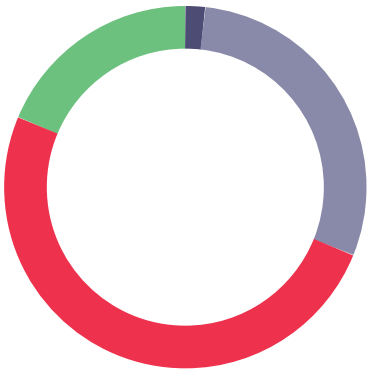
PART 4: LOOKING AHEAD

% of respondents who **strongly agree** that the following will be barriers to serving survivors of gender-based violence in the next year

Barrier	%
General financial/economic strain in society	72.7%
Agencies need more money and resources to provide services	60.5%
Survivor risk for homelessness if evicted/unable to pay rent	55.2%
Survivors are unable to get away from abuser in home/have privacy to seek help	54.7%
Survivors are afraid of group living at shelters	45.9%
Morale and support of staff at agency	43.0%
Reliance on technology to communicate and provide services	39.5%
Distrust of public information about the virus/public safety	39.0%
Racial inequity and/or tension with law enforcement agencies	38.4%
Survivors are afraid to leave the home in fear of getting sick and/or their children becoming sick	34.3%
Places, such as shelters, are unable to keep up with adequate sanitation and protective equipment needs	33.7%
Survivor knowledge of resources and/or where to seek help	32.0%
Employees are unable to work or fear for their health to come to work	22.7%
Inadequate staffing due to layoffs or reduced hours	23.3%
System services (e.g., protective orders) are not being provided or only being provided in limited capacity	22.7%

Higher concerns above midpoint	Medium concerns above midpoint	Lower concerns above midpoint

HOW PREPARED IS YOUR AGENCY TO DEAL WITH ANOTHER SOCIETAL SHUTDOWN?



2%, Not at all
29%, A little
51%, Quite
19%, Very

"Fear of the unknown… will we shut down again and what will that look like?"

-RESPONDENT

"I believe there should be YEARLY trauma informed practice training for refresher."

-RESPONDENT

"Increased awareness has improved the response of our advocates to the needs of this population."

-RESPONDENT

CONCLUSION

The consequences of the COVID-19 pandemic are far-reaching and we still have much to learn about how this pandemic has impacted and will continue to impact survivors of gender-based violence and those that serve them. Although governments and agencies across the world were initially unprepared for the devastating impact of the COVID-19 pandemic, there is hope that efforts to gather information will illuminate areas of high concern and innovations to improve services going forward.

This report identified challenges that victim service agencies face during a global pandemic and perceptions of the impact the pandemic has had on the dynamics of gender-based violence. Clearly, concerns regarding available funding and resources for service agencies, homelessness and financial insecurity of survivors, health and wellness of both staff and clients, limitations in services available within the community, and continued isolation and safety of survivors are key challenges that face those who serve victims of gender-based violence. However, these results also underscore the resilience and dedication of agency staff to serving survivors of gender-based violence during an unprecedentedly challenging time.

> *"This is such an unprecedented time that is affecting our entire nation and has been very long lasting. I don't think that we even know what the effects will be on survivors."*
>
> -RESPONDENT

Ideally, the results of this report can be used to: (1) help agencies, local governments, and states obtain further funding to support their work and services they provide; (2) inform more coordinated plans for serving survivors during and after the pandemic; (3) identify and address structural inequities that affect survivors of gender-based violence and the services, resources and protections available to them; and (4) provide information regarding questions researchers should be asking when developing a meaningful research agenda related to helping survivors of gender-based violence during a time of global crisis.

> *"Some survivors found strength in overcoming obstacles and celebrated their resilience in the face of adversity."*
>
> -RESPONDENT

More work is needed to bring the full scope of the impact of COVID-19 to light and these results should be considered in light of several methodological limitations. Although this is a national sample of respondents, it is not a random sample that is nationally representative of all victim service agencies in the United States. Relatedly, a large sample size was not employed and not all populations of survivors were represented equally in this sample, as the vast majority served IPV and sexual assault victims. Therefore, the generalizability of the results to other victim service agencies in the United States or in other countries is limited. Additionally, this report presents a snapshot of respondents' experiences and perceptions of the pandemic at one point in time and these experiences may, and perhaps are likely to, change over time. The pandemic is a longitudinal issue that will present continuous waves of challenges and consequences for society. Nevertheless, this report is an interim step in documenting the resiliency in agency responses to gender-based violence and harnessing the creativity, determination, and passion of staff to navigate this pandemic.

REFERENCES

American Psychological Association. (2020). *Stress in America 2020: A National Mental Health Crisis.* Retrieved from https://www.apa.org/news/press/releases/stress/2020/sia-mental-health-crisis.pdf

Bailey, Z. D., Feldman, J. M., & Bassett, M. T. (2020). How Structural Racism Works — Racist Policies as a Root Cause of U.S. Racial Health Inequities. *New England Journal of Medicine*. doi:10.1056/nejmms2025396

Baptiste, D. L., Commodore-Mensah, Y., Alexander, K. A., Jacques, K., Wilson, P. R., Akomah, J., . . . Cooper, L. A. (2020). COVID-19: Shedding light on racial and health inequities in the USA. *Journal of Clinical Nursing, 29*(15-16), 2734-2736. doi:10.1111/jocn.15351

Black, M. C., Basile, K. C., Breiding, M. J., Smith, S. G., Walters, M. L., Merrick, M. T., . . . Control . Division of Violence Prevention, i. b. (2011). *National Intimate Partner and Sexual Violence Survey : 2010 summary report:* Atlanta, Georgia : Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Division of Violence Prevention.

Boxall, H., Morgan, A., & Brown, R. (2020). The prevalence of domestic violence among women during the COVID-19 pandemic. *Australasian Policing, 12*(3), 38-46.

Czeisler, M. É., Lane, R. I., Petrosky, E., Wiley, J. F., Christensen, A., Njai, R., . . . Rajaratnam, S. M. W. (2020). Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic — United States, June 24–30, 2020. MMWR. *Morbidity and mortality weekly report, 69*(32), 1049-1057. doi:10.15585/mmwr.mm6932a1

Galea, S., & Abdalla, S. M. (2020). COVID-19 Pandemic, Unemployment, and Civil Unrest. *JAMA, 324*(3), 227. doi:10.1001/jama.2020.11132

Gosangi, B., Park, H., Thomas, R., Gujrathi, R., Bay, C. P., Raja, A. S., . . . Khurana, B. (2021). Exacerbation of Physical Intimate Partner Violence during COVID-19 Pandemic. *Radiology, 298*(1), E38-E45. doi:10.1148/radiol.2020202866

Kawachi, I. (2020). COVID-19 and the 'rediscovery' of health inequities. *International Journal of Epidemiology, 49*(5), 1415-1418. doi:10.1093/ije/dyaa159

Klein, A. (2008). Sexual violence in disasters: A planning guide for prevention and response. Lousiana Foundation Against Sexual Assault and National Sexual Violence Resource Center.

Leslie, E., & Riley, W. (2020). Sheltering in Place and Domestic Violence: Evidence from Calls for Service during COVID-19. *Journal of Public Economics, 189*. doi:http://dx.doi.org/10.2139/ssrn.3600646

Lindberg, L., VandeVusse, A., Mueller, J., & Kirstein, M. (2020). Early Impacts of the COVID-19 Pandemic: Findings from the 2020 Guttmacher Survey of Reproductive Health Experiences. Retrieved from New Yirk, NY: https://www.guttmacher.org/sites/default/files/report_pdf/early-impacts-covid-19-pandemic-findings-2020-guttmacher-survey-reproductive-health.pdf

Peterman, A., & O'Donnell, M. (2020). *COVID-19 and Violence against Women and Children: A Second Research Round Up.* Retrieved from https://www.cgdev.org/sites/default/files/covid-19-and-violence-against-women-and-children-second-research-round.pdf

Petrosky, E., Blair, J. M., Betz, C. J., Fowler, K. A., Jack, S. P. D., & Lyons, B. H. (2017). Racial and Ethnic Differences in Homicides of Adult Women and the Role of Intimate Partner Violence — United States, 2003–2014. *MMWR. Morbidity and mortality weekly report, 66*(28), 741-746. doi:10.15585/mmwr.mm6628a1

Piquero, A. R., Riddell, J. R., Bishopp, S. A., Narvey, C., Reid, J. A., & Piquero, N. L. (2020). Staying Home, Staying Safe? A Short-Term Analysis of COVID-19 on Dallas Domestic Violence. *American Journal of Criminal Justice, 45*(4), 601-635. doi:10.1007/s12103-020-09531-7

Todres, J., & Diaz, A. (2020). COVID-19 and human trafficking—the amplified impact on vulnerable populations. *JAMA pediatrics.*

Janse van Rensburg, M., & Smith, H. (2020). Navigating uncertainty, employment and women's safety during COVID-19: Reflections of sexual assault resistance educators. Gender, Work & Organization.

United Nations Development Programme. (2020). *Gender-based violence and COVID-19.* Retrieved from file:///C:/Users/TK/Downloads/undp-gender-GBV_and_COVID-19.pdf

Usher, K., Bhullar, N., Durkin, J., Gyamfi, N., & Jackson, D. (2020). Family violence and COVID-19: Increased vulnerability and reduced options for support. *International Journal of Mental Health Nursing, 29*(4), 549-552. doi:10.1111/inm.12735

When Abusers Keep Their Guns

Reveal

from The Center for Investigative Reporting

ARMED AND ABUSIVE
How America's Gun Laws Are Failing Domestic Violence Victims

By Jennifer Gollan | October 26, 2021

This story was co-published with The Guardian.

Paige Mitchell and Bradley Gray forged a bond over tragedy. Late one Sunday in October 2009, Mitchell's husband borrowed a motorcycle from a neighbor on a whim, rumbled down a back road in rural Moundville, Alabama, and careened to his death. Almost exactly a year later, at almost precisely the same time of night, Gray's wife died on the same county byway when her car crashed into a tree. Fate seemed to push Mitchell and Gray together, making their relationship hard to sever even as it descended into dysfunction.

Mitchell treated Gray's son, Bradley Jr., like one of her own children, bringing him on outings with her daughters, Kayla and Kaci. Gray, who worked for a construction company, mowed Mitchell's lawn and did repairs around her house. They went to concerts and cruised the Black Warrior River in Gray's boat. Mitchell, a hairdresser with a gregarious personality, was glad to have someone to laugh with. But a darkness hovered over their relationship. Gray drank – a lot. And when he drank, his temper exploded. After beating a friend with a baseball bat in 2014, he was charged with felony assault, though the case was eventually dismissed.

Gray tried rehab, but he couldn't stay sober, Mitchell's family said. Many of the people who loved him gave up. Mitchell felt sorry for him, her family said; like the German shepherd she rescued and the foster children with disabilities she took in, she thought she could help him heal.

After Gray hit her in the chin with a metal hand-grip exerciser, bruising her face and leaving her worried she would lose her tooth, Mitchell began to give up, too. But Moundville is tiny, and they kept running into each other. On the night of July 9, 2015, she went to Gray's home to pick up her car and collect her belongings after another split. This time, according to police, he showed her a Glock in a holster and threatened to use it: "I will blow you away." Police arrested Gray at his house and confiscated his gun, evidence of a potential crime. Prosecutors charged him with third-degree domestic violence, punishable by up to a year in jail.

Then Gray bumped into Moundville's police chief, Ken Robertson, in a convenience store and started "really ranting," Robertson recounted in a deposition five years later. Gray called Robertson and his officers "you son of bitches" and demanded that they return his gun. "Let me see what's going on and we will rectify the situation," Robertson told him.

Back at the station, Robertson read Gray's arrest report – and, over the objections of another officer, he handed back the gun. The former police chief, who is now a sheriff's deputy for Hale County, didn't respond to requests for an interview. But in his deposition, he offered an explanation of sorts: Police didn't have a search warrant for the weapon, he said. In his view, "there was zero legal reason to keep it."

In fact, under Alabama law, police could have – and should have – sought a court order to retain the gun through a process known as condemnation, said Hale County District Attorney Michael Jackson, whose jurisdiction includes most of Moundville. Giving back the gun, Jackson said, "was a big mistake."

That error was compounded a few weeks later after Gray pleaded guilty to the domestic violence charge. Along with

Paige Mitchell (left) and her 14-year-old daughter, Kaci (right), of Moundville, Ala. Credit: GunMemorial.org

a 30-day suspended jail sentence and a year's probation, he was ordered to enroll in anger management classes. The timing was crucial: Under a state law that took effect the previous week, on Sept. 1, 2015, Gray's domestic violence misdemeanor conviction meant he was no longer allowed to possess a firearm or have one "under (his) control." As a convicted abuser, Gray was now also permanently barred from possessing a firearm under federal law.

Bradley Grey. Credit: Hale County DA

If Robertson's department had held on to the Glock, the rest of the story might have been different. But Gray had his gun – and the new Alabama statute didn't spell out a procedure for him to surrender it. Nor was there any requirement for law enforcement to seize it. In his deposition, Robertson acknowledged that Gray was no longer allowed to have a firearm, but he said he didn't follow up on the case: "We don't have the authority to go and start checking everybody that's been convicted." He also admitted that he'd never notified Mitchell that he'd given back the Glock. The law didn't require it.

A little more than a year later, Mitchell, then 37, ran into Gray unexpectedly at a friend's place and made it clear one more time that the relationship was over. "Brad was trying to convince her otherwise, and she was moving on," said Sylvia Ray, Mitchell's aunt and adoptive mother.

Hours later, just before dawn on Jan. 26, 2017, Gray broke into Mitchell's house through the back door, according to her family. When Mitchell's foster child woke and went to check on the noise, Gray told her to go back to bed. In the living room, he found 14-year-old Kaci, who had been asleep on a couch by the front door, and shot her in the neck, according to her autopsy.

Former Moundville, Ala., Police Chief Ken Robertson returned a confiscated gun to Bradley Gray after Gray was arrested and charged with domestic violence in July 2015. Credit: Gray Media Group Inc./WBRC

Next he turned the Glock on Mitchell, firing a single bullet into the back of her head.

The shooting was over so quickly that 10-year-old Kayla slept through it. She discovered the bodies of her mother and sister when she woke the next morning to get ready for school.

As officers waited on his front porch soon after to question him, Gray fired one last shot with the gun he wasn't supposed to have. He died at a hospital three days later.

A memorial baseball game in April 2017 honors Paige and Kaci Mitchell. Credit: Erin Nelson/USA Today Network

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Every 16 hours somewhere in the U.S., a woman is fatally shot by a current or former intimate partner. The numbers have been soaring: Gun homicides by intimate partners jumped 58% over the last decade, according to never-before-published FBI data analyzed for Reveal from The Center for Investigative Reporting by James Alan Fox, a professor and criminologist at Northeastern University. The pandemic has been an especially lethal period for abuse victims, Fox found; gun homicides involving intimate partners rose a stunning 25% in 2020 compared with the previous year, to the highest level in almost three decades. Women accounted for more than two-thirds of the victims shot and killed by intimate partners last year.

Many of these killings involve offenders, such as Bradley Gray, who were legally prohibited from having guns, a Reveal investigation has found. From 2017 through 2020, Reveal identified at least 110 intimate partners and others who were fatally shot by offenders using weapons they weren't allowed to possess under federal and, in some cases, state law.

The true numbers aren't known; the federal government doesn't track fatal shootings by intimate partners who shouldn't have firearms, and state data is incomplete, inaccessible or nonexistent. To find these cases, Reveal amassed information on hundreds of gun homicides around the U.S. from domestic violence coalitions, news accounts and state agencies, then vetted each shooter using criminal background checks and thousands of pages of police and

court records. The number of cases we found is almost certainly a vast undercount, in large part because we were able to obtain limited information from only 21 states, and crucial records in many cases were missing.

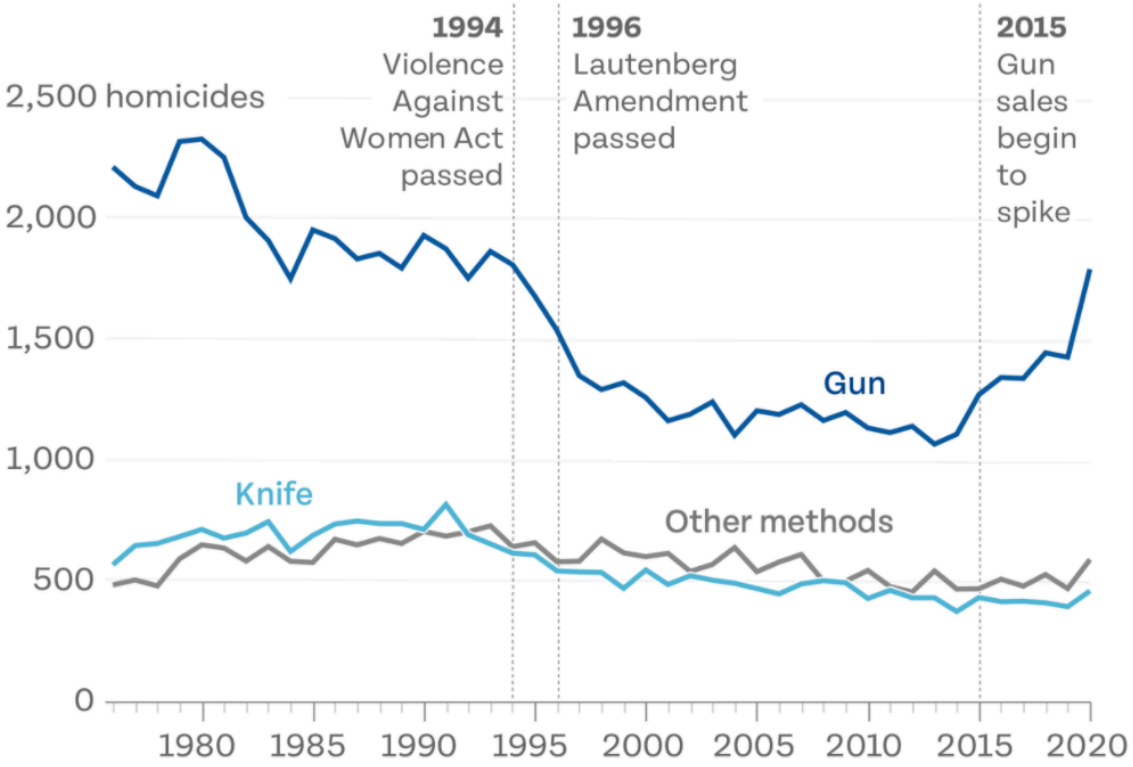
The victims, nearly all of them women, represent a cross-section of race and class. They include a 26-year-old factory worker from Arkansas whose boyfriend shot her in the back of the head in front of her two infants. A nurse in Washington state who was about to move to Missouri when her estranged husband gunned down her and her mother. Seventeen people in the database were killed during the pandemic, including a Milwaukee mother and four teenagers slain by a convicted felon with a 12-gauge shotgun. Four of the victims were pregnant. Also killed were bystanders, police officers and a 4-year-old girl.

"Every one of these deaths is preventable," said Natalie Nanasi, an associate professor of law at Southern Methodist University who specializes in gender-based violence. "It's absolutely outrageous that we're losing people in this way, because we know what we need to do in order to prevent it from happening. We have laws on the books. We're just not actually enforcing them."

Guns are the No. 1 weapon in domestic violence killings in the U.S. – just owning a firearm makes an abuser five times more likely to take a partner's life. People with a history of violence against a partner, including stalking or strangulation, are also far more likely to go on to commit more heinous acts. Earlier this year, researchers reported that more than two-thirds of recent mass shootings in the U.S. involved perpetrators who killed partners or relatives or had a history of domestic abuse. There's an obvious antidote, said David Martin, who supervises the domestic

Intimate Partner Shooting Deaths Are Soaring

Domestic violence gun homicides fell sharply in the 1990s, then began to rise in the Obama years, reaching a 26-year high during the pandemic. The change in killings by other methods has been less pronounced over time.



Source: Unpublished FBI data analyzed for Reveal by criminologist James Alan Fox of Northeastern University

Credit: Reveal

violence unit for the King County prosecuting attorney's office in Seattle. "The lowest-hanging fruit in this entire conversation is making sure that people at high risk do not have access to firearms," he said. "This is the easiest thing that anybody can do."

But in a country with some of the highest levels of gun ownership in the world, deeply divided by politics and culture and increasingly hostile to the rights of women, enacting comprehensive gun safety measures – universal background checks, licensing and permitting, bans on military-style weapons, and national databases to track who owns firearms and how they're used – has been politically unfeasible. Indeed, Robyn Thomas, executive director of the Giffords Law Center to Prevent Gun Violence, sees an opposite trend: "We're going in the wrong direction in some states and repealing gun regulations."

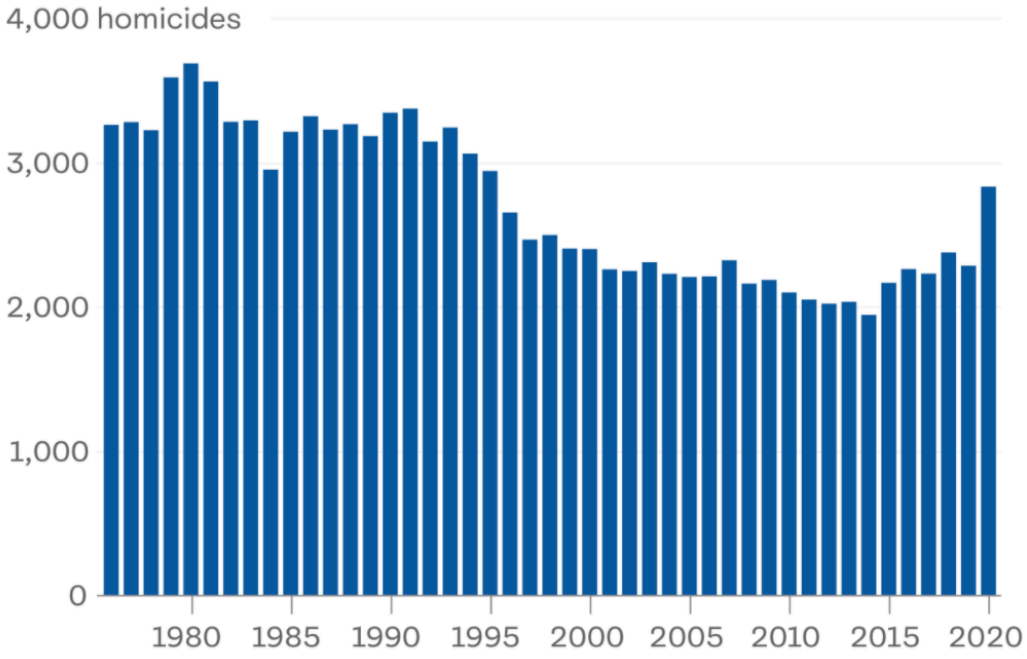
Thus, the U.S. relies on an amalgam of narrower laws and policies that often end up working against the abuse victims they're supposed to protect, creating not just gaps in protection, but gaps in accountability.

The Gun Control Act of 1968, enacted in the aftermath of political assassinations that roiled the country in the 1960s, makes it illegal for people convicted of a felony to possess a firearm. A quarter-century later, as part of the Violence Against Women Act, Congress barred people subject to family violence protection orders from having firearms. Two years after that, lawmakers led by then-New Jersey Sen. Frank Lautenberg expanded the federal gun restrictions to include some people convicted of domestic violence misdemeanors, a critical change given that many abusers avoid more severe charges through plea agreements. The passage of the latter two bills helped drive down the number of women shot and killed by their partners starting in the 1990s, said Fox, the Northeastern criminologist.

But the number of domestic violence homicides has climbed again in recent years, exposing the system's fundamental weaknesses.

Intimate Partner Homicides in the U.S.

At least 122,000 Americans have been slain since 1976, with more than 2,800 killings in 2020 alone.



Source: Unpublished FBI data analyzed for Reveal by criminologist James Alan Fox of Northeastern University

Credit: Reveal

Every state has passed some version of the federal ban on felons having firearms. In addition, in 33 states and the District of Columbia, it's illegal for people convicted of domestic violence misdemeanors to possess guns. But federal gun laws and the vast majority of state statutes share a glaring flaw: They don't address how to get guns away from people who aren't supposed to have them. They don't say how offenders who are banned from possessing firearms should surrender them or spell out procedures for confiscating them. They don't create the legal infrastructure that is essential for keeping abuse victims, their families and communities safe from dangerous offenders.

Instead, around much of the country, these gun laws are enforced on an honor system that relies on people who are prohibited from possessing firearms to disarm themselves.

"You are trusting somebody who is not worthy of being taken at their word," said Democratic U.S. Rep. Eric Swalwell, who spent seven years working as a prosecutor in Alameda County, California. "And that has been to the peril of domestic violence victims." The notion of leaving it up to offenders to turn in their guns of their own volition is absurd, law professor Nanasi added. "It's a fairy tale."

Intimate partner violence is, by its nature, the most local of crimes, and states and local jurisdictions are where the vast majority of domestic violence cases are handled. But 17 states do not make it illegal for people convicted of domestic violence misdemeanors to possess guns. Even in states with misdemeanor bans, the restrictions can be significantly weaker than federal law. For example, South Dakota bars people from possessing a firearm for just a year after they're convicted of a domestic violence misdemeanor; in South Carolina, the length of the ban depends on the crime's severity. In Arizona, the gun prohibition applies only while offenders are on probation.

And local and state officials can't enforce federal gun laws. "It's a jurisdictional thing," said Alabama district attorney Michael Jackson. "As a general rule, the feds are the ones who enforce their own laws. … We're the prosecutors for the state, and we enforce state law."

U.S. Rep. Eric Swalwell, D-Calif., is a former prosecutor in Alameda County. Credit: Al Jazeera English/Fault Lines

But the federal criminal justice system is inundated, and the volume of cases just involving felons caught with guns is staggering. Part of the problem is that it's easy to obtain a weapon, even for felons, through private gun transfers that don't require background checks.

The Bureau of Alcohol, Tobacco, Firearms and Explosives investigates federal firearms violations when it learns of them – for instance, when local police respond to a domestic abuse incident and discover an offender has a gun illegally – but none of its agents focus exclusively on domestic violence. "A lot of the time, firearms violations are only detected when they have resulted in violent crime," Thomas Chittum, the ATF's acting deputy director, said in an interview.
Nor does the ATF or any other federal agency track the number of people prohibited from possessing firearms who go on to kill their intimate partners.

"Oh, I don't know that number," Chittum said. "I'm not sure anyone knows that number with precision."

Taris Ford-Dillard was a former community college basketball team captain who, at 6-foot-3, towered over his partner, Jazmine Willock. But in every other way, it was clear that she was the one with the gigantic spirit and he was the one who felt small.

Willock was a gifted artist whose high school self-portrait won the Congressional Art Competition and hung in the U.S. Capitol. She had a green belt in taekwondo and a kick so powerful that it earned her a spot on the U.S. Virgin Islands Women's National Soccer team, playing for the island territory where she grew up. She went to college at 17,

Hale County District Attorney Michael Jackson outside a courthouse in Alabama. Credit: Andi Rice for Reveal

moving to Arizona, where her mother and siblings lived, to finish her degree. She bought a house at 21; to pay the mortgage, she juggled a server job at The Cheesecake Factory with a gig as a physical therapy assistant in Tucson. Her mother, Annette Sisson, can't recall how the two met, but Willock thought Ford-Dillard was handsome, smart and charming. Sisson was less impressed: "Narcissistic people are always charming."

From early in their romance, Ford-Dillard showed signs of having a jealous, controlling personality, Willock's family said. He seethed if she glanced at another man and tagged along wherever she went, even insisting on driving her to work. He also had a worrisome history of abuse; he was convicted of a misdemeanor domestic violence assault charge after punching his previous live-in girlfriend in the face and shoving her to the ground. Ford-Dillard was ordered to undergo domestic violence counseling and sentenced to a year of probation. This 2014 conviction meant he was permanently prohibited from possessing a gun under federal law and barred under Arizona law while he was on probation.

By July 2017, it was clear the relationship with Willock had turned abusive as well. During one especially terrifying incident, she told police, Ford-Dillard flung her across the bed and onto the floor, ripping her shirt, squeezing her neck in a headlock and smashing her face with a shoe.

Then, Willock recounted, he grabbed the handgun he always seemed to carry despite the federal ban.

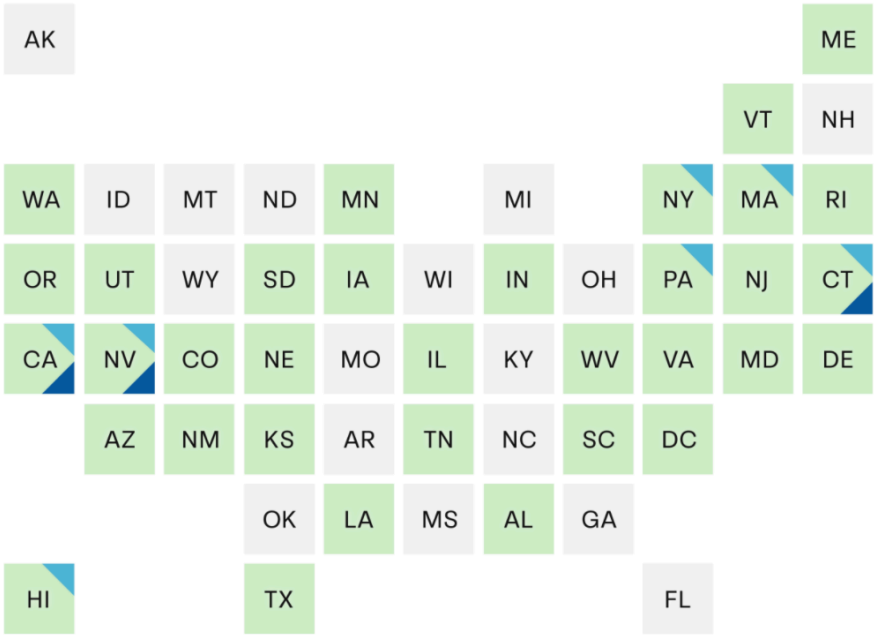
"I should, I should," he said, pointing the gun at her.

"Please stop, please stop, please stop," Willock begged.

"Who's going to save you?" Ford-Dillard taunted.

How State Gun Laws Leave Abuse Victims Unprotected

Every state has some sort of ban on felons possessing firearms. But big gaps remain. Only **33 states and the District of Columbia** bar people convicted of domestic violence misdemeanors from having guns for some period of time. **Seven states** require prohibited possessors to give up their firearms. **Three states** require proof of surrender.



Source: Giffords Law Center to Prevent Gun Violence

Credit: Reveal

Jazmine Willock (center) and her sisters, Rosa (left) and Domonique (right). Jazmine was killed by her boyfriend, Taris Ford-Dillard, in January 2018 in Tucson, Ariz. Credit: Courtesy of Annette Sisson

To escape that night, Willock told police, she bolted out the sliding back door, leaped over a cinder-block fence and sprinted through overgrown bushes across a dry, rocky riverbed into the desert, until she reached a shopping center, where she flagged down someone who called for help. She urged police to contact her mother, because Ford-Dillard had threatened to hurt her, too. When Tucson officers arrested Ford-Dillard the next day, they recovered a gun magazine from the trunk of his Pontiac Grand Prix, but no weapon. A little over a week later, a grand jury indicted him for felony aggravated assault with a deadly weapon and domestic violence kidnapping.

At his initial hearing after his arrest, Tucson Magistrate Nikki Chayet, who'd been a magistrate judge for almost 30 years, laid out the conditions of Ford-Dillard's release on $7,500 bail: "You're to commit no acts of domestic violence, possess no firearms, have no contact with Jazmine of any sort, except for legal proceedings, and you're not to go back to within three blocks of her residence. Do you understand that?"

His response was a forceful "yes." But that was it. Chayet didn't ask him about the gun. She didn't order him to turn it over. Chayet declined to answer questions for this story.

The reality is that nothing in Arizona law prohibits someone convicted of a domestic violence misdemeanor from possessing a firearm once he completes his probation. Nor do Arizona judges have the authority to require offenders to provide proof that they surrendered their guns. Local laws in Pima County don't require proof either.

"I see this all the time, where the way the law currently works, we're trusting abusers will relinquish their weapons," said Negar Katirai, a clinical law professor and director of the Domestic Violence Law Clinic at the University of Arizona in Tucson. "It just doesn't make sense. It leaves victims extremely vulnerable."

Meanwhile, fearing for her own safety, Willock's mother sought a protection order that same day in Pima County court in which she urged a second judge to explicitly prohibit Ford-Dillard from having any firearms. "He made a verbal threat against my life, to my daughter," Sisson wrote in her petition. "He also threaten (sic) and hurt her as well. Always has a gun."

But when Justice of the Peace Charlene Pesquiera issued an injunction against harassment, it didn't include a firearm prohibition.

Pesquiera declined an interview, but noted in an email that Chayet already had ordered Ford-Dillard not to have a gun at his initial appearance that day. Willock's mother scoffed at that excuse.

Jazmine Willock and Taris Ford-Dillard. Credit: Courtesy of Annette Sisson.

"I think she's passing the buck and blaming someone else," Sisson said. "She fell short because it was her job to protect me and Jazmine at that moment."

The next time Willock and Ford-Dillard came to the attention of police, nearly four months had passed. A video from a neighbor's Ring doorbell camera captured Willock running naked from her home late one night in early November, screaming, "Help me! Help me!" as Ford-Dillard grabbed her and steered her back inside.

Still under a felony indictment in the earlier incident, Ford-Dillard was quickly charged with three additional misdemeanor domestic violence offenses. But he didn't surrender to police until just before Christmas, and once again, no police officer, prosecutor or judge intervened to try to take away his weapon – or even acknowledged that he was already under indictment for assaulting Willock with a gun. On a form releasing him from custody, Tucson Magistrate Susan Shetter ordered Ford-Dillard to stay away from Willock and her home and not to commit any more acts of domestic violence. But the judge didn't check the "possess no firearms" box on the form. Shetter declined to comment on the case.

A month later, when Willock didn't show up at work for two days, her boss called police, who notified Sisson, who raced to her daughter's house. No one answered the door, so Sisson broke in through the living room window. Then she opened Willock's bedroom door.

"Who is that girl?" Sisson wondered at first, peering through the darkness.

Bullets collected from the scene where Taris Ford-Dillard killed Jazmine Willock and himself. Credit: Tucson Police Department

Then she recognized her 22-year-old daughter, lying naked on the floor. The beige carpet beneath her chest was crimson. A gunshot at close range had seared a black muzzle imprint into her chest. At least five other bullets had ripped through her head, hand and thigh. Ford-Dillard was slumped on the floor, too, dead from a self-inflicted wound. Between them on the floor was the pistol no one in law enforcement had taken away from him.

Still tacked to the back wall of the garage were two paper targets riddled with practice shots from Ford-Dillard's gun. A large can on the floor brimmed with spent shell casings.

Jazmine Willock's mother, Annette Sisson (left), and sisters Rosa (center) and Domonique (right) visit Jazmine's gravesite. Credit: Al Jazeera English/Fault Lines

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A recording of Willock's interview with Tucson police after the November incident shows why making sure abusers surrender their weapons is crucial. The two officers were sympathetic toward Willock and disdainful of Ford-Dillard, gently probing her about why she didn't push him out of her life. Willock gave an answer that police and victims advocates hear over and over. "I keep thinking I can help him," she sobbed, adding: "I know he loves me, but it's just – he's messed up."

What do you think is going to happen after this incident?

"I feel like I can't escape, I feel like I can't leave. … I want to help him and I want to be here, but I just, like, I feel like I just keep digging a bigger hole and I don't know what to do now."

Well, you need to do what's going to make you happy.

"I've thought of moving, and I don't know how to do this."

It's a scenario that plays out all the time in police stations and courtrooms and among family members and friends: Victims are asked, "Why don't you just leave?" Yet the question fails to acknowledge the complexities of domestic

violence – the crimes are deeply intimate, unseen and easy to mask; the victim and the abuser are often emotionally and financially intertwined. It's a question that "makes us feel better, that we would be different. It is victim blaming," said April Zeoli, an associate professor in the School of Criminal Justice at Michigan State University. "Why didn't the justice system use the tools available to it to remove the guns they knew were illegal?"

What's more, fighting back often intensifies the abuse. At its core, intimate partner violence is about power and control. Disrupting this power dynamic – for example, by reporting the abuse to police or trying to leave – can make the situation far more volatile and dangerous, ample research shows.

"It is an incredibly difficult and challenging and high-risk moment in (an abuser's) life," said David Martin, the King County prosecutor. "And when they have a firearm in their hand, the likelihood that they're going to terribly harm that person or terribly harm themselves is exponentially greater."

Removing a gun greatly reduces the chances that an episode will escalate, he said. "You're putting barriers in place. … You're making it harder to act on an urge to kill someone."

But just seven states require the surrender of firearms. Only California, Connecticut and Nevada explicitly order offenders to prove to courts or law enforcement that they've turned in their guns. Another half-dozen local jurisdictions require proof of surrender, including Seattle/King County, Denver and Harris County, Texas, where Houston is located.

Federal gun laws are also silent on relinquishment. Swalwell has reintroduced legislation, the No Guns for Abusers Act, which would direct the federal government to develop best practices for states to use for firearm relinquishment in domestic abuser cases. But the legislation has already died in Congress – twice. Even if the current version passes, neither the federal government nor states would be required to adopt any of the recommended procedures.

"Today in America, the right for an abuser to own a gun is greater than the right of a victim to be safe," Swalwell said in an interview. "We are truly flying in the blind."

Without national leadership, some local officials have tried to come up with solutions suited to their own communities. In 2015, after a rash of domestic violence homicides in the Dallas area, then-Judge Roberto Cañas and a few of his colleagues grew tired of doing only what Texas state law required: verbally warning people with felony and misdemeanor domestic violence convictions that they couldn't possess a firearm.

"Even if everyone knew that a guy had an arsenal of guns he shouldn't have, there was no follow-up," Cañas said. So they launched a gun surrender program, requiring judges to press defendants on whether they had any firearms and, if they did, to turn them over. The goal: to collect 2,400 guns over four years. But the result was disappointing, netting fewer than 200 weapons. After Cañas left the bench in September 2018, the program largely petered out.

"Part of it is courage," he said. "You have to put yourself out there to do something a little different. It's going to take a little drive from elected officials and the criminal justice system."

Dave Keck, project director for the National Resource Center on Domestic Violence and Firearms, has seen a similar pattern in many communities considering relinquishment programs: Initial enthusiasm gives way to excuses and inertia. "Relinquishment should be automatic," he said. "But there is a general reluctance to do it."

Some law enforcement officials cite practicalities, telling Keck, "We can't store all those guns." Others argue that their area has a "gun culture." "Are they trying to say it's OK to shoot your wife or your girlfriend with a gun?" Keck said. "If you're violent, particularly toward people you love, you (shouldn't) have a firearm. Gun culture doesn't change that."

One of the biggest obstacles, Keck says, is the gender bias that pervades the criminal justice system. "The whole 'he said, she said' implies that women lie. Society expects women to take the fall," he said. "The very thought of taking someone's gun away from them, and at the same time doing it because of domestic violence, inflames a lot of people."

There's no doubt that Chad Absher should never have had the rifle he is accused of using to kill Ashlee Rucker in October 2017. Jacksonville, Florida, police and prosecutors knew that better than almost anyone else. What's more, they had a clear opportunity to take away Absher's weapon following a domestic battery call six months before Rucker died.

But instead, they did what so many law enforcement agencies around the U.S. do when confronted with an offender illegally possessing a firearm: next to nothing.

Absher's propensity for violence was evident at a young age. So was his fascination with firearms: By 20, he had a tattoo of a clown gripping a pistol emblazoned on his chest. When his teenage girlfriend broke up with him in February 2006, he threatened to "kill her and throw her in the river so no one could have her," according to a police report. He demonstrated his rage by decapitating a teddy bear, throwing the head onto her family's driveway and dumping the body next to her car in the high school parking lot.

Four days later, as his ex-girlfriend and her family slept, he took a handgun to their house and opened fire. Three bullets pierced the walls of the girl's bedroom. Absher was convicted of two felony charges and was sentenced to four years in prison and two years of probation.

As a felon, under both federal and Florida law, Absher was prohibited from having a firearm. But that didn't seem to deter him, recalled Tiffany Johnson, whose best friend, Rucker, started dating Absher eight years after his conviction.

Rucker was a single mother in her late 20s working as a medical assistant. Absher, then 28, ran a lawn care business and ingratiated himself by taking her young son, Joseph, for a ride on his mower. Within a few months, they were living together and socializing with Rucker's family and friends. "Anytime they came to the house, he would have his gun and put it on my refrigerator and let it be known that he had it," Johnson said. It was a macho thing, she added: "He just always acted like he was a man and carried a gun."

Ashlee Rucker (left) and sister Lisa Rucker. Credit: Courtesy of Lisa Rucker. Photo of Chad Absher courtesy of Jacksonville Sheriff's Office.

According to her family, Rucker didn't know the details of Absher's conviction – at least not at first. "And I don't think specifically, she cared at that point," recalled her younger sister, Lisa Rucker. "You know, she saw him at face value, basically."

But about a year and a half into the relationship, alarms went off. One Sunday in August 2015, Absher called Lisa Rucker in a panic, claiming her sister had tried to kill herself. "(She's) going crazy," Lisa Rucker remembered him saying. "We were arguing and going back and forth, and she stabbed herself in the stomach."

As Absher was phoning police, Ashlee Rucker managed to get to her car and drive away. Police found her on the floor in the back of her vehicle and rushed her to the hospital, where surgeons sewed up her abdomen, then leveled with her sister. "It's almost physically impossible for you to stab yourself through your abdominal wall," Lisa Rucker recalled the doctor telling her. The staff was worried enough about Ashlee Rucker's safety to register her under a pseudonym. But because the incident had been reported to police as a suicide attempt, Absher wasn't arrested, Lisa Rucker said.

In April 2017, the couple got into another fight, this time about one of her relatives who was staying with them. Ashlee Rucker later told police that Absher whipped her with a phone charger cord, and when she fell to the ground in the fetal position, he forced her mouth open to prevent her from screaming. When police pounded on the door, Absher grabbed a rifle. "I'm gonna die for you," he told her. She barricaded herself in the bedroom and escaped by climbing out the window, where police were waiting to take her to safety. One officer noted Rucker had abrasions to her eye and scratches across her face. She warned them that Absher was still inside and had a weapon.
In their report, police noted that Absher was a felon with a gun, an offense punishable under Florida law by up to 15 years in prison.

But instead of trying to arrest him on the spot, officers remained outside and tried to reason with him. "We made multiple attempts to get the suspect to leave his residence with negative results," they wrote in their report. The officers didn't try to seize the weapon, even though they knew Absher was prohibited from possessing it. After about an hour and a half, police decided to leave the scene "due to the suspect not making any threats with the weapon to harm himself or the victim."

Lisa Rucker and her son, Colten, visit Ashlee Rucker's gravesite in 2017. Credit: Courtesy of Lisa Rucker

Only then did police seek a warrant for Absher's arrest for misdemeanor battery and felony possession of a firearm by a convicted felon, forwarding the case to the local state attorney's office. But they didn't take the obvious step of getting a search warrant for the gun. A month later, prosecutors denied the arrest warrant and declined to charge Absher, citing insufficient evidence – and shifting the blame to Rucker. "The only evidence that the suspect was in possession of a gun is the testimony of V, who is uncooperative," prosecutors wrote in their disposition statement, referring to Rucker as V for "victim."

It's one of the most common excuses prosecutors give for dropping domestic violence charges – yet women are often reluctant to cooperate out of fear of antagonizing their abusers. In Ashlee Rucker's case, Absher had threatened to kill her when she tried to leave, her sister said. If police had obtained a search warrant and seized the gun, they wouldn't have needed Rucker's help. But as so often happens with intimate partner abuse, law enforcement put the onus on the victim.

Jacksonville Sheriff Mike Williams turned down an interview request and refused to answer detailed follow-up questions about how his department handled the case. The local state attorney, Melissa Nelson, also declined to discuss the case and her office's policies on domestic violence cases more broadly.

If police and prosecutors didn't seem to understand the urgency of the situation, Rucker did. She tried to break off the relationship for good, moving in with her sister and their two young sons. She covered up the tattoo she'd gotten of Absher's name.

But Absher kept coming around, and sometimes he brought his rifle, friends and family said. One night, he refused to leave, even after Lisa Rucker called 911. She told dispatchers that he didn't have a gun; she didn't realize his rifle was hidden behind a cushion. A few minutes after 2 a.m. Oct. 31, 2017, Absher shot both sisters, according to court records. Their sons, 9-year-old Joseph and 4-year-old Colten, cowered in a bedroom nearby.

"I looked over and I saw my nephew standing over my sister, and he was crying," Lisa Rucker said in an interview. "And I guess Colten noticed that I was awake, because he came over to me and he said, 'Mommy, please, don't die.' "

The bullet pierced the back of Lisa Rucker's head, nicked her carotid artery and shattered the mandible bone on the left side of her face. She was in a coma for two days and underwent multiple surgeries. Ashlee Rucker was pronounced dead at the scene.

Two days later, police found Absher hiding at a friend's house and recovered a rifle.

Lisa Rucker remains outraged that law enforcement failed to prosecute Absher before or confiscate his gun.

"My sister would still be here," she said. "I wouldn't have to live with the trauma, the scars, the heartache and everything that goes along with it. … My nephew would still have his mother."

Absher and his lawyer did not respond to requests for comment. He is scheduled to go on trial for first-degree murder and attempted murder in mid-December. He also faces an additional charge, one that comes too late for Ashlee Rucker: possession of a firearm by a convicted felon.

Freelance journalist Katherine Sypher contributed to this story. It was edited by Narda Zacchino, Nina Martin and Andy Donohue and copy edited by Nikki Frick. Soo Oh created the charts.