Development of LGBT Youth and Related Epidemiology

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SPR 2013 Pre-Conference Workshop:
Synthesis across Multiple, Long-Term Outcomes of Prevention Interventions Delivered Early In Life among Lesbian, Gay, Bisexual and Transgendered Youth
Overview

1. Development of sexual orientation and gender identity

2. Health disparities

3. Major risk and protective factors

4. Example of pooling project for epidemiological research
Development of sexual orientation and gender identity
What is sexual orientation?


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How do you measure sexual orientation?

• Most epidemiological research utilizes a single item measure (often identity or same-sex behavior).

• Multi-item assessments of multiple dimensions (e.g., “Kinsey Scale,” Klein Grid, etc.)

• Biological (e.g., genital psychophysiology, brain activation) and cognitive (e.g., viewing time, IAT) measures.
When does sexual orientation emerge?

• Initial awareness of same-sex attractions at ages 7-12
• Initiation of same-sex activity at ages 13-18
• Self-identifying as LGB at 14-18
• Disclosing sexual orientation to others at 15-19

• More recently collected cohorts are reaching milestones at earlier ages than older cohorts.

• From Mustanski et al., (2013). APA Handbook of Sexuality And Psychology.
What percent of youth are LGB?

<table>
<thead>
<tr>
<th>Country</th>
<th>Attraction</th>
<th>Behavior</th>
<th>Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>United States:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youth(^a)</td>
<td>6%</td>
<td>3%</td>
<td>11%</td>
</tr>
<tr>
<td>Young adults(^b)</td>
<td>13%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Adults(^c)</td>
<td>8%</td>
<td>8%</td>
<td>4%</td>
</tr>
</tbody>
</table>

How much do these dimensions overlap in youth?

Igartua et al., (2009). *J Adol Health*

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**Figure 1.** Venn diagram of students who reported nonheterosexual identity (gay or lesbian, bisexual, unsure), attraction (same gender, both genders), and/or behavior (same gender, both genders) *(n = 237)*. Students with missing data on any of the three items were not included *(n = 57)*.
What percentage of youth are LGB across development?

How stable are these dimensions in youth?

• Among 14-21 year old NYC youth most remained consistent in identity label over 1 year, except 30-40% of bisexual identified youth shifted to gay/lesbian labels (Rosario et al, 2006).

• Ad Health data over 6 years showed youth with a non-heterosexual orientation in any dimension were less likely than exclusively heterosexual youth to remain consistent in their attractions and behavior over time (Savin-Williams & Ream, 2007).

• 10 year longitudinal study of young adult women found relative consistency in sexual attractions, but over 2/3 changed labels and behavior over the course of 10 years, with a small number of young women dropping a lesbian or bisexual label for a heterosexual identity, but far more of them switching between lesbian and bisexual, or shifting to “unlabeled.” (Diamond, 2008).
Stability

Mustanski et al., (2011). IASR
The dimension matters

• Analysis of data from the 2002 National Survey of Family Growth \( (n = 6,356) \) revealed discordant health outcomes for women according to their classification based on sexual orientation identity, attraction, and sex of sex partners (Bauer & Jairam, 2008).

• Similar effect were found in terms of mental health using data from wave 2 of the National Epidemiologic Survey on Alcohol and Related Conditions (Bostwick et al., 2010).
What does transgender mean?

• Transgender is an umbrella term that includes persons whose gender identity, expression, or behavior does not conform to societal gender norms associated with sex at birth.
• May or may not have made physical changes to their body to match their gender identity.
• Prevalence is largely unknown.
• Very little know developmentally or in terms of health disparities among youth.
Health Disparities

• Disparities exist in most areas of adolescent health that have a behavioral, emotional, or stress-related aspect (see YRBS special issue, IOM report, etc).
  – HIV/AIDS and teen pregnancy
  – Substance use
  – Mental health
Diagnoses of HIV Infection among Men Who Have Sex with Men, by Age Group, 2008–2011—United States and 6 Dependent Areas

Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays and missing transmission category, but not for incomplete reporting. Data on men who have sex with men do not include men with HIV infection attributed to male-to-male sexual contact and injection drug use.
Substance use

• According to a meta-analysis, LGB youth have higher odds of substance use (190% higher), particularly bisexual (340%) and females (400%). (Marshal et al., 2008).

• Appear to show higher initial levels of use and sharper patterns of escalation (Marshal et al., 2009).
Suicidality

- School-based, representative samples
- Meta-analysis of 20 studies with 122 effect size estimates. 1 was a non-school based sample (Marshal et al., 2011).

<table>
<thead>
<tr>
<th>Rate of Suicidality (ideation, plan/intent, attempt, attempt with injury)</th>
<th>Males</th>
<th>Females</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gay/Bi/Lesbian</td>
<td>28%</td>
<td>37%</td>
<td>28%</td>
</tr>
<tr>
<td>Heterosexual</td>
<td>17%</td>
<td>23%</td>
<td>12%</td>
</tr>
<tr>
<td>Odds Ratio</td>
<td>Not significantly different</td>
<td></td>
<td>2.92 (2.11–4.03)</td>
</tr>
<tr>
<td>Bisexual</td>
<td></td>
<td></td>
<td>4.92 (2.82–8.59)</td>
</tr>
<tr>
<td>Lesbian/Gay</td>
<td></td>
<td></td>
<td>1.87 (1.35–2.58)</td>
</tr>
</tbody>
</table>
Differences by definition of suicidality

• Disparities in rates of suicidality increased with an increase in the severity of the suicidal behavior:
  – Ideation: OR = 1.96, n = 9
  – Intent/Plan: OR = 2.20, n = 4
  – Attempts: OR = 3.18, n = 14
  – Attempt resulting in injury/medical attention: OR = 4.17, n = 5

• Trend for greater effect for recent attempt rather than lifetime
  – Recent: OR = 3.34
  – Lifetime: OR = 1.92

(Marshal et al., 2011)
Predictors and Mediators

- Victimization, Depression, Hopelessness increased risk of an attempt.
- Family support reduced risk.
- Effects of victimization and support mediated by depression and hopelessness.
Risk and protective factors
Ecodevelopmental drivers

Figure 2. A visual depiction of Bronfenbrenner’s (1979) multi-systemic ecological theory of development, applied to HIV risk and protective factors among YMSM. *Note.* We used this model to structure our review, placing each risk-related variable into one of the categories and discussing each category successively. MSM = men who have sex with men.

From Mustanski et al., 2011, *J Sex Res*
• These health issues tend to cluster together
• Co-occurrence tends to increase risk for adverse health outcomes
• Common social determinants (stigma, bullying)
Macrosystem

• Family support
  – Substance use (Newcomb et al., 2012 *J Stud Alcohol Drug*)
  – Risky sexual behavior and HIV (Beidas et al., 2012 *AIDS Patient Care STDS*; Garofalo et al., 2007 *J Adol Health*)

• Victimization, rejections, microaggressions
• Healthy romantic relationships
• Schools
• Gay community
YRBS pooling project

• Prior population-based studies of LGB youth have often had too few to look at specific groups. Goal was to overcome this issue by pooling across multiple jurisdictions.

• 14 jurisdictions that asked about at least one dimensions of sexual orientation in 2005 and/or 2007.
Issues to consider for YRBS

• How to code sexual orientation dimensions across jurisdictions
  – “During your life, with whom have you had sexual contact?” VERUS “During your life, with whom have you had sexual intercourse?”
  – Not all jurisdictions had all dimensions, most only had one or two (most often identity and behavior).

• How to analyze such data across jurisdictions and years.

See Mustanski et al in AJPH special issue for details.
Questions

• Given developmental changes in prevalence of LGB status and patterns of overlap...
  – How do you best measure sexual orientation in large scale studies of adolescent health? How do you define LGB status?
  – What are the implications of developmental change in prevalence and stability over time for measuring associations with health outcomes?
Remember:
Most LGBT youth are doing well

See http://iheartmysexuality.tumblr.com
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Thank you funders and project staff!

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