

Improving Prevention of Family Violence During
(and After) Disaster: Lessons Learned from the
Covid-19 Pandemic

Andrew M. Campbell



PII: S2665-9107(21)00010-4

DOI: <https://doi.org/10.1016/j.fsir.2021.100179>

Reference: FSIR100179

To appear in: *Forensic Science International: Reports*

Received date: 21 January 2021

Revised date: 7 February 2021

Accepted date: 9 February 2021

Please cite this article as: Andrew M. Campbell, Improving Prevention of Family Violence During (and After) Disaster: Lessons Learned from the Covid-19 Pandemic, *Forensic Science International: Reports*, (2021) doi:<https://doi.org/10.1016/j.fsir.2021.100179>

This is a PDF file of an article that has undergone enhancements after acceptance, such as the addition of a cover page and metadata, and formatting for readability, but it is not yet the definitive version of record. This version will undergo additional copyediting, typesetting and review before it is published in its final form, but we are providing this version to give early visibility of the article. Please note that, during the production process, errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

© 2021 Published by Elsevier.

Improving Prevention of Family Violence During (and After) Disaster: Lessons Learned from the Covid-19 Pandemic

By: Andrew M. Campbell, MPH

Campbell Research & Consulting

Abstract

As feared by many, our dedicated actions to slow the spread of COVID-19 significantly impacted reporting for most forms of family violence. This concerning decline in reports was greatest during periods of lockdown, when risk of abuse was likely at its highest. A new theory termed, Opportunity to Abuse Theory, helps explain why family violence increased during the Covid-19 pandemic and after most prior natural disasters. The theory focuses on reducing opportunity to abuse by reducing victim vulnerability and increasing perpetrator accountability. Additional actions to improve detection of and reduce risk for family violence, such as improving partnerships with animal welfare organizations (animal abuse reporting was not as impacted during lockdown), enlisting the aid of non-traditional family violence report sources, better utilizing hotels to provide safety when shelter space is limited, and ensuring texting options for reporting abuse, must be considered during and after disaster.

Manuscript

A global crisis has a way of stripping away facades and revealing a nation's true priorities in health, safety, and well-being. Any healthcare/safety disparities that pre-dated the event are only furthered as a result. Gaps in care widen, and those most vulnerable to the health/safety issues neglected, fall through the cracks. If we fail to **immediately** make better identifying and protecting victims of family violence a **real priority**, acts of abuse perpetrated against humans or animals in the home will continue to claim the well-being, health, safety, and lives of **many more** over the months and years to come.

Though family violence (Intimate Partner Violence, Child Maltreatment, and Pet Abuse) affects nearly all the population in some manner (directly or indirectly), the public health response to these issues has long seemed to fall desperately short. There are few other health issues that impact as large a portion of the population, and yet our response remains disproportionately limited. Though difficulties and barriers to a more effective response exist, they hardly seem an excuse for failing to protect the many adults, children, and pets who remain vulnerable daily to life-altering or life-ending abuse in the home.

When the widespread actions that would be taken to slow the spread of Covid-19 became clear, I was immediately concerned that these actions would drastically increase risk of family violence (Campbell, 2020). In the field of public health, we cannot take actions to address one health issue without carefully considering the impact of these actions on other important issues. While action was necessary to slow the spread of the virus, we did a great disservice to those most vulnerable to abuse in the home by taking no real widespread actions to mitigate the increased risk of abuse created by these actions. The result was increasing incidence of physical, sexual, and emotional abuse victimization in the home, harmful acts from which many may never fully recover.

Just as is often reported in natural disaster literature, risk of family violence dramatically increases during and after a widespread crisis. Acts of abuse that pre-dated disaster often worsen and increase in frequency and severity. In homes where abuse has not previously occurred, we may often see the

dramatic increase in stress and associated hardships result in the initial acts of abuse within the walls of the home – acts that will likely continue in the future as part of a “new normal” for the household.

Reports of family violence are likely to continue to rise in communities around the globe, and victim-serving professionals must prepare for a sustained increase in service requests and reports of abuse for the foreseeable future. Our actions to slow Covid-19 significantly increased risk of abuse in the home while simultaneously significantly reducing opportunity for detection – a deadly combination that caused a level of harm, of which we may never fully understand its extent. This article will focus on how reporting of each form of family violence was impacted by the Covid-19 pandemic, introduce a new theory to better describe why family violence increased during the Covid-19 pandemic, and provide examples of necessary actions to better ensure these victims are not forgotten, during the current crisis, during any future crises, and all the times in-between.

Intimate Partner Violence during the Covid-19 Pandemic

As predicted before lockdown procedures were enacted, in most communities, reporting of intimate partner violence was significantly impacted (Campbell, 2020). Prior study has determined that most calls reporting intimate partner violence (IPV) to law enforcement come from the victim themselves (Campbell 2017) – likely at the first opportunity of separation from the perpetrator. Victims of IPV who suddenly found themselves trapped with an abuser indefinitely during Covid-19 lockdown orders, likely had limited opportunity to safely separate and call for help. While reports of domestic violence in some communities increased right before lockdown orders were put in place, calls dropped well below 2019 levels in most communities from March to June (Figure 1).

While overall reports of intimate partner violence declined in many communities during lockdown and the immediate months that followed, public record data indicates dramatic increases in reports of domestic violence incidents involving a weapon as lockdown restrictions began to ease (Figure 2). Victims may have finally found themselves with greater opportunity to report the abuse, as perpetrators became more likely to leave the home (as bars and businesses began to reopen). While all IPV incidents are concerning, incidents involving weapons have often been tied to an increased risk for fatal incidents. It is not surprising that incidents involving a weapon were among those first reported when opportunity to report increased – as victims in these homes likely spent the preceding months fearing for their lives and the safety of other adults, children, and pets who reside in the home.

Alarming rates of intimate partner violence-related homicides were reported in many communities while lockdown orders were in place (Arkow & Campbell, 2020). While non-fatal reports (most often reported by the victim themselves) were likely suppressed by victims due to a lack of opportunity to safely report, fatal incidents were likely more difficult to conceal. Some communities have reported experiencing more domestic violence related homicides during 3 months of lockdown than had occurred in their community during the entirety of 2019. In rural Alaska, it was reported that more women had died at the hands of an intimate partner during lockdown than from the Covid-19 virus (Hopkins, 2020).

Child Maltreatment during the Covid-19 Pandemic

Reports of child maltreatment have dropped significantly during the pandemic – particularly during the months of widespread lockdown from March to May (Figure 3). Much of the data I have examined indicate reports of child maltreatment were elevated in January and February (pre-pandemic) compared

to 2019, making the sudden drop off in reports even more concerning. It has been well-documented in literature that a major reason for this decline in child maltreatment reports during lockdown could be a result of closing schools and other key organization that are often critical report sources of child maltreatment (Campbell, 2020).

While some family violence professionals have indicated hopefulness that this sudden drop in reports may be due to many years of work to improve prevention of child maltreatment – I do not share their optimism (though I wish I could). Unfortunately, with conditions ideal for perpetration of abuse, meaning every known risk factor was elevated and detection opportunities limited, it defies logic to assume this drop in reports is an accurate indicator of incidence. It seems more likely that abuse occurred at an alarming rate during this period and was not reported. Though some reports may come in later regarding abuse that occurred during this extremely high-risk period, possibly when victims are assured no future lockdown will occur (they may fear not surviving another round if they were to disclose), there are likely many incidents that will never be reported. The suppression of these reports is alarming as it means these victims are unlikely to receive mental health services they need, and victim-serving professionals will not be given the opportunity to work to prevent future abuse from occurring.

Pet Abuse during the Covid-19 Pandemic

Though more data is needed to verify, early indications seem to confirm my prediction that reporting of pet abuse would not be as significantly impacted during Covid-19 lockdown procedures (Figure 4) (Campbell, 2020). With an estimated 80% of animal abuse or neglect reports historically coming from neighbors or those passing by, lockdown procedures increased the likelihood that neighbors would be home and therefore have greater opportunity to detect and report harm to animals. Further, with family units being forced to remain in the home for extended periods of time, it may have been even more likely that pets were placed outdoors for longer periods of time – allowing greater opportunity for harm to be detected and reported.

Given the clear, and well documented links between risks of harm to animals and risks to humans who also reside in the home (National Link Coalition, 2020), animal welfare professionals, both during the pandemic and after, must ensure that when harm to animals is reported, cross-reporting with appropriate agencies occurs, so steps may be taken to ensure the safety and well-being of human members of the household as well. In many cases, reports of animal abuse may be the best (and only) opportunity to detect harm to humans during a time of widespread crisis. Often representing the most vulnerable member of the household, harm to pets could be an indicator of harm to humans already occurring or soon to follow (in addition to emotional harm humans experience when witnessing abuse of a pet). We cannot afford to ignore the warning signs associated with intentional abuse of an animal, because doing so forfeits opportunity to intervene and prevent the almost sure harm to animals and humans in that home that is likely to follow – especially during and after a widespread crisis.

Natural Disasters and the Covid-19 Pandemic

Natural disaster literature has long showed a clear connection between disaster occurring outside the home and resulting disaster within the family unit. Regardless of the type of disaster or location in the world where it occurs, increases in reports of family violence are extremely common following these events (Figure 5). In fact, natural disasters that are *not* followed by increases in acts of abuse in the home are nearly impossible to identify in literature.

While a natural disaster acts swiftly, spanning only a period of minutes, hours, or days, a dangerous combination of diminished resources, increased stress, and isolation from standard community support systems may result in catastrophic, prolonged emotional and physical harm to those who survive. This harm and its crippling effects will only worsen in the absence of effective intervention and will plague victims long after disaster-affected communities are physically rebuilt, and life appears to “return to normal”.

Crisis-related negative mental health effects and increases in perpetration of family violence may extend for years after a natural disaster. Studies have found these harmful effects may disproportionately impact those with limited resources (Paxson, et. al., 2012) – further evidence of the concept that disaster furthers existing disparities and often worsens “difficult” household conditions. If natural disasters often only last hours or days and result in extended abuse and poor mental health for years to come, how much more so will the Covid-19 pandemic (spanning more than a year) result in lingering harm? The effects of this pandemic (and our response to it) will be felt for generations to come.

Another key lesson learned in exploring natural disaster literature is that the increased risk for family violence during and after a widespread crisis not only impacts those who suddenly become unemployed or lose resources, but also extends to those deemed “essential”, such as first responders, government leaders, and healthcare providers. Many of these individuals now find themselves working in extremely stressful conditions with constant exposure to significant trauma. First responders to disaster have long reported damaging effects of chronic exposure to trauma with negative mental health effects that may even include post-traumatic stress disorder (PTSD). While natural disasters are often more localized, allowing for outside assistance from unaffected communities to support the work at ground zero, ALL have been impacted by the Covid-19 pandemic eliminating availability of outside or “unaffected” help.

While first responders and other essential workers find themselves likely working in extremely stressful conditions during the pandemic, **no amount of stress excuses acts of abuse**. Prior research has revealed a concerning notion held by some professionals, that abuse that is perpetrated in stressful conditions, such as during a disaster, is somehow excusable and can be tied to a product of stress rather than the individual (Parkinson, Zara, 2013). I am extremely concerned with this mindset and wholeheartedly disagree. Abuse under any circumstances is wrong and likely **will continue** even after the crisis concludes. If abuse is deemed an acceptable response to stress, it may quickly become the go-to-response when other stressors arise.

Preventing Family Violence During and After a Disaster

A New Theory to Guide Prevention of Family Violence

What became increasingly clear during the Covid-19 pandemic is that many existing family violence prevention initiatives seem to fail under pressure. As reported in this article and in many others, family violence almost always increases after a disaster and the current pandemic appears to be no exception. While abuse risk and likely incidence increased however, reports and opportunities to effectively intervene and assist completely dropped off. How can initiatives be viewed as anything but falling short if they fail victims when help is needed most, during a widespread crisis?

To address this need and provide groundwork for developing more effective (crisis/disaster-proof) family violence prevention initiatives, I propose my theory, termed “Opportunity to Abuse Theory”. This

theory is derived from a combination of key concepts from Opportunity Theory and Routine Activity Theory; many studies over the last 40 years have validated the use of these theories in gaining a greater understanding of why crimes occur, and they have been used widely to guide prevention of many different forms of crime (Cohen and Felson, 1979; Cohen, Felson, and Land, 1980; Cohen, Kluegel, and Land, 1981). I have added additional concepts based on my work in this field, to better adapt this manner of thinking to the field of family violence.

The Opportunity to Abuse Theory operates under the assumption that if those who are willing to and capable of abusing share space with one who is vulnerable to abuse (adult, child, or animal), abuse WILL occur in time. As opportunity to abuse increases, so too does the likelihood of abuse perpetration. Opportunity is greatest when victims are most vulnerable (unable to stop abuse and in absence of a capable and willing guardian) and perpetrator accountability is low (little fear of outside detection or the seriousness of any ramifications if abuse IS detected).

Rather than focusing on commonly stated “family violence risk factors” such as poverty and unemployment that suddenly become characteristics shared by much of the population during disaster, the theory allows for abuse to occur in ANY home regardless of socio-economic status. Specific factors are identified that may further increase risk of abuse when opportunity exists. These factors include stress, alcohol/drug access or use, societal or cultural beliefs that condone abuse, and a history of abuse victimization or perpetration.

The Opportunity to Abuse Theory helps shed light on why family violence has increased after most natural disasters and throughout the Covid-19 pandemic, especially while lockdown orders were in place. Actions that increase opportunity to abuse, such as encouraging (or ordering) prolonged household isolation, while reducing perpetrator accountability (limiting outside opportunities to detect abuse by closing schools, churches, and other key community organizations; forbidding social gatherings; and lessening or suspending charges related to family violence), along with actions that increase risk of abuse when opportunity exists, such as mass closures of businesses (increased stress), inconsistent messaging from government leaders regarding the crisis (increased stress) and closures of bars while liquor stores remain open (greater alcohol consumption likely to occur in the home) WILL result in increasing incidence of acts of abuse in homes throughout the geographic area impacted.

Limiting opportunity to abuse is even more crucial as stressful conditions increase – a key driver of family violence severity and incidence. If community lockdown orders are to become a regular response for future similar crises, we must acknowledge that they create overwhelming opportunity for abuse to occur in the home, while also severely limiting traditional opportunities to detect and report the abuse. Future signed lockdown orders, in the absence of dedicated efforts to counterbalance the clear associated risk of family violence, ensure acts of abuse WILL INCREASE in homes throughout the community.

Non-traditional family violence report sources

What became immediately clear during the Covid-19 pandemic, as key report sources of family violence suddenly found themselves with limited or no access to the populations they serve, was the need for immediate expansion of what we consider “traditional partners” in this fight to end abuse. While school staff, social service providers, and medical professionals suddenly found themselves cut-off from vulnerable families they serve, resulting in dramatic drops in reports of abuse, there were many

individuals still actively out in the community with potential opportunity to detect and report family violence. Mail carriers, garbage collectors, food delivery workers, and home repair staff were all deemed “essential” during lockdown and all still out in the community.

These “non-traditional” partners could have helped bridge critical gaps in abuse detection opportunities. In fact, many of these individuals may already have families they are concerned about but do not know if or how to make a report. By preparing a simple info-card with reminders of who to call if they suspect or witness abuse of humans or animals in the home, that these individuals can carry with them while at work, this critical group of new partners can continue to provide important insight and detection opportunities long after the Covid-19 pandemic concludes.

Hotels

Even before the pandemic, sheltering victims of family violence has been hindered by many barriers (financial, physical safety, proximity to shelter, ability of shelter to protect humans AND animals, etc.). A key barrier relates to the often-limited available physical space to house this ever-growing population of victims. It is often reported that communities turn away families requesting services or assistance every year due to a lack of space and resources. The nature of the Covid-19 virus only further complicated available space, as many shelters were forced to reduce capacity to be able to follow social distancing guidelines. At a time when the need for services was greatest, in most communities, space was even more limited.

Though the housing need was great and space severely limited, many hotels sat empty during the Covid-19 pandemic. With travel restrictions severely limiting the use of these locations, many hotels had to release or reduce staff. Hotels would have made a perfect fit to fill the desperate need for family violence shelter space as abuse incidence and severity increased. The individual rooms allow for social distancing between clients/families to conform to pandemic guidelines. Utilizing pet-friendly hotels could have also allowed for pets to travel with the family, as it continues to be reported that pets are often at great risk in homes where family violence occurs. When domestic violence shelters do not allow pets, it becomes a major barrier to victims fleeing the home.

Victim safety remains paramount and so additional steps would be necessary to ensure victim location anonymity and would likely require dispersing victims throughout different hotels in the area. In some communities across the United States, several months into the pandemic, domestic violence shelters did begin to use hotel rooms to shelter victims (Evans, et al., 2020) – but most report having to do so out of the shelters’ own limited funding. While many hotels publicized offering free rooms to medical staff fighting the Covid-19 pandemic, no such announcements were documented to assist those most vulnerable to abuse in the home. BEFORE future disasters, funding must be made available and emergency housing plans discussed by community leadership, to better ensure the possibility of this critical partnership and opportunity to better protect vulnerable humans and animals during times of widespread crisis.

Reporting Family Violence Through Text Message

Another key barrier to victims reporting family violence, is the difficulty in safely reporting while residing with the perpetrator. My prior study of IPV incidents and law enforcement reports and observations from the scene, indicates that many victims may wait until the abuser leaves the home before

attempting to call 911 to report the abuse (Campbell, et. al., 2018). During the Covid-19 pandemic, and especially when lockdown orders were in place, victims found themselves trapped with the abuser for prolonged periods of time and likely had no opportunity to separate in a manner that allowed them to safely make a phone call.

Progress must be made to better ensure texting as a widespread method for reporting abuse, especially during a disaster. When victims cannot separate from the perpetrator, they are taking an even greater risk than usual to make the call to report the abuse. By enabling a texting method of reporting, victims would be able to report abuse quickly and silently while in the restroom or when the perpetrator is asleep. Many victims of abuse suffer from a damaged-stress response resulting from chronic exposure to stressful conditions. Particularly if they experience a hyper-responsive system to stress, a phone call may seem like an overwhelming undertaking for victims. Additionally, victims who have been strangled by a perpetrator may not physically be able to articulate their need for assistance over the phone. For many reasons, adding texting as an additional option for reporting family violence is likely to save lives both during and after disaster.

Animal Shelter Space

One silver-lining of an otherwise heartbreaking year, clouded by the Covid-19 pandemic, was the impact that lockdown orders had on animal shelters. In many communities, animal shelters found themselves completely empty as every animal they housed was adopted. As individuals were instructed or ordered to remain in the home, isolated from humans outside of their household, many chose to adopt animal companions. While empty shelters are often unheard of, it created a unique opportunity for domestic violence shelters to partner with these agencies to allow protection for victims' pets if this key resource was not available at their shelter.

In some communities, domestic violence shelters already have programs in place that utilize on-site sheltering, animal fostering systems, or local animal shelters to ensure families do not have to leave animal companions behind when fleeing abuse (Animal Welfare Institute, 2020) – but space can often be an issue. Family violence professionals must be aware of the importance of protecting pets from abuse in the home as well (after all, these animals often suffer right alongside the other members of the household) and that there may be no better time than now to approach local animal shelters about exploring partnerships to better protect vulnerable humans and animal companions in their community.

Conclusions

I have been told many times throughout the course of the pandemic by various public health professionals that increases in family violence were an “unfortunate result of necessary actions” to slow the spread of the Covid-19 pandemic. This mindset implies these increases in family violence were inevitable and unpreventable – while inevitable based on our actions, I do not believe them to have been completely unpreventable. If future disasters require similar actions (mass closures and lockdowns), we MUST acknowledge the increased risk of abuse for victims of family violence and take direct action to reduce this risk. Possible actions have been outlined in this paper and must focus on reducing opportunity to abuse while also better engaging and extending community partnerships to increase opportunity to detect any abuse that may occur.

For too long we have largely failed in this fight end family violence. The Covid-19 pandemic has only seemed to set us further back in these important efforts. While disaster does often further existing disparities, it also presents opportunity. Opportunity to right past wrongs, renew focus and vigor toward critical causes, and create real change.

May the overwhelming failure to account for and protect victims of family violence during the Covid-19 pandemic be the lowest point in our efforts to protect those most vulnerable to abuse. May the lessons learned during this time of widespread crisis drive us to be better. Since abuse against all races, all ages, and all genders in any form is unacceptable, may we better strive to end it all. May this be a time of innovation, of new growth, new ideas, new hope, and new life in the field of family violence. May victims of family violence soon find themselves trading exhaustion for rest, pain for peace, chaos for consistency, fear for hope, and danger for safety. Me we fail them no longer.

Figures

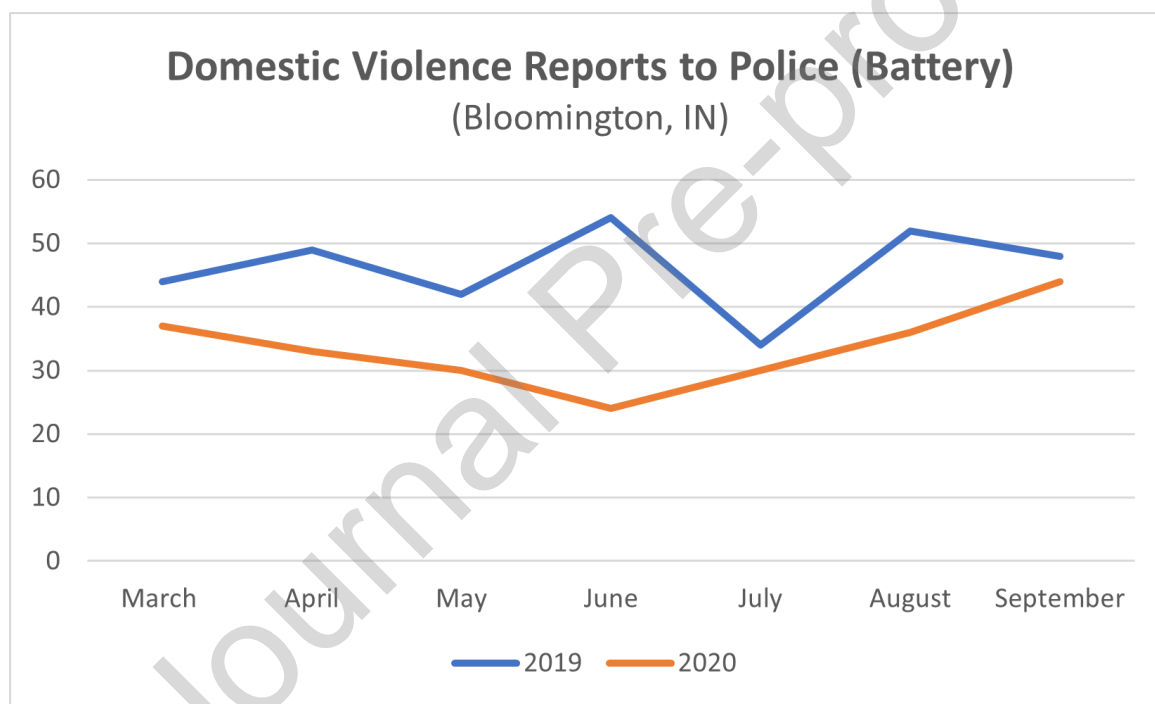


Figure 1. Calls to law enforcement reporting Domestic Violence Battery. (Bloomington.IN.gov, 2020)

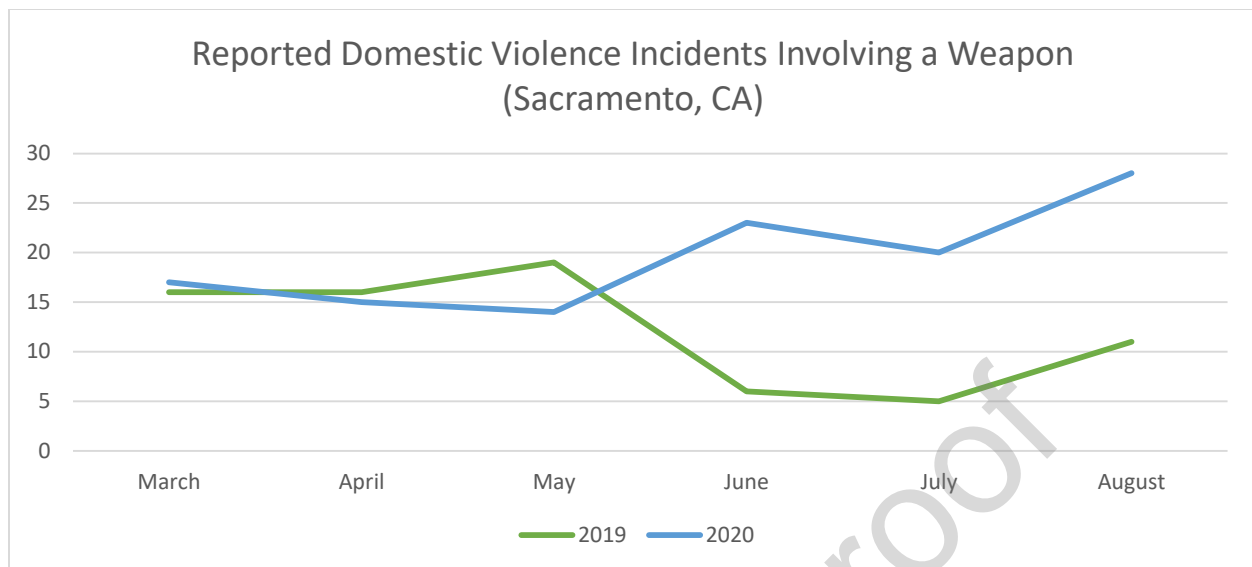


Figure 2. Domestic Violence incidents involving a weapon, reported to police. (City of Sacramento, 2020)

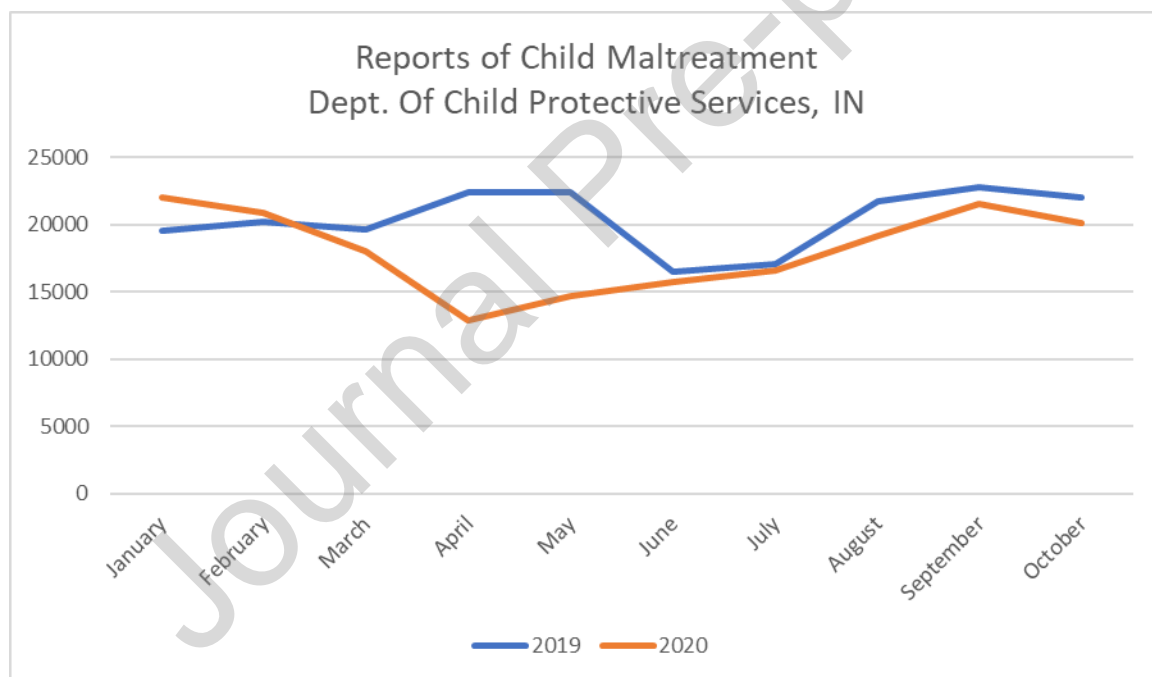


Figure 3. Reports of Child Maltreatment received by Child Protective Services, Indiana (Indiana Department of Child Services, 2020)

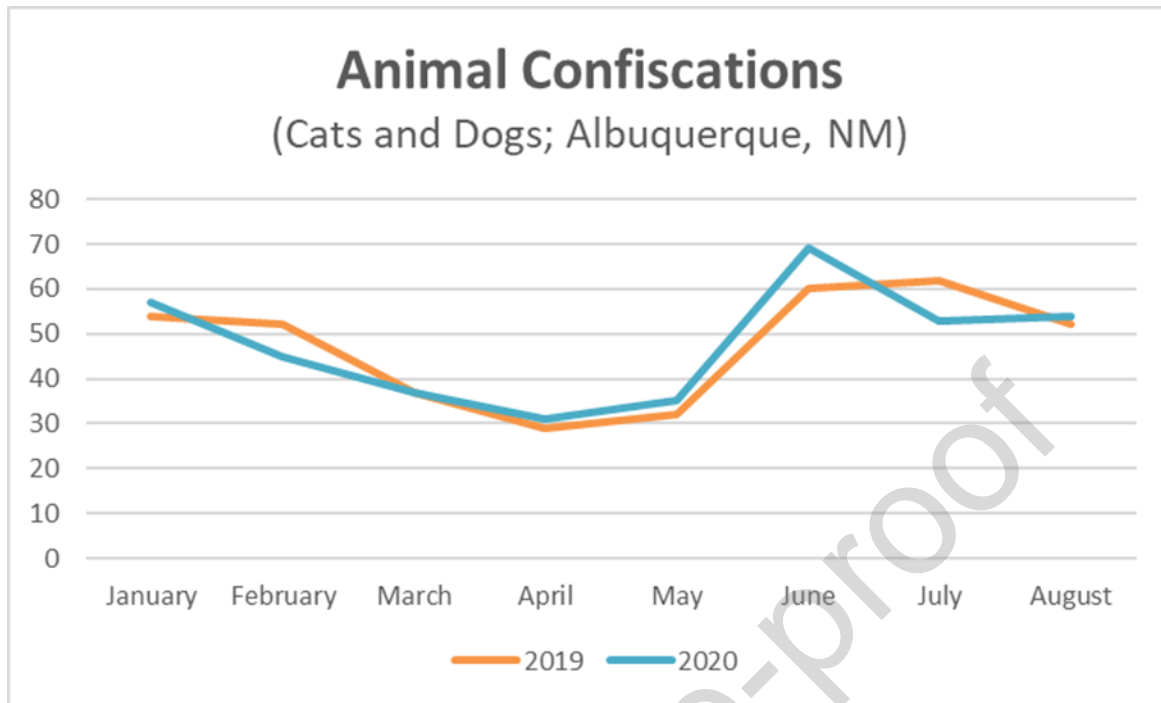


Figure 4. Cat and Dog Confiscations reported by Animal Control. (City of Albuquerque, 2020).

Natural Disaster	Data Source	Impact on Family Violence
Mount St. Helens Eruption	Adams & Adams (1984)	46% Increase in Domestic Violence
Canterbury Earthquake	Houghton, et. al. (2010)	53% Increase in Domestic Violence
Hurricane Katrina	Schumacher et. al. (2010)	98% Increase in Physical Victimization of Women
Missouri River Flood	Enarson (2012)	400% Increase in Women's Shelter Demand
Whakatane Flood (2004)	Houghton (2009)	200% Increase in Workload for DV Agencies 100% Increase in DV Calls to Police
Loma Prieta Earthquake	Kelly (1990)	300% Increase in Sexual Assaults
Dale County, AL Earthquake (1997)	Wilson, Phillips, & Neal (1998)	600% Increase in Domestic Violence
Hurricane Andrew	Laudisio (1993)	50% Increase in Spousal Abuse Calls
Grand Forks Flood (1997)	Fothergill (1999)	50% Increase in Protection Orders
Timaru Snowstorms (2006)	Houghton, et. al. (2010)	100% Increase in Family Violence For 1 Year

Figure 5. Natural Disasters and the Reported Impact on Family Violence

References

Animal Welfare Institute. (2020). Safe havens mapping project for pets of domestic violence victims. Retrieved from: <https://awionline.org/content/safe-havens-mapping-project-pets-domestic-violence-victims>

Arkow, P., & Campbell, A.M. (2020). Unintended consequences of covid-19 include increases in child and animal abuse and domestic violence, Wellbeing International, September 30, 2020. Retrieved from: <https://www.wellbeingintludiesrepository.org/wbn/vol2/iss8/2/>

Bloomington.IN.gov. (2020). Domestic Battery Data. Retrieved from: <https://data.bloomington.in.gov/dataset/domestic-battery-data>

Campbell, A.M. (2020). An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives, Forensic Science International: Reports, 2, 100089. <https://doi.org/10.1016/j.fsir.2020.100089>.

Campbell, A.M., Thompson, S.L., Harris, T.A., & Wiehe, S. (2018). Intimate partner violence and pet abuse: responding law enforcement officers' observations and victim reports from the scene, J. Interpers. Violence, pre-published online on March 5, 2018. doi:<http://dx.doi.org/10.1177/0886260518759653>

Campbell, A. M., Hicks, R. A., Thompson, S. L., & Wiehe, S. E. (2017). Characteristics of intimate partner violence incidents and the environments in which they occur: Victim reports to responding law enforcement officers. Journal of Interpersonal Violence. Prepublished April 20, 2017. Doi: 10.1177/0886260517704230

City of Albuquerque. (2020). Animal welfare reports. Retrieved from: <http://www.cabq.gov/pets/animal-welfare-reports>

City of Sacramento. (2020). Sacramento Dispatch Data from Current Year. Retrieved from: https://data.cityofsacramento.org/datasets/9efe7653009b448f8d177c1da0cc068f_0?geometry=-161.648%2C28.593%2C-102.365%2C41.161

Cohen, L., Kluegel, J., & Land, K. (1981). Social Inequality and Predatory Criminal Victimization: An Exposition and Test of a Formal Theory. American Sociological Review, 46(5), 505-524. Retrieved January 14, 2021, from <http://www.jstor.org/stable/2094935>

Cohen, L.E., & Felson, M. (1979). Social Change and Crime Rate Trends: A Routine Activity Approach. American Sociological Review 44:588-608.

Cohen, L.E., Felson, M., & Land, K. (1980). "Property Crime Rates in the United States: A Macrodynamic Analysis, 1947-1977; with Ex Ante Forecasts for the Mid-1980s." American Journal of Sociology 86(1):90-118.

Evans, M.L., Lindauer, M., & Farrell, M.E. (2020). A pandemic within a pandemic — intimate partner violence during covid-19, N Engl J Med, 383. 2302-2304. DOI: 10.1056/NEJMp2024046

Hopkins, K. (2020). She asked to be saved from him. Now she's dead. Anchorage Daily News, July 28, 2020. Retrieved from: <https://www.propublica.org/article/in-remote-villages-domestic-violence-kills-more-than-covid-19>

Indiana Department of Child Services. (2020). DCS Hotline Statistics. Retrieved from: <https://www.in.gov/dcs/3165.htm>

National Link Coalition. (2020). Resource materials. Retrieved from: <https://nationallinkcoalition.org/resources/articles-research>

Parkinson, D., & Zara, C. (2013). The hidden disaster: domestic violence in the aftermath of natural disaster. *Australian Journal of Emergency Management*, 28(2), 28-35. Retrieved from: <https://ajem.infoservices.com.au/items/AJEM-28-02-09>

Paxson, C., Fussell, E., Rhodes, J., & Waters, M. (2012). Five years later: recovery from post traumatic stress and psychological distress among low-income mothers affected by Hurricane Katrina. *Social science & medicine* (1982), 74(2), 150–157. <https://doi.org/10.1016/j.socscimed.2011.10.004>

Declaration of interests

☒ The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

☐ The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

--