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Increases in Unlawful Homicides in Florida Following the Enactment of a “Stand Your Ground” Self- defense Law

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Introduction

Results from our study of the impact of Florida’s “Stand Your Ground” self-defense law on homicide and suicide by firearm have been put into question for not distinguishing between “unlawful” homicide (i.e. murder) and “justifiable” homicide (i.e. lawful use of lethal force). Using an interrupted time series design, we found “an abrupt and sustained increase in the monthly homicide rate of 24.4% (31.6% for homicide by firearm)” after the law was enacted.¹ Readers have suggested that if the increase in homicide rates resulted from an increase in homicides that were justifiable, the law may be working as intended.^{2,3} We investigated this possibility by acquiring additional data and conducting new analyses.

Methods

As in our earlier study,¹ we used an interrupted time series design to compare monthly rates of homicide in Florida (1999-2015) before and after October 1, 2005, the effective date of the law. We obtained monthly counts of justifiable homicides—broadly defined as the killing of a felon, during the commission of a criminal act, by a civilian—from the Florida Department of Law Enforcement.^{4,5} We subtracted the monthly counts of justifiable homicide from counts of total homicide collected from the Centers for Disease Control and Prevention’s (CDC) Wide-ranging Online Data for Epidemiologic Research (WONDER) web portal, to create a measure of “unlawful homicide” in addition to the measure of justifiable homicide. We used segmented Poisson regression models, accounting for seasonal influences by using harmonic terms, to analyse each time series. Where significant residual autocorrelation was detected ($P < .10$), we generated robust standard errors (using a sandwich estimator).¹ All analyses were conducted in R statistical software (version 3.3.2; RStudio, Inc) using RStudio (version 1.0.136; RStudio Inc).

Results

Between 1999 and 2015, the mean monthly count of justifiable homicide in Florida was 6 deaths per month (6.6% of all homicides). In the 10 years following the enactment of the law, the average monthly rate of justifiable homicide increased from 0.017 deaths per 100,000 (1999–2005) to 0.044 deaths per 100,000 (Table). Justifiable homicide accounted for an average of 3.4% of all homicides between 1999 and 2005, and an average of 8.7% of all homicides between 2006 and 2015.

After adjustment for underlying trends, we estimated a 75.0% (RR,1.75; 95% CI,1.24–2.48; $P=.001$) increase in justifiable homicides following the enactment of Florida’s stand your ground law. After removing incidents deemed justifiable from the overall homicide count, we estimated a 21.7% (RR,1.21; 95% CI, 1.14–1.30; $P<.001$) increase in the rates of unlawful homicide following the effective date of the law (Table & Figure).

Discussion

In response to questions about our previous analysis, we tested for changes in justifiable and unlawful homicide after the stand your ground law was enacted in Florida.^{2,3} Were increased rates of justifiable homicides expected as citizens utilized their right to use lethal force to protect themselves? It is unclear what lawmakers hoped to achieve, there is little evidence that any health needs assessment was conducted to anticipate consequences of this law. We found that unlawful homicides increased substantially—by 21.7%—after the law was enacted. Moreover, although homicides deemed justifiable typically accounted for only a small proportion of all monthly homicides, we found an increase of 75.0%.

Some questions still remain unanswered. For example the Florida Department of Law Enforcement data could not be disaggregated to enable separate tests for changes in homicide by firearm or within ethnic origin or sex subpopulations. Nonetheless, these results are further evidence that Florida’s stand your ground law led to increases in both unlawful homicide and justifiable homicide. We know of no other possible explanation for these increases.

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Table 1: Justifiable Homicide and Unlawful Homicide Analysis

	Mean Monthly Count		Mean Monthly Rate Per 100,000 Population		Trend change (RR)	95 % CI ^a		P-value	Step change Relative Risk [†]	95 % CI ^a		P-value
	Before Law	After Law	Before Law	After Law		LL	UL			LL	UL	
"Justifiable" Homicide	2.802	8.496	0.017	0.044	1.004	1.001	1.007	<.01	1.750	1.237	2.477	<.01
"Unlawful" Homicide	79.120	90.860	0.474	0.478	0.998	0.998	0.999	<.001	1.217	1.136	1.305	<.001

[†] Effects adjusted for seasonality using harmonic terms. ^a Robust standard errors are reported following statistically significant Breusch–Godfrey and Seasonal Breusch–Godfrey tests for autocorrelation

Figure 1: Changes in Unlawful Homicides Following Florida’s Stand Your Ground Law

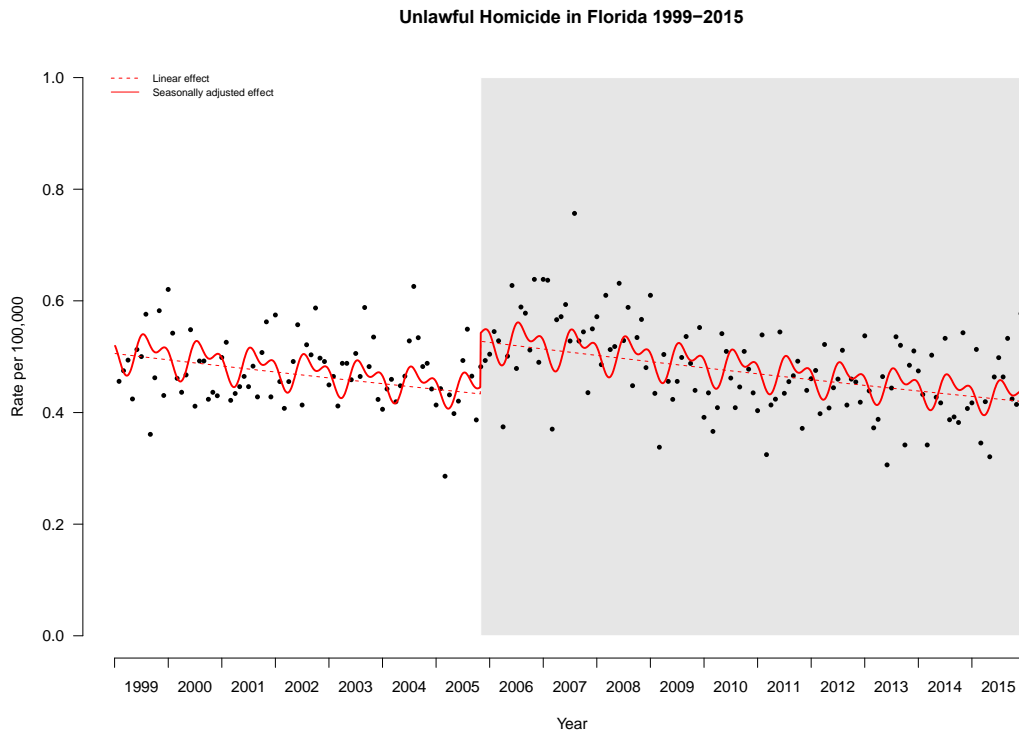


Figure Legends

Figure 1: Changes in Unlawful Homicides Following Florida’s Stand Your Ground Law

Data points represent monthly rates of homicide and homicide by firearm in Florida between 1999 and 2015. Gray-shaded area depicts the onset of Florida’s stand your ground law.

Straight-hatched lines represent fitted estimates using a linear step change model. The curved lines represent fitted values for seasonally adjusted models.