

August 2019

# Do Prostitution Advertisements Reduce Violence Against Women? A Methodological Examination of Cunningham, DeAngelo, and Tripp Findings

Katie Feifer

*The Voices and Faces Project, USA, katie@voicesandfaces.org*

Jody Raphael

*DePaul University College of Law, USA, jraphae2@depaul.edu*

Kezban Yagci Sokat

*Northwestern University, USA, kezban.yagcisokat@u.northwestern.edu*

Follow this and additional works at: <https://digitalcommons.uri.edu/dignity>

 Part of the [Gender and Sexuality Commons](#), [Internet Law Commons](#), [Law and Society Commons](#), [Other Feminist, Gender, and Sexuality Studies Commons](#), [Public Policy Commons](#), [Social Policy Commons](#), [Social Work Commons](#), and the [Women's Studies Commons](#)

## Recommended Citation

Feifer, Katie; Raphael, Jody; and Yagci Sokat, Kezban (2019) "Do Prostitution Advertisements Reduce Violence Against Women? A Methodological Examination of Cunningham, DeAngelo, and Tripp Findings," *Dignity: A Journal on Sexual Exploitation and Violence*: Vol. 4: Iss. 3, Article 7.

DOI: 10.23860/dignity.2019.04.03.07

Available at: <https://digitalcommons.uri.edu/dignity/vol4/iss3/7><https://digitalcommons.uri.edu/dignity/vol4/iss3/7>

This Research and Scholarly Article is brought to you for free and open access by DigitalCommons@URI. It has been accepted for inclusion in Dignity: A Journal on Sexual Exploitation and Violence by an authorized editor of DigitalCommons@URI. For more information, please contact [digitalcommons@etal.uri.edu](mailto:digitalcommons@etal.uri.edu).

---

# Do Prostitution Advertisements Reduce Violence Against Women? A Methodological Examination of Cunningham, DeAngelo, and Tripp Findings

## Abstract

A recent study by Cunningham, DeAngelo, and Tripp (unpublished 2017, 2019) found that advertising prostitution online led to a lower rate of homicide of women in the United States. These findings have circulated widely in the mainstream media as proof that advertising prostitution online increases the safety of prostituted women. The study's findings were used to argue against the 2018 passage of a federal anti-trafficking bill: Allow States and Victims to Fight Online Sex Trafficking Act (FOSTA) and Stop Enabling Sex Traffickers Act (SESTA), known collectively as FOSTA-SESTA. This new law holds websites that knowingly facilitate sex trafficking accountable for the harms they cause. Passage of the legislation led to the shutdown of sites that profited from prostitution advertising. Backpage.com, a major site for prostitution advertising, was shut down by the U.S. Department of Justice just days following Congress' passage of the legislation, but prior to FOSTA-SESTA being signed into law. Within days of the passage of the legislation, operators of other prostitution advertising sites shuttered their sites. Our critique of the article is based on the assumptions and methodology employed by Cunningham et al. We find the study is methodologically flawed. First, the study fails to demonstrate a link between the decline in the female homicide rate and online prostitution advertising. Second, the study does not measure the murder rate within the population of women in prostitution to show that online prostitution advertising keeps prostituted women safe. Third, the authors attempt to explain the reasons for a decline in the murder rate of women via speculation. Fourth, the study defines "safety" as not being murdered, ignoring other forms of violence inherent in the sex trade. Fifth, Cunningham et al. wrongly extrapolate findings from 2002 to the present by speculating about the impact of FOSTA-SESTA on prostituted women's safety, without accounting for shifts in Internet culture and usage. The findings and conclusions from this study could lead people to believe falsely that using and expanding online prostitution advertising sites will reduce violence against all women, as well as prostituted women. The safety of people in prostitution is a serious concern. Consequently, other measures should be examined to protect them.

## Keywords

Prostitution, homicide, murder, prostitutes, Backpage.com, Craigslist Erotic Services ERS, Allow States and Victims to Fight Online Sex Trafficking Act (FOSTA), Stop Enabling Sex Traffickers Act (SESTA), FOSTA-SESTA, full decriminalization, sex trade

## Creative Commons License



This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 4.0 License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

## Acknowledgements

Dignity thanks the following reviewer for her time and expertise in reviewing this article: Callie Marie Rennison, Professor and former Associate Dean of Faculty Affairs in the School of Public Affairs, University of Colorado, Denver.

## **DO PROSTITUTION ADVERTISEMENTS REDUCE VIOLENCE AGAINST WOMEN? A METHODOLOGICAL EXAMINATION OF CUNNINGHAM, DEANGELO, AND TRIPP FINDINGS**

**Katie Feifer**

*The Voices and Faces Project, USA*

**Jody Raphael**

*DePaul University College of Law, USA*

**Kezban Yagci Sokat**

*Northwestern University, USA*

### **ABSTRACT**

A recent study by Cunningham, DeAngelo, and Tripp (unpublished 2017, 2019) found that advertising prostitution online led to a lower rate of homicide of women in the United States. These findings have circulated widely in the mainstream media as proof that advertising prostitution online increases the safety of prostituted women. The study's findings were used to argue against the 2018 passage of a federal anti-trafficking bill: Allow States and Victims to Fight Online Sex Trafficking Act (FOSTA) and Stop Enabling Sex Traffickers Act (SESTA), known collectively as FOSTA-SESTA. This new law holds websites that knowingly facilitate sex trafficking accountable for the harms they cause. Passage of the legislation led to the shutdown of sites that profited from prostitution advertising. Backpage.com, a major site for prostitution advertising, was shut down by the U.S. Department of Justice just days following Congress' passage of the legislation, but prior to FOSTA-SESTA being signed into law. Within days of the passage of the legislation, operators of other prostitution advertising sites shuttered their sites. Our critique of the article is based on the assumptions and methodology employed by Cunningham et al. We find the study is methodologically flawed. First, the study fails to demonstrate a link between the decline in the female homicide rate and online prostitution advertising. Second, the study does not measure the murder rate within the population of women in prostitution to show that online prostitution advertising keeps prostituted women safe. Third, the authors attempt to explain the reasons for a decline in the murder rate of women via speculation. Fourth, the study defines "safety" as not being murdered, ignoring other forms of violence inherent in the sex trade. Fifth, Cunningham et al. wrongly extrapolate findings from 2002 to the present by speculating about the impact of FOSTA-SESTA on prostituted women's safety, without accounting for shifts in Internet culture and usage. The findings and conclusions from this study could lead people to believe falsely that using and expanding online prostitution advertising sites will reduce violence against all women, as well as prostituted women. The safety of people in prostitution is a serious concern. Consequently, other measures should be examined to protect them.

## KEYWORDS

Prostitution, homicide, murder, prostitutes, Backpage.com, Craigslist Erotic Services ERS, Allow States and Victims to Fight Online Sex Trafficking Act (FOSTA), Stop Enabling Sex Traffickers Act (SESTA), FOSTA-SESTA, full decriminalization, sex trade

A HIGHLY PUBLICIZED STUDY by economics professors at Baylor and West Virginia Universities (Cunningham, De Angelo, & Tripp, unpublished 2017, 2019), has become a key piece of evidence in an ongoing battle over whether websites that advertise prostitution do more good than harm. The debate came to a head during the passage of the federal bill Allow States and Victims to Fight Online Sex Trafficking Act (FOSTA) and Stop Enabling Sex Traffickers Act (SESTA), known collectively as FOSTA-SESTA in April 2018. FOSTA-SESTA amended section 230 of the Communications Decency Act to hold websites accountable that knowingly facilitate sex trafficking. Prior to its passage, websites like Craigslist and Backpage.com were immune from prosecution for any content posted by their customers, including for the facilitation of prostitution and sex trafficking (Halverson, 2018).

Backpage.com, a major publisher of prostitution advertising, was shut down by the U.S. Department of Justice just days following Congress' passage of the legislation but prior to FOSTA-SESTA being signed into law. Within days of the passage of the legislation, operators of prostitution advertising sites like CityVibe and Escorts in College also shuttered their sites. One of the key arguments against FOSTA-SESTA made by pro-prostitution advocates and some representatives of Internet technology companies is that advertising prostitution online makes the lives of prostituted people safer since they can screen clients online and meet them indoors. They contend that the shutdown of Backpage.com and other sites force prostituted people outdoors and into the streets to procure customers, which they claim is inherently more dangerous than indoor/online solicitation. The Cunningham et al. study findings regarding the impact of Craigslist Erotic Services (ERS) online prostitution advertising are used to support their claim. One of its key conclusions:

Our estimate of a 17.4 percent reduction in female homicides does suggest, though, that ERS created an overwhelmingly safe environment for female prostitutes perhaps the safest in history (Cunningham et al., 2017, p.17).

The Cunningham research study has become a regular feature of articles in mainstream news, journals, blogs, and organizations' websites criticizing FOSTA-SESTA. For example, "Female Homicide Rate Dropped After Craigslist Launched Its Erotic Services Platform" was the headline of an article on the website of the Center for American Progress. It continued, "Sex workers have long argued that online erotic services platforms make their jobs safer. A new study proves it" (Beralsky, 2017).

In 2018 media outlets such as CNN (Nedelman 2018), *The New Yorker* (Witt, 2018), *Time* (Jenkins, 2018), and *The Daily Beast* (Zimmerman, 2018), among others, ran articles about the study to buttress the claims of some women in prostitution ("sex worker" groups) that lack of Internet advertising platforms would reduce their safety. Common to all these articles were statements like the following from *Time* magazine:

According to one recent study conducted by economists at Baylor University, escort ads on Craigslist reduced the female homicide rate by up to 17.4% from 2002 to 2009. Allowing sex workers to advertise their services online kept them off the streets, and also gave them the opportunity to better screen potential clientele (Jenkins, 2018).

The 2017 Cunningham research findings conclude that Craigslist Erotic Services ads (ERS) reduced the female homicide rate by up to 17.4% in the cities in the United States where those ads ran between 2002 and 2009. They present several hypotheses to explain the correlation.

- First, they posit that the Internet had allowed individuals in prostitution to move indoors, increasing their safety from street predators.
- Second, they speculate that the Internet might have increased the number of customers, of whom violent individuals played a smaller part.
- Third, they hypothesize that being online might have allowed sellers the opportunity to better screen buyers.

In February 2019 Cunningham et al. issued an updated version of their unpublished paper. In it, they claim that their research demonstrated there would be adverse safety consequences to prostituted women as a result of the new federal law. Their updated 2019 article revised some of the 2017 findings. A few of the revisions are noteworthy.

- Cunningham et al. changed the finding of a 17.4% reduction in female homicides to 10%.
- The authors deleted the sections of the 2017 report that alleged that there was a “modest” decline in the number of rapes of U.S. women as a result of Craigslist Erotic Services ads.
- Cunningham et al. changed the title of the article to emphasize the study’s conclusion that online advertising reduced violence against women. The original study was titled “Craigslist’s Effect on Violence Against Women.” The updated study title is “Craigslist Reduced Violence Against Women.”

However, the analysis itself along with the conclusions that advertising prostitution on Craigslist Erotic Services led to a reduced homicide rate among all women and provided a safe environment for prostituted women remained unchanged between the 2017 and 2019 versions of the article.

To the best of our knowledge, neither the 2017 nor the 2019 Cunningham paper has appeared in a peer-reviewed publication. Publication following peer review, an important principle of social science research, provides the reader with a guarantee that qualified professional peers have read and evaluated the study’s methods and findings. This type of review provides a starting point for the scientific discussion of an important topic. The lack of peer review indicates caution should be used in citing the paper’s conclusions.

## METHODS

We investigated the Cunningham et al. paper in order to determine whether or not there are any incorrect assumptions or methodological or conceptual errors that would render their findings and conclusions invalid. We focused on three areas: 1) the authors’ use of total female homicide data as their outcome variable and the causal link they assert between online prostitution advertising and the “safety”

of prostituted women; 2) their use of The Erotic Review (TER) to speculate as to reasons why Craigslist prostitution advertising would result in a lower female homicide rate; and 3) the extrapolation of 2000-2009 Craigslist usage and Internet behavior to Internet behavior in 2019.

An examination of the outcome variable utilized – female homicide – and the assumptions and methodology Cunningham et al. employ to analyze the data is essential to determining whether the key finding the authors report – that advertising prostitution on Craigslist creates an “overwhelmingly safe environment” for prostituted women – is valid. We examined the FBI Supplemental Homicide Reports (SHR) female homicide data for the study period and information about its limitations (Maltz, 1999). We examined the prevalence of prostituted women within the data (Brewer, Dudek, Potterat, Muth, Roberts, Woodhouse, 2006). Beyond examining the dataset and its limitations, we analyzed the methods Cunningham et al. utilized to determine causality between online advertising of prostitution and a declining female homicide rate, including the use of control factors to account for other reasons for the decline in female homicide rates. A review of research documenting reasons for the decline in the female homicide rate informed this area of analysis. In particular, we examined data from the Centers for Disease Control and Prevention on factors contributing to the female homicide rate in the U.S. during the study period

We explored the authors’ assumption that female homicide is a proxy for prostituted women’s “safety” by conducting a review of recent research on the prevalence and frequency of violence against prostituted women to ascertain what, if any, violence short of murder this population is subjected to that might call their safety into question.

The second area we explored was Cunningham et al.’s use of The Erotic Review (TER) to explain reasons why advertising prostitution online would result in fewer homicides of women in the U.S. Here, too, a literature review was employed. Research about the reliability and validity of TER from Janson, 2013 and the Human Trafficking Initiative, 2018 was particularly helpful.

The third area we explored was whether or not Internet usage and behavior in 2019 is significantly different from that in the time period of the study (2000-2009). Cunningham et al.’s conclusions about the impact of FOSTA-SESTA on the safety of prostituted women depends on there being no significant differences in how people use the Internet in the decade after the study period. Data from the Pew Research Center informed this aspect of our analysis.

Cunningham et al. employed statistical analysis of homicide data, ERS data, and TER data to arrive at their conclusion that online prostitution advertising results in a lower homicide rate for women in the U.S., and an “overwhelmingly safe” environment for prostituted women. We did not investigate their math, because our analysis of the assumptions they made and the limitations of their data sources showed fundamental flaws that no statistical analysis can correct. We detail the five flaws we uncovered in our findings below.

## FINDINGS

Based on our analysis, we identify five significant flaws in the Cunningham et al. article that render the findings invalid. The five flaws are summarized below, along with the key issue with each. We then describe each flaw in detail.

- Cunningham et al. fail to prove a link between advertising prostitution online and a lower homicide rate for all women. That is because they do not account for other factors that impacted the declining female homicide rate during the time period of the study.
- The study offers no evidence that murders of women in prostitution decreased when online prostitution advertising occurred. This is because there are no reliable data on homicides of women in prostitution.
- Though Cunningham et al. explore mechanisms that they hypothesize might explain the declining homicide rate of all women when prostitution advertising occurs online, they fail to provide any evidence that links these mechanisms to lower homicide rates.
- The primary conclusion of the Cunningham et al. study is false. The study's findings do *not* show that online advertising of prostitution reduces violence against women or keeps prostituted women safe. The flaw is that Cunningham et al. use murder as a proxy for violence against all women and prostituted women. Claiming that a lower murder rate means less violence and greater safety for all women, and prostituted women in particular, ignores the many kinds of serious violence to which women fall victim.
- Cunningham et al. cannot make the speculative conclusions they do on how FOSTA-SESTA might impact the safety of prostituted women. That is because they fail to account for the impact of the significant differences in Internet users and behavior that have occurred in the 10 years since their study period ended.

### Attributing Reduction in Total Female Homicide to Online Advertising of Prostitution

Cunningham et al. use data on homicides of *all* women as their dependent variable. Doing so, they conclude that advertising prostitution on Craigslist results in a lower homicide rate for all women. Statistically, this is a generalization error. The characteristics of the subsample population – prostituted women – do not represent the characteristics of the much broader population – all women – about whom Cunningham et al. are forming conclusions. Cunningham et al. provide no evidence that the conditions and behavior impacting violence against all women is representative of the sub-sample of prostituted women. Further, positing that advertising prostitution online results in a lower murder rate for women, in general, makes no logical sense unless the overwhelming majority of women killed in this country are prostituted women. And that is simply not the case. In fact, the Centers for Disease Control and Prevention have determined that over half of all women murdered in this country in recent years (overlapping those of the Cunningham study) are killed by a current or former intimate partner (Petrosky, Blair, Betz, Fowler, Jack, & Lyons, 2017).

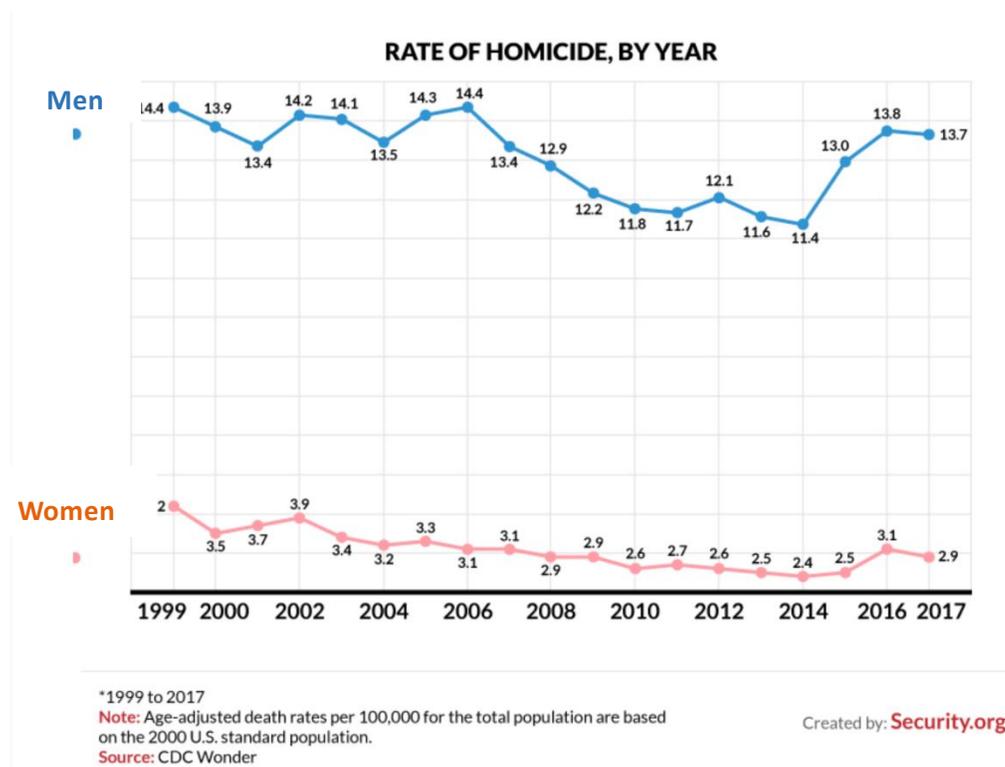
Cunningham et al. themselves write that their findings are not entirely plausible. They say:

We can calculate the number of saved female lives using a back-of-the-envelope calculation. Using the year prior to the introduction of ERS

(2001) as our base year, we compute the number of total homicides at 1,754 total female homicides in our sample of cities. We then shrink this number by 10 percent which gives us 175 fewer murders as a result of ERS. Multiplying 175 fewer murders by eight years, we estimate approximately 1,400 fewer murders resulting from the introduction of ERS. *Are these magnitudes plausible? It is difficult to answer this question given that the true incidence of prostitution homicides is unknown* (Emphasis added.) (Cunningham et al., 2019, p. 16).

The period of time Cunningham et al. analyze coincides with a significant decline in the murder rate in the U.S. for both men and women in virtually all cities reporting data to the FBI’s Supplemental Homicide Reports (SHR). SHR is the source of the researchers’ dependent variable data. The Cunningham et al. research fails adequately to address factors independent of Craigslist Erotic Services ads that impact the falling homicide rate.

Overall homicide rates have decreased in the U.S. in recent years. Homicide rates declined sharply from 9.3 homicides per 100,000 in 1992 to 4.8 homicides per 100,000 in 2010, according to Department of Justice, Bureau of Justice Statistics. Another source also shows that homicide rates of women have declined over time, including over the Cunningham researchers’ study period (Figure 1).



**Figure 1. Source: Rate of homicides in the U.S., by year and gender, 1999-2017, Centers for Disease Control and Prevention, retrieved June 1, 2019 from <https://www.security.org/resources/american-homicides/>**

As the rate of homicide of women has declined over time, any analysis relying upon homicide of women must ascertain the reasons for this overall decline, which began occurring before the advent of Craigslist’s Erotic Services advertising. Yet

Cunningham et al. do not adequately control for other variables that might have been responsible for, or highly correlated with, the decline in female homicide. A summary explanation of how the researchers conducted their analysis will help illuminate the issue.

In order to conduct their analysis, Cunningham et al. first establish a study period between 2002 and 2009, in which Craigslist expanded its Erotic Services section. (Craigslist shut down the section in 2010.) As a control, Cunningham et al. compare homicide rates during the study period to those in the same cities between 1995 and the time when Craigslist ERS started in that city.

Next, Cunningham et al. review homicide rates of women for the period using the FBI's Supplemental Homicide Reports, including data reported from 402 cities. The researchers compare homicide rate data in selected cities in which Craigslist operated over time. Cunningham et al. conclude that in the cities in which Craigslist ERS operated, there was a reduction in the homicide rates of women by 10% (Cunningham et al. 2019).

To check the robustness of their findings, Cunningham et al. conduct additional analyses. They compare test and control cities' rates of female homicide prior to the introduction of Craigslist Erotic Services in the test cities. In so doing, they find that "both sets of cities had been traveling the same time path prior to treatment, on average, with regards to female homicides" (Cunningham, et al, 2019, p.4). They also check to see whether the introduction of Craigslist Erotic Services advertising into a market had an impact on other killings: murders of men, murders of women by intimate partners, and manslaughter. They hypothesize that since there was not a statistically significant decrease in those murder rates when Craigslist Erotic Services entered a market, then the decrease in homicides of all women would have to come from the introduction of prostitution advertising on Craigslist.

However, as stated by Cunningham et al., the methodology they utilize assumes that the only change over time was the advent of the Craigslist Erotic Services advertising. Although Cunningham et al. attempt to control for city, month, and population-level effects, and to conduct robustness checks described above, they fail to control for other important reasons for the decline in homicide rates. Some potential reasons for the decline in homicide rates include the impact of general violence reduction efforts, economic factors, and so on.

In fact, one often-cited reason for the decline in the rate of homicide of women is the diminution in the prevalence of fatal intimate partner violence (IPV) in the U.S. Homicide of women is less common than for men, and most victims know their perpetrator: For example, the Centers for Disease Control and Prevention report that nearly half of all women murdered in 2015 were killed by a current or former male intimate partner (Petrosky et al., 2017). Rates of intimate partner violence (IPV) in general have decreased significantly between 1993 and 2015, falling 79.3% (Catalano, 2015). Given that at least half of women murdered in this country are killed by intimate partners, the decline in fatal IPV might have had a more significant effect on the decline in female homicide rate in the Craigslist Erotic Services advertising cities.

The results described in the Cunningham study show changes over time for selected cities in the sample. What happened in the cities where Craigslist Erotic Services ads were not present but female homicide rates were declining? Was there

any statistical difference between those two sets of cities? Knowing the results of this comparison would not have solved the logical challenge of explaining how advertising prostitution online reduces the rate of homicide for all women but would have been a potentially more interesting test.

The bottom line is that Cunningham et al. fail to demonstrate a link between advertising prostitution online and a lower homicide rate for women in total. That is because they do not account for other factors that impacted the declining female homicide rate during the time period they analyzed.

### **Equating Rates of Female Homicide to Safety of Prostituted Women**

Cunningham et al. state that their analysis shows that Craigslist Erotic Services ads keep prostituted women safe. They claim:

Our estimate of a 10 percent reduction in female homicides does suggest, though, that ERS created an overwhelmingly safe environment for female sex workers — perhaps the safest in history (Cunningham et al., 2019, p. 17).

The analysis that leads to this finding contains the second major methodological flaw we identify. Cunningham et al. do not analyze the impact of Craigslist Erotic Services advertising on the homicide rate of prostituted women, nor utilize any other variable to measure “safety” of prostituted women. They could not do so because the homicide rate for prostituted women has not and cannot be measured reliably.

There are no reliable data on homicides of prostituted women in the U.S. Cunningham et al. use the FBI Supplemental Homicide Reports (SHR) for their measure of homicides of women. However, it was only in 2002 that federal homicide data began to include a code for prostitution as a possible circumstance for homicide. These data have shortcomings. First, not all jurisdictions report homicides on their SHR form, so much data are simply missing. Second, information on offender-victim relationships are often incomplete, and sometimes wrong (Maltz, 1999). And even when a homicide is coded as a prostitution circumstance, there are considerable inconsistencies in the use of this category. For example, was the homicide prostitution-related or was a prostituted woman killed for reasons unrelated to prostitution (Brewer, Dudek, Potterat, Muth, Roberts, Woodhouse, 2006)? Using these data, along with an in-depth look at research with smaller, local data sets, Brewer et al. claim that 2.7% of all female homicide victims in the U.S. are likely involved in the sex trade. And that is only an estimate based on limited information. Cunningham et al. acknowledge this in their article. They write:

Most datasets do not record whether a female victim of a homicide was a sex worker, and those that do suffer from severe under ascertainment biases built into the data collection methods... (Cunningham et al., 2019. p. 17).

Indeed, Cunningham et al. do not have a large enough sample of murdered prostituted women in their database to analyze the impact of Craigslist Erotic Services advertising on homicides of prostituted women specifically. One of Cunningham’s footnotes notes this fact. "For instance, there are only 49 such instances of a murder offense named as a prostitution death out of 31,250 observations"

(Cunningham et al., 2019, p.11). Dividing 49 known prostituted women homicides by 31,250 total female homicides, we find that just .01% of all female homicides in the Cunningham study's database were known to have been prostituted women murdered by a buyer or pimp.

Additionally, the number of women murdered in the total U.S. is between 3,000 and 3,600. According to the Department of Justice (Smith & Cooper, 2013), using the FBI's Supplemental Homicide Reports, the total number of women homicide victims between 2002-2011 (close to Cunningham et al.'s own study period) has fallen (Table 1). When applying Brewer et al.'s estimate of 2.7% of all women homicide victims being in the sex trade, the actual number of homicides of prostituted women is likely under 100 in any given year (2.7% of 3,500 = 94.5).

In sum: there are roughly 3,000 - 3,600 women murdered in the U.S. each year. The estimate of the percentage of female homicide victims who are murdered while being prostituted is very low. Cunningham et al. have an insignificant number of prostituted women's homicides in their database.

Thus, Cunningham et al. do not show any evidence that Craigslist Erotic Services advertising increases prostituted women's safety when they define "safety" as not being murdered. That is because they have no measure of homicides of prostituted women.

**Table 1. Number of homicides in the U.S., by victim demographic characteristics, 2002-2011, U.S. Department of Justice, Bureau of Justice Statistics**

Year	All victims	Sex		Race			Age						
		Male	Female	White	Black/African American	Other*	11 or younger	12-17	18-24	25-34	35-49	50-64	65 or older
<b>Number of homicides</b>													
2002	16,230	12,475	3,755	7,805	7,990	435	790	825	4,345	4,305	3,875	1,365	720
2003	16,530	12,835	3,690	7,985	8,080	465	790	785	4,510	4,375	3,890	1,425	750
2004	16,150	12,600	3,550	7,980	7,755	415	765	860	4,165	4,295	3,800	1,510	755
2005	16,740	13,180	3,560	8,050	8,255	435	745	925	4,405	4,480	3,880	1,560	740
2006	17,310	13,655	3,655	8,135	8,710	460	780	1,035	4,615	4,545	3,920	1,755	660
2007	17,130	13,460	3,665	8,110	8,610	405	800	1,035	4,485	4,570	3,875	1,680	675
2008	16,465	12,900	3,565	8,020	8,070	375	810	955	4,065	4,445	3,745	1,705	745
2009	15,400	11,880	3,520	7,485	7,495	425	730	840	3,840	3,975	3,590	1,685	745
2010	14,720	11,410	3,315	6,885	7,450	385	710	770	3,655	4,025	3,200	1,700	665
2011	14,610	11,370	3,240	6,830	7,380	400	740	665	3,680	3,850	3,260	1,710	700

### **Explaining Why Online Prostitution Advertising Results in Fewer Homicides**

Cunningham et al. attempt to explain the counter-intuitive finding that advertising prostitution online can lead to a 10% reduction in homicides of the whole population of women. They summarize their explanation thusly: “...we estimate that ERS reduced the female homicide rate by 10-17 percent, with the reduction driven by street prostitution moving indoors and by helping sex workers to screen out the most dangerous clients” (Cunningham et al. 2019, p1).

The researchers explore three “mechanisms” to explain why advertising prostitution on Craigslist Erotic Services results in a lower homicide rate among women, the vast majority of whom are not prostituted women. The data for this part of their study comes from The Erotic Review (TER). The Erotic Review is a “Yelp”-like site where buyers post reviews about prostituted women.

We propose three mechanisms that link ERS to declining violence. Our [sic] possible mechanism is that ERS leads to greater market efficiency which leads to more repeat business (or both). We call this the “efficiency effect”. [sic] The second possible mechanism is that the sex worker’s work environment is becoming safer due to sex workers moving solicitation itself from outdoor street work to indoor work. We call this the “composition effect”. [sic] The composition effect speaks to changes in entry, while the efficiency effect speaks to changes in the matching technology linking sex workers with clients. The final mechanism is that the Internet allows for the sex worker to increase screening, which we call the “screening effect”. [sic] We can evaluate both of these, albeit somewhat indirectly (Cunningham et al., 2019, p. 20).

We find that Cunningham et al.’s analyses are based on questionable data from The Erotic Review (TER), and in some cases, are inconsistent with other research.

#### **Mechanism 1: Transition from “dangerous” street prostitution to “safe” indoor prostitution**

First, the researchers posit that a decrease in homicides of all women is a result of a transition from dangerous street prostitution to indoor prostitution. And they presume that the transition to indoor prostitution occurred largely as a result of the Internet. It is likely that street prostitution has declined somewhat over time, especially as the Internet has grown and sites like Backpage.com became an easy way for buyers to solicit prostitution. And it is undoubtedly true that many prostituted women would prefer to solicit clients online versus on “the track” outdoors. However, the “transition” theory ignores two facts. The first fact is that indoor prostitution long predates the Internet. Brothels, massage parlors, strip clubs, escort services, bars, and lingerie establishments have existed for hundreds of years as indoor prostitution venues. Given the illegal and clandestine nature of prostitution, it is not surprising that there are no known studies confirming the numbers of prostituted women working outdoor and indoors and whether there have been any transitions between them over time.

The second fact, even more important, is that the sex trade is inherently violent. Several studies have shown that violence suffered by prostituted women occurs with alarming frequency in both indoor and outdoor venues (Raphael and Shapiro, 2004). We are not aware of any reliable data showing that violence

decreases and “safety” increases for prostituted women when they solicit buyers indoors or online.

### **Mechanism 2: Advertising online increases the number of buyers**

The second mechanism Cunningham et al. claim explains their finding of reduced homicides from Craigslist Erotic Services ads is that the Internet as an advertising vehicle might have increased the number of buyers, of whom violent individuals may be a smaller share. This assumption supposes that prostituted women engage more with “repeat buyers” in this scenario. This is a hard-to-test assumption. The data on violent buyers and reliable data about whether prostituted people increase the number of “repeat buyers” only when advertising online do not exist.

### **Mechanism 3: Increased “screening” of customers**

Cunningham et al. assert that prostituted individuals are now able to post advertisements themselves, and screen customers. They claim that increased “independence” by prostituted women is a likely reason for the lower likelihood of all women being murdered. We know that The Erotic Review is a questionable data source: the comments and posts are quite unreliable. Buyers tend to brag and lie about their experiences (Janson, 2013). Even so, reviews of buyers’ Internet comments reveal the extent to which they understand that pimps are posting ads in ways to give the illusion of independence. This artifice occurs because dealing with sometimes dangerous pimps is not to the liking of sex buyers. And recent research has confirmed a variety of Internet subterfuges used by pimps and traffickers to make it seem that a prostituted woman is not under pimp/trafficker control. In a recent study involving an analysis of scores of backpage.com ads of Nevada’s online sex market (Human Trafficking Initiative, 2018), researchers conclude that only 28% of sex providers in Nevada’s online market appear to be adults working independently with no risk of trafficking.

In addition, researchers in Arizona (Roe-Sepowitz, Hogan, Bray, & Lul, 2018) recently identified online posts advertising girls 18-26 years of age. Law enforcement officials ascertained the girls’ real ages, which ranged from 14-18, with the average age of 16.47 years. It is highly likely that traffickers posted the ads of these very young girls, or compelled them to post those ads.

Cunningham et al. admit that they do not find a significant impact of Craigslist Erotic Services ads on the number of buyer reviews of prostituted women on The Erotic Review that mention screening.

Cunningham et al.’s findings that an increased number of repeat buyers and an increase in prostitution moving indoors leads to fewer women being murdered are highly speculative. Further, Cunningham et al. fail to demonstrate an actual link between any data on these speculations to homicides of women.

### **Female Homicide as a Proxy for Women’s Safety**

The fourth methodological flaw in Cunningham et al.’s study is the decision to use female homicide as a proxy for women’s safety. The authors state “Our proxy for female safety is the number of female victim homicides per 100,000 population” (2019, p.11). Women in this country suffer violence on a daily basis that falls short of being murdered. Nearly half of women experience sexual violence other than rape. One in five women become victims of rape. One in three women has experienced physical violence at the hands of an intimate partner (National

Intimate Partner and Sexual Violence Survey, 2011). Additionally, women in prostitution suffer significant violence at the hands of buyers and pimps, short of murder. Much research has documented that prostituted women experience multiple forms of violence including physical assault, strangulation, being threatened with a weapon, and rape. Studies have shown that post-traumatic stress disorder is commonplace among prostituted women (Valera, Sawyer & Schiraldi, 2001).

Indeed, research done in Chicago found that moving prostitution indoors does not make prostitution “safe.” The study found that 50% of those in escort services reported being subjected to forced sex. Fifty-one percent of exotic dancers reported being threatened with a weapon. Examining the frequency of violence, 21% of women in escort services stated they had been subjected to forced sex more than ten times. This was the same percentage experienced by women in street prostitution (Raphael & Shapiro, 2004). On its face, then, Cunningham et al.’s conclusion that “ERS created an overwhelmingly safe environment for female prostitutes – perhaps the safest in history” (Cunningham et al., 2017) is incorrect.

The primary conclusion of the Cunningham et al. study is false. Online advertising of prostitution does not reduce violence against women nor keep prostituted women safe. Cunningham et al. use murder as a proxy for violence against all women and prostituted women. Claiming that a lower murder rate means less violence against women and greater safety for prostituted women ignores the many kinds of serious violence that women, and prostituted women especially, fall victim to.

### **Unwarranted Extrapolation of Findings**

Lastly, in their 2019 update, Cunningham et al. use the results of their study from the period of 2002-2009 to speculate on the impact of federal law (FOSTA-SESTA) signed in 2018:

Insofar as FOSTA represents a major disruption in the matching markets linking safe clients to sex workers, then we might anticipate two effects. First, the marginal sex worker will leave the market if FOSTA causes her profits to become negative. Exiting may also be sub-optimal if the next best alternative is considerably worse from the worker’s perspective. Thus we expect some exit under FOSTA, though how much depends on the elasticity of supply. Exiting sex workers following FOSTA are by definition the most elastic group of workers in part because they have alternatives which they find relatively acceptable. The women who do not or cannot exit are inelastic to FOSTA because they lack such outside options, and we expect that for these inframarginal sex workers, hardships under FOSTA will be considerable, which may include choosing to work with pimps, falling into predatory relationships with traffickers, and facing heightened risk of death and physical violence at the hands of unsafe clients who may have gained the upper hand without adequate screening (Cunningham et al. 2019).

The authors present Backpage.com as the successor to Craigslist (Cunningham et al., 2019, p.28). They do not, however, re-evaluate the homicide rates in the new era (2010-2018). Neither do the authors take into account the fact that use of the Internet changed significantly from the early 2000s when Craigslist advertised prostitution to the present (Pew Research Center, 2019). Cunningham et al. do not address the fact that website users are likely significantly different in both attitudes

and behaviors than Craigslist users a decade earlier. The speculative conclusions about FOSTA-SESTA's impact on prostituted women and their safety are built on speculative findings and conclusions about the mechanisms by which advertising prostitution online could impact the murder rate for women. They provide no evidence for how such advertising actually might impact the murder rate – or other measures of safety or reduced violence – of prostituted women.

Cunningham et al. cannot make the speculative conclusions they do on how FOSTA-SESTA might impact the safety of prostituted women since they fail to account for the impact of the significant differences in Internet users and behavior in the 10 years since their study period ended.

## CONCLUSION

This critique has demonstrated that the findings and conclusions of the Cunningham et al. study “Craigslist’s Effect on Violence Against Women”/“Craigslist Reduced Violence Against Women” are unsound. They are based on flawed methodology and unsupported assumptions. We conclude that it would be a mistake for journalists, policymakers, and the general public to rely on the findings.

Cunningham et al.’s conclusion that online advertising of prostitution “create(s) an overwhelmingly safe environment for female sex workers” is unsupported by the data.

Cunningham et al. begin with a false assumption that safety, for women in general and for prostituted women specifically, is measured by not being murdered. In reality, women experience a great deal of violence that renders them harmed and traumatized, short of murder. Research shows that there is much violence in the sex trade, wherever it occurs, that renders its victims profoundly unsafe. The number of prostitution-related homicides is likely relatively low. The number of deaths of prostituted women from factors *related* to prostitution such as substance abuse, depression, and PTSD is likely higher and occurs independently of where the prostituted woman solicits buyers. The sex trade is inherently unsafe and murder rates are not a fair measure of safety for prostituted persons.

Cunningham et al. also ask us to make an unsupported logical leap: that when prostituted women advertise online, fewer women across the U.S. will be murdered. The methodology employed by Cunningham et al. fails to address important reasons for the decrease in homicides over time. The authors looked only at Craigslist Erotic Services ads for prostitution as a potential cause for declining homicide rates. In so doing, they ignore factors that likely may have played a greater role in the decreasing homicide rate for women.

Finally, even if the methodology employed by Cunningham et al. was sound and their basic assumptions valid, it would be a stretch to apply findings from data relying on Internet usage collected from 2002-2009 to 2019. The Internet and its users’ behavior have evolved significantly. Unlike in some other categories, it would be unwise to apply 10-year-old findings to today’s environment, even for speculative purposes.

The safety of prostituted women and the safety of all women in this country is a serious concern. Measures to protect them from all forms of violence, and not just murder, should be implemented. It is critical, though, that any such measures taken to protect women from violence should be shown to be effective. We do not

see evidence from the Cunningham et al. research, that allowing online advertising of prostitution will actually reduce men's violence against women.

## ACKNOWLEDGMENTS

*Dignity* thanks the following reviewer for her time and expertise in reviewing this article: Callie Marie Rennison, Professor and former Associate Dean of Faculty Affairs in the School of Public Affairs, University of Colorado, Denver.

## AUTHOR BIOGRAPHY

**Katie Feifer** is the Research Director of The Voices and Faces Project and chairs the leadership group of CounterQuo. Feifer is also a founding co-chair of World Without Exploitation, the movement to end human trafficking and sexual exploitation. She has worked for forty years in communications, market research, strategic planning and meeting facilitation, first as a Vice President at Leo Burnett, a communications firm, and then as an independent consultant for Fortune 500 companies and organizations addressing violence against women.

**Jody Raphael** is Senior Research Fellow, Schiller DuCanto & Fleck Law Center, DePaul University College of Law, Chicago, Illinois. She has researched prostitution and human trafficking since 2001 and is the author of four books on violence against women with particular emphasis on denial. Her latest book is *Rape Is Rape: How Denial, Distortion, and Victim Blaming Are Fueling a Hidden Acquaintance Rape Crisis* (Chicago Review Press, 2013).

**Kezban Yagci Sokat**, Ph.D., is an adjunct professor in the Industrial Engineering and Management Sciences Department at Northwestern University. She received her Ph.D. in Industrial Engineering and Management Sciences (IEMS) from Northwestern University. She completed master's degrees in Industrial Engineering (MSIE) and Health Systems Engineering (MSHS) from Georgia Institute of Technology (GT) with Fulbright scholarship. Dr. Yagci Sokat's research focuses on using mathematical modeling and decision analytics to alleviate human suffering. Her main research interests are human trafficking, humanitarian logistics, and healthcare operations. She specializes in integrating limited information in decision making for NGOs and public officials. Dr. Yagci Sokat has published her research in prestigious academic journals and presented in many conferences. She pursues multiple projects on national initiatives to integrate decision analytics and operations research to human trafficking and policing in collaboration with local and national efforts. She recently attended the closed call National Science Foundation Workshop on Decision Analytics for Dynamic Policing as the team lead for Chicago in Washington, D.C.

## RECOMMENDED CITATION

Feifer, Katie; Raphael, Jody; Yagci Sokat, Kezban. (2019). Do prostitution advertisements reduce violence against women? A methodological examination of Cunningham, DeAngelo, and Tripp findings. *Dignity: A Journal of Sexual Exploitation and Violence*. Vol. 4, Issue 3, Article 7. <https://doi.org/10.23860/dignity.2019.04.03.07> Available at <http://digitalcommons.uri.edu/dignity/vol4/iss3/7>

## REFERENCES

- Berlatsky, N. (2017). *Female homicide rate dropped after Craigslist launched its erotic services platform*. Retrieved from <https://thinkprogress.org/craigslist-erotic-services-platform-3eab46092717/>
- Black, M.C., Basile, K.C., Breiding, M.J., Smith, S.G., Walters, M.L., Merrick, M.T., Chen, J., & Stevens, M.R. (2011). *The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 Summary Report*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Brewer, D., Dudek, J., Potterat J., Muth, S., Roberts, J., Woodhouse, D., (2006). Extent, trends, and perpetrators of prostitution-related homicide in the United States. *Journal of Forensic Sciences* 51 (5), <https://doi.org/10.1111/j.1556-4029.2006.00206.x/>
- Catalano, S. (2015). *Intimate partner violence, 1993-2010*. U.S. Department of Justice, Bureau of Justice Statistics. Retrieved from <https://www.bjs.gov/content/pub/pdf/ipv9310.pdf/>
- Cunningham, S., DeAngelo, G., & Tripp, J. (2017). *Craigslist's effect on violence against women*. Retrieved from <https://www.documentcloud.org/documents/4441219-Craigslist-s-Effect-on-Violence-Against-Women.html/>
- Cunningham, S., DeAngelo, G., & Tripp, J. (2019). *Craigslist reduced violence against women*. Retrieved from <http://scunning.com/craigslist110.pdf/>
- FOSTA-SESTA (2018). S.1693-115<sup>th</sup> Congress: Stop Enabling Sex Traffickers Act of 2017. Retrieved from <https://www.govtrack.us/congress/bills/115/s1693/>
- Halverson, Haley C. (2018). The Communications Decency Act: Immunity for Internet-facilitated commercial sexual exploitation. *Dignity: A Journal of Sexual Exploitation and Violence*. Vol. 3: Iss. 1, Article 12. <https://doi.org/10.23860/dignity.2018.03.01.12>
- Human Trafficking Initiative (2018). *Nevada's Online Commercial Sex Market Report* from the Data Sciences Lab, Creighton University. Retrieved from <https://www.scribd.com/document/379531366/Nevada-sex-trafficking-study/>
- Janson, L. (2013). *Our Great Hobby: An Analysis of Online Networks for Buyers of Sex in Illinois*. Retrieved from <http://caase.org/research>
- Jenkins, N. (2018, March 27). A new bill aims to fight sex trafficking. But critics say it goes too far. *Time*. Retrieved from <http://time.com/5217280/sex-trafficking-fosta-craigslist-reddit/>
- Lonsway, K., Archambault, J. (2012). The “justice gap” for sexual assault cases: Future directions for research and reform. *Violence Against Women*, 18(2), <https://doi.org/10.1177/1077801212440017>
- Maltz, M., (1999). *Bridging Gaps in Police Crime Data*, U.S. Department of Justice, Bureau of Justice Statistics, Office of Justice Programs. Retrieved from <https://www.bjs.gov/content/pub/pdf/bgpcd.pdf>
- Nedelman, M. (2018, April 11). What's next. *CNN*. Retrieved from <https://cnn.com/2018/04/health/sex-workers-craigslist-personals-trafficking-bill/index.html/>
- Permanent Subcommittee on Investigations, U.S. Senate (2017). *Backpage.com's knowing facilitation of online sex trafficking*. Retrieved from <http://www.BackpageReport2017.01.10Final.pdf-AdobeAcrobatReaderDC/>
- Pew Research Center, Internet/Broadband Fact Sheet Retrieved from <https://www.pewInternetorg/fact-sheet/Internet-broadband/>

- Petrosky E, Blair J, Betz C, Fowler K, Jack S, & Lyons B. 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* 2017; 66:741–746. DOI: <http://dx.doi.org/10.15585/mmwr.mm6628a1External>
- Raphael & Shapiro (2004). Violence in indoor and outdoor prostitution venues. *Violence Against Women* 10(2), <https://doi.org/10.1177/1077801203260529>
- Roe-Sepowitz, D., Hogan, K., Bracy, K., & Lul, B. (2018). *Online advertisement truth set sex trafficking matrix: A tool to detect minors in online advertisements*. Report from the Arizona State University School of Social Work, Office of Sex Trafficking Intervention Research. Retrieved from [https://socialwork.asu.edu/sites/default/files/stir/November\\_2018\\_sex\\_trafficking\\_matrix\\_report\\_final.pdf/](https://socialwork.asu.edu/sites/default/files/stir/November_2018_sex_trafficking_matrix_report_final.pdf/)
- Smith, E. & Cooper, A. (2013). *Homicide in the U.S. known to law enforcement, 2011*. U. S. Department of Justice, Bureau of Justice Statistics. Retrieved from <https://www.bjs.gov/content/pub/pdf/hus11.pdf/>
- Witt, E. (2018, June 8). After the closure of Backpage, increasingly vulnerable sex workers are demanding their rights. *The New Yorker*. Retrieved from <https://www.newyorker.com/news/dispatch/after-the-closure-of-backpage-increasingly-vulnerable-sex-workers-are-demanding-their-rights/>
- Zimmerman, A. (2018, April 4). Sex workers fear for their future: How SESTA is putting many prostitutes in peril. *The Daily Beast*. Retrieved from <https://www.thedailybeast.com/sex-workers-fear-for-their-future-how-sesta-is-putting-many-prostitutes-in-peril/>