

# Examining Differences Between Perceived Health and Stigma Amongst Males and Females in the LGBT Community

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## Abstract

The aim of this study is to determine whether AFAB individuals within the LGBT community face more general, physical, and mental health issues than their AMAB counterparts within the LGBT community, which may be mitigated by perceived stigma. The population was built off the previous TCORS study with 11,000 participants. Recruitment was done for participants in the LGBT community and a referral system was implemented to gain more LGBT participants. Measures of interest were gender at birth, perceived general health, mental health, physical health, and stigma. Analysis was conducted via SAS and a statistical t-test was done on the health measures to determine association. Additionally, linear models were created for each health measure. Out of 192 participants, 110 were eligible for the analysis, 50 of which were female and 60 were male. Heterogeneity was present in sociodemographic characteristics such as age and education. However, data for annual income and race remained somewhat homogeneous. AFABs had higher perception of poor health, mental health, and physical health. When a two tailed t-test was conducted general health and mental health for gender at birth and stigma were statistically significant. This indicated for general health and mental health on average AFAB had a higher number of sick days than AMAB. Furthermore, when a linear model was created for the health indicators, general health and mental health resulted in statistically/marginally significant results in regard to gender at birth. The model for general health also indicated significance for education and mental health had marginal significance for age. However, the model of physical health was marginally significant for gender at birth and not significant for stigma. The resulting findings for the linear models support the initial hypothesis that there are more health inequalities faced by AFAB than AMAB. These results are consistent with other studies that indicate LGBT females have higher rates of mental health distress than their non-LGBT counterparts.

## Introduction

- **AFAB:** Assigned Female at Birth
- **AMAB:** Assigned Male at Birth
- 13.9 Million LGBT Adults in the US (5.5% of Population) -58% identify as female
- Research mainly focuses on health inequities of cis-gendered women compared to cis-gendered men
- Women tend to have poorer mental and physical health than tier male counterparts (Cameron et al., 2010)
- Gender and sexual minorities have worse health outcomes (George & Stokes, 2018)
- People who identify as women in the LGBT community felt discriminated against by their healthcare (Lambda Legal, 2010)

**Hypothesis:** Female individuals, specifically AFAB (Assigned Female at Birth) have higher rates of health inequalities than their male counterparts within the LGBT community. This study was interested in the role of perceived stigma on health indicators.

## Methodology

- 11,000 people recruited part of past TCORS study (Agans et al., 2021; Boynton et al., 2016)
- Two panels created
  - Transgender and non-binary participants
  - Lesbian, gay and bisexual participants
- Combined two panels to focus on AFAB and AMAB
- LGBT participants from previous study referred LGBT individuals from their social circles
- Higher recruitment of LGBT participants

## Measures

- **General Health**
  - CDC Health Related Quality Of Life (HRQOL)
  - 1-5 Rating scale
  - “Would you say that in general your health is...” (Excellent/Very Good/Good/Fair/Poor)*
- **Mental Health**
  - CDC HRQOL
  - “Now thinking about your physical health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your physical health not good?” (0-30 days)*
- **Physical Health**
  - CDC HRQOL
  - “Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?” (0-30 days)*
- **Stigma ( $\alpha=0.89$ )**
  - Meyer et al. (2008) Scale
  - The following questions scores were averaged:
    - “Most employers will not hire a person like you.”*
    - “Most people believe that a person like you cannot be trusted.”*
    - “Most people think that a person like you is dangerous and unpredictable.”*
    - “Most people think less of a person like you.”*
    - “Most people look down on people like you.”*
    - and “Most people think people like you are not as intelligent as the average person”*
  - (Agree Strongly/Agree/Disagree/Disagree Strongly)*
- **Gender at Birth**
  - Birth Certificate
  - “What sex were you assigned at birth, on your birth certificate?” (Male/Female)*

## Analysis

- SAS Version 9.4
- Demographics used the frequency procedure
- T-test procedure (PROC TTEST)
  - Association between variables
- Linear model procedure (PROC REG)
- Statistical significance of  $\alpha=0.05$

## Results

- 192 LGBT participants recruited, 82 excluded -50 AMAB and 60 AFAB participants
- Demographic Characteristics**
  - AFABs on average younger than AMABs -31.7% of AFABs between ages 18-24 compared to only 10% of AMABs
  - AFABs were less likely to be college graduates -34.4% AFABs vs. 50% AMABs
  - Comparable racial demographics with majority of the participants being white
  - 62.3% of AFABs and 66% of AMABs had annual incomes of less than or equal to \$25,000
- Health Measurements**
  - AFABs had higher perceptions of poor general health -18% AFABs vs 4% AMABs
  - AFABs also had almost double the amount of mental and physical health distress compared to AMABs
    - Mental Health: 49.2% of AFABs vs 26% of AMABs
    - Physical Health: 60.7% of AFABs vs 36% AMABs
- Two Tailed T-Tests**
  - General Health: the t-test indicated statistical significance under  $\alpha=0.05$ 
    - Sufficient evidence of an association between general health and gender at birth
    - AFAB had a higher perception of poor health compared to AMAB
  - Physical Health: t-test indicated marginal significance under  $\alpha=0.05$ 
    - Trend was in the expected direction
  - Mental Health: t-test indicated statistical significance under  $\alpha=0.05$ 
    - AFAB had a higher number of mental sick days than AMAB
- Model 1: General Health**
  - General health proved to be significant for gender at birth and education

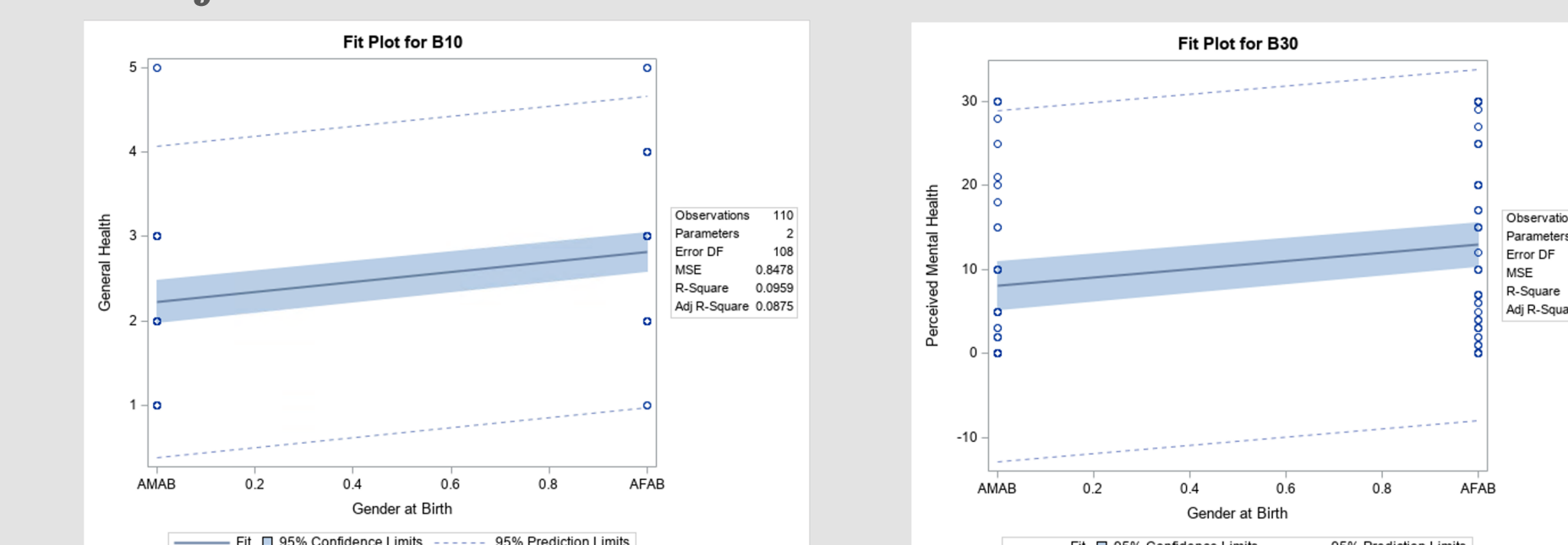
Variable	Model 1: General Health			
	B	95% CI of $\beta$	Standard Error	p-value
Intercept	2.41	(1.38, 3.44)	0.51	<0.0001
Gender at Birth	0.56	(0.21, 0.92)	0.18	0.0023
Stigma	0.21	(0.02, 0.44)	0.12	0.08
Age	-0.00	(-0.02, 0.01)	0.01	0.98
GED+	-0.66	(-1.29, -0.02)	0.32	0.04

## Model 3: Mental Health

- Mental health proved significant for stigma and age and marginally significant for gender at birth

Variable	Model 3: Mental Health			
	$\beta$	95% CI of $\beta$	Standard Error	p-value
Intercept	10.87	(2.26, 21.47)	5.35	0.05
Gender at Birth	3.51	(-0.18, 7.20)	1.86	0.06
Stigma	3.88	(1.50, 6.25)	1.20	0.00
Age	-0.19	(-0.34, -0.03)	0.08	0.02
GED+	-4.11	(-10.63, 2.42)	3.29	0.22

## Unadjusted Models for General and Mental Health



## Conclusion

- Perceived mental health and general health differ amongst AFAB and AMAB individuals
- Heterogeneity in household income, education, age between AFAB and AMAB individuals
- Findings support the hypothesis that there are health inequalities
  - Stigma and Gender at Birth increased general health, mental health, and physical health indicators
- Association between stigma and gender at birth remained significant for general health
- Association between stigma and gender at birth remained statistically/marginally significant for mental health
- Physical health was not significant for the t-test nor the linear model, did not present with heterogeneity
- Socioeconomic differences were significant
  - Education (GED+) was significant for general health
  - Age was significant for mental health
- Consistent with other studies that female individuals have higher rates of mental health distress, but research focuses on LGBT vs non-LGBT
- Consistent with Female LGB individuals face more discrimination than their male LGB peers (Lambda Legal, 2010).

## Limitations

- Insufficient racial demographics
  - Different from the US Census demographics
  - Overrepresentation of White individuals
  - Underrepresentation of Black, Asian, Native individuals
  - Limits on generalizability because race is a factor that contributes to health disparities
- Sample Size
  - Limited sample size of 110 participants
  - Low statistical power of hypothesis testing
- Sampling Method
  - Respondent driven sampling limits analysis
  - Referrals indicate participants are not random, when that assumption was made to conduct statistical testing
  - Participants may have recruited individuals like them in terms of outcomes
  - Correlation between participants meaning participants are not independent from each other
- Future Studies
  - Bigger sample size, more racial diversity and independence amongst participants

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