

# Overview of New Contextual Database for Studying Associations between Structural Heterosexism and Sexual Minority Disparities

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# The Contextual Heterosexism Database Team





Thank you to graduate students:

Ryan Bogle, Lisa Carlson, Chris Julian  
and Barbara Prince



# Presentation Aims

1. Production of the Contextual Heterosexism Database (CHD)
2. Content of the CHD
3. User Guide
4. Data issues
5. Future databases

# Importance of Structural Discrimination

- Extensive research on differentials in the health and well-being of individuals based on their sexual orientation and gender identities (SOGI), much of which is based on Add Health.
- Growing recognition of the importance of structural discrimination and calls for the collection of data on at multiple levels (e.g., Homan, Everett, & Brown forthcoming; Hatzenbeuhler, Lattanner, McKetta, Pachankis, 2024 ).

# Importance of Structural Discrimination

- Essential ingredients in Add Health to examine the effects of structural heterosexism (or stigma) on sexual diverse populations
  - Inclusion of respondents who identify as heterosexual
  - Measures of orientation (attraction, identity and behavior) across all waves.
  - Coverage of multiple states, cities/counties, or neighborhoods
  - Formal mechanism for appending contextual data (ancillary studies)

# Production of the CHD

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# Pathway to R01 Funding

- Presented and published **papers** using existing variables in Add Health (e.g., same-sex concentration of tract and Republican voting in county)
- Awarded a **Seed Grant** from the CFDR to fund ancillary study appending state-level policy variables to Waves 3 and 4 (2014)
- Awarded a **BGSU Building Strengths grant** to write an NIH grant application (2018)
- Obtained **Valuable Feedback**
  - CFDR Grant Working Group (2019)
  - UNC scholars (e.g., consultants)
- Submitted **R15 application** (discussed in 2019 but not funded)
- Met with a **program officer** and discussed specific aims page for an R01 (2020)



# Pathway to R01 Funding

- **New application** submitted in 2020 (impact score: 27; percentile: 11)
  - Revised application in response to comments on R15 application
  - Obtained letters of support
  - Updated citations and number of contracts for our pilot data
  - Discussed score with program officer
  - Drafted a response to reviewer concerns for upcoming Council Meeting

# Pathway to R01 Funding

- **Revised application** submitted in 2021 (impact score: 14; percentile: 3)
  - Revised the application in response to reviewer concerns
  - Proposed an advisory board
  - Obtained letter of support from the Director of Add Health
  - Updated citations and number of contracts for our pilot data
  - Changed phrases throughout (e.g., sexual minorities to sexual minority individuals)

# Indicators of Pent-up Demand

- Over 100 contracts for our pilot database as of 2021
- Add Health studies using contextual factors to study SGM populations
  - (Everett and Agénor. 2023) ← state-level data to assess maternal hypertension
  - (Everett et al. 2022) ← state and tract-level data to assess birth outcomes
  - (Levine 2022) ← county-level data to assess migration
  - (Wienke 2021) ← tract-level data to assess mental health
  - (Prince et al. 2019) ← county and tract-level data to assess union formation
  - (Mollborn and Everett 2015) ← tract-level data to assess educational attainment
  - (Wilkinson and Pearson 2015) ← MSA-level urbanicity data to assess postsecondary education outcomes
  - (Everett 2014) ← county and block-level data to assess depression

# Production of the CHD

- Consulted with members of our advisory team, consultants, and the Director of Add Health on multiple occasions to ensure we had the best measures
- Assembled a research team to curate key measures
- Generated and evaluated measures
- Worked with the staff at Add Health to check and append variables
- Created User Guides with careful documentation of variables across ancillary databases
- Next steps:
  - Checking the variables at BGSU and UTSA
  - Releasing the variables

# Advisory Team

Carolyn Halpern, University of North Carolina (consultant on R01)

Kathleen Harris, University of North Carolina (consultant in R01)

Lauren Gaydos, University of Texas - Austin

Taylor Hargrove, University of North Carolina

Madina Agénor, Brown University

Christopher Carpenter, Vanderbilt University

Special thanks to Bob Hummer, Caroline Jackson, and Brian Frizzelle – University of North Carolina

# Content of the CHD

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# Content of the CHD

- Measures of:
  - Social climate
  - Legal climate
  - Income inequality
  - Confounding variables
- Different levels of geography:
  - Tract
  - County
  - State
  - City



# Our Journey – SEEKING MEASURES

- MAP vs HRC
  - MAP produces more robust measures at the state level (SO/GI Tallies)
  - HRC produces more robust measures at the city level (Municipal Equality Index)
- Attitude Measures
  - Project Implicit (Harvard) includes attitudinal data – convenience sampled
  - Cooperative Election Study includes attitudinal data – only election years
- Census Data

# Verification of State-Level Measures

- Exploration of dimensionality of variables in PCA
- Creation of scales
- Association of scales with outcomes in multiple data sets
  - BRFSS & HPS (mental health)
  - ACS (interstate migration)

# Measures

## 1. Policies

- a. Movement Advancement Project (MAP) Overall Policy Tallies
- b. Year of Adoption by Policy Type (from MAP)
  - i. Adoption legislation
  - ii. Employment anti-discrimination
  - iii. Hate crime protection
  - iv. Housing anti-discrimination
  - v. Public accommodation anti-discrimination
  - vi. Same-sex union recognition
- c. Municipal Equality Index (from HRC) available in CHD-II

# Measures

## 1. Social Climate

- a. Proportion approving LGB policies
- b. Proportion voting for republican presidential candidate
- c. Religious conservatism
- d. *Sexual minority concentrations*
- e. **Implicit bias (from Harvard's IAT database) available in CHD-II**

# Measures

## 1. Income Inequality

- a. Household income by sex composition of couple

# Measures

1. Variables associated with health and well-being
  - a. Gini index
  - b. *Population size/density/classification*
  - c. *Proportion owner-occupied housing units*
  - d. *Socioeconomic status (SES) scale (5 variables)*

# User Guide

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# User Guide

Collate relevant measures in one spot – mushrooming of contextual indicators

Clear documentation of all sources

- Subject Index
- Source Descriptions
- Variable Naming Conventions
- Data Dictionary

# Subject Index

Lists the various topics/scales measured by the variables contained in the CHD as well as other Add Health Ancillary Studies (dependent upon topic and/or wave).

# Subject Index

CHD & Other Add Health Ancillary Study Crosswalk

SUBTOPICS	ANCILLARY STUDIES NEEDED		
	W3	W4	W5
<b>Policies</b>	<ul style="list-style-type: none"> <li>• <b>Contextual Heterosexism Database I</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Contextual Heterosexism Database I &amp; II</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Contextual Heterosexism Database I &amp; II</b></li> </ul>
<b>Social climate</b>	<ul style="list-style-type: none"> <li>• <b>Contextual Heterosexism Database I</b></li> <li>• Wave III Contextual Data</li> <li>• Wave I, II, III Political Context Data</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Contextual Heterosexism Database I &amp; II</b></li> <li>• Contextual Wave IV Database,</li> <li>• Wave IV Supplemental Tract-Level Contextual Data</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Contextual Heterosexism Database I &amp; II</b></li> <li>• Contextual Wave V Database</li> </ul>
<b>Income inequality</b>		<ul style="list-style-type: none"> <li>• <b>Contextual Heterosexism Database I</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Contextual Heterosexism Database I</b></li> </ul>
<b>Confounders</b>	<ul style="list-style-type: none"> <li>• Wave III Contextual Data</li> </ul>	<ul style="list-style-type: none"> <li>• Contextual Wave IV Database,</li> <li>• Wave IV Supplemental Tract-Level Contextual Data</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Contextual Heterosexism Database I</b></li> <li>• Contextual Wave V Database</li> </ul>

# Source Descriptions

- American Community Survey
- Decennial Census
- Harvard's Cooperative Election Study (CCES)
- Lax & Phillips
- Movement Advancement Project (MAP)
- MIT Election Lab
- PRRI American Values Atlas
- U.S. Religion Census - Religious Congregations and Membership Study, 2000 & 2010

# Variable Naming Structure

Maintained consistency across the other Add Health ancillary projects.

Summary level <i>1<sup>st</sup> character</i>	Data source <i>2<sup>nd</sup> &amp; 3<sup>rd</sup> characters</i>	Wave <i>4<sup>th</sup> character</i>	Variable number <i>5<sup>th</sup> – 7<sup>th</sup> characters</i>
<b>T = Tract</b>	AC = American Community Survey 5-Year Estimates	3 = Wave III	001 – 008
<b>C = County</b>	CC = CES	4 = Wave IV	
<b>S = State</b>	LP = Lax & Phillips	5 = Wave V	
	MP = Movement Advancement Project (MAP)		
	MT = MIT Election Data		
	PR = PRRI America Values Atlas		
	RC = U.S. Religion Census - Religious Congregations and Membership Study		
	SF = Census of Population and Housing, 2000: Summary File 3		

# Data Dictionary

List of all the variables comprising the CHD organized by data source.

- Name
- Description – including policy type when applicable
- Formula – when applicable

# Data Dictionary

Variables Based on Census and ACS  
Five-Year Estimates – Sexual Minority  
Concentrations

Name	Description	Formula
<b>S/C/T SF3001</b>	Proportion of household headed by male couples of the same sex among all households	pct001003/pct001001
<b>S/C/T AC4001</b>	Proportion of household headed by male couples of the same sex among all households	b11009_003e/b11009_001e
<b>S/C/T AC4001</b>	Proportion of household headed by male couples of the same sex among all households	b11009_003e/b11009_001e
<b>S/C/T SF3002</b>	Proportion of household headed by female couples of the same sex among all households	pct001005/pct001001
<b>S/C/T AC4002</b>	Proportion of household headed by female couples of the same sex among all households	b11009_005e/b11009_001e
<b>S/C/T AC4002</b>	Proportion of household headed by female couples of the same sex among all households	b11009_005e/b11009_001e



# Data Dictionary

Variables Measuring Policies Based on MAP (Policy Years and Tallies of Policies)

Name	Description
<b>SMAP3001</b>	
<b>SMAP4001</b>	Year state adopted employment anti-discrimination law(s)/statute(s)
<b>SMAP5001</b>	
<b>SMAP3002</b>	
<b>SMAP4002</b>	Year state adopted public accommodation anti-discrimination law(s)/statute(s)
<b>SMAP5002</b>	
<b>SMAP3003</b>	
<b>SMAP4003</b>	Year state adopted housing anti-discrimination law(s)/statute(s)
<b>SMAP5003</b>	
<b>SMAP3004</b>	
<b>SMAP4004</b>	Year state adopted hate crime protection law(s)/statute(s)
<b>SMAP5004</b>	
<b>SMAP3005</b>	
<b>SMAP4005</b>	Year state adopted marriage/civil union protection law(s)/statute(s)
<b>SMAP5005</b>	
<b>SMAP3006</b>	
<b>SMAP4006</b>	Year state adopted adoption protection law(s)/statute(s)
<b>SMAP5006</b>	
<b>SMAP5007</b>	MAP SOGI Tallies
<b>SMAP5008</b>	MAP SO Tallies

# Data Dictionary

Variables Measuring Proportion of Population Approving of LGB Policies

Name	Policy Type	Description	Source
<b>SLP4001</b>	Second-parent adoption	Opinion estimates via multilevel regression and poststratification of data from 1999-2008	Lax & Phillips, 2009 *
<b>SLP4002</b>	Hate crimes		
<b>SLP4003</b>	Health benefits		
<b>SLP4004</b>	Housing		
<b>SLP4005</b>	Jobs		
<b>SLP4006</b>	Sodomy		
<b>SLP4007</b>	Civil Unions		
<b>SLP4008</b>	Marriage <sup>§</sup>		
<b>SCC4001</b>	Marriage <sup>§</sup>	Two-year mean share of population approving, 2006 & 2008	CCES
<b>SPR5001</b>	Marriage <sup>§</sup>	Proportion approving, 2015	PRRI
<b>SCC5001</b>	Marriage <sup>§</sup>	Two-year mean share of population approving, 2014 & 2016	CCES
<b>SPR5002</b>	LGBTQ Nondiscrimination laws	Proportion approving, 2015	PRRI
<b>SPR5003</b>	Religious-based refusals to serve	Proportion approving, 2015	PRRI

\* Opinion estimates were taken directly from Table 1 (Lax & Phillips, 2009). See the [Data Source description](#) in the User Guide for more details.

<sup>§</sup> Regarding marriage, there are multiple sources for measuring the proportion of a population approving of policies/laws supporting marriage among couples of the same-sex.

# Variable Naming Structure – Phase II

Maintained consistency across the other Add Health ancillary projects.

Summary level <i>1<sup>st</sup> character</i>	Data source <i>2<sup>nd</sup> &amp; 3<sup>rd</sup> characters</i>	Wave <i>4<sup>th</sup> character</i>	Variable number <i>5<sup>th</sup> – 7<sup>th</sup> characters</i>
<b>S = State</b>	IA = Harvard’s IAT Database	4 = Wave IV 5 = Wave V	001 – 006
Variable Type <i>1<sup>st</sup> character</i>	Data source <i>2<sup>nd</sup> &amp; 3<sup>rd</sup> characters</i>	Wave <i>4<sup>th</sup> character</i>	Variable number <i>5<sup>th</sup> – 7<sup>th</sup> characters</i>
<b>P = Proximity to Geocoded Residence</b> <b>M = City-Level MEI Score</b>	ME = HRC’s Municipal Equality Index	4 = Wave IV 5 = Wave V	001-003

# Data Dictionary

Variables Measuring Attitudes and  
Implicit Associations Test Results

\*All variables retrieved from  
Harvard's Project Implicit Database

Name	Wave	Description
<b>SIA4001</b>	4	Average sexuality implicit associations test result
<b>SIA5001</b>	5	
<b>SIA4001</b>	4	Average self-reported attitude toward gays and lesbians
<b>SIA5002</b>	5	
<b>SIA4003</b>	4	Proportion approving of same-sex relations
<b>SIA5003</b>	5	
<b>SIA4004</b>	4	Proportion approving of same-sex marriage
<b>SIA5004</b>	5	
<b>SIA5005</b>	5	Proportion approving of same-sex adoption
<b>SIA5006</b>	5	Proportion approving of refusals to serve same-sex couples

# Data Dictionary

Variables Measuring City-Level LGBT Policies

\*All variables retrieved from Human Rights Campaign's Municipal Equality Indices

Name	Wave	Description
<b>PME5001</b>	5	Proximity of respondent geocoded residence to nearest MEI-scored city
<b>MME5002</b>	5	MEI Regular Score (without bonus points)
<b>MME5003</b>	5	MEI Final Score (with bonus points)

# Issues to be Aware of

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# Opportunities and Challenges

- Our ancillary study complements others, permitting analyses of structural intersectionality.
- Studying intersectionality is challenging due to small sample sizes.
- The data structure must be transformed to explore the dimensionality of measures at different levels.
- Multilevel models require an adjustment for design effects.
- Our measures are worth exploring for other groups, not just SOGI populations (e.g., religious conservatism at the state and county levels).
- The growing numbers of contextual datasets make it difficult to find variables and replicate analyses, unless you provide citations to specific User Guides.

# Future Databases

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# New Add Health Databases

- Contextual heterosexism database for the SOGI-SES and Wave 6
- Exposome – environmental exposures impact biology and health (Hummer et al. U01)
  - Wave 6 Environmental determinants: Structural racism, structural sexism, structural heterosexism, structural xenophobia, and health inequality
  - Natural, physical, and chemical environmental exposures Wave I through Wave VI.
- External Causes of Death: Policy, Availability, and Population Health (Gaydos et al.)
- Biological Data and Vital Events (Whitsel)
- Genetic Datasets (Levitt)

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## IPUMS CONTEXTUAL DETERMINANTS OF HEALTH

The **Contextual Determinants of Health (CDOH)** provides access to measures of disparities, policies, and counts, by state and county, for historically marginalized populations in the United States, including Black, Asian, Hispanic/Latina/o/e/x, LGBTQ+ persons and women.

To find out more information about the measures or to download data files, please visit the [Download Data and Documentation page](#).

## CDOH NEWS

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# Contextual Determinants of Health (CDOH)

## SUPPORTED BY



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# Thank you!

Please share your research and reach out with any questions/comments.

