Taking Stock of An Emerging Literature: Mental Health Disparities among LGBTQ Youth

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DA026312 & DA030385
Presentation Topics

1) Overview of minority stress hypothesis
2) Overview of cross-sectional SMY disparities literature
3) Three important methodological tools to understand minority stress through a developmental lens.
4) Conclusions: How these methodological tools facilitate SMY health disparities research
Minority Stress Model (Meyer, 2003)

Coping and Social Support

Minority Status
- sexual orientation
- race/ethnicity
- gender

Minority Identity (gay, lesbian, bisexual)
- prominence
- valence
- integration

General Stressors

Minority Stress Processes (distal)
- prejudice events (discrimination, violence)

Minority Stress Processes (proximal)
- expectations of rejection
- concealment
- internalized homophobia

Mental health outcomes

Unique Adolescent Developmental Stressors

Potential Sources of Discrimination, Victimization, and Stress

- Parent’s Cultural Naïveté
- Parental Rejection
- Rejection by Religious Institutions
- Brain Development
- Social Development
- Peer Bullying
- Cyber Bullying
- School Apathy
Assaulted at school

Overall Odds Ratio: 2.68

Girls: 3.31

Substance use disparities

Overall Odds Ratio: 2.89

Girls: 5.02

Bisexual Youth: 4.42

Suicidality disparities

Overall Odds Ratio: 2.92

Bisexual Youth: 4.92

Absolute rates of any suicidality (13/19)

History of Suicidality

<table>
<thead>
<tr>
<th></th>
<th>Heterosexual</th>
<th>SMY</th>
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<tbody>
<tr>
<td>Percentage</td>
<td>12%</td>
<td>28%</td>
</tr>
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</table>

Three Important Methodological Tools...

For understand minority stress through a developmental lens:

1) *Assessment* of sexual orientation in youth
2) *Longitudinal data analysis* techniques
3) *Mediation modeling* to identify risk factors
Three Important Methodological Tools

Assessment of Sexual Orientation Among Youth: How and When?
Assessment of Sexual Orientation among Youth

**ATTRACTION**
- opposite sex
- both sexes
- same sex

**BEHAVIOR**
- opposite sex
- both sexes
- same sex

**IDENTITY**
- heterosexual
- bisexual
- gay/lesbian
Risk varies across the continuum

- 100% Heterosexual
- Mostly Heterosexual
- Bisexual
- Mostly Gay/Lesbian
- 100% Gay/Lesbian

Risk varies across the continuum!
What should we ask youth?

IDENTITY

100% Heterosexual

Mostly Heterosexual

Bisexual

Mostly Gay/Lesbian

100% Gay/Lesbian

3-5%
What should we ask youth?

IDENTITY

100% Heterosexual

Mostly Heterosexual

Bisexual

Mostly Gay/Lesbian

100% Gay/Lesbian

10% Add Health
Identity is defined for them...

“Mostly heterosexual (straight), but a somewhat attracted to people of your own sex…”
### How many gay youth in the world?

| 2.2 | Billion children in the World |
| ~1.2 | Billion children who have reached puberty |
| **10% rule** | 10% of teens may experience same sex attraction or |
| **120** | Million Same-Sex Attracted Youth Worldwide |
How many gay youth in the U.S.?

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>314</td>
<td>Million people in the U.S.</td>
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<tr>
<td>25</td>
<td>Million adolescents ages 12-17 in the U.S.</td>
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<td>10% rule</td>
<td>10% of teens may experience same sex attraction or</td>
</tr>
<tr>
<td>2.5</td>
<td>Million Same-Sex Attracted Youth in the U.S.</td>
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How many SMY in the U.S. experience suicidality?

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<td>Million Adolescents ages 12-17 in the U.S. (childstats.gov)</td>
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<tr>
<td>10% rule</td>
<td>10% of Teens will report Same Sex Attraction or Identity by</td>
</tr>
<tr>
<td>~2.5</td>
<td>Million Same-Sex Attracted Youth in the U.S.</td>
</tr>
<tr>
<td>28%</td>
<td>Estimate based on meta-analysis*</td>
</tr>
<tr>
<td>~700,000</td>
<td>SMY may experience suicidality</td>
</tr>
</tbody>
</table>

*Note: Add Health: 24% of SMY ideation; PGS 29% ideation; Hatzenbueeler Oregon study: 24% attempts
WHEN should we ask youth?

Trajectories across four waves from age ~14 through age ~28

- Bisexual
- Mostly Heterosexual
- Gay/Mostly Gay
- Heterosexual

Three Important Methodological Tools

Longitudinal Data Analysis Techniques
Why Examine SMY Disparities Longitudinally?

- **Childhood**
  - LGBT Absent from School Curriculum

- **Adolescence**
  - Rejection by Churches and Schools
  - Parents and Close Family Hetero-Normative

- **Adulthood**
  - Hiring and Job Discrimination
  - Rejection by Parents and Peers
  - Cumulative Health Problems Due to Chronic Stress

- **Late Adulthood**
  - Nursing Home Discrimination

Visible World is Hetero
One individual’s change over time

Frequency of Drinking, Past Year

Time=Wave

* * *
Individual *and* group change over time

Frequency of Drinking, Past Year

Time=Wave
Individual *and group* change over time
Longitudinal Trajectories of Substance Use during past year from age 14 through age 28.

Longitudinal Trajectories of Substance Use

The Pittsburgh Girls Study (PGS)

1) A multiple cohort, multi-informant, prospective study of urban girls (Original MH56630, PI: Rolf Loeber)

2) 2,451 girls who were between 5 and 8 years old at the start of data collection in 2000.

3) 52% African American/Black.

4) Year 14 data collection (girls aged 18-21 years) was completed in 2014.

DA030385
Longitudinal Trajectories of Marijuana Use

DA030385
Longitudinal Trajectories of Cigarette Use

![Graph showing the longitudinal trajectories of cigarette use by age, comparing sexual minority and heterosexual groups.](DA030385)
## Average Cohen’s D Effect Sizes at Each Year

<table>
<thead>
<tr>
<th>Age</th>
<th>Alcohol</th>
<th>Marijuana</th>
<th>Cigarette</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 13</td>
<td>0.16</td>
<td>0.16</td>
<td>0.25</td>
</tr>
<tr>
<td>Age 14</td>
<td>0.25</td>
<td>0.29</td>
<td>0.37</td>
</tr>
<tr>
<td>Age 15</td>
<td>0.30</td>
<td>0.40</td>
<td>0.47</td>
</tr>
<tr>
<td>Age 16</td>
<td>0.31</td>
<td>0.47</td>
<td>0.56</td>
</tr>
<tr>
<td>Age 17</td>
<td>0.28</td>
<td>0.52</td>
<td>0.63</td>
</tr>
<tr>
<td>Age 18</td>
<td>0.24</td>
<td>0.56</td>
<td>0.69</td>
</tr>
<tr>
<td>Age 19</td>
<td>0.19</td>
<td>0.58</td>
<td>0.70</td>
</tr>
<tr>
<td>Age 20</td>
<td>0.13</td>
<td>0.60</td>
<td>0.66</td>
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Cohen’s D: small=0.20, medium=0.50, large=0.80
Three Important Methodological Tools

Statistical Mediation Modeling
Minority Stress Model (Meyer, 2003)

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Mental health outcomes

Statistical Mediation Modeling

Sexual Orientation → Explanatory Variables? (Mediators) → Substance Use and Mental Health Outcomes

\[ a \rightarrow \text{Explanatory Variables?} \rightarrow b \]
Why is identifying mediators important?

Why is identifying mediators important?

Multiple Mediator Model

- Sexual Orientation
- Victimization
- Depression
- Family Relationship Problems
- Social Isolation
- Adolescent Suicidal Thoughts
Designing intervention and prevention programs

Intervention program

- School Bullying Education
  - Core beliefs about self-worth
    - Parent education & socialization
    - Relationship & trust building
  - Victimization
    - Depression
    - Family Relationship Problems
    - Social Isolation

- Adolescent Suicidal Behavior
1) Open enrollment design across 4 years of recruitment.
2) 338 youth who were ages 14-19 at baseline (Mean=17)
3) Semi-annual data collection across four years.
4) ~60% African American/Black or Biracial.
Gay-related victimization as a mediator (p<.5)

Understanding via mediation modeling

Understanding via mediation modeling

Stress and negative affect pathway (p<.01)

Sexual Orientation → Gay-related Victimization → Depression → Drug and Alcohol Use

Reasons for hope

Lesbian, Gay, Bisexual, and Transgender Health - Healthy People

HealthyPeople.gov

Lesbian, Gay, Bisexual, and Transgender Health

Overview

Goal
Improve the health, safety, and well-being of lesbian, gay, bisexual, and transgender (LGBT) individuals.

Overview
LGBT individuals encompass all races and ethnicities, religions, and social classes. Sexual orientation and gender identity questions are not asked on most national or State surveys, making it difficult to estimate the number of LGBT individuals and their health needs.

Research suggests that LGBT individuals face health disparities linked to societal stigma, discrimination, and denial of their civil and human rights. Discrimination against LGBT persons has been associated with high rates of psychiatric disorders, substance abuse, and suicide. Experiences of violence and victimization are frequent for LGBT individuals, and have long-lasting effects on the individual and the community. Personal, family, and social acceptance of sexual orientation and gender identity affects the mental health and personal safety of LGBT individuals.
Reasons for hope

NIH FY 2016-2020 Strategic Plan to Advance Research on the Health and Well-being of Sexual and Gender Minorities

NATIONAL INSTITUTES OF HEALTH SEXUAL AND GENDER MINORITY RESEARCH COORDINATING COMMITTEE

NATIONAL INSTITUTES OF HEALTH
Reasons for hope

The Health of Sexual and Gender Minority (SGM) Populations (R01)
Reasons for hope

The Health of Lesbian, Gay, Bisexual, and Transgender People
Building a Foundation for Better Understanding
Reasons for hope
Reasons for hope!

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</tr>
<tr>
<td>78%</td>
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<tr>
<td>55%</td>
<td></td>
<td></td>
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<tr>
<td>33%</td>
<td></td>
<td></td>
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<tr>
<td>12%</td>
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<tr>
<td>10%</td>
<td>12%</td>
<td>72%</td>
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Conclusions

1) Using inclusive measurement tools can identify twice as many SMY, many of whom are at high risk (“Mostly hetero…”).

2) By using repeated measures over time, and individual trajectory modeling across critical developmental stages, we can identify the proper timing for prevention interventions.

3) Using statistical mediation modeling with longitudinal data we can identify potential driving mechanisms of disparities and use this knowledge to inform intervention targets.