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Isabelle Alley
Skidmore College, ialley@skidmore.edu

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**The Effect of Conservative Politics on Sex Education and Teen Birth: A State-by-State
Analysis of Abstinence and Contraception-focused Approaches***

Isabelle Alley

Skidmore College

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*Please direct all correspondence to Isabelle Alley, 815 N. Broadway, Skidmore College, Saratoga Springs, NY 12866. E-mail: ialley@skidmore.edu. I would like to acknowledge Professor Catherine Berheide and Professor Andrew Lindner for their thoughtful advice and guidance as well as my colleagues in Senior Seminar for their support this semester.

The Effect of Conservative Politics on Sex Education and Teen Birth: A State-by-State Analysis of Abstinence and Contraception-focused Approaches

ABSTRACT

Researchers and policy makers have looked at many factors that result in high teen birth rates, most notably sex education in public schools. Most often sex education policies fall to the state government, resulting in vast differences in policy across the US. In this study I look at two different approaches to sex education: programs in which abstinence is stressed and programs that include information on contraception. Using the Guttmacher Institute's evaluation of state sex education laws (2015) and The National Campaign to End Teen and Unplanned Pregnancy's teen birthrates (2015), I have compiled a data set that allows a state-by-state analysis of sex education policies and teen birthrate outcomes. I have also considered the influence of the state's political leaning on the variables by coding states that voted for Donald Trump in the 2016 election as conservative. The findings suggest that controlling for sex education, conservative states have higher teen birthrates. While there appears to be a relationship between the type of sex education and teen birthrate, when conservative is controlled for the relationship disappears. Conservative states have higher teen birthrates than liberal states across all racial categories. Additionally, conservative states were more likely to stress abstinence in their sex education than include information on contraception. Finally, stressing abstinence in sex education has no effect on teen birthrates, while including information on contraception only has an effect on reducing the birthrate for Black teens. It appears that conservative politics may be a better indicator of teen birthrates than sex education requirements.

The Effect of Conservative Politics on Sex Education and Teen Birth: A State-by-State Analysis of Abstinence and Contraception-focused Approaches*

Sociologists have been interested in the study of sex and reproduction, particularly in a political moment that brings a great deal of attention to this subject. Contraception, abortion, sex education, and teen pregnancy have been considered taboo subjects at the forefront of this conversation (Brint and Abrutyn 2010). Pre-marital and adolescent sexuality can be framed in the larger context of sociology as sexual behavior is highly socialized and differs greatly from group to group. Gender, race, class, and sexuality intersect and contribute to the formulation of one's sexual experiences. Sociologists (Schalet et al. 2014) are interested in the factors that lead to certain health outcomes, such as teenage pregnancy. While many of these factors are rooted in race and class (unchanging), education—particularly sex education—is the focus of policy and other change-makers. Many states have expanded their educational curriculum to include sex education as a tool to help prevent teenage pregnancy. Researching the factors that predict high rates of teen pregnancy and the role of sex education, we see the intersection of race, class and gender as well as policy and public health.

While the rate of teen pregnancy and teen birth in the United States is on the decline, the issue still remains extremely important for three main reasons. A primary reason to continue the research and activism around teen pregnancy is the large racial and ethnic disparities in the statistics. The rate of pregnancies for Hispanic and Black teenagers is almost double the rate of their white peers (Office of Adolescent Health 2014) (Silk and Romero 2014). Applying a theoretical framework rooted in addressing racial disparities will help us break down the systemic inequities in education, opportunity, and family structure as well as better

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understanding the everyday social norms associated with different racial groups for teenagers in the United States. This research continues to be important as we are experiencing a partisanship in United States politics and public opinion on issues related to reproductive rights. I am interested in looking at a state by state analysis of the educational curriculum policies with their corresponding teenage birth rate outcomes. Lastly, this research is framed as a state-by-state analysis of policies and health outcomes. The trends in teen pregnancy rates are largely dictated by geographic disparities. By looking at the laws and policies of each state, we can take a closer look at why these disparities still exist. The goal of the research is to better understand the factors that predict sexual health outcomes in adolescence. The findings of this research can be used to better inform policy that aims to address the public health issue of teenage pregnancy and teen birth. It's important that this research has a strategic and practical application that will directly impact the lives of young women.

Looking at data collected from analyses of sex education curriculum policy mandates as well as the birth rates of women 15-19 by state, I will be able to examine the impacts of sex education on teen pregnancy state by state. I will also break down teen birth rates by race to determine the role of race as an indicator. Research and the literature I have collected show that sex education decreases the rate of teen pregnancy, while at the same time race and family structure can be just as important indicators. I hypothesize that states that mandate including information on contraception in their sex education curriculum have lower teen birth rates. I also hypothesize that states that mandate stressing abstinence in their sex education curriculum have higher teen birth rates.

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THEORETICAL FRAMEWORK

In order to understand the relationship between sex education and teen pregnancy in the United States we can look to theoretical approaches to public health and sexuality. Michel Foucault's theory of biopower and governmentality explains health promotion approaches through government policy as a tool to control human capital. Barcelos (2014) discusses the role of biopower specifically stating, "Foucault's concepts of biopower and governmentality are useful to understand and critically analyze the operation of power in discourses related to adolescent childbearing." Sex education in the United States generally comes from government-instated policy. Through the lens of biopower and government control, we can conceptualize abstinence-focused sex education and contraceptive inclusive sex education as government tools to control both human population (birthrates), and women's bodies. While abstinence-focused and contraceptive inclusive sex education are both forms of government control—they are also two very different approaches negotiating different relationships with government. Barcelos adds, "The responsibility for teen pregnancy prevention is shared between individuals and political bodies; it requires rational, calculated responses to risk such as contraceptive use and appropriate public policies (Barcelos 2014: 485). Through this critical analysis of power and a feminist lens, the issue of sex education and teen pregnancy can be understood as the government exerting control over

Additionally, other scholars have further considered theories that attempt to explain how views about sex education and teen pregnancy are shaped. For this particular research project, I am concerned with how policy affects a public health outcome (teen birthrate), which relied heavily on understanding how the policy was created which leads us to incorporating theories that explain conservative views. Brint and Abrutyn (2010:330) consider "moral standards

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traditionalism: the cognitive orientation that draws a strong contrast between right and wrong ways of living, is rooted in traditional standards, and can be threatened by social change.”

Through their use of this theory they find these “traditional family values” to be at the root of political views that inform policies that promote patriarchal values.

LITERATURE REVIEW

The three existing bodies of literature discuss teen pregnancy, sex education, and conservative politics in generally very separate contexts. The purpose of this literature review is to weave these themes together in order to examine the question of sex education and teen birth more closely. A large portion of the literature suggests that teen pregnancy is a huge issue in the United States and that sex education that includes information on contraception is proven to reduce the extremely high teen pregnancy rates. The literature also delves into other negative consequences of unsafe sex practices including the prevalence of sexually transmitted infections (STIs). Sociologists have also studied why conservative political views promote policy that oftentimes has negative consequences on women. The literature comes together to illustrate the expansive background of sex education and teen birth in the United States.

Teen Pregnancy and Birth in the United States

The United States has the highest teen birth rate among developed nations or nations with similar teenage sexual experiences, according to the National Research Council (Schalet et al. 2014:1597). The US has seen a recent decrease in teen births, but still remains abnormally high. According to a 2009 Pew Social Trends Poll teen motherhood is considered a “bad thing for our society” by 94 percent of US adults (Mollborn et al. 2014:241). Many researchers and educators see a strong need for comprehensive sex education policy as a solution to the teen pregnancy issue in the United States.

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Outcomes of Teen Pregnancy

Before discussing the connection between sex education and teen pregnancy outcomes, let us first consider the question of why pregnancy is a negative health outcome for adolescents. While most literature suggests that unintended pregnancy has “long-term health and social consequences for teens, their families, and communities,” and between 79-83 percent of pregnancies in women aged 15-19 are unintended, we cannot assume that all teen pregnancies are unintended. Still, intended or not, the same health and social consequences (high blood pressure, preterm birth, low birthweight, financial instability, relationships stress etc.) apply (Jozkowski and Crawford 2016: 253; Silk and Romero 2014). Geronimus (1991) seeks to understand the relationship between poverty and teen pregnancy. Specifically, she wants to know the direction of the relationship: does poverty cause teen pregnancy or does teen pregnancy cause poverty? Geronimus challenges misconceptions about this relationship stating that researchers should stray away from putting all efforts behind alleviating poverty or all efforts toward decreasing teen pregnancy rates—rather they should consider the relationship more broadly.

Sisson (2012) argues that the evidence shows no differences in child outcomes in women that parented in their teens and in their twenties. She finds the problem that the studies do not compare women from the same backgrounds. Rather, when comparing sisters there are no differences on “future fertility, marital status, or hourly wages” as well as dependence on public assistance. While the differences may exist immediately after the birth, they disappear over the course of the mother’s life (Sisson 2012: 58). Sisson’s argument presents a lens of class, race, and cultural background that questions the status quo of teenage pregnancy as inherently “bad.”

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Abstinence and Comprehensive Sex Education

The two approaches to sex education at the forefront of curricula are abstinence focused programs and “comprehensive” programs that include information on contraceptives and include medically accurate information. Abstinence-only programs will not provide information on contraceptives. Many researchers use the term “comprehensive” but the field is lacking a consistent definition of what comprehensive sex education includes. Kirby (2007) incorporates abstinence in comprehensive sex education “those that emphasize abstinence as the safest behavior, but also promote condoms or other forms of contraception for those who do have sex” (Kirby 2007: 151). Silk and Romero (2014) emphasize Kirby’s argument, by framing sex education as a private, family issue, comprehensive sex education (CSE) is often denied to American youth even though it has shown to be effective in reducing sexual risk taking and related negative social and health outcomes (Kirby 2007). Silk and Romero add that family involvement has been overlooked because of this. Shame and stigma have plagued sexual health topics resulting in poor health outcomes. Beasley (2008) suggests that by incorporating sexuality and pleasure into sex education, educators can broaden the view of sex and have candid conversations about sex that resonate with students. By humanizing sex education, educators can expect to see safer and healthier sexual outcomes including increased condom usage and a decrease in sexual violence toward women.

Jozkowski and Crawford (2016) expand comprehensive sex education to require medically accurate information, evidence-based, as well as provide increased *access* to contraceptive. While these are the two competing approaches to sex education in the United States, many individual school districts find themselves somewhere on the continuum of abstinence and comprehensive sex education. Both comprehensive sex education and abstinence

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based sex education are very diverse (Kirby 2008). This is important to keep in mind when considering the policies and outcomes.

Studies consistently show that abstinence-only education results in poor sexual health outcomes for adolescents (higher rates of STDs and unintended pregnancy) (Kirby 2007; Jozkowski and Crawford 2016). Once again, every program is different and while some abstinence only programs may have positive sexual health outcomes, it is not nearly enough to justify widespread abstinence-only policy (Kirby 2008). The alternative of comprehensive sex education, including information on contraception that is medically accurate, has resulted in lower rates of poor sexual health outcomes. Although controversial in many geographic areas, the models of sex education that are proven to be successful time and time again build “contraception knowledge” as well as distribute contraceptives (Franklin et al. 1997). While this has been proven in research to be effective, concern from policy makers, educators, and parents vocalizes that students may be receiving “mixed messages” due to the duality of both mention of abstinence as well as the distribution/knowledge building of contraceptives. Franklin et al. as well as Kirby (2008) show that in fact comprehensive sex education both reduces rates of sexual activity as well as increasing contraceptive use for those that *are* having sex. Fields (2005) argues for a sex education model that moves beyond the dichotomy of contraception and abstinence one that is situated in the applicable structural context and environment of the student.

While the previous authors (Jozkowski & Crawford 2016; Kirby 2008) have discussed the differences between abstinence-only and contraceptive inclusive models, Elliot (2014) argues that both popular models of sex education are neoliberal in nature, emphasizing personal responsibility. Through an ethnographic study, Elliot has found that the themes of neoliberalism reproduce social inequality through gendered and sexualized messages. Elliot suggests a move

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away from the neoliberal discourse of personal responsibility in sex education and move toward a social justice approach specifically, “unpacking how social inequalities are reproduced and how to interrupt them” (Elliot 2014:222)

Race, Class, and Gender

Sisson discusses the need for a class-conscious model of sex education, acknowledging that the rhetoric used in current curricula does not account for the experience of low-income and minority women (Sisson 2012). Challenging the white-centered approach, Sisson gives alternatives that *work* for the population she is studying. Race and class play an important role in teen health outcomes as women of color and low income women are disproportionately experiencing negative health outcomes (Jozkowski and Crawford 2016). Fields (2005) also addresses the problematic nature of racializing sex education. Like many researchers, Fields knows that Black and Hispanic women experience significantly higher teen birth rates. Similarly to Sisson (2012), she agrees that sex education must be culturally appropriate. In studying, “children having children” she analyzes racialized language that intertwines with the concept of innocence for young Black women. By calling pregnant Black teenagers “children having children” these women are infantilized and depicted as not only recklessly sexual, but in need of protection. Black teens sometimes see having children as a mark of entering adulthood as they take on this responsibility, but for (oftentimes White) policymakers to use infantilizing language to exhibit Black female innocence, we see a problematic power dynamic that shames young women.

Innocence is juxtaposed against Hogan and Kitagawa’s (1985) theory of adolescent pregnancy as a pathway to adult status. They find that based on characteristics of one’s childhood, Black adolescent women find premarital pregnancy as a pathway to adult status, a

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form of capital desired in the community they are raised. Hogan and Kitagawa (1985) look more closely at the social demographic characteristics that lead to high rates of premarital pregnancy in black teens. While clearly an outdated article in many ways, the analysis helps us better understand the racial differences in teen birth rates. Hogan and Kitagawa approach teen pregnancy and race from a cultural and class based background, but lack the sex education component in their study. They are also limited by concentrating their sample to Chicago, therefore we are unable to extrapolate state trends as well as information of education standards.

Latina teenagers face the highest birthrates of any racial or ethnic category. García (2009) suggests that some Latina teens face “racialized and heterogendered” experiences that limit their access to sex education (García 2009:520). The historical and current rhetoric around Latina youth frames them as “oversexed” and “over-reproductive.” Educators enact a “good girl/bad girl rhetoric” incorporating racialized verbiage of what a bad girl looks like.

Social norms surrounding teen pregnancy can have a strong impact on teen pregnancy outcomes as teens feel social pressure or embarrassment as a result of this group-level phenomenon. Mollburn et al. (2014) find that variation in social norms for adolescents can be attributed to race/ethnicity, socioeconomic status (SES), and religion. Through measuring norms, the authors found that social norms may be a better indicator of teen pregnancy outcomes than racial composition. While the previous authors (García 20019; Sisson 2012| Hogan and Kitagawa 1985) have recommended policy that is class-conscious or racially specific, Mollburn et al. argue for a model that looks more closely at local school environment.

Gender also plays a role in sex education. Both boys and girls will receive sex education, yet girls disproportionately face negative sexual health outcomes because of teen pregnancy having the strongest impact on women. Teen fatherhood presents its own set of obstacles, but

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women carry the larger burden of teen pregnancy. García (2009) discusses the sexism in the language educators use when teaching sex education, particularly shameful language that teaches girls to view themselves as sexual objects as well as teaching this to boys too.

State Policy

Educational policy can come from both the federal level and the state level. Sex education policy is currently under the discretion of states. States have always varied on their policies for sex education in public schools for many reasons. While states can require certain components in sex education, the reality is that variability, interpretation, and the vagueness of these laws results in a lack of uniformity within states and among states.

Politics of Sex Education

Public opinion on sex education has shifted as the United States has "developed more liberal attitudes toward sexuality" (Chappell, Maggard, and Gibson 2010: 201). According to a 1999 Gallop Poll, "60 percent of adults supported mandated sex education in public schools and 32 percent supported sex education but believed that it should not be mandatory" (Chappell, Maggard, and Gibson 2010: 199). The authors implement Ira L. Reiss' theory of sociocultural factors and sexuality to better understand why individuals support or oppose sex education. Their findings indicate that religiosity (church attendance) is "the overarching theoretical predictor of attitudes toward sexuality (or at least sex education)" in their sample (Chappell, Maggard, and Gibson 2010: 215). They understand the theoretical framework as religiosity shapes attitudes toward gender equality which predicts attitudes toward sexuality.

Because sex education is controlled by state legislatures, each state's policies are often a strong reflection of the political leaning of that state. More conservative states often use "traditional" rhetoric which emphasizes abstinence and does not include information on

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contraception. These states also find themselves with the highest rates of poor sexual health outcomes in the country. (Jozkowski and Crawford 2016: 260). There have been national incentives such as funding from President Obama's 2010 teen pregnancy prevention initiative to move toward comprehensive sex education (programs but be based in scientific evidence), yet some states still refuse to adopt them.

More recently, the Department of Health and Human Services has approved funding for 35 evidence-based sex education programs that studies have shown to decrease teen pregnancy rates, among other risky sexual behaviors. The problem that arises is a debate over what type of scientific findings are considered "evidence" Schalet et al. (2014) argue that "evidence-based interventions" or EBI's need to expand to include programming on sexual orientation and gender beliefs, as well as address society-level structural inequalities. While other programs are solely focused teen pregnancy and STI outcomes, Schalet et al. believe that by exploring other dimensions of adolescent sexuality and the social factors affecting health (structural racism, poverty, gender inequality, and stigma against LBGTQ people), we may see better health outcomes.

Right Wing Conservatives and Sex Education Policy

Sex education policy is often a direct reflection of the politics of the current government. The United States bipartisan system has split law-makers into defined categories of liberal and conservative. Because reproductive rights and sex education have become such politicized topics, there is a strong divide among lawmakers (and as a result, states) between more conservative approaches (abstinence-only or no sex education at all) or more liberal approaches (contraception information, promoting safe sex). Rose (2005) has found an inconsistency between the type of sex education Americans prefer and the type that legislators are enacting into

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law. She argues that by the conservative states (she specifically calls out the “religious right”) promoting abstinence-only education, they are ignoring “research, public opinion, and the experience of other countries about what actually works to prevent teenage pregnancy and STIs” (Rose 2005:1208). Rose poses the question of how we got to be a country that so heavily relies on abstinence-only sex education when public opinion so strongly supports comprehensive approaches *and* research shows that abstinence-only approaches do not work.

One possible response is the politician’s firm stance in “family values” that promote the “patriarchal, nuclear family” which is eroded by sexual relationships outside of marriage as well as gender equality (Gallagher 1999 in Rose 2005). These conservative policies promote many other aspects of the right wing agenda. While authors like Rose are concerned with the Religious Right, others (Baker, Smith, and Stoss 2015) explore theism and secularism as other religious factors influencing sex education. Similar to Rose, they found religious composition to be a strong predictor of sex education policy, with both theists and secularists. Donald Trump was elected as President of the United States in 2016. The United States has entered into a strong conservative period and many politicians currently cite religious text and rhetoric when advocating for policies. While many would say Donald Trump is not the face of the conservative party, we can say that in the era of Trump there appears to be a more visible presence of right-wing Americans. In examining policy about sex education (data coming from pre-Trump America) it’s important to think about the influence of popular vote and politics on the national level as well as the state legislators that create the sex education policies.

With conservatism on the rise in the United States, many are interested in the role of religion, specifically white evangelicals in contemporary US politics. Brint and Abrutyn (2010:330) consider “moral standards traditionalism: the cognitive orientation that draws a

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strong contrast between right and wrong ways of living, is rooted in traditional standards, and can be threatened by social change.” They find this to be the most consistent explanation for the link between white evangelicals and the conservative politics in the United States. It is important to consider the background of these sex education policies in order to know the political context in which they arose.

The literature on sex education and teen pregnancy is expansive, coming from public health publications, education journals, and sociological insights. For this research I have chosen to focus on sociological journals and authors in order to ground my work from a sociological background. I am interested in the social factors affecting these issues—race, class, gender, political views, and social norms. I have found the existing literature to reflect that abstinence-only sex education does not have a strong effect on reducing teen pregnancy. The literature (Kirby 2007, 2008; Jozkowski and Crawford 2016) indicates that comprehensive sex education or contraceptive inclusive approaches have a greater impact on reducing teen pregnancy—both of which support my hypotheses. I was also interested in learning more about conservative politics and the effect on sex education policies. From this research I have found theories that suggest conservative policies come from ideas of traditionalism and family values which was helpful when conceptualizing the background of these policies (Rose 2005; Gallagher 1999; Baker, Smith, and Stoss 2015; Brint and Abrutyn 2010). Lastly, I sought out research on race and class and teen pregnancy. I have found that Hispanic and Black teens have a much greater risk for becoming pregnant than White teens and I was able to see how different sex education approaches contribute to that statistic.

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METHODS

Data

This research will use data collected from the Guttmacher Institute and the National Campaign to Prevent Teen and Unplanned Pregnancy, organizations that collect data on reproductive rights. The analyses of sex education curricula as well as the rates of teen pregnancy are data that are collected by the Guttmacher Institute researchers. The birth rate data as well as the sex education data are from 2016. The National Conference of State Legislatures (NCSL) and the National Coalition to Support Sexuality Education (NCSSE) were used to fill in missing data from the Guttmacher Institute data set on sex education. The missing information from the Guttmacher Institute included vague interpretations of certain policies as well as missing data from some states. For certain cases I used the NCSL and the NCSSE data to look more deeply into education laws to double-check my information. These organizations analyze policy and laws to create a succinct “report card” style analysis that gives a brief profile of each state’s policy. From this report, I selected the variables of contraception and abstinence. Using the Guttmacher Institute analysis, we are unable to know exactly how they extrapolate the profile of each state and to what criteria they use to determine the standards for sex education. The control variable uses 2016 Presidential election data to look at whether the popular vote went to the Democratic candidate (Hillary Clinton) or the Republican Candidate, in order to get an idea of the political views of the state.

The data set is the population: all 50 states plus the District of Columbia. There was no sampling involved. The data used in this research are not survey data, they are collected from public records therefore the unit of analysis is not the individual, but the state. For more

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information on data collected see references the websites for The Guttmacher Institute and the National Campaign to End Teen and Unplanned Pregnancy.

Variables

The independent variable in this research is type of sex education required by the state. I dummy the following variables: includes information on contraception (“ContacaptionInfo”) and stresses abstinence (“AbstincneStressed”) Each response will be coded as “1=yes” or “0=no.” While the contraception dummy was originally a yes/no question from the original data set, the abstinence question had three responses: “stresses,” “covers,” and “no” in regard to their sex education program’s inclusion of abstinence. Because this is not a yes/no question, I coded “stresses” as 1 and all other values (including “covers”) as 0 as I am only interested in programs that “stress” abstinence. Through this variable we are able to see if a contraception focused approach, an abstinence focused approach, both contraception and abstinence, or neither contraception nor abstinence results in the lowest teen birth rate.

The dependent variable I am interested in is the teen birth rate (the number of births per 1,000 women aged 15-19). Originally I was interested in looking at pregnancy rates, but due to missing data on pregnancy rates for each state (which I will elaborate on in my limitations section) I decided to use the birth rate which I see as a similar indicator of teen fertility. This variable will be “birthrate.” Additionally, I will look at this variable broken down by race, by looking at teen birth rates for black women (“BlackBirthrate”), Hispanic women (“HispanicBirthrate”), and white women (“WhiteBirthrate”). These rates are interval-ratio data.

The control variables in this study is “conservative.” The political affiliation (voted for Trump or Clinton in the 2016 Presidential election) will act as a control of political ideology in controlling for politics in the study. This variable is coded as a dummy variable, “Conservative”

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1= conservative (red—state popular vote went to Donald Trump in 2016) and 0= liberal (blue—state popular vote went to Hillary Clinton in 2016).

FINDINGS

Univariate Results

Table 1 reports the mean, median, and standard deviations for all variables. The mean birthrate varies greatly by racial/ethnic category. While the national birthrate is only about 23, the Hispanic birthrate is as high as 38, followed by the Black birthrate at 32, and White birthrate at only 17. This tells us that teen birth is a very racialized issue.

Insert Table 1 about here

Figure 1 shows that approximately 63 percent of states require contraception information to be taught in sex education, while 27 percent do not. Similarly, Figure 2 shows that 53 percent of states do not stress abstinence in sex education, while 47 percent do. This tells us that while most states do not require contraception information to be taught, most states also do not stress abstinence either. This demonstrates that states are more often opting away from conventional categories of abstinence only and contraception focused sex education/

Insert Figure 1 about here

Insert Figure 2 about here

The teenage birthrate chart, Figure 3 the percent of states with birthrates that fall into select categories. 46 percent of states report a birthrate below 21 (births per 1,000 women aged 15-19). Alternatively, for the Hispanic birthrate, 0 percent of states report a birthrate below 21. That number is quite different from the White birthrate (75 percent of states report a white birthrate below 21), but more similar to the Black birthrate (8 percent of states report a Black birthrate below 21). There are drastic differences in the racial/ethnic teenage birth rates.

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Insert Figure 3 about here

Figure 4 depicts the control variable, whether the state popular vote went to Donald Trump or Hillary Clinton in 2016. While it was close, more states voted for Trump than Clinton indicating that more states fall under the “conservative” category. This will be important when analyzing the conservative movement in the US and its effect on policy

Insert Figure 4 about here

Bivariate Results

Correlation coefficients are used to calculate the bivariate relationships between the independent, dependent, and control variables. My data requires four separate correlation matrixes, one for each dependent variable (Tables 2, 3, 4 and 5). Table 2 shows a strong positive relationship between the teen birthrate and conservative, meaning that conservative states have a higher teen birthrate. There is also a strong negative correlation between contraception and conservative, meaning that conservative states are less likely to include information about contraception in their sex education. There was no relationship between contraception and abstinence (the primary independent variables) with birthrate (the primary dependent variable). When looking at these results it is important to remember that because this is a population not a sample, significance tests do not have that much meaning because we already know the information on the population.

Insert Table 2 about here

Similarly to Table 2, Table 3 shows a moderate positive relationship between Hispanic birthrate and conservative. This means conservative states have a higher Hispanic birthrate. There is also a strong negative relationship between contraception and conservative, so as we

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saw in Table 2 as well, conservative states are less likely to provide information on contraception.

Insert Table 3 about here

Table 4 is slightly different in that there is a moderate negative relationship between Black birthrate and contraception. This means that states that provide information on contraception in their sex education have a lower Black birthrate. Similarly to the previous two tables, there is a strong positive relationship between Black birthrate and conservative, meaning conservative states have a higher Black birthrate. There is also a strong negative relationship between conservative and contraception, meaning that conservative states are less likely to include information on contraception in their sex education.

Insert Table 4 about here

Lastly, in Table 5 there is a strong positive relationship between conservative and White birthrate, meaning conservative states have a higher White birthrate. There is also a strong negative relationship between conservative and contraception, meaning that conservative states are less likely to provide information on contraception in their sex education.

Insert Table 5 about here

Multivariate Results

Controlling for conservative political leaning, sex education does not have a significant effect on teen birthrates (see Table 6). Although when controlling for sex education, conservative (state voted for Donald Trump in 2016) has a statistically significant effect on all teen birthrate variables ($\beta = .723$ [total birthrate]; $\beta = .509$ [Hispanic]; $\beta = .495$ [Black]; $\beta = .767$ [White]). The three variables (contraception, abstinence, and conservative) explain about 38 percent of the variation in the total teen birthrate. The three variables explain about 20 percent of the variation

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in the Hispanic teen birthrate, 33 percent of the variation in the Black teen birthrate, and 43 percent of the variation in the White teen birthrate ($R^2 = .384$; $R^2 = .202$; $R^2 = .332$; $R^2 = .435$).

Insert Table 6 about here

All the regression equations are statistically significant ($F = 9.755$ [total birthrate]; $F = 3.792$ [Hispanic]; $F = 8.136$ [Black]; $F = 11.828$ [White]). Conservative has the largest effect on all teen birth rate outcomes. Conservative states have approximately 11 more births per 1,000 teens than liberal states. This is by far the largest effect of any independent variable on any dependent variable in the study. Conservative also has an effect on each dependent variable (total, Hispanic, Black, and White birthrates). Conservative states have approximately 8 more births per 1,000 Hispanic teens, 9 more births per 1,000 Black teens, and 11 more births per 1,000 White teens. Conservative has the largest effect on White teens. Providing information about contraception appears to increase the the total teen birthrate, Hispanic teen birthrate, and White teen birthrate, while decreasing the Black teen birthrate. The magnitude of this effect is so small it is not significant. Stressing abstinence had an even smaller effect on teen birthrates, it was not significant.

In the bivariate findings, I found contraception to consistently decrease the birthrate yet with the multivariate results we see a more complicated relationship amongst the variables. The relationship between contraception and teen birthrate flips from a negative relationship to a positive one. This is likely due to the magnitude of the conservative variable which has a positive relationship with teen birthrate. Because the strength of the conservative variable is much larger the relationship between contraception and teen birthrate (a very small and non-significant relationship) becomes positive to mimic the trend. I hypothesized that states that provide contraception information in sex education will have lower teen birthrates and states that stress

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abstinence will have higher teen birthrates. My multivariate findings suggest no evidence to support these hypotheses.

DISCUSSION

The findings suggest that sex education may not be the best indicator of teen birth rates in the United States. The vast majority of the literature on the subject aligns with my hypotheses arguing that models of comprehensive sex education (more similar to the "contraception" variable in this study) reduce teen birthrates, while abstinence focused model, or rather no sex education at all, increase teen birthrates. It appeared that the control variable, conservative (based off of whether the state voted for Donald Trump in 2016), was better able to explain the birthrate. Because the sex education variables are so intertwined with policy and therefore partisan politics, the conservative variable was a stronger indicator. The findings from this study do not support my hypotheses. Looking back on Foucault's theory of biopower and governmentality I am inclined to think that the government does attempt to exert power over young women's bodies by implementing policy that does not properly teach sex education, but the ways in which they attempt control are more complicated and nuanced than merely forgoing sex education. By examining moral standards traditionalism and theories of family values it becomes very clear how the conservative variable played a much larger role in predicting birthrates. Despite sex education appearing to be dichotomized by contraception and abstinence, there is much more to sex education policy and it is not as clearly politicized down party lines as we might think.

While many of the studies in the literature (Kirby 2007, 2008; Jozkowski and Crawford 2016; Franklin et al. 1997) use empirical studies to prove which sex education methods work best, these studies were often operationalized on a small scale-- usually a sample of schools in a

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given area. This study was interested in looking at the issue from a state-level and policy perspective which showed that the findings (sex education decreasing negative teen health outcomes) in the literature may not be applicable at the state level. One reason for this may be that sex education requirements are very vague and often up to the interpretation of the districts and instructors. One school may have a very different adaptation of a contraceptive inclusive program than another school. Another larger issue is that many states do not require sex education at all, meaning there rather than a "contraception *or* abstinence" curriculum it may be a "contraception *and* abstinence" or "neither contraception *nor* abstinence."

CONCLUSION

This study set out to study the effect of sex education policy on teen birth outcomes at the state level. After analyzing the effect of sex education on teen birthrates and learning of the significance of the control variable, "conservative," I have chosen to incorporate conservative politics (state voting for Donald Trump in 2016) into the analysis of the results as it proves to be the most significant factor in determining teen birthrates. Overall, conservative states have higher teen birthrates across all racial categories. As for sex education, conservative states are more likely to stress abstinence than include information on contraception. Stressing abstinence in sex education has no effect on teen birthrates, while including information on contraception only has an effect on reducing the birthrate for Black teens. I hypothesized that states that stress abstinence will have higher teen birthrates and states that include information on contraception will have lower teen birth rates. The data reject both hypotheses and lead us to believe that there are likely other factors that more accurately predict birthrates, political leaning being one of them. The literature on sex education policy consistently showed comprehensive sex education policies to decrease teen birthrates (Kirby 2007, 2008; Jozkowski and Crawford 2016). Although

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my data did not support this, I believe it is because of the limited nature of my sex education variables (state policy level rather than empirical study) and I would argue the results should be used alongside current literature. It is important to understand the sociological forces that predict health outcomes. In the United States, policy aims to better the health of individuals. This research is important and timely when considering the political interest vested in certain health outcomes and how the US grapples with the concept of health as a human right. This study illuminates the effect of conservative politics and the impact on sexual health outcomes.

Limitations

There are many limitations to this research largely due to the nature of state-level analysis. In an ideal study I would like to look at the additional “control” factors that might help explain why certain states have higher teen birthrates, but with an n of 51 the equations can only use so many variables. I think this is a major shortcoming to the study. Additionally, the sex education variables do not fully explain the problem I am looking to study. By just looking at abstinence and contraception, I am unable to understand the vast variability in sex education and the smaller intricacies of law that are unable to be coded for. A flaw in the Guttmacher data set is their lack of description in categorizing the sex education of each state. I also chose to look at birthrate because it was able to be broken down into racial categories whereas pregnancy rates were not due to missing data. Birth rates and pregnancy rates follow very similar trends, but future research may want to look at the impact of abortion policies and the frequency at which teens seek abortions as additional variables in the study. It was important to examine race in this study as the univariate results show that teen birth disproportionately affects women of color, which is supported by the literature. Lastly, I decided to use 2016 presidential election popular vote data to determine a state’s political leaning. While some may say this election is the most

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polarizing time for US politics, other may say that this election is unprecedented with Donald Trump as not an ordinary Republican candidate. This may be limiting in making generalizations about a state's political views.

Implications for Research and Policy Change

The results of this study bring to light the impact of politics on sexual health outcomes, in this case teen birth rates. The relationship between conservative politics and sexual health related issues is a contentious one circling back to theories of biopower and governmentality as well as rhetoric involving “family values” which stems back to moral standards traditionalism. This research highlights the need to address conservative politicians and policies that negatively affect women's health. This is grounded in a larger discussion of the role the government should play in controlling women's bodies which includes policy regarding abortion, access to contraceptives, and sexual assault. Despite sex education not being a statistically significant indicator of teen birth rates, I believe it is still an important factor to examine due to the extensive literature that demonstrates the effectiveness of comprehensive sex education on reducing teen pregnancy and teen birth (Kirby 2007) (Jozkowski and Crawford 2016). This research did not delve deeply enough into the issue of race and teen pregnancy due to the nature of the data. Future policy should target socio-cultural factors that contribute to the alarmingly high teen birthrates for Black and Hispanic women.

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Table 1. Means and Standard Deviations

Variable	Mean	Median	SD
Contraception	.36	.00	.485
Abstinence	.55	1.00	.504
Birthrate	23.12	22.10	7.484
Hispanic Birthrate	37.95	36.65	7.897
Black Birthrate	31.84	31.65	9.156
White Birthrate	17.25	16.15	7.791
Conservative	.62	1.00	.492

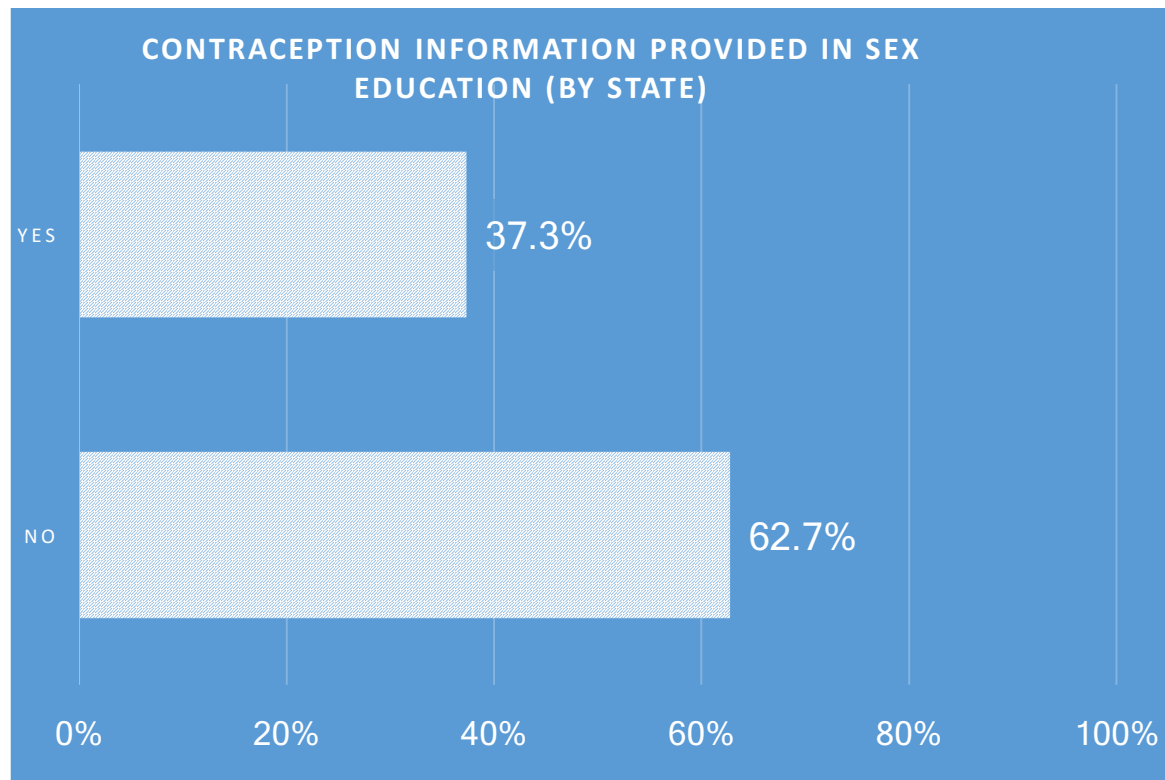


Figure 1. Bar Chart Contraception Information Provided in Sex Education

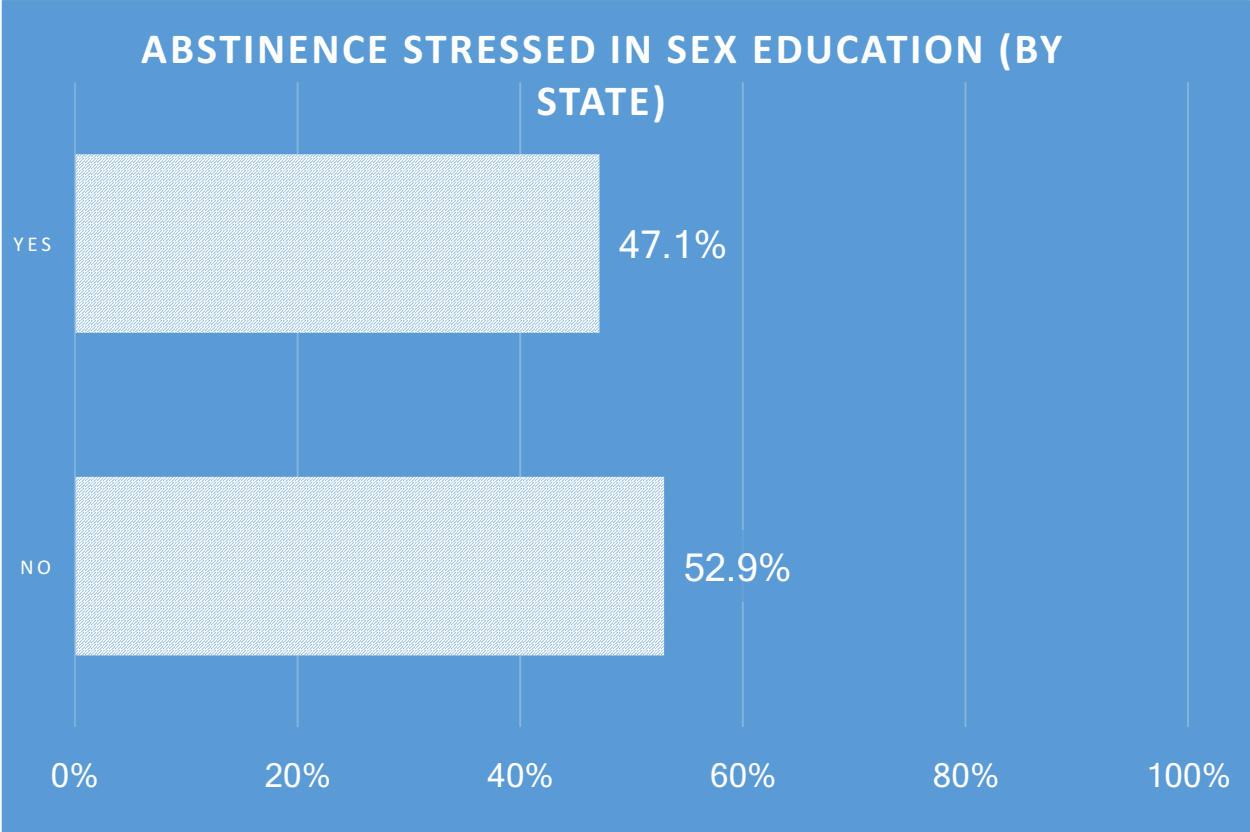


Figure 2. Bar Chart Abstinence Stressed in Sex Education

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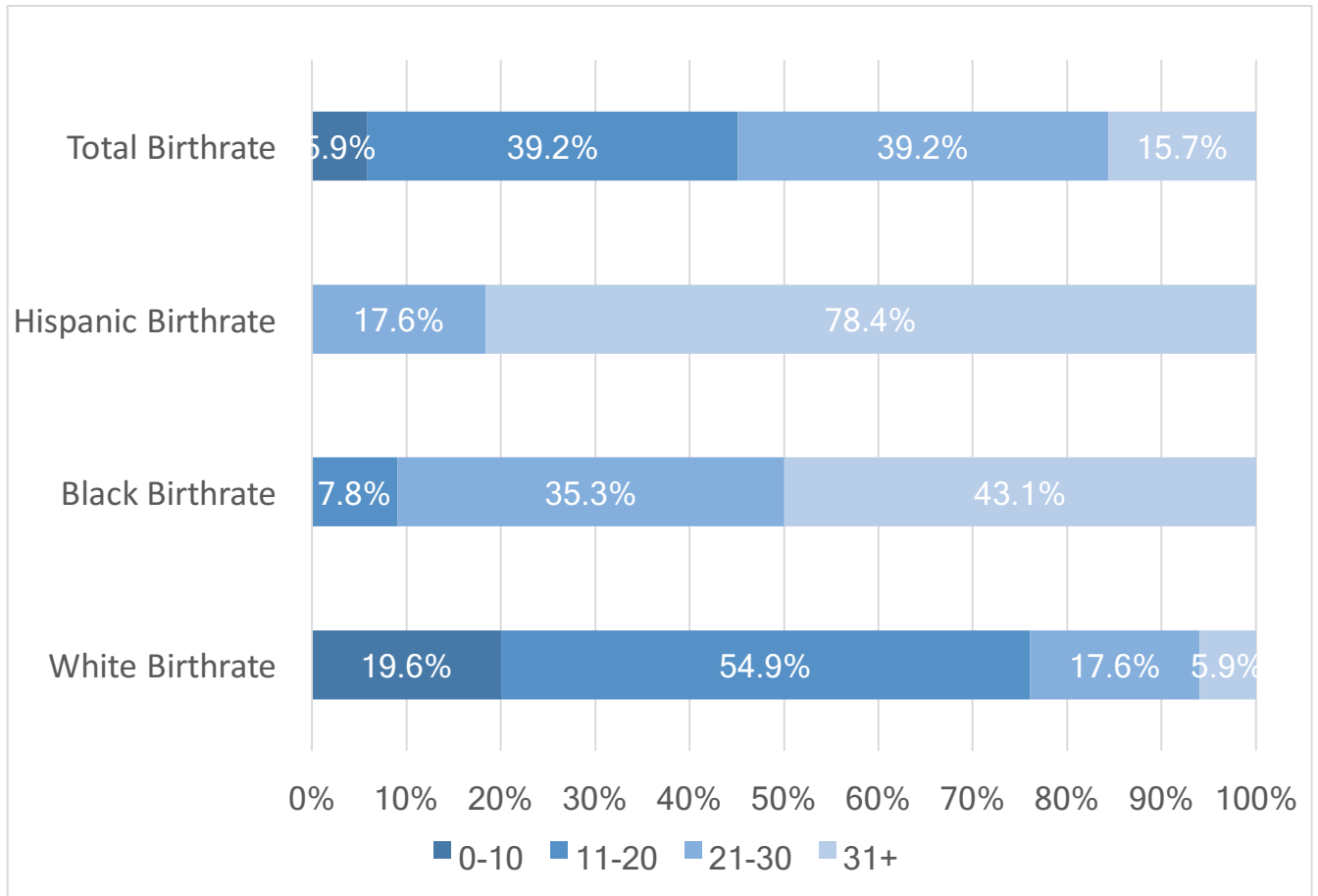


Figure 3. Visual of Teen Birthrates per 1,000 Women aged 15-19 by State

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Table 2. Correlations (r) among Teen Birthrate and Three Independent Variables (listwise deletion, two-tailed, $n = 51$)

	Contraception	Abstinence	Conservative
Birthrate	-.209	.185	.594*
Contraception		.086	-.591*
Abstinence			.230

* $p < .01$

Table 3. Correlations (r) among Hispanic Teen Birthrate and Three Independent Variables (listwise deletion, two-tailed, $n = 51$)

	Contraception	Abstinence	Conservative
Birthrate	-.188	.094	.442*
Contraception		.088	-.564*
Abstinence			.245

* $p < .01$

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Table 4. Correlations (*r*) among Black Teen Birthrate and Three Independent Variables (listwise deletion, two-tailed, *n* = 44)

	Contraception	Abstinence	Conservative
Birthrate	-.423*	.212	.602*
Contraception		.088	-.574*
Abstinence			.262

**p* < .01

Table 5. Correlations (*r*) among White Teen Birthrate and Three Independent Variables (listwise deletion, two-tailed, *n* = 50)

	Contraception	Abstinence	Conservative
Birthrate	-.211*	.187	.632*
Contraception		.113	-.578*
Abstinence			.212

**p* < .01

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Table 6. Regression of Total, Hispanic, Black, and White Birthrates on All Variables

Variable	Total Birthrate β (<i>b</i>)	Hispanic Birthrate β (<i>b</i>)	Black Birthrate β (<i>b</i>)	White Birthrate β (<i>b</i>)
Contraception	0.219 (3.296)	0.102 (1.742)	-0.145 (-2.655)	0.233 (3.546)
Abstinence	0.000 (-0.005)	-0.039 (-0.640)	0.092 (1.654)	-0.003 (-0.038)
Conservative	0.723* (10.685*)	0.509* (8.493*)	0.495* (8.974*)	0.767* (11.456*)
Constant	15.205*	32.606*	26.641*	9.046*
R^2	0.384	0.202	0.332	0.435
F	9.755*	3.792*	8.136*	11.828*
df	(3,47)	(3,45)	(3,40)	(3,46)
N	51	49	44	50

* $p < .05$