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Political Partisanship and Female High School Students Who Physically Fight on Campus

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I. INTRODUCTION

Democrats and Republicans have different platforms on how to modify the social learning environment. First, many Democrats support legalizing recreational marijuana because it is commonly used and socially acceptable (Snyder, 2016). Republicans, on the other hand, oppose legalizing recreational marijuana because they believe it is a threat to the health and safety of the public. Second, Democrats support gun-control laws because they believe that the behavior of criminals can be modified in a good way through the elimination of guns. Republicans, on the other hand, oppose gun-control laws because they believe that the behavior of criminals will be modified in a bad way. In other words, if the law-abiding residents give up their guns, then the social environment will be optimistic for criminal behaviors. Third, Democrats and Republicans have different philosophies on religion (DeMint, 2020; Snyder, 2016). Democrats believe that God and religion should be removed from the government and the power of the government is the moral authority. Republicans, on the other hand, believe God and religion are the foundations of America and God's word is the guiding moral authority on how Americans should behave. In short, Democrats and Republicans create two different social learning environments via the passage of laws. Each party will support laws to create the environment that furthers its agenda.

This study will investigate whether there is a difference between political party and the amount of female high school student violence. According to the social learning theory, people learn to be aggressive through their life experiences (Siegel, 2018). These experiences include personally observing the behaviors of others and modeling them. Personal behaviors are a product of learning the norms, values, and behaviors of society. Indeed, learning is a by-product of the interaction with others and is influenced by perceptions of the legal code. Because people experience culture conflict when they are exposed to different and opposing attitudes of acceptable behaviors, and because Democrats and Republicans have different attitudes toward marijuana, gun control, and religion, it is unclear if the different social learning environments created by the two different political parties will influence high school violence.

Because public safety is a desirable social goal, it is important to investigate whether there is a difference between the Democrat-created social environment and the Republican-created social environment. 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 fight on campus in each jurisdiction. 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 physically fight on school property?

Null Hypothesis: There is no difference between Democrat and Republican states in the percentage of female high school students who physically fight on school property.

II. LITERATURE REVIEW

Three factors will be reviewed involving the social learning environment: marijuana use, gun-control policies, and religion. These factors are important because there are clear differences between the two political parties on these topics (DeMint, 2020; Snyder, 2016). The Democrats are liberal on marijuana use, strict on gun-control policies, and believe the government should be free from religion. The Republicans, on the other hand, are strict on marijuana use, oppose strict gun-control policies, and believe religion should play a visible role in the government.

Marijuana Use

For a study that supports the Democrats, Morris et al. (2014) conducted a longitudinal study to assess the relationship between medical marijuana legalization and the number of Part I Uniform Crime Reporting offenses. Data for Part 1 crimes for each state were collected from 1990 to 2006. The researchers used fixed-effects ordinary least squares regression models to assess the data, and the findings indicated that there is no relationship between medical marijuana laws and officially reported Part 1 crimes.

However, there were several limitations in the Morris et al. (2014) study. First, the Uniform Crime Reporting data used in the study did not include juvenile crimes. Second, the Uniform Crime Reporting data did not consider crimes not reported to the police. Thus, the crime data used in the study were less than optimal, which may affect the validity of the study. Third, there is the possibility that some extraneous variables were not considered, which may affect the nature of the relationship between the variables. Fourth, fixed-effect models are vulnerable to time-varying factors, which may differ between states with and without medical marijuana laws. Finally, because the study was quantitative in nature, it does not determine the reasons *why* variables are or are not related.

For a study that supports the Republicans, Shorey et al. (2016) conducted a study to determine if marijuana use is related to dating violence. One-hundred seventy-three female undergraduate students from a public university in the Southeastern United States agreed to participate in a 90-day daily diary study. Each participant was at least 18 years of age, she was in a current relationship with a partner who was at least 18 years of age, she saw her dating partner at least twice per week, and she consumed alcohol in the previous month. In addition, each participant recorded whether she used marijuana immediately before she was victimization by her partner. Each participant recorded information in her 90-day daily diary about her contact with her dating partner, her dating violence victimization, her alcohol use, her marijuana use, and her partner's substance use.   The researchers used multilevel modeling to examine the odds of being victimized, and the findings indicated that marijuana increases the odds of being psychologically and sexually victimized.

However, there were several limitations in the Shorey et al. (2016) study. First, because the sample was primarily Caucasian females, the findings may not necessarily be generalized to other populations. Second, data were only collected from the participants and not from their dating partners. It may be important to examine the substance use of the partners when assessing

the odds of dating violence. Third, the participants were asked to indicate if they used marijuana immediately before the victimization, but the length of time was not specified. Fourth, the researchers did not allow the participants to indicate if they were dating multiple partners or if they were victimized more than once per day. Finally, the researchers did not have information on females who qualified for the study but decided not to participate. Individuals who did not participate may have been different in a systematic way from the individuals who chose to participate.

Gun-Control Policies

For a study that supports the Democrats, Kaufman et al. (2018) have conducted a cross-sectional study to determine if there is a relationship between the distance that counties are located from states with lenient gun-control policies and the number of gun-related deaths. The researchers examined the U.S. Centers for Disease Control and Prevention's gun-related death rates for 3,108 counties in the 48 contiguous states in America from 2010 to 2014. The researchers used multilevel Bayesian spatial Poisson models to generate incident rate ratios, and the findings indicated that strong firearm laws are inversely related to the number of firearm homicides and firearm suicides, regardless of the firearm laws in adjacent states. In addition, there is an inverse relationship between strong gun-control policies in adjacent states and the number of gun-related deaths in states with weak gun-control laws.

However, there were several limitations in the Kaufman et al. (2018) study. First, because the available data only contained a few states with very strict gun-control laws, the researchers were unable to effectively detect an effect of the strictest gun-control laws. Second, evidence from the FBI indicated that guns discovered at crime scenes often migrated there from distant states. Third, the laws were grouped together in a way that masked the effect of any particular law. Fourth, it is unclear if unmeasured variables may have impacted the adoption of firearm laws and death rates. Finally, the study examined correlational relationships and not causal relationships.

For a study that supports the Republicans, Moorhouse and Wanner (2006) conducted a study to determine if the number of gun-control measures is negatively related to the number of gun-related crimes in the state. Data were collected from all 50 states and from the District of Columbia for laws that were in place in 1998. The laws were grouped into six categories: 1) Registration laws, 2) Safety training requirements, 3) Regulation of firearm sales, 4) Safety storage, 5) Ownership licensing, and 6) the Presence of more restrictive city or county ordinances. The researchers employed regression analysis to assess the data, and the findings indicated that there is no significant relationship between the number of gun-control measures and the number of gun-related crimes in the state. In addition, the findings indicated that there is no relationship between neighboring states having lax gun laws and the number of crimes in the state with gun-control laws.

However, there were several limitations in the Moorhouse and Wanner (2006) study. First, there are aggregation problems when state data are used, which could mask relationships in the data. Second, many of the gun-control laws since 1998 have changed, which make the findings less than applicable in today's culture. Finally, because the study was quantitative in nature, it

investigated *how* variables were related, but it did not investigate *why* existing laws were not effective.

Religion

For a study that supports the Democrats, Yilmaz et al. (2016) conducted a study to investigate the causal effect of religious beliefs and analytic thinking on prejudice toward out-groups. The sample was comprised of 127 Muslim undergraduate students from Boğaziçi University in Turkey. The sample was comprised of 80 females, 47 males, and one individual who did not identify a specific sex. Data were collected via online surveys. The researchers conducted a between-subjects ANOVA and a Tukey Honestly Significance Difference post hoc test to assess the differences between religious individuals, analytical individuals, and neutral individuals. The findings indicated that the negative attitudes of the analytical individuals are not significantly different from the negative attitudes of the neutral individuals. However, the findings also indicated that 1) persons who scored high or moderately high in religiosity are more prejudice than individuals who scored low in religiosity, and 2) religious individuals are more prejudice than the analytical or neutral individuals.

However, there were several limitations in the Yilmaz et al. (2016) study. First, the study was conducted in Turkey, which has a different social learning environment than the U.S. Second, the study was conducted on college students, and the findings may not necessarily apply to high school students. Third, the researchers had to change some of the language on the Intuitive Religious Belief Scale because some of the items were unclear when translated to Turkish. Changing the wording of the questions may negatively affect the validity of the data. Finally, the study assessed *how* variables were numerically related but not *why* they were related.

For a study that supports the Republicans, Pearce et al. (2003) conducted a one-year longitudinal study to assess whether religiosity and parent involvement were related to student conduct problems. Religiosity was measured by one's a) frequency of attending religious services, b) frequency of engaging in informal religious practices, c) beliefs about God, and d) personal evaluation of being religious. The researchers collected data from 1,703 high-risk urban students in Northeastern United States who were in 6th to 8th grade. The sample was comprised of about 53% females and 61% African Americans. The researchers applied hierarchical multiple regression to analyze the data, and the findings indicated that religiosity and parent involvement are related to fewer conduct problems. In addition, the relationship between exposure to violence and misconduct is moderated by religiosity, which diminishes the negative effects of exposure to violence.

However, there were several limitations in the Pearce et al. (2003) study. First, because the data were collected using a self-administered survey, and because the students were being asked about violence and misconduct, there is the possibility that they were less than truthful in their responses. Second, because the participants were in 6th to 8th grade, the findings may not necessarily apply to high school students. Third, because the participants resided in the Northeastern United States, the findings may not necessarily apply to populations in other geographical locations. Fourth, because the study used a cross-sectional survey design, causal

relationships cannot be determined. Finally, because the study was quantitative in nature, it does explain the motive behind the participants' behaviors.

In sum, as explained by the social learning theory, individuals may learn either pro-social or anti-social behaviors in a specific social learning environment (Siegel, 2018). Hence, it is difficult to say how the social learning environment, as created by the political parties, may impact the behaviors of high school students. Because public safety is an important social goal, it is important to know if there is a difference between Democrat and Republican jurisdictions and violent behaviors among high school students.

III. METHODOLOGY

Political Partisanship Definition

A state was considered either Democrat or Republican based on the U.S. Presidential elections for 2012 and 2016 ("Presidential Voting History by State," n.d.). If a state's electoral college voted for the Democrat U.S. Presidential candidate, then that state was considered a Democrat state. If a state's electoral college voted for the Republican U.S. Presidential candidate, then that state was considered a Republican state. To be considered in this study, a state had to be consistently Democrat or Republican during the years of data collection, which were 2013, 2015, and 2017.

Sample

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

Statistical Analysis

Because data were collected from the same states over three collection periods, data may have been collected from the same participants for more than one survey (Kann et al., 2014; Kann et al., 2016; Kann et al., 2018). For example, students surveyed in 9th grade may have also been surveyed in 11th grade. Students surveyed in 10th grade may have been surveyed in 12th grade. In other words, the data values were not expected to be independent. This was confirmed in a prior study that used the same data source, which indicated a very large overdisperson problem (Davis, 2020). Thus, to address this parametric statistic assumption violation, generalized estimating equations (GEE), a nonparametric statistic, was used to assess the data. However, the use of a nonparametric statistic may result in some loss of efficiency for estimation of the coefficients (Fitzmaurice et al., 2004; Su, 2020).

IV. RESULTS

Data were collected from 28 states in 2013, 26 states in 2015, and 25 states in 2017 for a total of 79 observations (see Table 1). Of all the states considered, 62% were Republican and 38% were Democrat. The mean numbers of females who physically fought at school for the Republican states were 39.58 (SD = 17.98), 38.07 (SD = 29.68), and 28.13 (SD = 14.16) in 2013, 2015, and 2017, respectively (see Table 2). The mean numbers of females who physically fought at school for the Democrat states were 301.00 (SD = 721.45), 245.18 (SD = 553.62), and 222.00 (SD = 512.39) in 2013, 2015, and 2017, respectively. The mean rates of females who physically fought at school for the Republican states were 0.056 (SD = 0.019), 0.046 (SD = 0.013), and 0.043 (SD = 0.017) in 2013, 2015, and 2017, respectively. The mean rates of females who physically fought at school for the Democrat states were 0.054 (SD = 0.025), 0.051 (SD = 0.017), and 0.051 (SD = 0.022) in 2013, 2015, and 2017, respectively.

Table 1. Sample Size Overview

		Number of states (%) per political party		Number of states per year		
Variable	Total number of observations	Republican	Democrat	2013	2015	2017
Females who physically fought	79	49 (62.0)	38 (38.0)	28	26	25

Table 2. Descriptive Statistics for the Variables of Interest

				Events		Trials		Events/Trials			
Variable	Year	Party	Number of states	M	SD	M	SD	M	SD	Min	Max
Females who physically fought	2013	R	19	39.58	17.98	733.47	377.33	0.056	0.019	0.035	0.109
		D	9	301.00	721.45	3529.44	6881.59	0.054	0.025	0.026	0.102
	2015	R	15	38.07	29.68	779.33	399.75	0.046	0.013	0.031	0.077
		D	11	245.18	553.62	3704.36	6361.53	0.051	0.017	0.023	0.085
	2017	R	15	28.13	14.16	682.73	348.58	0.043	0.017	0.021	0.095
		D	10	222.00	512.39	3115.60	5724.42	0.051	0.022	0.019	0.087
	Overall	R	49	35.61	21.50	731.98	370.00	0.049	0.018	0.021	0.109
		D	30	254.20	576.04	3455.63	6103.55	0.052	0.021	0.019	0.102

Note: R = Republican; D = Democrat; M = mean; SD = standard deviation; Min = minimum; Max = maximum. Events represent the number of females who physically fought at school. Trials represent the female sample size. Events/Trials represent the rate of females who physically fought at school.
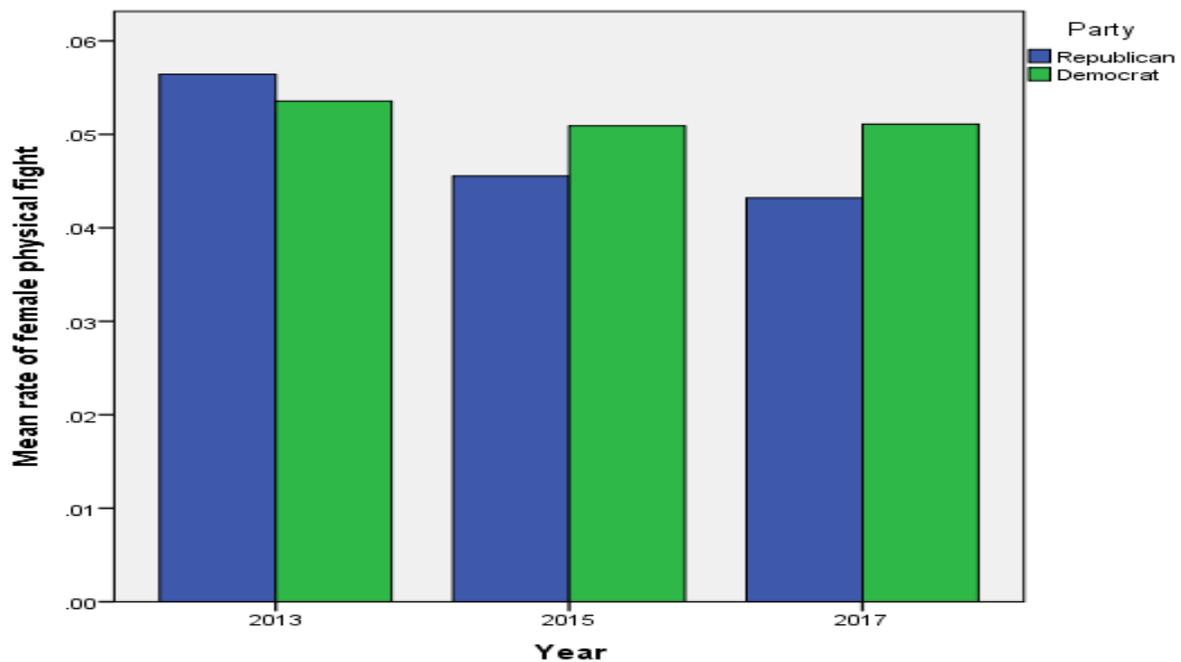
Figure 1. Bar chart of mean rates of female high school students who physically fought on campus by year and political party.

Figure 1 shows the bar chart of mean rates of females who physically fought by year and political party, which provides a direct comparison of the mean rates of females who physically fought at school between the two political parties. Compared to the mean rates in the Democrat states, except for 2013, the mean rates of females who physically fought at school seem to be lower in the Republican states. Indeed, the results of the logistic regression for repeated measures indicate that there is a statistically significant relationship between females who physically fight at school and political party ($\chi^2(1) = 5.591$, p = 0.018, Table 3). In particular, females were 35.6% less likely to physically fight at schools in Republican states than in Democrat states (OR = 0.644, 95% CI = [0.447, 0.927], Table 4).

Table 3. Tests of Model Effects

Model	Wald χ^2	df	p
Females who physically fight on campus	5.591	1	0.018

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

Table 4. Parameter Estimates and Odds Ratios

Model	Variable	B	SE	95% CI of B		OR	95% CI of OR	
				Lower	Upper		Lower	Upper
Females who physically fight on campus	Intercept	-2.533	.1757	-2.878	-2.189			
	Political party							
	Republican	-0.440	0.186	-0.805	-0.075	0.644	0.447	0.927
	Democrat	Ref						

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

The results of the logistic regression for repeated measures indicate that there is a statistically significant relationship between female high school students who physically fight on campus and political party. Females were 35.6% less likely to physically fight on campus in Republican states than in Democrat states. Therefore, the null hypothesis is rejected. The results of this study are important because they indicate that the social learning environment created by the Republicans seem to decrease the number of fights on campus for female high school students. In short, the problem of fighting on campus may be addressed through appropriate laws that create the proper social learning environment.

Limitations

There were several limitations in this study. First, not all states and large urban school districts included all of the standard questions on their Youth Risk Behavior Surveillance System questionnaires (Kann et al, 2016). Second, the history factor may have affected the study's internal validity. In other words, specific events, other than the treatment, may have occurred between multiple observations, which may have affected the results (Bordens & Abbott, 2008). Third, the social learning theory fails to adequately consider a) how other people help an individual construct the social world, b) how an individual acquires shared representations of social and interpersonal phenomena, and c) how some developmental routes are encouraged and some are inhibited as a result of particular social arrangements (Durkin, 1995). Fourth, because the sample was limited to female high school students in the U.S., the findings cannot necessarily be generalized to individuals who do not match the sample's characteristics. Fifth, because the study was quantitative in design, it does not explain *why* female high school students physically fight on campus (Berg, 2007). Sixth, the participants may have provided responses that reflect the way that they want to see themselves. 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 state representatives and/or U.S. representatives.

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