Structural Stigma and the Health of Lesbian, Gay, and Bisexual Populations

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LGBT Health Disparities

The Health of Lesbian, Gay, Bisexual, and Transgender People
Building a Foundation for Better Understanding
“Societal-level conditions, cultural norms, and institutional policies and practices that constrain the opportunities, resources, and wellbeing of the stigmatized” (Hatzenbuehler & Link, 2014, p. 1).

“The under-representation of [structural stigma] is a dramatic shortcoming in the literature on stigma, as the processes involved are likely major contributors to unequal outcomes” (Link et al., 2004, p. 315).
Multi-Measure, Multi-Method, Multi-Group, Multi-Outcome Approach to Studying Structural Stigma and Health

- Measures of structural stigma
  - Social policies (Hatzenbuehler et al., 2009; 2010; 2012; 2017)
  - Social attitudes (Hatzenbuehler et al., 2014; in press)
  - Composite indicators (e.g., Pachankis, Hatzenbuehler, et al., 2015)
- Methods
  - Observational designs (Hatzenbuehler et al., 2009; 2017; Pachankis et al., 2015)
  - Quasi-experimental designs (Hatzenbuehler et al., 2010; 2012)
  - Laboratory designs (Hatzenbuehler & McLaughlin, 2014)
- Groups
  - Sexual minorities (Hatzenbuehler et al., 2009; 2010; 2012)
  - Racial minorities (Lukachko, Hatzenbuehler et al., 2009)
  - Ethnic minorities (Hatzenbuehler et al., 2017)
- Health outcomes
  - Psychiatric morbidity, suicide attempts (Hatzenbuehler et al., 2009; 2011)
  - Health behaviors (Hatzenbuehler et al., 2014)
  - Premature mortality (Hatzenbuehler et al., 2014)

Approach #1a:
Capitalize on State-Level Variation in Social Policies Targeting LGB Populations

State-Level Policies and Psychiatric Morbidity In Lesbian, Gay, and Bisexual Populations

Mark L. Hatzenbuehler, MS, MPhil, Katherine M. Keyes, MPH, and Deborah S. Hasin, PhD

Measure of Structural Stigma: State-Level Policies

(1) Hate Crimes
(2) Employment Discrimination
- Red = States with no protective policies
- Blue = States with at least one protective policy

National Epidemiologic Survey on Alcohol and Related Conditions (NESARC)

- Wave 2 (N=34,653)
- Household and group residents
- Face-to-face interviews
- Response rate: 81%
- Oversampling of Blacks, Hispanics, young adults (18-24 yrs)
- DSM-IV diagnoses
- Sexual orientation (1.67% LGB-identified [1.86% men, 1.52% women])
Sexual Orientation Disparity In Psychiatric Morbidity Is Higher In States With Structural Forms Of Stigma

- Covariates: sex, age, race/ethnicity, SES, marital status, perceived discrimination

Addressing Alternative Explanations: Limited Evidence for Social Selection by Health Status

- Minimal sexual orientation differences in geographic mobility in the General Social Survey (2008-2014)
  - Live in same city: 38.1% of sexual minority respondents live in the same city since 16, vs. 39.0% of heterosexuals.
  - Different city, same state: 23.2% of sexual minorities reported moving to a different city in the same state, vs. 23.2% of heterosexuals.
  - Different state: 38.7% of sexual minorities have moved to a different state, vs. 36.2% of heterosexuals.

- Relation to health:
  - Among those in fair/poor health, sexual minorities are more likely to have moved out of state than heterosexuals (43% vs. 37%), the opposite of what the selection hypothesis would predict.
  - Suggests results are robust to selection effects regarding mobility
Approach #1b: Capitalize on County-Level Variation in Social Policies Targeting LGB Populations

Inclusive Anti-bullying Policies and Reduced Risk of Suicide Attempts in Lesbian and Gay Youth
Mark L. Hatzenbuehler, Ph.D. and Katherine M. Keyes, Ph.D.

Original article

Proportion of school districts with anti-bullying policies that were inclusive of sexual orientation in 34 Oregon counties
Oregon Healthy Teens (OHT) Study

- Linked ecologic data on inclusive anti-bullying policies at the county level to individual health outcomes among lesbian and gay youth living in these counties

- Health and sexual orientation data from OHT study
  - Annual surveys to over 1/3 of Oregon’s 11th grade public school students
  - Modeled on Youth Risk Behavior Surveillance studies from CDC
  - N=31,852 11th grade students (2006-2008)
  - N=301 lesbian and gay respondents
  - Outcome measure: any suicide attempt in the past year (Brener et al., 1995; 2002)

Highest Risk of Suicide Attempts in Counties with Lowest Proportion of School Districts with Inclusive Anti-Bullying Policies (Lesbian and Gay Youth)

OR=2.25, 95%CI=1.13, 4.49  Hatzenbuehler & Keyes, (2013), J Adolesc Health
Approach #2a:
Capitalize on Rapidly Changing Policy Environment to Conduct Natural Experiments

The Impact of Institutional Discrimination on Psychiatric Disorders in Lesbian, Gay, and Bisexual Populations: A Prospective Study

Mark L. Hetzenbuehler, MS, MPhil, Katie A. McLaughlin, PhD, Katherine M. Keyes, MPH, and Deborah S. Hasin, PhD

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Constitutional Amendments Banning Same-Sex Marriage (2004)

- Red = States passing constitutional amendments
- Blue = States not passing constitutional amendments

NESARC (2001-2005)
LGB Adults Living in States that Banned Same-Sex Marriage Experienced Increase in Mood Disorders

- AOR = 1.67 (95% C.I. 1.01, 2.77)
- AOR = 0.69 (95% C.I., 0.47, 1.01)

Covariates: sex, age, race/ethnicity, SES, marital status

Effect of Marriage Bans Specific to LGB Adults

- AOR = 1.67 (95% C.I. 1.01, 2.77)
- AOR = 1.03 (95% C.I. 0.93, 1.15)

Covariates: sex, age, race/ethnicity, SES, marital status
Approach #2b: Repeated Cross-Sectional Panel Data with State Fixed Effects

**JAMA Pediatrics | Original Investigation**

Difference-in-Differences Analysis of the Association Between State Same-Sex Marriage Policies and Adolescent Suicide Attempts

Julia Raffman, ScD; Ellen Mosco, MA; S. Bryn Austin, ScD; Margaret McConnell, PhD

Approach #3: Capitalize on Unique Population-Level Reductions in Structural Stigma

Societal-Level Explanations for Reductions in Sexual Orientation Mental Health Disparities: Results From a Ten-Year, Population-Based Study in Sweden

Mark L. Hatzenbuehler  
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Richard Bränström  
Karolinska Institutet  

John E. Pachankis  
Yale School of Public Health
Structural Stigma in Sweden: Laws

- 1999: Discrimination in employment based on sexual orientation is made illegal.
- 2003: Adoption by same-sex couples is made legal.
- 2005: Access to artificial insemination is granted to lesbian couples.
- 2006: Discrimination based on sexual orientation is banned in the Swedish Constitution.
- 2008: Protections based on sexual orientation are added to hate crime and hate speech laws.
- 2008: Protections based on gender identity/expression are added to anti-discrimination laws.
- 2009: Same-sex marriage is legalized.

Structural Stigma in Sweden: Attitudes

Percent agreeing or strongly agreeing: "Gays and lesbians should be free to live life as they wish."

Graph showing the percent agreeing or strongly agreeing from 2002 to 2014.
Data Source

Swedish National Public Health Survey (2005-2015)

- In 2005, 2010, and 2015, population-based health surveys were collected of the general population of Sweden, ages 16-84 (N=24,819; N=675 LGB)
  - Proportion of respondents endorsing LGB identity remained stable over the ten-year period (men: 2.1-2.3%; women: 2.2-2.9%)

Reduction in Sexual Orientation Disparity in Psychological Distress Following Declines in Structural Stigma

*Interaction between year and sexual orientation: Wald $\chi^2=11.14; p<0.01$. Covariates: Age, income, country of birth, relationship status, urbanicity.

2005: AOR=2.78 (1.48, 5.24)  
2015: AOR=0.77 (0.39, 1.52)
Approach #4: Laboratory Designs to Test Potential Mechanisms Linking Structural Stigma and Health

Structural Stigma and Hypothalamic–Pituitary–Adrenocortical Axis Reactivity in Lesbian, Gay, and Bisexual Young Adults

Mark L. Hatzenbuehler, Ph.D. • Katie A. McLaughlin, Ph.D.

Participants

- 74 LGB young adults from 24 states
- Age: $M=23.68$, $SD=4.12$
- 54% female
- 57% lesbian/gay
- 60% non-White
- Told purpose of study was to “understand connections between daily experiences, your bodily activity, and health”
Structural Stigma Measure

- Density of same-sex partner households (Census)
- Proportion of GSAs in public high schools (GLSEN)
- 5 state-level policies (e.g., hate crimes, ENDA, same-sex marriage)
- Composite index of attitudes from 41 national opinion polls (Lax & Phillips, 2009)
- Factor Analysis (loadings range from .79 to .97)

- Lower scores (lighter blue) indicate higher structural stigma
- Ranges from low of -4.46 (Mississippi) to 7.90 (Massachusetts)

Procedure

- **Trier Social Stress Test** (Kirschbaum et al., 1993)
  - 5-minute speech (identity-relevant topic) in front of 2 evaluators (confederates), followed by 5-minute math task
  - Collect neuroendocrine samples (cortisol) before, during, and after speech and math tasks
Structural Stigma Associated with Blunted Cortisol Reactivity to Trier Social Stress Test

- Blunted cortisol response also observed in:
  - Youths exposed to extreme life stressors (e.g., childhood maltreatment; Carpenter et al., 2007)
  - Individuals with PTSD and other forms of severe trauma (e.g., Yehuda et al., 2000)
- Stress of growing up in high structural stigma environments may exert biological consequences that are similar to other chronic life stressors

Cortisol Area Under Curve (AUC) for low structural stigma: adjusted $M=124.68$
Cortisol AUC for high structural stigma: adjusted $M=62.68$
Covariates: sex, age, race, waking time, smoking, exercise, caffeine use, perceived stigma

A Note on Establishing Causal Inferences Regarding the Structural Stigma-Health Relationship

- Triangulating evidence across multiple methods, measures, outcomes, and independent research teams
- Documenting specificity of findings to the stigmatized group (i.e., LGBT populations) and not the non-stigmatized group
- Controlling for potential individual- and structural-level confounders to rule out spurious associations
- Conducting falsification tests to show structural stigma does not predict outcomes it shouldn’t theoretically influence
- Addressing plausible alternative explanations (e.g., differential mobility by health status)
Future Directions for Structural Stigma and LGBT Health Disparities among Youth

Advancing Research on Structural Stigma and Sexual Orientation Disparities in Mental Health Among Youth

Mark L. Hatzenbuehler

Structural Stigma: Research Evidence and Implications for Psychological Science

Mark L. Hatzenbuehler
Columbia University

Future Directions for Structural Stigma and LGBT Health Disparities among Youth

• Test generalizability of structural stigma to transgender youth

Individual- and Structural-Level Risk Factors for Suicide Attempts among Transgender Adults

Amaya Perez-Brumer, MSc1, Mark L. Hatzenbuehler, PhD1, Catherine E. Oldenburg, MPH2, and Walter Bockting, PhD3,4

Behav Med. 2015; 41(3): 164–171
Future Directions for Structural Stigma and LGBT Health Disparities among Youth

• Adopt a life-course approach to the study of structural stigma

Structural Stigma and Cigarette Smoking in a Prospective Cohort Study of Sexual Minority and Heterosexual Youth

Mark L. Hatzenbuehler, Ph.D. • Hee-Jin Jun, Sc.D. • Heather L. Corliss, M.P.H., Ph.D. • S. Bryn Austin, Sc.D.

Future Directions for Structural Stigma and LGBT Health Disparities among Youth

• Develop and validate new measures of structural stigma

Neighborhood-Level LGBT Hate Crimes and Bullying Among Sexual Minority Youths: A Geospatial Analysis

Mark L. Hatzenbuehler, PhD
Dustin Duncan, ScD
Renee Johnson, PhD

Religious Climate and Health Risk Behaviors in Sexual Minority Youths: A Population-Based Study

Mark L. Hatzenbuehler, PhD, John E. Pachankis, PhD, and Joshua Wolff, PhD

Protective School Climates and Reduced Risk for Suicide Ideation in Sexual Minority Youths

Mark L. Hatzenbuehler, PhD, Michele Birke, PhD, Aimee Van Wagenen, PhD, and Ian H. Meyer, PhD
Future Directions for Structural Stigma and LGBT Health Disparities among Youth

- Examine structural stigma within the context of intersectionality

Anti-LGBT and Anti-immigrant Structural Stigma: An Intersectional Analysis of Sexual Minority Men’s HIV Risk When Migrating to or Within Europe

John E. Pachankis, PhD,* Mark L. Hatzenbuehler, PhD,† Rigmor C. Berg, PhD,‡ Percy Fernández-Dávila, PhD,§ Massimo Mirandola, PhD,|| Ulrich Marcus, MD,¶ Peter Weatherburn, MSc,|| and Axel J. Schmidt, MD||**

Future Directions for Structural Stigma and LGBT Health Disparities among Youth

- Evaluate whether structural stigma impairs efficacy of psychological interventions aimed at improving mental health of LGBT populations

[Graph showing the relationship between Whites’ community-level attitudes toward African Americans and standardized mean difference for condom use.]

Reid et al., 2014
Conclusions (I):
Structural Stigma as a Risk Indicator for Poor Health

- Structural State Policies, Institutional Practices
- Interpersonal Abuse, Rejection, Discrimination
- Individual Self-Stigma, Disclosure

Conclusions (II):
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Conclusions (III):
Using Research on Structural Stigma to Inform Public Policies

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