

Time-Series Statistical Analysis of Suicidal Behavior  
Among Non-Heterosexual Youth

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## 1.1 Introduction

It has long been known that LGBTQ+ youth face an elevated risk of suicidal ideation, attempts, and risk than their heterosexual peers. So well-established is this discrepancy that there is a name for it in psychology and paediatrics: “the suicide consensus” (Poteat, pg. 1), referring to the gap in suicidal risk between queer and straight young people. There are numerous factors contributing to this disparity. Among these are the stigma surrounding queer sexuality, confusion and shame towards one’s sexual disposition, religious and social pressure, lack of hope for a future relationship and family, and harassment and bullying faced by queer youth in their schools, homes, and communities. In the last two decades, however, there have been numerous strides in ensuring legal protection of same-sex and queer relationships. At the state level, many states nationwide have passed their own laws legalizing same-sex marriage (SSM). At the federal level, the Supreme Court case *Obergefell vs Hodges* (2015) officially legalized SSM across the country—the most significant victory for LGBTQ+ rights in American history.

This raises the question of how the legalization of SSM may have impacted the rates of suicide among LGBTQ+ youth in the United States. Did it reduce overall suicide attempts and ideation? Did it lessen the gap in suicidal risk between straight and queer youth? It is important to examine what effect, if any, such policies have had on the mental health and suicidal ideation among gay, bi, and questioning teenagers. This will help the country better address this crisis among its LGBTQ+ youth and better protect this especially vulnerable community. On a personal level, this topic is meaningful to me as an ally of the LGBTQ+ community as well as someone who has very recently been forcibly hospitalized by the police due to suicidal ideation. I do not want any other young people to have to go through what I experienced, namely a crisis of identity, belonging, and purpose. Such traumatic psychological issues are all too common among sexual minorities.

## 1.2 Literature Review

The relationship between SSM and mental well-being of queer people has been explored before, although specific investigation of its effect on the youth has been scarce. Despite this, there has much been research concerning the psychological legacy of legalizing SSM which has been valuable to my research.

Perhaps the most widely-cited paper on this topic was published in *JAMA Pediatrics* in 2017, under the title “Difference-in-Differences Analysis of the Association Between State Same-Sex Marriage Policies and Adolescent Suicide Attempts” (Raifman, et al). The study reveals that in between 1999 and 2015, there was an average of a 7% decline in youth suicide attempts among all high schoolers in 35 states, and much of this was concentrated among LGBTQ+ students. This decline was correlated with the passing of marriage equality laws at the state level among these 35 states. No such decline was seen in states that did not pass such laws. The study also notes prior research that SSM *bans* were associated with higher levels of psychiatric disorders (Raifman, pg. 5) and that in Massachusetts, legalized SSM was found to be linked to lower health expenditure among gay couples, indicating a decline in physical and mental health issues (Raifman, pg. 6). I agree with the conclusions presented in this paper, as it clearly shows that there is a relationship between SSM and queer youth suicide. It argues that SSM policies have had a positive impact on the mental health of queer youth, which is generally what I would expect. The paper also does a good job of separating the suicide rates among queer youth and heterosexual youth, which shows that there is a meaningful difference between the two communities in terms of how suicidal behavior has changed over time. One question I had regarding this paper was whether SSM at a federal level had a similar impact, as the paper mainly looked at state-level SSM.

Another valuable paper on this topic was published in the *Journal of Adolescent Health* in 2020 under the title “Changes in Victimization Risk and Disparities for Heterosexual and Sexual Minority Youth: Trends From 2009 to 2017” (Poteat, et al). This study tracked changes in victimization patterns among self-identified sexual minorities and compared them to victimization among heterosexual and gender-conforming youth from 2009 to 2017. It found that there is a significant disparity in victimization rates between LGBTQ+ and heterosexual students, as the former group faces far more harassment and bullying. However, this disparity has narrowed between 2009 and 2017. I find this study interesting as it does not claim that SSM is the sole or primary factor behind this. The study notes that there is actually a range of reasons why this decrease may have occurred. Examples include more media visibility of LGBTQ+ students, stricter school policies regarding homophobia and bullying, and more public backlash towards homophobic acts. Marriage equality laws can be just a part of that overall trend of acceptance of gay rights. Regardless, it is valuable to note that according to this study, targeted

bullying against the LGBTQ+ youth has decreased overall between 2009 and 2017. I agree with the paper's overall conclusion that victimization against queer youth has decreased in recent years, and there are multiple factors – not just SSM – that culminated in this. However, SSM is still an important piece of the puzzle. It may be *indicative* of broader changes in social attitudes, which in turn impact how queer youth are treated in their communities.

One very interesting paper was published in *SSRN Electronic Journal* in 2019 under the title “Marriage Equality Laws and Youth Suicidal Behaviors” (Anderson et al). This study tracked how suicidal behavior among queer youth has changed with the passing of same-sex marriage laws in America since 2004. This study is interesting because it contradicts the findings of the other journal articles I used. It reaches the exact opposite conclusion, that pro-SSM policies are not linked to lower queer youth suicides. They actually claim that suicide rates may have gone up despite SSM. Since my question deals with how SSM impacts queer youth suicide rates, it is important to also take into account these findings, even though they contradict my hypothesis and other sources. The study notes several ways SSM may *possibly* improve queer youth's mental health, such as by reducing sexual stigma, allowing for expectations of a future family and successful relationships, and provide role models for young LGBTQ+ students (Anderson, pg. 4). All of these factors may logically reduce suicide attempts and ideation among this community and improve mental health. This is generally my hypothesis and my expected answer to the research question.

However, the study claims that this link actually does not exist. They outline several ways how SSM may actually *damage* youth's mental health. For example, legalizing SSM can lead to backlash and retaliation, especially among local communities that are unfriendly towards it. They note that “legalization is more likely to be unpopularly imposed by judicial order rather than legislative action taken by elected representatives” (Anderson, pg. 5). They also point out that legalized SSM can lead to higher rates of sexual contact and earlier sexual initiation among high schoolers, which is linked to higher suicidal ideation rates (Anderson, pg. 6). Reading about these factors is helpful as they provide a counterpoint to my hypothesis and help me better understand the full scope of my research question. They also provide their own data, which contradicts my other sources, that queer teen suicide attempts have gone up instead of down in correlation with legalized SSM in multiple states. I cannot fully evaluate the soundness of this

research, but what I do know is that most of the other research I encountered directly contradicted this paper's claims. I also intuitively find it hard to believe that queer youth suicide has become more prominent instead of less in recent years. Therefore, although this paper raises some valuable points, I will not be using it as a primary guide to my research.

Some other research I viewed include the 2013 paper "Same-Sex Legal Marriage and Psychological Well-Being: Findings From the California Health Interview Survey" (Wight, et al) in the *American Journal of Public Health*. The study found that gay couples reported significantly lower levels of stress and mental health issues following the legalization of same-sex marriage. Despite this, there is a disparity between mental health issues among homosexual and heterosexual couples. Another source was "Sexual orientation trends and disparities in school bullying and violence-related experiences, 1999–2013" (Goodenow, et al) published in *Psychology of Sexual Orientation and Gender Diversity* in 2013. This paper shows that between 1999 and 2013, there was an overall reduction in violence faced by LGBTQ+ students in high school. However, despite this, there remains a disparity between the violence faced by queer and heterosexual students. Both of the above papers inform me that a) psychological distress and violence has decreased among queer youth in recent years, and that b) this may be linked to stronger SSM policies. I agree with both ideas as they reinforce the intuitive expectations I had when starting my research, and both draw a logical link between SSM/more progressive policies around queer relationships and the mental health of queer people.

### **1.3 Theory and Hypothesis**

My expectation is that legalizing SSM led to a decline in suicidal risk among the LGBTQ+ youth of America. The independent variable here is the legalization of SSM, and the dependent variable is suicide rates among queer youth in America. I expect a negative correlation between these two variables. There are numerous causal mechanisms that may be responsible for this decline. One important causal mechanism is that legalized SSM is correlated to, and is possibly a result of, wider acceptance of LGBTQ+ sexualities and relationships (Raifman, pg. 2). This reduces the stigma surrounding these sexualities and may help lessen the anxiety, shame, and confusion felt by queer youth. In addition, this change in social views means that more Americans – especially young people – are befriending and accepting their LGBTQ+ peers for who they are, meaning queer teenagers are less likely to feel isolated and unwelcome.

Also, this shift in attitude may encourage more young people to “come out” as queer, creating safer communities and social support systems for LGBTQ+ youth. Another causal mechanism at hand is that legalizing SSM will obviously lead to more married gay couples and public relationships. This not only provides more positive role models for queer youth, but it gives them hope that they too may have a public queer relationship and family in the future. This hope that they have a more desirable future ahead of them, as opposed to being forced to hide their sexualities or not be able to marry or raise children, is a powerful force that can reduce suicidal ideation (Anderson, pg. 4).

All of this creates a kind of “trickle-down effect” from SSM, where the SSM leads to other smaller social factors that end up dramatically affecting queer youth and their mental health. This can happen in in-person interactions in their community, social media, or just increased visibility of queer relationships in general. This is also interesting as it may account for some of the contradictory research I found, specifically Anderson et al, that claims that SSM did not improve conditions for queer youth. This trickle-down effect may help explain why. It is possible that the trickle-down effect was not as pronounced in the areas or time periods surveyed by the authors, due to differences in social structure, social media trends, and more. In general, it is important to keep in mind that SSM is not a monolithic independent variable—it “trickles down” into several smaller but significant social forces that act on the dependent variable.

The scope of this theory is limited to youth aged 10-18 who identify as a non-heterosexual sexual orientation, such as gay, lesbian, bisexual, or others. Location wise, this theory applies to the entire United States, even though there will be relevant data from individual states that have passed their own SSM laws. In terms of time, the scope is a few years before and after 2015, as this is the year SSM was legalized at the federal level. Selecting these years will allow me to see how my dependent variable may have changed before and after the 2015 decision, which is a major part of my independent variable. This scope will particularly analyze suicide rates among young queer Americans nationwide to measure any changes in response to the legalization of SSM in 2015.

An interesting third variable to keep in mind is how youth suicide rates overall have changed. Unfortunately, youth suicide rates have dramatically risen over the last decade and a half, and has even replaced homicide as the second leading cause of death among American

teens (Null, para 1). The rate of suicide for those ages 10 to 24 increased nearly 60% between 2007 and 2018, according to the Center for Disease Control and Prevention (CDC). This has been even more pronounced since the pandemic. This may influence my variables, as perhaps queer youth suicide rates have been part of this overall trend, which affects all teens regardless of sexuality. This would create a countervailing relationship in which queer youth suicide increased as part of the overall trend, erasing the positive effects of SSM.

All in all, I hope and expect that SSM had an overall and visible positive effect on queer youth suicide. My hypothesis is that suicidal ideation among queer American youth has been decreased by SSM at a federal level and that we will see a decline in these rates after 2015, when SSM was legalized nationwide. My null hypothesis is that there has been no effect and that SSM at a federal level has not affected queer youth suicide rates.

#### **1.4 Data Set and Description**

In this section I will lay out the definitions and measurements of my independent and dependent variables, as well as examine the data concerning my research question: the relationship between suicide rates among gay/bisexual youth and the federal legalization of same-sex marriage in the United States.

My independent variable, conceptually defined, is the acceptance of gay relationships at a nationwide level. The operational definition is whether or not same-sex marriage (SSM) was officially and legally recognized at the federal level in the United States through a Supreme Court ruling. I would argue that this operational definition is a sound way to measure the conceptual definition, which is acceptance. Although there is not a perfect relationship between acceptance and legalization, I have observed that when it comes to controversial social policies, acceptance often *precedes* and *propels* legalization (“The Journey to Marriage Equality in the United States – HRC”, para 2). It is rare to see a social policy become established before large swaths of the U.S. population accept it. In fact, large-scale nationwide activism and campaigning preceded the *Obergefell* decision, which very likely would have never seen the light of day if not for decades of LGBTQ+ rallying, protests, and movements that boosted social acceptance of queer relationships. Therefore I would argue that the *Obergefell* decision is actually a culmination and an indication of broader social acceptance of the queer community. I found information on this variable through a report on the legalization of SSM, which



established that the Supreme Court decision *Obergefell vs Hodges* (2015) officially recognized SSM at a federal level. In this decision, the Court “held that the Due Process Clause of the Fourteenth Amendment guarantees the right to marry as one of the fundamental liberties it protects, and that analysis applies to same-sex couples in the same manner as it does to opposite sex couples” (“*Obergefell v. Hodges*”, para 1). Therefore for every year from 2009-2017, I assigned a score of 0 or 1 depending on whether or not *Obergefell v. Hodges* had been codified yet. I chose to measure my independent variable this way because I believe the legalization of SSM federally was a pivotal event that dramatically impacted the acceptance of gay relationships across the United States and I would like to investigate if it also affected suicide rates among queer youth. I believe this measurement is both valid and reliable. It is valid because *Obergefell v. Hodges* represents the legal acceptance of SSM nationwide and it is the only law/decision that can be used as an official measurement of my independent variable. It is also reliable as anyone can check the Supreme Court documents and rulings and see that it legalized SSM through *Obergefell v. Hodges* in 2015.

My dependent variable, conceptually defined, is the mental health and safety of gay and bisexual youth, specifically their overall sense of satisfaction with their lives and a willingness to continue it. The operational definition is the rate at which these youth commit or attempt suicide annually. The most comprehensive report I could find on this topic was from a 2020 journal article titled “Changes in Victimization Risk and Disparities for Heterosexual and Sexual Minority Youth: Trends From 2009 to 2017” published in the *Journal for Adolescent Health*. This report assigned a “Victimization Score” to several youth groups, categorized by sexuality: heterosexual, gay male, bi male, gay female, bi female, transgender, and “not sure.” The Victimization Score was assigned based on annual rates of suicidal ideation, violence, abuse, bullying, and mental and physical safety. The score is originally from the Youth Risk Behavior Survey (YRBS), a biennial survey done by the Center for Disease Control. The higher the score, the higher the frequency of violence faced by the respective group. I averaged the scores of gay males, bi males, gay females, and bi females for each year to get an average score for queer youth in general. Although I would have preferred to find data about solely attempted or successful suicide attempts, this Victimization Score was the closest and most relevant measurement I could find. I am confident that it is valid as it measures rates of suicide, harassment, bullying, and violence, all of which are largely pertinent to mental well-being

(Poteat, para 4), and the survey focuses on children in grades 9- 12, which is an adequate sample of queer youth. I also believe it is reliable as the scores are based on YRBS data collected by the CDC, which outlines its methods of administering the survey at the state, large urban school district, or county level with the departments of education or health. This means the results can be replicated accurately.

For my units of analysis, I chose the years 2009-2017. I chose these years as they are included in the report containing the data for my dependent variable, and also because they are centered around 2015, the year of *Obergefell v. Hodges*. This means I have data from before, after, and during 2015. I have nine units of analysis, every year from 2009 to 2017.

### **Figure 1.1**

<b>Year</b>	<b>Gay Marriage Legalized Federally? (0=No, 1=Yes)</b>	<b>Average Victimization Score for Gay/Bi Youth</b>
2009	0	9.85
2010	0	9.55
2011	0	9.2
2012	0	8.825
2013	0	8.375
2014	0	8.175
2015	1	7.9
2016	1	6.9
2017	1	5.85

Mean: 8.292

Median: 8.375

Mode: 0 (IV)

Standard Deviation: 1.284

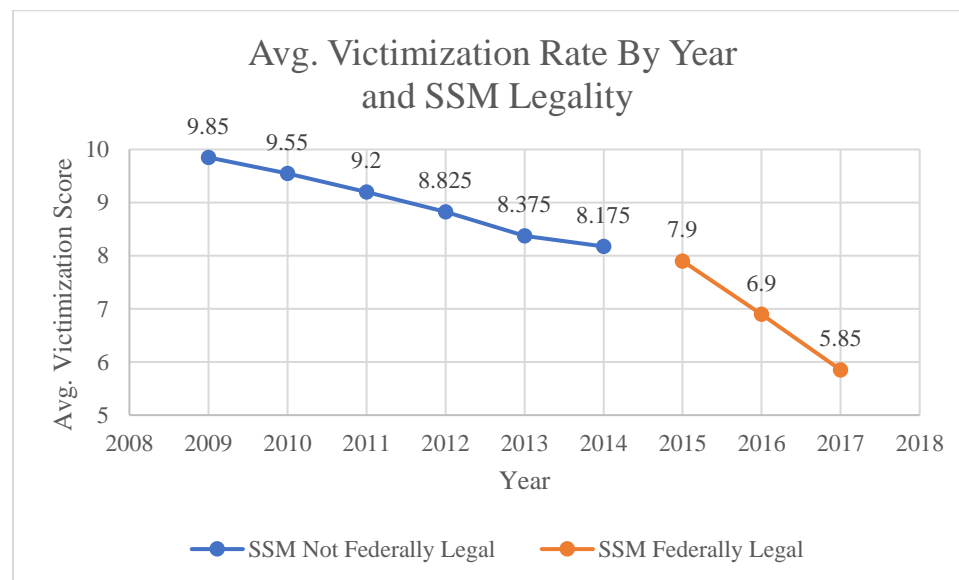
Minimum: 5.85

Maximum: 9.85

As seen above, there is an independent and dependent variable for each unit of analysis. For each respective year, there is a 0/1 score based on whether or not SSM was legalized yet, as well as a corresponding Victimization Score from the YRBS. The higher the score, the more frequent acts of victimization (suicide, violence, etc) was for the group that year. The mean for the scores is 8.292; the median is 8.375; there is no mode; the standard deviation is 1.284; the minimum and maximums are 5.85 and 9.85, respectively. To measure the statistical significance of my results and the strength of the relationship between my variables, I will be conducting an ANOVA test. This ideal as my independent variable is a nominal variable as it cannot be ranked (0 and 1), and my dependent variable is a ratio-level variable (on a numerical scale with a possible value of 0). The ANOVA test will include a Eta and Eta-squared test, which specifically measures the strength of the relationship.

Below you can see this data organized in a scatterplot. The data is separated based on SSM legality.

**Figure 1.2**



## 1.5 Discussion

**Figure 1.3**

<b>Gay Marriage Legalized Federally? (0 = No, 1 = Yes)</b>	<b>Averaged Victimization Score</b>
0	8.99583
1	6.88333
Total	8.29167
N = 9	Eta = .822** Eta squared = .676**

**Source: Youth Risk Behavior Survey (2017)**

**\*prob.<0.05**

**\*\*prob.<0.01**

**\*\*\*prob.<0.001**

My results are in agreement with my hypothesis. They show that there is a relationship between the legalization of SMS and queer youth suicide/victimization rates. The average victimization score for a year without legalized SMS was almost 9, whereas the score from a year with legalized score was around 6.8 on average.

The results are significant at the 0.01 level. The significance level given by the ANOVA output is 0.006. The relationship itself is quite strong. The Eta score is 0.822, which is much higher than the threshold of 0.3. The high Eta squared score of 0.676 reveals that around 67.6% of the change in victimization scores comes from the legalization of SMS. Overall this is a very strong relationship.

## 1.6 Conclusion

In this paper, I investigated the question of how legalizing SSM federally affected suicide rates among queer American youth. To do this, I analyzed victimization scores among queer youth for every year from 2009 to 2017, with 2015 being the year that SSM was legalized federally. My hypothesis was that queer youth suicide would decline during and after 2015 due

to this. This is what I found. In conclusion, there is a strong relationship between the legalization of SMS at a federal level and queer youth suicide rates in America. We have seen that queer youth suicidal ideation and victimization has gone down in response to SSM being legalized. This means that this legalization, combined with “trickle-down effects” such as more visibility for queer couples, changes in how queer youth are treated in their communities, and the prospects of a better future for queer kids, all had the overall effect of reducing suicidal ideation and victimization among queer teenagers.

### 1.7 Original ANOVA Output

#### Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Average Victimization Score for Gay/Bi Youth * Gay Marriage Legalized Federally? (0=No, 1=Yes)	9	47.4%	10	52.6%	19	100.0%

#### Report

Average Victimization Score for Gay/Bi Youth			
Gay Marriage Legalized Federally? (0=No, 1=Yes)	Mean	N	Std. Deviation
0	8.99583	6	.658296
1	6.88333	3	1.025102
Total	8.29167	9	1.284219

#### Measures of Association

	Eta	Eta Squared
Average Victimization Score for Gay/Bi Youth * Gay Marriage Legalized Federally? (0=No, 1=Yes)	.822	.676

## 1.8 Bibliography

- Anderson, D., Matsuzawa, K. and Sabia, J., 2019. Marriage Equality Laws and Youth Suicidal Behaviors. *SSRN Electronic Journal*, 64(1).
- Goodenow, C., Watson, R., Adjei, J., Homma, Y. and Saewyc, E., 2016. Sexual orientation trends and disparities in school bullying and violence-related experiences, 1999–2013. *Psychology of Sexual Orientation and Gender Diversity*, 3(4), pp.386-396.
- Poteat, V., Birkett, M., Turner, B., Wang, X. and Phillips, G., 2020. Changes in Victimization Risk and Disparities for Heterosexual and Sexual Minority Youth: Trends From 2009 to 2017. *Journal of Adolescent Health*, 66(2), pp.202-209.
- Null. 2022. “Even before Covid-19 Pandemic, Youth Suicide Already at Record High.” *news*. <https://health.ucdavis.edu/news/headlines/even-before-covid-19-pandemic-youth-suicide-already-at-record-high/2021/04> (December 11, 2022).
- Raifman, J., Moscoe, E., Austin, S. and McConnell, M., 2017. Difference-in-Differences Analysis of the Association Between State Same-Sex Marriage Policies and Adolescent Suicide Attempts. *JAMA Pediatrics*, 171(4), p.350.
- “Supreme Court of the United States.” [https://www.supremecourt.gov/opinions/14pdf/14-556\\_3204.pdf](https://www.supremecourt.gov/opinions/14pdf/14-556_3204.pdf) (November 17, 2022).
- “The Journey to Marriage Equality in the United States - HRC.” *Human Rights Campaign*. <https://www.hrc.org/our-work/stories/the-journey-to-marriage-equality-in-the-united-states> (December 12, 2022).
- Wight, R., LeBlanc, A. and Lee Badgett, M., 2013. Same-Sex Legal Marriage and Psychological Well-Being: Findings From the California Health Interview Survey. *American Journal of Public Health*, 103(2), pp.339-346.

## 1.9 Annotated Bibliography

- Poteat, V., Birkett, M., Turner, B., Wang, X. and Phillips, G., 2020. Changes in Victimization Risk and Disparities for Heterosexual and Sexual Minority Youth: Trends From 2009 to 2017. *Journal of Adolescent Health*, 66(2), pp.202-209.

- Independent variable: Sexual orientation  
Dependent variable: Victimization (harassment, bullying, etc)
- Summary: This study tracked changes in victimization patterns among self-identified sexual minorities and compared them to victimization among heterosexual and gender-conforming youth from 2009 to 2017. It found that there is a significant disparity in victimization rates between LGBTQ+ and heterosexual students, as the former group faces far more harassment and bullying. However, this disparity has narrowed between 2009 and 2017.
- My research question is about how the legalization of same-sex marriage (SSM) may have affected suicide rates among queer youth. Suicide rates are linked to victimization, as noted in the study on page 4, which can take the form of harassment, name-calling, physical violence, social isolation, and more (Poteat, pg. 5). This study is important to my research paper as it lays out the evidence that there is a stark disparity between victimization faced by LGBTQ+ and heterosexual students in American high schools. Although this disparity has narrowed in recent years, it is still evident. In addition, it is interesting that overall rates of victimization faced by queer students has decreased between 2009 and 2017 (Poteat, pg. 3). This *may* indicate that rising acceptance of LGBTQ+ rights and marriage equality laws contributed to lower levels of victimization, which is what my research paper is exploring. However, correlation is not causation. The study notes that there is a range of reasons why this decrease may have occurred. Examples include more media visibility of LGBTQ+ students, stricter school policies regarding homophobia and bullying, and more public backlash towards homophobic acts. Marriage equality laws can be just a part of that overall trend of acceptance of gay rights. Regardless, it is valuable to note that according to this study, targeted bullying against the LGBTQ+ youth has decreased overall between 2009 and 2017. This establishes a starting point for my research and helps me understand how such victimization rates have changed in recent years, then figure out what may have caused it.



Raifman, J., Moscoe, E., Austin, S. and McConnell, M., 2017. Difference-in-Differences Analysis of the Association Between State Same-Sex Marriage Policies and Adolescent Suicide Attempts. *JAMA Pediatrics*, 171(4), p.350.

- Independent variable: Marriage equality at the state level  
Dependent variable: Adolescent suicide attempts among LGBTQ+ community
- Summary: In between 1999 and 2015, there was an average of a 7% decline in youth suicide attempts among all high schoolers in 35 states, and much of this was concentrated among LGBTQ+ students. This decline was correlated with the passing of marriage equality laws at the state level among these 35 states. No such decline was seen in states that did not pass such laws.
- This is perhaps the most relevant and important study for my research paper. It directly measures whether the legalization of SSM may have impacted suicide rates among queer high school students. The study concludes that “analysis of representative data from 47 states found that same-sex marriage policies were associated with a 7% reduction in the proportion of all high school students reporting a suicide attempt within the past year” (Raifman, pg. 1). This supports my hypothesis that the legalization of SSM may positively impact LGBTQ+ youth’s mental health and treatment in society and thus reduce suicidal ideation and attempts among this vulnerable community. The study analyzed suicide attempt rates among all youth in 47 states, and found that in the 35 states that legalized SSM, such suicide attempts decreased specifically among queer youth. No such reduction was seen in the other states that did not legalize SSM. This clearly separates my independent variable, legalized SSM, from my dependent variable, suicide among LGBTQ+ youth, and explores the relationship between them. Given the data collected, the study also estimated that SSM policies would be associated with 134,000 fewer youths attempting suicide every year nationwide (Raifman, pg. 5). The study also notes prior research that SSM bans were associated with higher levels of psychiatric disorders (Raifman, pg. 5) and that in Massachusetts, legalized SSM was found to be linked to lower health expenditure among gay couples, indicating a decline in physical and mental health issues (Raifman, pg. 6). All of this helps me establish the relationship between

SSM and queer youth suicide and mental health, which is that SSM has a positive effect on mental health among the LGBTQ+ community.

Anderson, D., Matsuzawa, K. and Sabia, J., 2019. Marriage Equality Laws and Youth Suicidal Behaviors. *SSRN Electronic Journal*, 64(1).

- Independent variable: Passage of marriage equality laws  
Dependent variable: Suicidal behavior among LGBTQ+ youth
- Summary: This study tracked how suicidal behavior among queer youth has changed with the passing of same-sex marriage (SSM) laws in America since 2004. They found little to no evidence that suicidal behavior had decreased as a response to SSM. In fact, they found some evidence that such behavior may have actually increased in states where SSM was passed.
- This study is interesting because it contradicts the findings of the other journal articles I used. It reaches the exact opposite conclusion, that pro-SSM policies are not linked to lower queer youth suicides. They actually claim that suicide rates may have gone up despite SSM. Since my question deals with how SSM impacts queer youth suicide rates, it is important to also take into account these findings, even though they contradict my hypothesis and other sources. The study notes several ways SSM may *possibly* improve queer youth's mental health, such as by reducing sexual stigma, allowing for expectations of a future family and successful relationships, and provide role models for young LGBTQ+ students (Anderson, pg. 4). All of these factors may logically reduce suicide attempts and ideation among this community and improve mental health. This is generally my hypothesis and my expected answer to the research question. However, the study claims that this link actually does not exist. They outline several ways how SSM may actually *damage* youth's mental health. For example, legalizing SSM can lead to backlash and retaliation, especially among local communities that are unfriendly towards it. They note that "legalization is more likely to be unpopularly imposed by judicial order rather than legislative action taken by elected representatives" (Anderson, pg. 5). They also point out that legalized SSM can lead to higher rates of sexual contact and earlier sexual initiation among high

schoolers, which is linked to higher suicidal ideation rates (Anderson, pg. 6). Reading about these factors is helpful as they provide a counterpoint to my hypothesis and help me better understand the full scope of my research question. They also provide their own data, which contradicts my other sources, that queer teen suicide attempts have gone up instead of down in correlation with legalized SSM in multiple states.

Wight, R., LeBlanc, A. and Lee Badgett, M., 2013. Same-Sex Legal Marriage and Psychological Well-Being: Findings From the California Health Interview Survey. *American Journal of Public Health*, 103(2), pp.339-346.

- Independent variable: Legalization of same-sex marriage in California  
Dependent variable: Self-reported mental health issues among LGBTQ+ couples
- Summary: The study found that gay couples reported significantly lower levels of stress and mental health issues following the legalization of same-sex marriage. Despite this, there is a disparity between mental health issues among homosexual and heterosexual couples.
- This study ties into my research topic by exploring the effect of SSM on the mental health of the LGBTQ+ community. They analyzed changes in nonspecific psychological and mental health issues among queer couples in California following the legalization of SSM. Using the California Health Interview Survey, it was found that legally married gay couples reported significantly lower mental health issues and concerns. This helps answer my question by indicating that legalizing SSM has positive outcomes for the mental health of LGBTQ+ community members. This positive mental health results may be correlated to lower rates of suicide attempts and ideation (Wight, pg. 7), although the study itself does not try to confirm this. I can use this study as one example that SSM can improve mental health for LGBTQ+ community members and, by extension, LGBTQ+ youth. The study also notes that there is a noticeable discrepancy between gay and heterosexual couples in terms of mental and psychological distress. The group with the lower reported rate of mental health issues was heterosexual couples. The group with the highest rate of such issues was

unmarried gay couples. According to the report, being in a “legally recognized same-sex relationship, marriage in particular, appeared to diminish mental health differentials between heterosexuals and lesbian, gay, and bisexual persons” (Wight, pg. 6). This further supports the argument that marriage equality can positively impact the queer community’s mental health issues.

Goodenow, C., Watson, R., Adjei, J., Homma, Y. and Saewyc, E., 2016. Sexual orientation trends and disparities in school bullying and violence-related experiences, 1999–2013. *Psychology of Sexual Orientation and Gender Diversity*, 3(4), pp.386-396.

- Independent variable: Sexual orientation  
Dependent variable: Violence in school
- Summary: Between 1999 and 2013, there was an overall reduction in violence faced by LGBTQ+ students in high school. However, despite this, there remains a disparity between the violence faced by queer and heterosexual students.
- This source is similar to my first source but adds on more detail and data to the observation that LGBTQ+ students face more violence than their heterosexual counterparts, and that this disparity lingers regardless of SSM policies. The study draws from the Youth Risk Behavior Surveys from 1999 to 2013 and divides this time period into four time periods. It finds that each time period saw a further decline in violence faced by queer high schoolers over time. This helps answer my question by establishing that violence and victimization towards LGBTQ+ youth has declined over time, indicating that mental health issues, social isolation, and suicidal ideation may also be reduced, as noted by the study (Goodenow, pg. 2). Despite this, there are clear signs of a disparity between violence faced by queer and heterosexual students. “Almost no reduction” in this disparity was seen throughout all four waves. This may be a sign that the decline in violence may have been “across the board” and not just specifically for LGBTQ+ students. This would mean that pro-SSM policies during this time period did not help reduce violence for gay students specifically, and that this decline was just part of an overall reduction in bullying towards all sexual groups.