Sex Education and Teen Pregnancy Rates in the United States:
A Study of California Public Schools

Hannah Horton
Department of Political Science, Honors College

Dr. Tom Miles, Faculty Mentor
Honors College

Bio: Hannah Horton graduated from the University of North Texas with a bachelor’s degree in political science in 2014. She is currently pursuing a master’s degree in public administration at UNT.

Abstract

The teen pregnancy rates within the United States far exceed the rates recorded in other industrialized nations around the world, a discrepancy that has been found to be due primarily to the failure of teenagers within the U.S. to properly utilize contraceptives. Studies reveal that this lack of contraceptive use, as well as the teen pregnancies that result from it, is significantly correlated to the type of sex education mandated within states. More specifically, higher teen pregnancy rates can be found in states that mandate abstinence-only sex education programs than those that utilize comprehensive programs. However, these correlations were measured across states as whole, resulting in a limited data set of only fifty data points. In order to increase the data set, and, ideally, further prove the strength of this correlation, I propose performing a similar study that correlates the types of sex education utilized in individual counties or independent school districts and teen pregnancy rates across a sufficiently diverse state, such as California. If the correlation between the type of sex education utilized within a region and teen pregnancy rates of that area is once again proved significant through this study, it would pose serious policy implications in regards to the federal funding of abstinence-education, state mandates requiring abstinence-only education, as well as local decisions regarding sex education curriculum choices in states lacking mandates.
The topic of sex education within the United States public school system, both in regards to what information should be included within such programs or if they should even be included within the school system at all, has long been a topic of debate across the country. Despite any evidence of its effectiveness, these debates have resulted in massive federal funding, state mandates, and local curriculum choices to implement sex education programs that emphasis abstinence-only, disregarding information regarding contraceptive and pregnancy preventive methods, throughout the majority of United States public school system.

However, as the pregnancy rates amongst teenagers throughout the U.S. continue to surpass those observed in other industrialized nations, the effectiveness of these programs has been brought into question. Does the utilization of abstinence-only sex education programs result in higher teen pregnancy rates? Inversely, do more comprehensive sex education programs, which include information regarding contraceptives and pregnancy prevention, result in lower teen pregnancy rates? Significant variance in the rates of poverty and the amount of resources available among school districts, many schools are left unable, or unwilling, to provide comprehensive sex education programs to their students. This leaves the teens that are considered most at risk of becoming pregnant without the information necessary to make positive, informed decisions regarding sexual activity. In this way, the state of California serves as a clear example of the need for state-mandated and funded comprehensive sex education in public schools.
Literature Review

According to the *United Nations Demographic Yearbook* 2009-2010, the United States has a significantly higher rate of teen pregnancy in comparison to other industrialized nations around the world. Surpassing its closest competitor, Russia, by more than 7 births, the United States reached a shockingly high 37.9 births per 1,000 women between the ages of 15 and 19 in 2009. Substantial research has been conducted in an effort to identify the root of the vast difference between the U.S. and other industrialized nations in Europe, revealing that this gap cannot be attributed to higher levels of sexual activity among American teenagers. In fact, American teenagers are approximately 10% less likely than most European teens to be sexually active. Because of this, the levels of sexual activity among U.S. teens cannot be considered a factor (Darroch, Singh, and Frost 2001). Instead, the difference between the pregnancy rates can be attributed to the fact that sexually active U.S. teens are also 15% less likely to use contraceptive techniques than their European counterparts (Kearney and Levine 2012).

Much like the levels of sexual activity and the U.S. teen pregnancy rate in relation to the rest of the world, factors such as ethnic diversity and median household income have often been pointed to as the primary cause of the teen pregnancy variance across regions and individual states that occurs throughout the United States itself. Although these factors may show correlation to teen pregnancy rates, the level at which the specific laws within a state promote and enforce the teaching of an abstinence-only sex education has been shown to have a significant impact upon teen pregnancy even when ethnic diversity and median household income are taken into account. These results suggest that, regardless of the ethnic and economic makeup of a state, the degree to which abstinence only sex education is
enforced within the state can be correlated to higher rates of teen pregnancy (Stanger-Hall and Hall 2011).

These findings are supported by research conducted to compare the success rates of various sex education programs and curricula utilized in U.S. schools. These comparisons revealed that, while the implementation of any type of sex education program more successfully reduces risky behavior among teens than a complete lack of sex education programs, comprehensive programs that include information regarding both the benefits of abstinence and the use of contraceptives were most likely to have positive long-term impacts on teen sexual behavior. Although the effectiveness of individual programs and curricula vary, across 29 studies, it was found that two thirds of comprehensive programs were shown to have a significant influence upon the sexual behavior of teens and were successful in reducing risky behavior (Kirby 2007).

Despite these statistics and evidence provided through previous research, the United States federal government has continuously pressed abstinence based sex education for American youth as the solution to high rates of teen pregnancy. Section 510 of the 1996 Social Security Act is considered the federal definition of abstinence only education, within requires that abstinence until marriage is emphasized as a social standard and the dangers of sexual activity are the primary focus of the program. The federal government has promoted its definition of abstinence only through massive funding efforts that reached record totals of $168 million in the 2005 fiscal year. This massive federal funding of abstinence only sex education has contributed greatly to the prominence of such programs throughout the country (Santelli, Ott, Lyon, Rogers, Summers, and Schleifer 2006).
Although abstinence only education is promoted strongly through this funding, the United States federal government does not legally require that individual states implement sex education programs within their public school systems. This has resulted in the adoption of mandated sex education programs in only 22 states, as well as the District of Columbia. Of those, only 13 require that the information provided to students be medically accurate. Although sex education may not be mandated within the school system, 26 states still require that sex education programs emphasize abstinence only and 13 states require that the negative impacts of sex and pregnancy be discussed (Guttmacher 2012). This data reveals that, in addition to clear gaps in the provision of any sex education being provided to students at all, the abstinence-only approach is the most prominent form of sex education programs implemented throughout the country.

Polls indicate that the federal funding and state implementation of abstinence only sex education is largely out of touch with public opinion, which, regardless of political ideology or affiliation, has been shown to favor more balanced, comprehensive education programs. In fact, one poll revealed that, even across groups with diverse ideologies, more than 80% of the general public support the idea that sex education that includes information regarding both abstinence and methods of preventing pregnancy is effective in preventing teen pregnancy. In this way, the lack of public support, as well as scientific support, indicate that the United States needs to reevaluate its policies that act in support of abstinence only sex education on both state and national fronts (Bleakey, Hennessy, and Fishbein 2006).

In efforts to identify the ideal means of addressing the issue of teen pregnancy within the United States, research has indicated that the public school system remains the key. As the most widely attended institutions in our society, with close to 95% percent of all youth
enrolled, it can easily be seen that the public school system is the most effective and practical way to reach the largest number of teens possible with this information. Polls show that schools and teachers are the second most common way that students learn about sex, meaning that mandating a factual and comprehensive sex education course within the school system of states could make a significant difference in reducing teen pregnancy rates within the country (Perrin and DeJoy 2003).

The conclusions of each of these studies points to a need for America’s youth to receive a more comprehensive understanding of sex and contraception in order to know how to properly protect themselves from health risks and prevent unwanted pregnancies. Although the effect of sex education methods on states’ overall teen pregnancy rate has been evaluated and proven significant, the majority of these studies have been limited in showing a clear, definitive correlation due to the limited data set of only 50 states. In seeking to expand the potential data set for such research, it is necessary to see if similar correlations can be established when examining data regarding individual state and county data.

In comparison to the current U.S. average of 31.7 births per 1,000 females between the ages of 15 and 19, the state of California has a relatively low teen birth rate of only 28.0. However, this figure represents the average of the state as a whole, masking the extreme variance of teen birth rates across counties within the state. In reality, the rates of teen birth within specific counties far surpass both the California’s state average and the U.S. national average, rivaling even the highest state averages in the country. In fact, 21 counties in the state of California exceed the national average significantly, with Tulare County reaching a rate as high as 60.2 in a three-year aggregated calculation measured from 2009 to 2011. The shockingly high teen birth rates of these 21 counties contrast sharply with other counties in
the state, some of which have rates as low as 12.3. Although the state average suggests that the state does not have a severe teen pregnancy problem in comparison to the rest of the U.S., the disparity between various counties within the state prove otherwise (California Department of Public Health 2013).

| County       | Pregnancy Rate | County       | Pregnancy Rate |
|--------------|----------------|--------------|----------------|
| Tulare       | 60.2           | Alameda      | 21.9           |
| Kings        | 59.3           | Santa Clara  | 21.4           |
| Del Norte    | 58.3           | Sonoma       | 20.8           |
| Kern         | 57.6           | Mono         | 20.6           |
| Imperial     | 57.5           | Contra Costa | 19.7           |
| Madera       | 54.6           | Amador       | 19.0           |
| Fresno       | 49.7           | Tuolumne     | 18.8           |
| Monterey     | 48.9           | San Mateo    | 18.2           |
| Yuba         | 46.8           | Yolo         | 16.8           |
| Merced       | 44.9           | San Luis Obispo | 16.2     |
| Glenn        | 43.1           | El Dorado    | 15.3           |
| Lake         | 42.1           | Nevada       | 14.2           |
| Tehama       | 41.6           | San Francisco| 13.7           |
| Colusa       | 40.6           | Placer       | 12.7           |
| San Bernardino | 39.8       | Marin        | 12.3           |

Source: CDPH 2013
Table 1 illustrates the extreme variance in teen birth rates between California counties. The 15 California counties with the highest teen pregnancy rates are shown on the right, with the lowest 15 shown on the left. As can be seen in the table, there is a major discrepancy between counties such as Tulare, with a rate of 60.2, and Marin, which has a rate of 12.3, which leaves gaps as large as 47.9 births per 1,000 females between the ages of 15 and 19 between California counties (CDPH 2013). This variance cannot be explained solely by factors such as poverty or population. For example, Monterey, Yuba, and Glenn counties all share very high teen pregnancy rates, but have poverty rates that fall near, or below, the California state average of approximately 17% (United States Department of Agriculture 2012). Similarly, in regards to population as a possible explanation of the variance across counties, San Francisco County has one of the lowest teen pregnancy rates in the state, but is also one of the most highly populated counties (California Department of Finance 2012). By eliminating such factors as the sole explanation, differences in the sex education programs utilized within each county remains as a possible source of the variance found among county teen pregnancy rates.

In order to understand the vast variance in teen birth rates across California counties, it is important to first understand the state laws that govern sex education within the public school system. Although the state requires HIV education, California does not mandate that sex education be taught in the public system. Despite a lack of mandated sex education, California does regulate that, when taught, sex education programs and curricula must follow certain state guidelines established through the California Education Code. These guidelines stipulate that sex education programs must be medically accurate, inclusive of all pupils, and include information regarding both abstinence and contraceptive techniques.
(Guttmacher 2012). Although these guidelines appear simple when summarized, they have not been established clearly through a single piece of legislation or clause in the California Education Code. Instead, these guidelines have been established over a 35-year time span, and are dispersed through 11 separate sections of the Education Code. These sections within the legislation lack clarity and sometimes even appear to conflict with each other, leaving many school districts in confusion as to whether or not their programs meet the state requirements and resulting in 85% of school districts’ sex education programs violating the state Education Code in at least one way (American Civil Liberties Union 2003).

Analysis

According to a 2003 survey of California public schools conducted by the American Civil Liberties Union of Northern California, despite the fact that it is voluntary, approximately 96% of California public schools provide sex education in addition to the state-mandated HIV/AIDS education. Although widely included in school curricula and regulated by the state guidelines previously discussed, the structuring, funding, and specific information to be included within sex education programs is largely left up to individual school districts. Additionally, many school districts do not have established, written policies regarding sex education, leaving the majority of the decisions regarding its content up to individual teachers. This has resulted in a wide range of differences between the quality and effectiveness of the sex education provided to students throughout the state (ACLU 2003).
Although many California schools have adopted curricula published by entities such as the American Red Cross, Glencoe, and the Department of Education, these programs are only utilized partially or not taught in their entirety. Although many of these curricula have been proven to have a positive impact upon risky sexual behavior among teens, the failure of schools to teach the curriculum in its entirety reduces its effectiveness and may impede these positive impacts. In these instances, students are often taught a mixture of various sources and materials throughout the course. The length of such courses also vary throughout the state, with approximately 2 out of every 5 schools reporting that their sex education courses typically last less than 10 classroom hours, which is far below the 14 hours of instruction research has proven necessary to achieve measurable positive impacts in students (ACLU 2003). Additionally, the majority of schools reported utilizing materials that can be considered outdated. In fact, more than half of schools utilize a curriculum that is more than 6 years old, and nearly one third of schools base their sex education programs on curricula and materials that are over 8 years old (ACLU 2003). This prevents students from accessing the most current information regarding emergency contraceptives and contraceptive techniques.

In addition to many California schools failing to structure their sex education programs in a way that would most likely promote positive results, many schools stray from the legal requirements established by the California Education Code that regulate what topics are to be covered, in what context various topics are presented, the accuracy of the information provided, as well as who is qualified to teach sex education courses. Although California schools are legally obligated to cover both of topics of abstinence and contraceptive techniques, 99% of high schools cover abstinence but only 85% cover
contraception while 80% teach condom effectiveness. Similarly, 8% of California high schools were found to completely omit the topic of contraceptives, and 7% omit condom effectiveness (ACLU 2003). Additionally, as many as 10% of schools report that, when covering the topics of contraceptives and condoms, they emphasize failure rates and suggest that such techniques are ineffective at preventing pregnancy. In this way, these schools are violating the California Education Code by presenting students with medically inaccurate information meant to persuade students to abstain from sex due to fear. Beyond this, the majority of California schools, 58%, fail to establish required training for sex education instructors (ACLU 2003). In districts without such requirements, it is estimated that up to 15% of instructors have no training at all in the instruction of sex education (ACLU 2003). Not only is this a violation of the education codes, but also severely limits the quality of sex education that California students are able to access.

The ACLU study, which surveyed 1,056 schools across California, also found that the majority of students (64%) only receive sex education classes once during middle or high school. These findings are echoed by a more recent study (Combellic and Brindis 2011), which surveyed 33 school districts scattered throughout California. They found that only half of all sex education programs were taught by a science or health teacher and that 37% had no training requirement for these teachers. Further, one out of five schools reported only mentioning birth control methods while spending most of the instructional time on abstinence. Perhaps most importantly, 16% of schools reported teaching that "condoms are not an effective means of pregnancies and STDs/HIV," which is clearly an inaccurate statement (Combellic and Brindis 2011, 1). They also find that 31% of the surveyed districts find laws governing sex education requirements “confusing.” The report concludes
that there is a clear need for a single, clearly designed set of standards of instruction for all California schools if the sex education is to be effective.

As the state of California mandates that sex education be comprehensive when taught in public schools, the state chooses not to apply for the federal Title V Abstinence Education Grant Program, which allocates $50 million per year to states that agree to implement abstinence-only education and participate the fund-matching requirement of the grant (Sexuality and Information Council of the United States 2012). Because California rejects this funding, it is forced to seek funding through other avenues. Through the President’s Teen Pregnancy Prevention Initiative (TPPI), an alternate federal grant, the state of California received approximately $6.8 million in funding in the 2012 fiscal year. This relatively small amount of funds was allocated among 9 different entities throughout the state, some of which do not function through the public school system. For example, the largest recipient of these federal funds, which received approximately $1.3 million in 2012, is only accessible to at-risk teens that have been referred to the program by a probation offices, police departments, schools, community partners of the program, or the parents or legal guardians of the teen. Only a fraction of federal funding provided through TPPI, totaling approximately $3.8 million, is allocated to entities that act directly in the public school classrooms (SIECUS 2012). In addition to TPPI, the state of California receives funding through the federal Personal Responsibility Education Program (PREP), which totaled slightly over $6.5 million in the 2012 fiscal year. This pool of federal funds was distributed by the California Department of Public Health across 21 private and public organizations throughout the state. It is unclear how many of these grantees act directly in
public classrooms, as the PREP program is designed to target at-risk teens and those that are already teen parents (SIECUS 2012).

Through both TPPI and PREP, very little federal funding is directed specifically toward public schools for the purpose of providing quality sex education to students. In addition to the limited pool of funds provided through these programs, the nature of these revenue streams, as they are both grants, require that entities seeking funding must apply and be chosen as a recipient. This forces schools to compete with other public and private organizations for federal funding. Additionally, the application process limits access to these funds in that only entity with the excess time, resources, and personnel necessary to complete the application process. Especially for those that already face financial strains, the competitive nature and necessary resources may put these sources of federal funding out of reach for many schools.

The failure of California schools to understand and implement the laws established through the California Education Code, as well as the severe lack of funding available to California schools for the purpose of providing sex education, has resulted in a highly inconsistent provision of quality sex education throughout the state. These flaws in the provision of sex education to teens in the state results in the inability of California teens to access complete, reliable information regarding their sexual health. Because of this, the highly inconsistent provision of sex education throughout the state could be considered a possible source of the wide variance in teen birth rates throughout California counties, regardless of the county’s population and poverty rates.

**Current Controversy within California**
Within some California counties, parents, physicians, and other members of the community, have spoken out against unlawful sex education curricula utilized in public schools. For example, in 2012, local parents and physicians sued the Clovis Unified School District (CUSD), located in Fresno, CA, for implementing a sex education curriculum that completely omitted the topic of condom use. As this specific program clearly promoted an abstinence-only approach in educating teens about sexual health and risky sexual behavior, it was an outright violation of the California Education Code requirement that all programs include information on both contraceptives and abstinence (ACLU 2012). As of February of 2014, the parents and doctors responsible have dropped the lawsuit against the CUSD due to the removal of the problematic curriculum and addition of more comprehensive materials in current sex education programs (ACLU 2014).

Although the lawsuit filed against CUSD was the first of its kind in the state of California, research has proven that the use of curricula that do not meet the requirements of the California Education Code is not unique to Clovis schools. CUSD is simply the first school district, out of the many that fail to meet education codes, to be confronted by the public for their unlawful programs. However, the filing of such a lawsuit indicates that California communities are informed and passionate about the sex education of teens within the state. Additionally, the success of this lawsuit provides a precedent for similar actions to take place in other areas of the state. In this way, the lawsuit against CUSD suggests that improvements upon the sex education within the state may be a near possibility.

**Directions for Future Research**
In addition to examining the effects of sex education upon teen pregnancy, similar methodologies could be applied to expand this research to include its impacts upon the spreading of sexually transmitted infections, prevalence of HIV, and the rates of abortions in states within the teenage population. In states that do not mandate comprehensive sex education programs, are the incident rates higher within these areas than in those that have implemented comprehensive programs? Further, the study of how specific sub-populations are affected through the material presented, or ignored, within sex education programs could be valuable to addressing issues that are more prevalent within these groups. For example, only seven states within the country have mandated that sex education programs taught within their public school systems discuss sexuality and are inclusive of the LGBT community (Guttmacher 2012). Does this exclusion of this group negatively impact their sexual health or lead to higher rates of risky sexual behavior within this population? If these correlations were found to be significant, it would clearly provide further support for the reform of state education laws to mandate more comprehensive and inclusive programs.

Currently, there is no complete data set that includes the type of sex education programs utilized in individual counties across the United States. The lack of such a data set is a major impediment to expanding the research regarding sex education and its impacts within the U.S. Although a daunting task, the amassing of such information into a single data set would not only allow for expanded research on this topic, but also provide for more conclusive findings when utilized in conjunction with existing studies.

**Conclusion and Recommendations**
As can be seen through the comparison of the teen pregnancy rates within United States to those found within other industrialized nations, the teen pregnancy rate within the U.S. is unreasonably high and poses a serious social problem for the nation. However, through the discovery of the correlation between types of sex education programs implemented and teen pregnancy rates, illuminates a potential solution to the issue through the mandating of comprehensive sex education. If this correlation is again found to be significant when examined across a larger data set, it would further prove that the teaching of abstinence-only sex education within the U.S. public school system is harmful to American youth in that it is not effective in reducing the rate of teen pregnancies, and instead acts to increase these rates by failing to teach contraceptive methods. In proving this correlation, it is made apparent that there is a need for the United States to reexamine policy in regards to the federal funding towards abstinence-only sex education programs, state mandates that require abstinence-only education, as well as local curriculum choices regarding sex education in states that lack mandates.

The status of sex education and teen pregnancy in the state of California serves as a clear example of a need for strong, central legislation and reliable funding streams for comprehensive sex education programs in public schools. Without state-mandated sex education, clear policies in regards to the structure of sex education programs, and adequate funding to ensure the quality of these programs, the state of California has been left with a patchwork of sex education throughout its public school system. The inconsistencies and irregularities of sex education throughout the state has left California teens without adequate knowledge to make informed decisions regarding their sexual activity and sexual health. This lack of knowledge, as is supported by research conducted
based upon the United States as whole, could result in the wide variance of teen pregnancy rates throughout the state. Because of this, the state of California should mandate sex education in all public schools, clarify and strengthen the current legislation in place regarding sex education, and seek to provide its public schools with additional funding to support such programs.
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