

The modifying effect of sport participation on the association between gay/lesbian and bisexual identity and depression and suicidality among US high school students

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Background

- **Physical activity is important!**

- Improved weight, brain health, bone and muscle health and reduced risk of disease.
- Improved mental health

- **LGBTQ+ adolescents are at risk**

- High proportions of depression and suicidality compared to non-LGBTQ+ adolescents
 - Depression: 30% vs 15%
 - Suicidality: 35% vs 19%
- Experience lack of social support, bullying, discrimination



Background

- **Benefits of Team Sports**

- Improved peer support
- Protection against bullying
- Reduced symptoms of depression and suicidality



Potential problem: Many LGBTQ+ adolescents report not participating in sports for fear of or experience with discrimination...





LGB adolescents who participate in team sports will have lower odds of depression and suicidality than those who do not.



Methods

- Cross-sectional study of 2019 Youth Risk Behavior Survey
- Exposure:
 - **Sexual Identity** (Heterosexual, Gay/Lesbian, Bisexual, Unsure)
- Outcome:
 - **Suicidality** (Considering, planning, or attempting suicide in past 12 months)
 - **Depression** (Felt sad or hopeless almost every day for 2+ weeks that they stopped doing some usual activities in past 12 months)
- Covariates: Age, race/ethnicity, body mass index, sleeping 8+ hours, meeting physical activity guidelines, and screen time
- Potential modifier: **Team sports participation**



Methods

Statistical analysis:

- YRBS sample weights
- Univariate analyses (frequencies, percentages)
- Logistic regression
 - Stratified by team sports participation (overall, team sports and no team sports)
 - Stratified by sex (male, female)



Results

- **Demographics**

- Mostly between 15-17 years old (74.0%), White (51.2%), not meeting physical activity (79.8%) or screen time (80.2%) guidelines

- **Exposure**

- Sexual identity: Mostly heterosexual (84.4%) or bisexual (8.7%)

- **Modifier**

- Team sports: Mostly athletes (57.4%)

- **Outcomes**

- 36.2% endorsed depression
- 22.9% endorsed suicidality



Results

	Depression (n =) AOR (95% CI)	Suicide (n =) AOR (95% CI)
Males		
All Males		
Heterosexual	Ref	Ref
Gay	3.05 (1.45-6.43)	3.11 (1.64-5.90)
Bisexual	3.43 (2.30-5.10)	6.83 (4.19-11.11)
Unsure	1.18 (0.66-2.11)	1.66 (0.85-3.22)
Male non-athletes		
Heterosexual	Ref	Ref
Gay	2.81 (1.29-6.13)	2.57 (1.58-8.03)
Bisexual	2.68 (1.49-4.82)	7.51 (4.26-13.25)
Unsure	0.89 (0.46-1.74)	1.10 (0.53-2.29)
Male athletes		
Heterosexual	Ref	Ref
Gay	4.38 (1.20-15.28)	2.96 (1.10-7.93)
Bisexual	3.75 (2.01-11.22)	5.95 (2.56-13.83)
Unsure	2.12 (0.82-5.51)	4.57 (2.07-10.12)



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Results

Females	Depression (n =) AOR (95% CI)	Suicide (n =) AOR (95% CI)
All Females		
Heterosexual	Ref	Ref
Lesbian	3.18 (1.88-5.38)	4.88 (2.72-8.74)
Bisexual	3.48 (2.71-4.47)	4.51 (3.45-5.90)
Unsure	1.89 (1.35-2.65)	1.87 (1.21-2.88)
Female non-athletes		
Heterosexual	Ref	Ref
Lesbian	2.87 (1.29-6.13)	3.71 (1.93-7.11)
Bisexual	2.68 (1.49-4.82)	4.61 (3.28-6.48)
Unsure	0.89 (0.46-1.74)	2.46 (1.55-3.88)
Female athletes		
Heterosexual	Ref	Ref
Lesbian	3.34 (1.61-6.92)	6.36 (2.68-15.09)
Bisexual	3.58 (2.45-5.24)	4.28 (2.89-6.34)
Unsure	2.74 (1.67-4.50)	1.36 (0.70-2.64)



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Key Takeaway

Playing sports may be protective against suicidality in gay and bisexual males

HOWEVER

An association exists between teams sports participation and increased odds of depression in both male and female athletes and suicidality in groups of LGB male and female athletes

Results demonstrate the need to make sports teams a safer, more accepting environment for vulnerable LGB youth!

