

A Decade of Disparities: Comparing Barriers to Healthcare Access for LGB People from 2013 to 2023

Cicely Karas

Advised by Dr. Robert Kelvey

Statistical and Data Science

Abstract

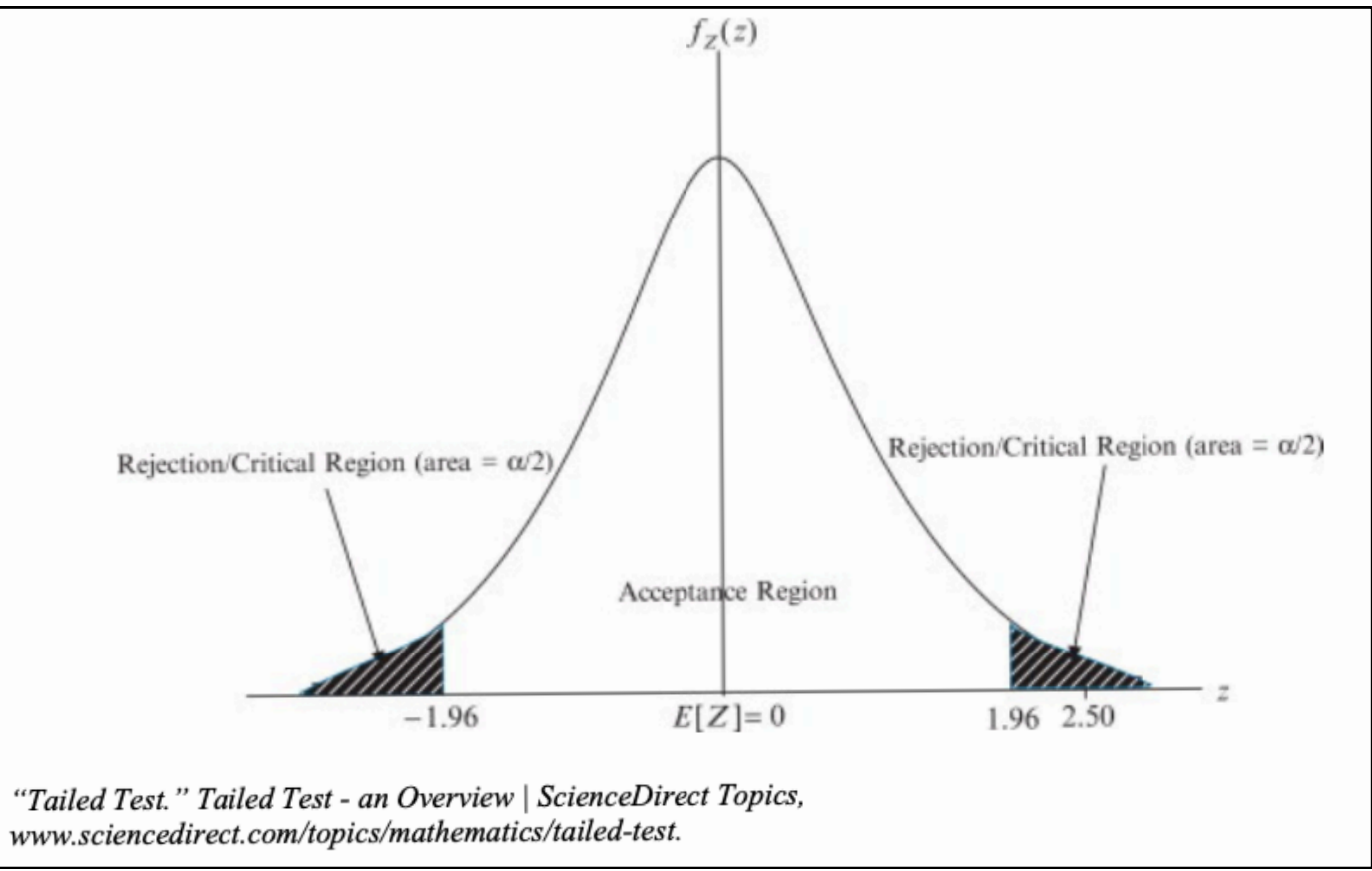
The purpose of this study is to assess barriers in healthcare access faced by sexual minorities utilizing data from the 2023 National Health Interview Survey (NHIS) and comparing the results to similar research by Dahlhamer et al., a group of researchers that utilized the 2013 NHIS. Recreating Dahlhamer et al.'s methodology to enable comparison, a multinomial logistic regression model was conducted along with a two-tailed significance test, and descriptive statistics were collected. The results revealed that sexual minorities face significant barriers to health-care access in 2023, especially cost-related barriers. Cost-related barriers to healthcare worsened from 2013 to 2023, but non-cost-related barriers slightly improved. Bisexual individuals face the highest prevalence of barriers to care compared to Gay/Lesbian and Straight individuals in 2013 and 2023. This study highlights the need for continued attention to healthcare equity in the United States.

Methods

- Created five composite predictor variables representing barriers to care
- Ran a multinomial logistic regression model to predict likliness of each sexual orientation category facing barriers to care
- Conducted a two-tailed significance test to determine if there were significant differences in barriers to healthcare based on sexual orientation
- Created three tables to enable comparison of results:
(1) Descriptive Estimates, (2) Prevalence of Barriers, (3) Adjusted Odds Ratio (Predicting Barriers)

Equation for Multinomial Logistic Regression

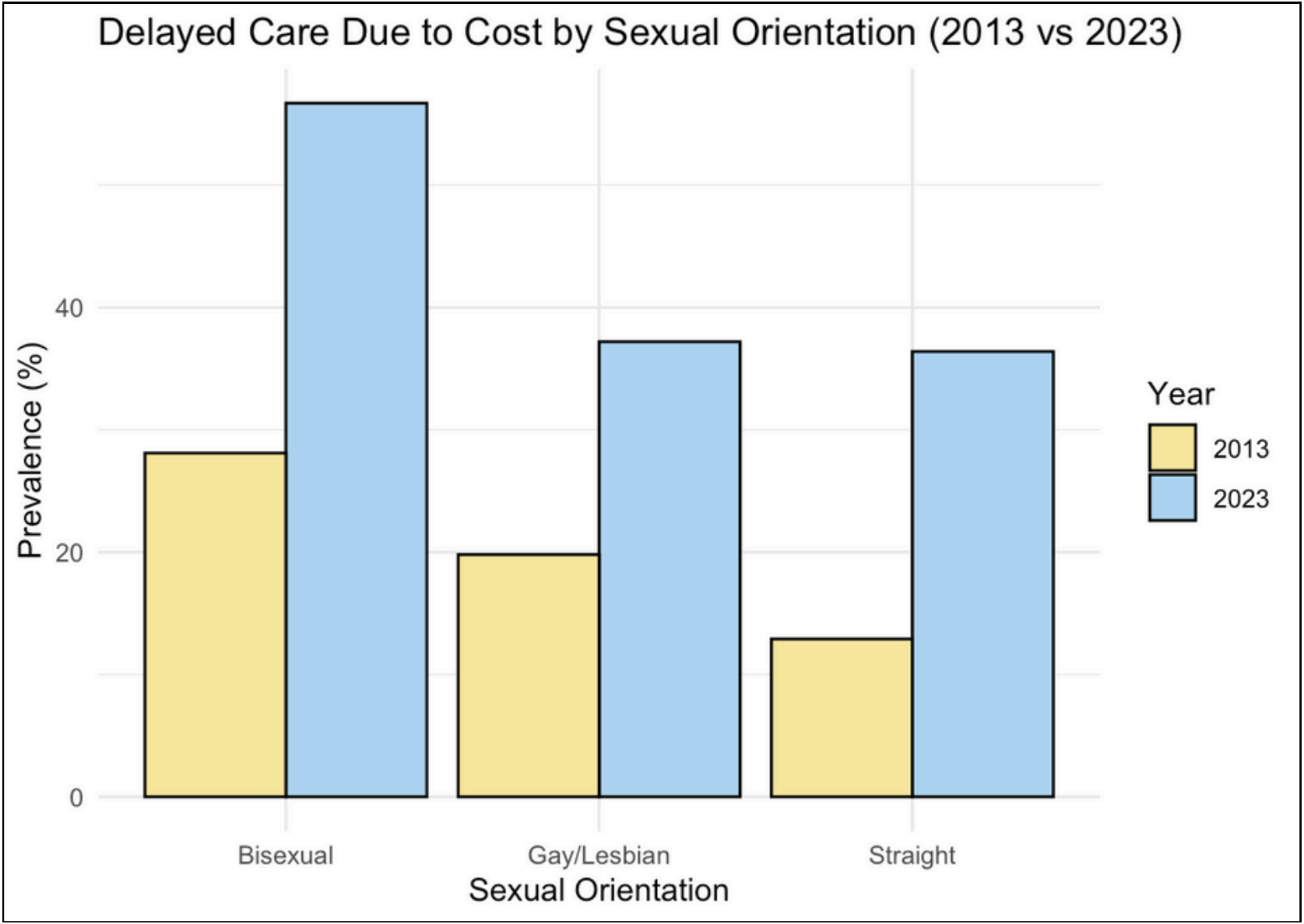
$$\log \left(\frac{P(Y = k)}{P(Y = K)} \right) = \beta k0 + \beta k1X1 + \beta k2X2 + \dots + \beta kpXp, \text{ for } K = 1, 2, \dots, K - 1$$



Key Findings

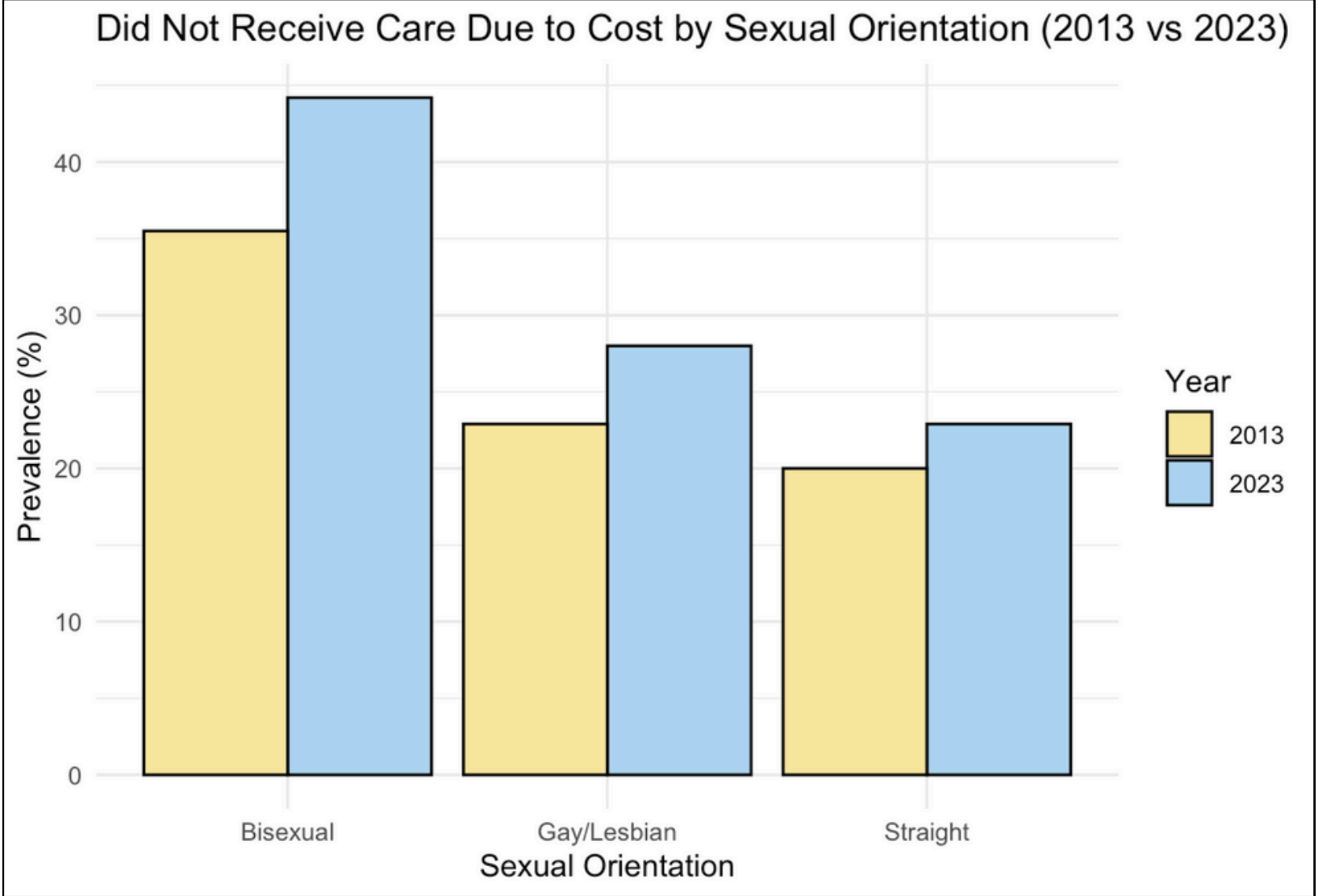
Prevalence of Barriers to Care:

- Cost-related barriers to care saw an increase in all sexual orientation groups from 2013 to 2023 (See bar graphs on right)
- Bisexual individuals face significant barriers to healthcare when compared to other groups, especially cost-related barriers, in 2013 and 2023
- In 2023:**
- Over 50% of Bisexual individuals delayed care due to cost, compared to ~33% of Straight individuals
- Nearly 50% of Bisexuals did not receive specific services due to cost, versus less than 25% of Straight individuals
- Individuals identifying as “Something else” or “I don’t know the answer” also reported high rates of delayed care (about 50%)
- Gay/Lesbian vs. Straight: Prevalence of barriers was similar, differing by no more than 6%.



Predicting Barriers to Care in 2023:

- All sexual orientation groups were compared to Straight individuals**
- Bisexuals** had:
 - 50% higher odds of delaying care due to cost
 - 60% higher odds of not receiving specific services due to cost
 - 160% higher odds of delaying/not receiving care for non-cost reasons
- Gay/Lesbian individuals** did not have results differing significantly from Straight individuals
- “Something else”** identifying individuals had:
 - 150% higher odds of delaying care due to cost
 - 90% higher odds of having trouble paying medical bills
- “I don’t know the answer”** identifying individuals had:
 - 120% higher odds of delaying or not receiving care for non-cost related reasons



Adjusted Odds Ratio (AOR) with 95% Confidence Interval (2023 NHIS)

Variable	Straight (Reference)	Bisexual	Gay/Lesbian	Something else	I don't know the answer
Delayed care due to cost	1	1.5 (1.1, 2.0)	0.9 (0.7, 1.2)	2.5 (1.6, 4.04)	1.2 (0.6, 2.2)
Delayed or did not receive services due for non-cost reasons	1	2.6 (1.9, 3.4)	1.4 (1.0, 1.9)	1.3 (0.8, 1.8)	2.2 (1.3, 3.7)

Adjusted Odds Ratio (AOR) with 95% Confidence Interval (2013 NHIS)

Variable	Straight (Reference)	Bisexual	Gay/Lesbian
Delayed care due to cost	1	2.4 (1.2, 4.5)	1.7 (1.1, 2.7)
Delayed or did not receive services due for non-cost reasons	1	2.3 (1.2, 4.5)	1.0 (0.6, 1.6)

Limitations

- Difference in variable availability in 2013 and 2023 datasets, which makes comparison more difficult
 - Lack of a gender variable in the 2023 NHIS especially made the comparison difficult
- Small sample size of sexual minorities in both the 2013 and 2023 datasets
 - In 2013, sexual minorities were 2.7% of overall population sampled
 - In 2023, sexual minorities were 7.1% of overall population sampled
- Dahlhamer et al. used an advanced statistical software for their analysis called SUDAAN, whereas I utilized R Studio

Conclusion

- Sexual minorities face significant barriers to healthcare access in 2013 and 2023, especially those identifying as Bisexual, “Something else,” or “I don’t know the answer”
- Non-cost related barriers to care have shown improvement from 2013 to 2023, but cost related barriers have increased in prevalence for all groups
- These findings reaffirm the need for continued attention to health-care equity and the need for action to make healthcare accessible and affordable for everyone, regardless of sexual orientation.