Political Partisanship and Female High School Students Who Carry Handguns

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I. INTRODUCTION

Political Partisanship & Gun-Related Attitudes

There is much political debate in the U.S. between Democrats and Republicans on handgun-control policies (Snyder, 2016). The United States is a gun culture nation, and gun violence is a serious problem (Goddard, 2011; Lott, 1998). There are more than 280 million guns in America with over 65 million handguns in circulation (Herbert, 2011; McGrory, 2006). As a result, the Republicans believe that there are too many guns in America to prevent criminals from illegally obtaining them. In addition, research has indicated that most of the homicides committed in Chicago, for example, are committed with old guns that have gone through a series of transactions (Siegel, 2018). In other words, newly purchased handguns obtained from registered gun dealers in documented sales are rarely used in crime. However, Democrats believe that the gun-related crime problem will never be solved until actions are taken to eliminate the availability of handguns. After all, it is hard to commit a gun-related crime if a person does not have the means to commit a gun-related crime. According to the Democrats, if the number of handguns in society is not reduced, then the gun-related crime problem will not be solved.

Firearm Threat

Firearms are a public safety issue that deserves further research. A 2018 poll conducted by the Pew Research Center indicates that 64% of juvenile girls and 51% of juvenile boys are worried that they may be shot at school (Idzikowski, 2020). This is understandable because there are about 300 people who are shot or killed every day in the U.S. on average (Goddard, 2011). Of these 300 individuals, 57 of them are juveniles. Of these 57 juveniles, nine of them die each day due to gun-related violence. Indeed, handguns are dangerous weapons. This is the reason why gun-carry laws have clauses in them that forbid guns to be carried into schools. If handguns were safe, then schools would not have been singled out.

Democrats

Democrats believe that gun-related crime can be managed by controlling the social environment. Democrats support gun-control laws that restrict law-abiding individuals from carrying concealed handguns because they believe that the environment can be modified to change the behavior of potential criminals (Kirk, 2018; O'Connor, 2020; Snyder, 2016). Democrats believe that criminals are not totally responsible for their actions because they are a product of the social environment. If guns are removed from society, then criminals will have less access to them, thus, reducing gun-related crimes. In short, if the number of guns in society is reduced, then the number of gun-related crimes can be reduced.

Democrats also believe that civilians should not be able to take the law into their own hands because innocent persons may sometimes be hurt or killed (Snyder, 2016). Civilians are not trained to effectively enforce the law like police officers and, because they may personally be involved in the situation, they may be biased. For example, if two armed parties refuse to back down, and both believe they are right, this may result in a shooting. Police officers, on the other hand, are trained in the use-of-force, firearms, and verbal judo. Police officers are held liable for
their bullets and know that deadly force can only be used in life-threatening situations (Del Carmen, 2010).

Republicans

Republicans oppose gun-control laws that restrict law-abiding adults from carrying concealed handguns because they feel that individuals have a right to protect their own lives whenever and wherever they believe they are threatened (Snyder, 2016). Republicans believe that disarming law-abiding civilians will enhance the violent crime problem because defenseless law-abiding citizens will become more attractive targets to the criminals. Indeed, criminals will come to learn that law-abiding civilians will not be armed. Republicans believe that criminals choose to commit acts of crime and a social environment filled with armed law-abiding residents will discourage crime (Siegel, 2018). If laws are passed to legally removed guns from society, then criminals will be the only ones who have access to them, which will increase gun-related crimes. After all, only law-abiding residents will honor gun-control laws, and law-abiding residents will become defenseless. In addition, gun-control laws will enhance the number of gun-related crimes because third party individuals who do not carry guns will lose the benefit gained from the criminals not knowing which individuals are carrying concealed weapons (Lott, 1998).

Law-abiding civilians who carry concealed handguns reduce the number of murders, rapes, and aggravated assaults (Lott, 1998). During many gun-related cases, the attacks are prevented by the law-abiding citizens simply brandishing their handguns. However, many of these cases are not reported to the authorities. Although about 30 people are accidental killed each year by private citizens who believed that they are protecting themselves, the police accidentally kill about 330 individuals per year. Relatively speaking, law-abiding citizens are less dangerous with guns than police officers with guns. Furthermore, arrestees have indicated during a survey that they were more afraid of armed victims than of police (Wright & Rossi, 1985).

Differential Association Theory

According to the differential association theory, individuals become law violators when they are in contact with people, groups, and events that produce an excess of definitions that are favorable toward criminality (Siegel, 2018). Criminal behaviors are influenced by the legal code and are learned via interactions with other people. Furthermore, a person’s behavior will be influenced by the frequency, importance, duration, and intensity of the social learning experiences. By allowing or restricting the carrying of concealed handguns for law-abiding residents, Democrats and Republicans attempt to create the ambience they envision, which they believe will reduce social harm. If high school students carry concealed handguns, which is against the law, then this would indicate that they are learning to do so in that politically created social environment.

Public Safety and Research Question

Because there is disagreement between Democrats and Republicans about gun-control policies, and because the reduction of social harm is an important social goal, it is important to know if there is a difference between the jurisdictions of the two political parties in the gun-
carrying behaviors of children. Therefore, the purpose of this study was to determine if there is a difference between political partisanship and the percentage of female high school students who carry handguns. The research question and the null hypothesis are listed below.

Research Question: Is there a difference between Democrat and Republican states in the percentage of female high school students who carry handguns?

Null Hypothesis: There is no difference between Democrat and Republican states in the percentage of female high school students who carry handguns.

II. LITERATURE REVIEW

First, DeSimone et al. (2013) conducted a study to investigate whether child access prevention laws are associated with decreased nonfatal gun injuries. Child access prevention laws hold the gun owner responsible if a child gains access to a gun that is not properly secured. Many of the prior research studies that investigated child access prevention laws have focused exclusively on gun-related deaths and not on gun-related injuries that were not fatal. To examine non-fatal gun injuries, the researchers examined data collected from annual hospital discharge records from 11 states for two age groups. One age group was comprised of individuals who were under 18 years of age and the other age group was comprised on individuals who were at least 18 years of age. The gun injury data were collected from the Agency for the Healthcare Research and Quality’s Nationwide Inpatient Sample. To assess the data, the researchers employed Poisson regressions to control for various hospital, county, and state characteristics. The findings indicated that child access prevention laws were associated with reductions in nonfatal gun injuries among children under 18 years of age. These results were supported by the absence of self-inflicted injuries by weapons other than guns.

However, there were several limitations in the DeSimone et al. (2013) study. First, because data were only collected from 11 states, the findings cannot necessarily be generalized to states not considered in the study. Second, because the pre-intervention period was brief, there was little variation to exploit before the child access prevention laws were implemented. Finally, a quantitative study does not interpret each person’s reality, does not explain why individuals behave in certain ways, and is ineffective for predicting human nature (Adams, 1999; Ponterotto, 2005).

Second, Crifiasi et al. (2018) conducted a study to determine whether laws related to the sale, use, and carrying of firearms were related to homicide rates at the state level. Using an interrupted time series design, the researchers conducted a longitudinal study from 1984 to 2015 involving 136 large, urban counties in the U.S. To test for the effects of the laws, homicide was stratified by firearm versus all other methods, and Poisson regression was applied to account for national trends. The findings indicated that requiring a permit to purchase firearms was associated with decreased firearm homicide. In addition, the findings indicated that comprehensive background checks only, stand-your-ground laws, right-to-carry laws, and persons who were convicted of violent misdemeanors and possessed guns were all associated with increases in the number of firearm homicides.
However, there were several limitations in the Crifasi et al. (2018) study. First, there is a risk of selection bias, which may impact the validity of the findings. Only counties that had a population of 200,000 or more were considered in the study, and these counties may not necessarily reflect smaller counties. Second, information on law enforcement expenditures, which was a covariate in the study, was available at the state level but not at the county level. Finally, because the study was quantitative in nature, it investigated how variables were related (i.e., the method of operandi), but it did not investigate why the variables were related (i.e., the motive).

Third, Cheng and Hoekstra (2013) conducted a study to examine whether the enhancement of the castle doctrine, which promotes self-defense, deters crime. The enhancement of the castle doctrine included removing the duty to retreat in places outside of one’s home and removing civil liability for those acting under the law. Data were collected on homicide, burglary, robbery, and aggravated assault across all 50 states from the Uniform Crime Report from 2000 to 2010. The researchers used a difference-in-differences regression framework to assess the data. The findings indicated that the enhancement of the castle law doctrine was positively related to the number of homicides. In addition, expansions to castle laws did not deter burglary, robbery, or aggravated assault. In short, the consequence of strengthening self-defense laws resulted in a net increase in homicides.

However, there were several limitations in the Cheng and Hoekstra (2013) study. First, some of the homicides could have been justifiable homicides. Thus, the homicide numbers used in the study may have been overexaggerate. Second, it is not possible to know the actual number of crimes committed in society because only about 40% of crimes are reported to the police (Berry & Smith, 2000; U.S. Department of Justice, 2010). Indeed, the FBI’s Uniform Crime Report data differ from the U.S. Census Bureau’s National Crime Victimization Survey data. Thus, crime statistics were incomplete and, consequently, they were less than accurate. Finally, the Uniform Crime Report data were determined by the number of arrests. Sometimes, innocent persons may be arrested. Thus, the crime statistics may be less than accurate.

Fourth, Marvell (2001) used a fixed-effects research design to assess the 1994 federal law that prohibits the possession of handguns by individuals under 18 years of age. State laws related to the ban of handguns were also evaluated. Data were collected from 1970 to 1999. Victimization data were collected from the Centers for Disease Control and Prevention, and juvenile victimization data were collected from the Bureau of Justice Statistics. Earlier total homicide data and gun homicide data were collected from mortality tables from the National Center for Health Statistics, Vital Statistics of the U.S. Finally, reported crime data were collected from the Uniform Crime Report. To assess the data, the researcher used multiple time-series regression with coefficient comparisons. The findings indicated that there was no significant relationship between banning firearms and the number of gun-related homicides.

However, there were several limitations in the Marvell (2001) study. First, state legislatures may have passed laws to ban guns in response to an increase in juvenile homicide. This will result in a misleading positive relationship between strict gun laws and the number of homicides. Second, data at the state level were incomplete and erratic, which may affect the validity of the study’s findings. Finally, small states may have had no juvenile homicides in a given year.
These states were disregarded during the data analysis because they create problems with regression analysis.

Finally, Rosengart et al. (2005) conducted a cross sectional time series study to determine if there was a relationship between state gun laws and firearm deaths. Data were collected from all 50 states and the District of Columbia from 1979 to 1998 from the National Center for Health Statistics. The five gun laws that were assessed were 1) shall issue laws that allow individuals to carry handguns unless restricted by other statutes, 2) age laws that prohibit individuals under 21 years of age to purchase handguns, 3) age laws that prohibit individuals under 21 years of age to possess handguns, 4) frequency laws that prohibit individuals from buying more than one gun per month, and 5) junk gun laws that ban cheaply constructed handguns. To assess the data, the researchers used Poisson regression to determine mortality rate ratios. As a result, the findings indicated that there was no significant relationship between the gun laws and the number of firearm homicides or firearm suicides.

However, there were several limitations in the Rosengart et al. (2005) study. First, the study’s analysis was restricted to states that had passed at least one of the five laws under study. If smaller jurisdictions within the states had passed similar laws before the statewide laws were enacted, then the study’s findings may have underestimated any effect. Second, if city or county ordinances passed similar laws after the statewide laws were enacted, then the researchers may have measured the effect of the local ordinances instead of the state law. Finally, because the study was a quantitative study, it does not interpret each person’s reality and is ineffective for predicting human nature (Adams, 1999; Ponterotto, 2005).

In sum, the studies are mixed. On the one hand, some studies indicate that handguns and stand-your-ground laws promote social harm. These studies seem to support strong gun-control policies. On the other hand, some studies challenge the effectiveness of gun-control policies. According to these studies, gun control polices have failed to serve their purpose, and law-abiding citizens may need to protect themselves. It is difficult to say how the ambience created by each political party may impact the behaviors of female high school students.

III. METHODOLOGY

Political Partisanship Definition

A state was considered either Democrat or Republican based on the political party of the state governor during the years of data collection, which were 2013, 2015, and 2017 (“List of Governors of the American States,” n.d.). If a state’s governor belonged to the Democrat party from the beginning of 2013 till the end of 2017, then that state was considered a Democrat state. If a state’s governor belonged to the Republican party from the beginning of 2013 till the end of 2017, then that state was considered a Republican state. To be considered in this study, a state had to be consistently Democrat or Republican during all years of data collection.
Data

Data were collected by the Centers for Disease Control and Prevention in 2013, 2015, and 2017 using the Youth Risk Behavior Surveillance System (Kann et al., 2014; Kann et al., 2016; Kann et al., 2018). The standard questionnaire in 2013 included 86 questions, and the standard questionnaires in 2015 and 2017 included 89 questions. A three-stage cluster sample of students in grades 9-12, who attended public and private schools, produced a nationally representative sample of American high school students.

Statistical Analysis

Because data were collected every two years from the same states, and students attend high school for four years, there is a possibility that the same students responded to more than one survey. Indeed, a prior study that used Poisson regression on the same data source has indicated that there is correlation among the data values, which resulted in a huge overdispersion problem (Davis, 2020). To address this parametric assumption violation, the current study used generalized estimating equations (GEE), a nonparametric statistic, to assess the data. However, nonparametric statistics are not as strong as parametric statistics (Field, 2005). In other words, relative to the use of a parametric statistic, the use of a nonparametric statistic, such as generalized estimating equations, may result in some loss of efficiency for estimation of the coefficients (Fitzmaurice et al., 2004; Su, 2020).

IV. RESULTS

Data were collected from 18 states in 2013, 13 states in 2015, and 13 states in 2017 for a total of 44 observations (see Table 1). Of all the states considered, 75% were Republican and 25% were Democrat. The mean numbers of female high school students who carried handguns for the Republican states were 22.79 (SD = 18.45), 29.67 (SD = 28.44), and 21.00 (SD = 23.91) in 2013, 2015, and 2017, respectively (see Table 2). The mean numbers of female high school students who carried handguns for the Democrat states were 44.75 (SD = 30.07), 38.00 (SD = 35.73), and 46.33 (SD = 35.81) in 2013, 2015, and 2017, respectively. The mean rates of female high school students who carried handguns for the Republican states were 0.026 (SD = 0.012), 0.034 (SD = 0.014), and 0.025 (SD = 0.010) in 2013, 2015, and 2017, respectively. The mean rates of female high school students who carried handguns for the Democrat states were 0.025 (SD = 0.009), 0.020 (SD = 0.017), and 0.021 (SD = 0.014) in 2013, 2015, and 2017, respectively.

Table 1. Sample Size Overview

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total number of observations</th>
<th>Number of states (%) per political party</th>
<th>Number of states per year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Republican</td>
<td>Democrat</td>
</tr>
<tr>
<td>Females who carried handguns</td>
<td>44</td>
<td>33 (75.0)</td>
<td>11 (25.0)</td>
</tr>
</tbody>
</table>
Table 2. Descriptive Statistics for the Variables of Interest

<table>
<thead>
<tr>
<th>Variable</th>
<th>Year</th>
<th>Party</th>
<th>Number of states</th>
<th>Events M</th>
<th>SD</th>
<th>Trials M</th>
<th>SD</th>
<th>Events/Trials M</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females who carried handguns</td>
<td>2013</td>
<td>R</td>
<td>14</td>
<td>22.79</td>
<td>18.45</td>
<td>818.07</td>
<td>449.27</td>
<td>0.026</td>
<td>0.012</td>
<td>0.008</td>
<td>0.050</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D</td>
<td>4</td>
<td>44.75</td>
<td>30.07</td>
<td>1831.75</td>
<td>1189.39</td>
<td>0.025</td>
<td>0.009</td>
<td>0.016</td>
<td>0.037</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>R</td>
<td>9</td>
<td>29.67</td>
<td>28.44</td>
<td>870.56</td>
<td>800.81</td>
<td>0.034</td>
<td>0.014</td>
<td>0.016</td>
<td>0.069</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D</td>
<td>4</td>
<td>38.00</td>
<td>35.73</td>
<td>1686.25</td>
<td>1238.84</td>
<td>0.020</td>
<td>0.017</td>
<td>0.007</td>
<td>0.044</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>R</td>
<td>10</td>
<td>21.00</td>
<td>23.91</td>
<td>747.00</td>
<td>452.27</td>
<td>0.025</td>
<td>0.010</td>
<td>0.016</td>
<td>0.044</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D</td>
<td>3</td>
<td>46.33</td>
<td>35.81</td>
<td>2017.67</td>
<td>1587.66</td>
<td>0.021</td>
<td>0.014</td>
<td>0.009</td>
<td>0.037</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>R</td>
<td>33</td>
<td>24.12</td>
<td>22.67</td>
<td>810.85</td>
<td>549.68</td>
<td>0.028</td>
<td>0.012</td>
<td>0.008</td>
<td>0.069</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D</td>
<td>11</td>
<td>42.73</td>
<td>30.42</td>
<td>1829.55</td>
<td>1186.50</td>
<td>0.022</td>
<td>0.012</td>
<td>0.007</td>
<td>0.044</td>
</tr>
</tbody>
</table>

Note:  R = Republican;  D = Democrat;  M = mean;  SD = standard deviation;  Min = minimum;  Max = maximum.  Events represent the number of female high school students who carried handguns.  Trials represent the female high school sample size.  Events/Trials represent the rate of female high school students who carried handguns.

Figure 1 shows the bar chart of mean rates of females who carried handguns by year and political party, which provides a direct comparison of the mean rates of female high school students who carried handguns between the two political parties.  Based on Figure 1, Republican states seem to have higher mean rates of female high school students who carried handguns than Democrat states.  However, the results of the logistic regression for repeated measures indicate that there is no statistically significant relationship between female high school students who carry handguns and political party ($\chi^2(1) = 0.959, p = 0.327, Table 3; OR = 1.282, 95\% CI = [0.780, 2.109], Tables 4$).
Figure 1. Bar chart of mean rates of female high school students who carried handguns by year and political party.

Table 3. Tests of Model Effects

<table>
<thead>
<tr>
<th>Model</th>
<th>Wald $\chi^2$</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females who carried handguns</td>
<td>0.959</td>
<td>1</td>
<td>0.327</td>
</tr>
</tbody>
</table>

Note: Wald $\chi^2$ = Wald chi-square statistic; df = degrees of freedom; p = p-value.

Table 4. Parameter Estimates and Odds Ratios

<table>
<thead>
<tr>
<th>Model</th>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>95% CI of B</th>
<th>OR</th>
<th>95% CI of OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females who carried handguns</td>
<td>Intercept</td>
<td>-3.733</td>
<td>0.231</td>
<td>-4.187 -3.280</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Political party</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Republican</td>
<td>0.249</td>
<td>0.254</td>
<td>-0.249 0.746</td>
<td>1.282</td>
<td>0.780 2.109</td>
</tr>
<tr>
<td></td>
<td>Democrat</td>
<td>Ref</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: B = parameter estimate; SE = standard error; CI = confidence interval; lower = lower bound; upper = upper bound; OR = odds ratio; ref = reference group. OR was computed as exp(B).
V. DISCUSSION

Compared to Democrat states, Republican states seem to have higher mean rates of female high school students who carry handguns. However, the results of the logistic regression for repeated measures indicate that there is no statistically significant relationship between female high school students who carry handguns and political party. Therefore, the null hypothesis is accepted. This study is important because it demonstrates that neither political party is better than the other when it comes to creating a social learning environment that discourages female high school students from carrying handguns. If either political party wants to demonstrate its superior gun-policy platform for female high school students, then it will need to do a better job at creating the proper ambience to address the problem.

Limitations

There were several limitations in this study. First, because the sample was limited to female high school students in grades 9-12, the findings cannot be generalized to other populations. Second, because of the study was not based on an experimental design, it cannot determine causal relationships. Third, although social learning theorists believe that exterior forces influence interior behavior, they fail to consider cognitive development (Durkin, 1995). Fourth, because the study was quantitative in nature, it does not explain why female high school students carry handguns (Berg, 2007). Fifth, because Likert-type scales were used during the collection of the data, there is a possibility that the participants may have simply selected positive responses over negative responses (Antonovich, 2008). Finally, there are different ways to define political partisanship, which may provide different results. For example, political partisanship may be defined by the political party affiliation of a state’s Senate or House of Representatives.

REFERENCES


