

Global LGBTQ Health

Sel J. Hwahng  
Michelle R. Kaufman *Editors*

# Global LGBTQ Health

Research, Policy, Practice, and Pathways

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# **Global LGBTQ Health**

## **Series Editor**

Sel J. Hwahng, Department of Women's and Gender Studies  
Towson University  
Towson, MD, USA

In general, global health is viewed as a pressing topic within public health, which is aligned with the increasing globalization of scientific and academic inquiry and practice. Over the last few decades there has also been increasing awareness of the importance in recognizing and identifying LGBTQ health issues and disparities. However, there is a dearth of research and scholarship that examines LGBTQ health through global and comparative perspectives. This book series fills this gap by examining LGBTQ health cross-culturally and comparatively across regional and country contexts.

The aims of the *Global LGBTQ Health* book series are the following: 1) to examine and discuss LGBTQ health cross-culturally and comparatively; 2) to examine and discuss LGBTQ health across regional and country contexts; 3) to provide socio-political-cultural contexts for LGBTQ health in specific countries and/or regions; 4) to facilitate greater socio-political-cultural awareness, sensitivity, and competence with regards to the health of LGBTQ populations; 5) to identify cross-cutting global LGBTQ health disparities and issues; 6) to identify LGBTQ health disparities and issues that are the most pressing within specific regional and country contexts; and 7) to provide directives and recommendations for increasing health-related capacities of agencies, organizations, and institutions across countries and/or regions.

Some volumes will focus on global-level analyses, while other volumes may focus on comparative analyses within specific geographic regions.

Sel J. Hwahng • Michelle R. Kaufman  
Editors

# Global LGBTQ Health

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FLORIDA STATE UNIVERSITY  
Center of Population Sciences for Health Equity

*Editors*

Sel J. Hwahng  
Department of Women's  
and Gender Studies  
Towson University  
Towson, MD, USA

Michelle R. Kaufman  
Department of Health, Behavior & Society  
and Department of International Health  
Johns Hopkins University  
Bloomberg School of Public Health  
Baltimore, MD, USA



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## About the Editors



**Sel J. Hwahng, PhD** (they/them/their), is assistant professor in the Department of Women’s and Gender Studies, Health and Sexuality track at Towson University. They are also pursuing an ScM degree in Cardiovascular Epidemiology at Johns Hopkins University, Bloomberg School of Public Health. Their current research focuses on women of color and LGBTQ nutritional and cardiometabolic health disparities utilizing social, behavioral, and epidemiological methods. They also lead an ontological-based leadership course at higher education institutions. They are a recipient of grants, awards, and fellowships from organizations/institutions such as the National Institute on Drug Abuse, National Institutes of Health, American Public Health Association, International AIDS Society, Association for Women in Psychology, and American Heart Association. Publications include over 30 articles and book chapters in peer-reviewed journals and edited volumes. Dr. Hwahng is also editor of the book series *Global LGBTQ Health* in which this volume is featured.

Photo credit: Dr. Raju Bhandari



**Michelle R. Kaufman, PhD** (she/her/hers), is associate professor in the Department of Health, Behavior and Society and the Department of International Health at the Bloomberg School of Public Health, Johns Hopkins University in Baltimore, Maryland, USA. She is a social psychologist by training. Dr. Kaufman's research focuses on the social determinants of health, particularly the role of gender and sexual identity. She has spent over 20 years studying sex, gender, and sexuality as predictors of health disparities in more than 12 countries using mixed and interdisciplinary research methods. Her work is focused primarily in low- and middle-income settings and has been funded by the NIH, USAID, CDC, Fulbright, Gates Foundation, and Bloomberg Philanthropies. Currently she leads the Data for Health Gender Equity Unit, an initiative focused on improving health data systems in 40+ low- and middle-income countries to ensure people of all genders are counted in health data.

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# Contributors

**Eunice M. Areba** School of Nursing, University of Minnesota, Minneapolis, MN, USA

**Stefan Baral** Department of Epidemiology, Division of Infectious Disease Epidemiology, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, USA

**S. Wilson Beckham** Department of Health, Behavior and Society, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, USA

**Katie Biello** Department of Behavioral and Social Sciences, School of Public Health, Brown University, Providence, RI, USA

**Nova Bradford** Health Policy, School of Medicine, Stanford University, Stanford, CA, USA

**Richard Bränström** Department of Clinical Neuroscience, Karolinska Institute, Stockholm, Sweden

**Valerie A. Earnshaw** Human Development and Family Sciences, University of Delaware, Newark, DE, USA

**Jennifer Glick** Department of Health, Behavior and Society, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, USA

**Bennett J. Gosiker** Kaiser Permanente Bernard J. Tyson School of Medicine, Pasadena, CA, USA

**Tonda L. Hughes** Department of Psychiatry, School of Nursing, Columbia University, New York, NY, USA

**Jackie White Hughto** Departments of Behavioral and Social Sciences and Epidemiology, School of Public Health, Brown University, Providence, RI, USA

**Sel J. Hwahng** Department of Women's and Gender Studies, Towson University, Towson, MD, USA

**Harry Jin** Department of Epidemiology, School of Public Health, Brown University, Providence, RI, USA

**Adeeba Kamarulzaman** Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

**Michelle R. Kaufman** Department of Health, Behavior and Society and Department of International Health, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, USA

**Lynn Klasko-Foster** Department of Psychiatry and Human Behavior, Warren Alpert Medical School, Brown University, Providence, RI, USA

**Chichun Lin** Master of Marriage and Family Therapy Program, Faculty of Education, The University of Winnipeg, Winnipeg, Manitoba, Canada

**Carmen Logie** Factor-Inwentash Faculty of Social Work, University of Toronto, Toronto, ON, Canada

**Jowanna Malone** Exponent, Inc., Washington, D.C., USA

**Jane A. McElroy** Department of Family & Community Medicine, School of Medicine, University of Missouri, Columbia, MO, USA

**Katy Miller** Children's Minnesota, Minneapolis, MN, USA

**Matthew J. Mimiaga** UCLA Center for LGBTQ+ Advocacy, Research & Health, Department of Epidemiology, UCLA Fielding School of Public Health, Los Angeles, CA, USA

**John E. Pachankis** Department of Social and Behavioral Sciences, School of Public Health, Yale University, New Haven, CT, USA

**Ashleigh J. Rich** Center for Health Equity Research, University of North Carolina, Chapel Hill, NC, USA

**G. Nic Rider** Department of Family Medicine and Community Health, University of Minnesota, Minneapolis, MN, USA

**Christopher Santostefano** Center for Gerontology and Healthcare Research, School of Public Health, Brown University, Providence, RI, USA

**Jeffrey A. Wickersham** Department of Internal Medicine, School of Medicine, Yale University, New Haven, CT, USA

**Andrea Wirtz** Department of Epidemiology, Johns Hopkins University, Baltimore, MD, USA

**Taryn Wyron** Reconstructionist Rabbinical College, PA, USA

**Casey D. Xavier Hall** College of Nursing, Florida State University, Tallahassee, FL, USA

# Chapter 1

## Introduction



Sel J. Hwahng and Michelle R. Kaufman

### 1.1 Why Global LGBTQ Health?

This edited volume seeks to excavate a new field focusing on global LGBTQ health. Why is there a need for this? This question can be answered in several ways. First, there have been a number of edited volumes that have focused mostly on LGBTQ health in the United States, North America, and/or the Global North (Eckstrand & Potter, 2017; Follins & Lassiter, 2016; Makadon et al., 2015; Meyer & Northridge, 2007; Ruth & Santacruz, 2017; Stall et al., 2020). There have also been active LGBTQ health research initiatives in various regions of the world, although a vast majority of this research has been focused on HIV risk among MSM (men who have sex with men) and, more recently, on transgender women (albeit transgender women are often problematically subsumed within the MSM category). Such research has often been siloed within the country or region where the research occurred. These US/Global North-focused edited volumes and the HIV in MSM research conducted in various regions of the world have been highly influential in raising the importance and visibility of LGBTQ health. Given this previous work, it seems that one of the next progressions in advancing LGBTQ health is to examine LGBTQ health from a global perspective, including emphasizing Global South issues, research, and concerns.

Thus, we present this interdisciplinary edited volume as an acknowledgment of prior research that has been conducted on LGBTQ health within various regions of the world and to impact the formation of a new field that focuses on global LGBTQ

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S. J. Hwahng (✉)

Department of Women's and Gender Studies, Towson University, Towson, MD, USA  
e-mail: [shwahng1@jhmi.edu](mailto:shwahng1@jhmi.edu)

M. R. Kaufman

Department of Health, Behavior and Society and Department of International Health,  
Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, USA  
e-mail: [michellekaufman@jhu.edu](mailto:michellekaufman@jhu.edu)

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health. This was accomplished through the integration of research findings that either focused on specific contexts and factors that impacted health or on the health outcomes themselves.

## 1.2 Genesis of This Book

Sel first got involved in public health research in 2004 focusing on HIV and drug use in behavioral science. In 2005, Sel also started teaching as an adjunct professor at the Center for the Study of Ethnicity and Race at Columbia University and, in 2007, developed and taught a course entitled “Transnational Trans/gender-variant Social Formations,” in which the examination of public health was a key component of this course. Sel would go on to teach this course or variations of this course multiple times. Several years later, Sel served as Program Chair-elect and Program Chair of the LGBT Caucus of the American Public Health Association from 2012 to 2016, which provided many opportunities for Sel to program and support the dissemination of emerging research findings on LGBTQ health.

Informed by Sel’s research, teaching, and administrative experiences, this book was first conceived by Sel who was awarded a contract for a book series on global LGBTQ health by Springer Nature in early 2018. Around this same time, Sel decided to pursue a master’s degree in epidemiology and applied to several programs, including the Sc.M. program in epidemiology at Johns Hopkins University, Bloomberg School of Public Health (“JHU BSPH”). While visiting JHU BSPH during an “Admitted Students Day,” Sel came across a flyer for a course being taught by Michelle Kaufman on “Global LGBTQ Health” through the Department of Health, Behavior and Society (“HBS”) at JHU BSPH. This seemed to be a fortuitous and exciting coincidence. Although Sel was aware of courses being taught on US-focused LGBTQ health at several institutions, this was the first time Sel had come across a course focused on global LGBTQ health.

As it turns out, Sel did choose to pursue their degree in epidemiology at JHU BSPH, and soon after starting their program in 2018, contacted Michelle Kaufman who was then an Assistant Professor in HBS (and now an Associate Professor in HBS and International Health). In addition to the course she taught, Michelle had research expertise in gender and sexuality as social determinants of health. She had studied these issues, including sexual and gender minority populations, in several global contexts, particularly in the Global South. Together, Sel and Michelle assembled the proposal for this edited volume, which was subsequently accepted by Springer Nature in 2019.



### 1.3 On COVID-19

After the book proposal was accepted, Sel and Michelle began the task of securing authors for the various chapters of this edited volume. At that time, Sel and Michelle did not anticipate that the most pivotal health-related event of the twenty-first century was about to occur, which was the global COVID-19 pandemic. This pandemic greatly interrupted the progress of this edited volume, often in the form of unanticipated caregiver responsibilities that were suddenly thrust upon them. This pandemic also gave rise to a new field examining LGBTQ populations and the COVID-19 infection, including COVID-19 surveillance (Sell & Krims, 2021), COVID-19 testing (Martino et al., 2021), and COVID-19 vaccine hesitancy (Garg et al., 2021), as well as impacts on health inequalities/disparities (Adamson et al., 2022; Krause, 2021; Phillips, 2021; Sachdeva et al., 2021; Wallach et al., 2020), mental health (Akré et al., 2021; Chen et al., 2022; Gato et al., 2021; Gonzales et al., 2020; Gorczyński & Fasoli, 2020; Lucas et al., 2022; Ormiston & Williams, 2022; Parchem et al., 2021; Salerno et al., 2020; Salerno & Boekeloo, 2022; Sampogna et al., 2022), sexual behavior and HIV (Griffin et al., 2022; Tomar et al., 2021), disordered eating and nutrition ((Hart et al., 2022; Joy, 2021; Tabler et al., 2021), LGBTQ youth (Fish et al., 2020; Gato et al., 2021; Gill & McQuillan, 2022; Gonzales et al., 2020; Ormiston & Williams, 2022; Parchem et al., 2021), LGBTQ older adults (Jen et al., 2020), and other health issues and outcomes (Martino et al., 2022; Rosa et al., 2020; Washburn et al., 2022; Wypler & Hoffelmeyer, 2020).

In addition, special issues of journals and sections of journals have also focused on LGBTQ populations and the COVID-19 pandemic (Bowleg & Landers, 2021; Drabble & Eliason, 2021), although there is also a dire need for more research on LGBTQ populations and COVID-19 (L. Bowleg & Landers, 2021; Chatterjee et al., 2020; Kaufman et al., [under review](#)). Because of the timeline of when the chapters for this edited volume were drafted, much of COVID-19-related research, which has been published more recently, was not included. However, in general it is useful to consider how the COVID-19 pandemic may have exacerbated many of the negative health outcomes discussed in this volume.

### 1.4 History, Culture, and Religion

In examining global health, it is important to contextualize health issues and outcomes within the historical-sociocultural contexts of a given country or region. This type of contextualization can further clarify how given health outcomes may be a result of dynamics between these environments and individuals/populations living within these respective settings. This may be especially important when examining Global South populations, especially for Global North readers and researchers to fully grasp particular health issues and outcomes in the Global South. This may also circumvent the tendency for Global North readers and researchers to unwittingly

impose Global North contexts and understandings on the Global South. In addition, an informed grasp of historical-sociocultural contexts can also provide greater opportunities for the development of interventions that are culturally tailored and culturally sensitive, based on evidence gathered from a “bottom-up” approach, with a greater chance of being more effective than standard unadapted interventions (Henderson et al., 2011; Horne et al., 2018; Jongen et al., 2017; Kalibatseva & Leong, 2014).

For example, in the **Mental Health** chapter (Chap. 3), there is a discussion of culture-bound syndromes among Global South populations. To date, there does not seem to be research specifically examining culture-bound syndromes among Global South LGBTQ populations, and this line of inquiry may be productive in researching and developing mental health interventions that may be particularly salient. In the **Community and Social Support** chapter (Chap. 6), a section is devoted to examining various forms of LGBTQ-inclusive organized religions and spiritual traditions. Health interventions integrating specific religious and spiritual traditions—and disseminated by LGBTQ-inclusive religious and spiritual organizations—may be particularly effective in reaching certain targeted LGBTQ subpopulations (Alvi & Zaidi, 2021; Codjoe et al., 2021; Escher et al., 2019; Fair, 2021).

Historically, health research, with its focus on quantitative methodology, analysis, and presentation of findings, has often failed to provide historical-sociocultural contextualization of health issues and outcomes with much meaningful breadth and depth (Hwahng, 2016). A future direction for LGBTQ health research could be to further contextualize health issues and outcomes within the historical-sociocultural contexts of a given country or region, which is important to comprehensively address health in both Global South as well as Global North countries.

## 1.5 Racial/Ethnic Stratification and Indigeneity

We also address racial/ethnic minorities and indigenous people who are LGBTQ in this edited volume. For example, it is well known that LGBTQ people of color and indigenous people (sometimes collectively referred to as “BIPOC”) who live in a white-dominant society will often experience multiple forms of marginalization, also known as multiple jeopardy, which can result in experiencing more extreme forms of stressors compared to white LGBTQ people (Balsam et al., 2011; Bowleg et al., 2003). The **HIV** chapter (Chap. 7) scrutinizes the overrepresentation of racial/ethnic minorities among those living with HIV in Global North countries such as the United States. This overrepresentation of disease burden can be attributed to multiple and compounded stressors and racial discrimination that exist within a framework of racial stratification (Hwahng & Nuttbrock, 2007). In the **Victimization and Intentional Injury** chapter (Chap. 9), distal and proximal factors are examined in relation to various LGBTQ populations, including indigenous LGBTQ people. This chapter discusses how colonization and historical trauma are key structural factors within processes of victimization and intentional injury.

A future direction of LGBTQ health research could be to further understand the role of race, ethnicity, and indigeneity by not only examining racial/ethnic minorities and indigenous people within Global North but also within Global South countries. For example, Brazil, China, India, Indonesia, Kenya, Malaysia, Mexico, South Africa, and Taiwan all contain a diversity of racial/ethnic groups as well as indigenous groups. It would thus be interesting, for example, to research the health of indigenous LGBTQ people in Taiwan and how these health outcomes would compare, say, to the health of indigenous LGBTQ people in Canada.

In addition, examining the health of white populations in the Global North or racially dominant populations in the Global South may yield surprising discoveries. It is often assumed that the “white privilege” (McIntosh, 1990; Rothenberg, 2008) ascribed to white racially dominant populations in Global North countries automatically confers optimal health and is the standard against which the health of other non-white groups is measured. Thus, white LGBTQ populations may experience sexual and/or gender minority stress (Meyer, 1995, 2003) but will also experience white privilege. Because of this white privilege, it is assumed that white LGBTQ people will experience fewer negative health outcomes compared to non-white LGBTQ people. However, through the “construction of whiteness” (Guess, 2006) that was historically used to reinforce racism, there may be detrimental health effects, such as limited abilities to develop resiliency or adverse mental health effects due to hyper-individualism (Borell, 2021; Casey, 2020; Huang et al., 2010) that may be particularly salient among white LGBTQ people.

## 1.6 Intersectionality

One approach to examining how various aspects of identity converge and affect one another within structural systems and processes is intersectionality, which originated in US Black feminism, indigenous feminism, third-world feminism, and queer and postcolonial theory (Collins, 1993; Crenshaw, 2013a, b; Hankivsky & Cormier, 2009). Structural systems and processes can privilege one type of identity in a category (e.g., white race) and simultaneously oppress another identity in that same category (e.g., non-white race and/or Black race), while also guiding how these racial identities impact one another. As a research and policy paradigm (Bowleg, 2012; Collins, 1993; Crenshaw, 2013a, b; Hankivsky & Cormier, 2009), intersectionality has been considered to more accurately reflect the complexity of social identity compared to approaches that focus primarily on a single identity category. Historically, intersectionality has been mostly utilized in the qualitative social sciences, although this paradigm has been encroaching into other fields, including public health (Hankivsky, 2012; Hankivsky & Cormier, 2009; Larson et al., 2016; McGibbon & McPherson, 2011; Springer et al., 2012).

A pivotal construct of intersectionality subdivides the concept into three main types: *anti-categorical*, *intra-categorical*, and *inter-categorical intersectionality* (McCall, 2005). From a public health perspective, anti-categorical intersectionality

may occur as nonsensical because it is derived from a humanities-based post-structuralist approach in which the categorization of identities itself is rejected or “problematized,” lending to a near-impossibility of measurement on a population level. On the other hand, intra-categorical intersectionality is most likely the approach to “intersectionality” in which public health research and discourse have most engaged. This approach, also known as the “additive” approach, is comprised of starting with a single identity category and then adding identity categories together, without examining the relationships between these categories. Oftentimes these categories are also not examined in relation to greater sociopolitical-cultural systems and processes.

Within feminist discourse, inter-categorical intersectionality is considered ideal. This concept examines how aspects of identity (such as race/ethnicity, gender, class, sexuality, geography, age, dis/ability, citizenship/immigration status, and religion) mutually constitute each other within “interlocking systems” of power (Collins, 1993). For example, an individual’s race constitutes their sexuality and vice versa, and their gender constitutes their class status and vice versa, within systems of power, privilege, and oppression. Thus, these mutual constitutions result in differential access to power and resources depending on the respective social contexts. Furthermore, within an inter-categorical intersectionality paradigm, aspects of identity are meaningless by themselves, and it is only at the *intersections* of these identity aspects that actual lived experience can be accurately described and measured.

Historically, research utilizing an inter-categorical intersectionality approach has been best undertaken through qualitative methods. Given that population health, with the attendant emphasis on quantitative methods, is a major cornerstone of public health research, a challenge has emerged as to how to incorporate inter-categorical intersectionality. In recent years, literature has emerged on quantifying inter-categorical intersectionality in which questions and best practices for sampling, measurement, and analysis have been examined (Bauer, 2014; Bowleg & Bauer, 2016). Regarding analytic methodologies, additive-scale interaction, effect measure modification, mediation, moderated mediation, relative risk due to interaction (RERI), the synergy index, and attributable proportion are considered possible approaches and tools that are appropriate for inter-categorical intersectionality (Bauer, 2014). Some researchers advocate that mixed-methods research may provide the most accurate picture of lived experiences when combining rigorous statistical approaches with in-depth narratives (Bowleg & Bauer, 2016; Creswell & Creswell, 2017). Thus, future directions for LGBTQ research could include designing, measuring, and analyzing data from LGBTQ people within an inter-categorical intersectionality framework along with designing and implementing more mixed-methods research.

## 1.7 Areas of Focus

The **Stigma** chapter (Chap. 2) begins with definitions and key concepts including functions and contexts of stigma and an examination of intersectional stigma. Manifestations and experiences of stigma include structural stigma in the form of

common and/or civil laws, religious teachings and laws, and historical traumatic assaults. Another form of structural stigma is institutional and organizational policies that are outside of civil and religious laws. In examining how stigma manifests on the individual level, there are those who perceive stigma, as well as those who are targets of stigma. Stigma impacts health in a wide variety of ways and can lead to social isolation, limits access to resources, and is associated with a range of biological, psychological, and behavioral responses. This chapter ends with a discussion of interventions to address stigma including structural change, reducing stigma among perceivers, and developing resilience among targets.

Differences in mental health between LGBTQ and cisgender, heterosexual people are first examined in the **Mental Health** chapter (Chap. 3). Types of mental health problems and varying cultural contexts to understand mental health are then examined. A diversity of mental health outcomes exists among the LGBTQ population including differences across age and sex, sexual identity and gender identity, socioeconomic status, race/ethnicity, and migration status. Geographic variations are also discussed among various regions. Determinants of LGBTQ mental health include minority stress, which has been shown to have cross-cultural relevance; structural stigma in societal attitudes, laws, and policies; barriers to societal integration; and conversion therapy. This chapter next examines interventions that reduce LGBTQ stigma as well as interventions that promote coping with stigma. Finally, future directions are discussed, including improving research methodologies, conducting more comparative cross-cultural research, disseminating LGBTQ-affirming mental health interventions, and developing more research on aging-related dementia and cognitive decline.

A general discussion of how contemporary global health issues are increasingly shifting from infectious diseases to noncommunicable diseases (NCDs) is at the beginning of the **Introduction to Noncommunicable Diseases** chapter (Chap. 4). The impact of COVID-19 on NCDs is next examined, followed by discussions of the effect of chronic stress on the immune system and factors contributing to NCDs. Health disparities theories, including fundamental cause theory, compression of morbidity theory, and cumulative disadvantage hypothesis, are then discussed. The chapter ends with a focus on methodological considerations, including sample size and sampling considerations.

The **Noncommunicable Diseases** chapter (Chap. 5) focuses on cardiovascular disease (CVD), cancer, diabetes, asthma, and chronic obstructive pulmonary disease (COPD). These five disease outcomes were selected because of their high global prevalence from an extensive literature review that was completed on NCDs among the LGBTQ population. Globally, countries were categorized as either emerging, developed, or mature. Each section examines the global burden of a specific NCD followed by a discussion of the epidemiological findings among sexual minority, transgender, and non-binary gender populations within each respective NCD.

A wide variety of LGBTQ support structures and mechanisms are examined from a global perspective in the **Community and Social Support** chapter (Chap. 6). The chapter begins with a general discussion of how community and social

support can be an antidote to sexual and gender minority stress. The first main section examines support in families, including parental and sibling support. Support in schools is next discussed, followed by an examination of support in intimate partner relationships, parenting and family-building, and among colleagues in the workplace. Support for and within LGBTQ communities in various regions of the world is next discussed, including elders, same-sex communities, bisexual communities, transgender and non-binary gender communities, intersex communities, asexual/aromantic communities, online communities, religious and spiritual groups, and BDSM/leather and polyamory communities. Finally, a focus on both global and local LGBTQ-related organizations is presented.

The **HIV** chapter (Chap. 7) begins with a discussion of key SGM subpopulations at high HIV risk: gay, bisexual, and other cisgender men who have sex with men and transgender women and transfeminine people who have sex with cisgender men. HIV risk among transgender men, transmasculine people, and sexual minority women is next examined. The chapter has a focus on the ethical challenges in global HIV research, including concerns about the stigma and safety of research participants and mistrust of the medical research community. Methodological issues in global HIV research are also highlighted, including challenges with recruitment and enrollment, sampling, and cultural conceptualizations of gender identity and sexual orientation. Multi-level factors and interventions relevant to HIV are presented, and a focus on chronic disease and HIV is also considered. The chapter ends with a discussion of future directions for global HIV research among LGBTQ people.

The categorization of various types of substances is first outlined in the **Substance Use** chapter (Chap. 8). Epidemiological findings by region are next presented. Each region is further divided focusing on sexual minority men, sexual minority women, and transgender populations. Social-ecological determinants are then examined including the minority stress model; psychosocial factors; social, interpersonal, and cultural factors; and contextual, environmental, and structural factors. Consequences of substance use are highlighted, including HIV, hepatitis C, and other sexually transmitted infections, chronic disease outcomes, incarceration, and social isolation. Finally, intervention and treatment options for alcohol use, smoking, stimulant use disorder, and opioid use disorder are presented as well as a need for integrated services.

The **Victimization and Intentional Injury** chapter (Chap. 9) begins with frameworks for understanding intentional injury and victimization in LGBTQ populations. These frameworks include syndemics, minority stress and multilevel influences, colonization and intergenerational/historical trauma, and human rights. Types of intentional injury and victimization are next delineated, including state-sanctioned victimization, community and organizational victimization, and interpersonal victimization. State-sanctioned victimization includes criminalization and the death penalty, police violence and harassment, forced surgeries on intersex children and gay/bisexual adults, and victimization of asylum seekers. Community and organizational victimization include stigma-motivated assault and homicide, victimization through employment discrimination, and workplace harassment. Interpersonal victimization includes adverse childhood experiences, intimate

partner violence, sexual violence, and elder abuse. Polyvictimization, which is experiencing multiple forms of victimization, is then discussed. Structural, communal, and individual risk factors for victimization are next examined, followed by a focus on health consequences. Various forms of prevention and interventions are then presented, including decolonization, structural/policy interventions, organizational and community interventions, and individual interventions.

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## Chapter 2

# LGBTQ Stigma



**Valerie A. Earnshaw, Carmen Logie, Jeffrey A. Wickersham,  
and Adeeba Kamarulzaman**

Lesbian, gay, bisexual, transgender, and/or queer (LGBTQ) individuals face significant stigma globally. As examples, Vicky Gutierrez, a young transgender woman from Honduras, was the first of two dozen transgender women to be killed in the United States in 2018 (Human Rights Campaign Foundation 2019). In early January, she was stabbed to death before her body was set on fire in her Los Angeles home. By summer, the Human Rights Campaign would characterize fatal violence toward transgender women of color as a “national epidemic” in the United States. In August 2018, police and government officials raided a LGBTQ night club in Kuala Lumpur, Malaysia (Ellis-Peterson 2018). Twenty men were detained and ultimately ordered into counseling, and a government official released a statement that “hopefully this initiative can mitigate the LGBTQ culture from spreading into our society.” News broke of a “gay purge” in Chechnya in December, wherein approximately 40 men and women were detained and tortured, and two killed, upon suspicion of being sexual minorities (Vasilyeva 2019). This is only the most recent of a series of “detentions, torture and killings of gay people” in Chechnya, some of which were reported in 2017.

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V. A. Earnshaw (✉)

Human Development and Family Sciences, University of Delaware, Newark, DE, USA

e-mail: [earnshaw@udel.edu](mailto:earnshaw@udel.edu)

C. Logie

Factor-Inwentash Faculty of Social Work, University of Toronto, Toronto, ON, Canada

e-mail: [carmen.logie@utoronto.ca](mailto:carmen.logie@utoronto.ca)

J. A. Wickersham

Department of Internal Medicine, School of Medicine, Yale University, New Haven, CT, USA

e-mail: [jeffrey.wickersham@yale.edu](mailto:jeffrey.wickersham@yale.edu)

A. Kamarulzaman

Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

Monash University Malaysia, Subang Jaya, Malaysia

e-mail: [adeeba.kamarulzaman@monash.edu](mailto:adeeba.kamarulzaman@monash.edu)

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Globally, stigma experienced by LGBTQ individuals ranges from extreme acts of violence, including those described above, to more subtle yet pervasive forms of marginalization and social exclusion, including being socially rejected, denied employment opportunities, and receiving poor healthcare. Stigma has been identified as a fundamental cause of health that leads to significant health inequities (Carroll & Ramón Mendos 2017; Hatzenbuehler, Phelan & Link 2013). Public health researchers, practitioners, policy makers, and other stakeholders have a key role to play in addressing stigma to improve the wellbeing of LGBTQ individuals worldwide. In this chapter, we summarize research and theory that defines LGBTQ stigma, documents ways in which stigma is manifested and experienced by LGBTQ individuals, articulates how stigma leads to health inequities among LGBTQ populations, and identifies evidence-based intervention strategies to address LGBTQ stigma. In doing so, we provide recommendations to readers for addressing stigma to promote LGBTQ health equity globally.

## 2.1 Stigma Definitions and Key Concepts

Theorists and researchers from several disciplines, including sociology, anthropology, psychology, and public health, have defined stigma and articulated key concepts relevant to stigma and health inequities. In 1963, Erving Goffman defined *stigma* as social devaluation and discrediting (Goffman, 1963). In 1981, Virginia Brooks introduced minority stress theory (Brooks, 1981). Ilan Meyer built on this theory when he characterized LGBTQ stigma as a significant and chronic stressor that undermines the health of gay men (Meyer, 1995). Minority stress theory, which was developed in the United States, continues to be the most widely used theory for understanding and addressing LGBTQ stigma globally (Nakamura & Logie, 2019). It is applied by LGBTQ communities around the world that have found it to be useful for their local socio-cultural contexts. Theorists have moved beyond individual-level conceptualizations of stigma by adopting a sociological lens, and stigma has been described as a social process that exists when labeling, stereotyping, separation, status loss, and discrimination occur within a power context (Link & Phelan, 2001). This social process is expressed or experienced as *stigma manifestations* within structures (e.g., codified within laws) and individuals (e.g., experienced as discrimination), and in turn, these stigma manifestations affect the health of stigmatized individuals both directly and through mediating mechanisms (Hatzenbuehler et al., 2013; Stangl et al., 2019). In this way, stigma leads to *health inequities or disparities* among stigmatized groups, which are avoidable health differences between groups of people (Braveman, 2006). In the sections below, we further elaborate on stigma manifestations and describe how they are related to health outcomes among LGBTQ people. First, we highlight several key concepts related to stigma and health inequities.

### 2.1.1 *Functions of Stigma*

Stigma is theorized to play societal functions across socio-cultural contexts (Kurzban & Leary, 2001). Phelan, Link, and Dovidio theorize that LGBTQ stigma operates to “keep people in” their expected gender roles, enforcing social norms surrounding sexuality and gender (2008). Although we used the term LGBTQ stigma, we recognize there are rich bodies of literature that focus on stigma toward sexually diverse persons (lesbian, bisexual, gay, and queer, among other nonheterosexual identities; Herek, 2007) as well as a growing body of literature documenting stigma targeting transgender persons (Hughto White et al., 2015). Sexually diverse persons may be cisgender (identify their gender with the sex they were assigned at birth), transgender (do not identify their gender with the sex assigned at birth), non-binary (identifying with no gender, or across genders), or other genders. The implications are that persons under the LGBTQ umbrella may experience both sexual stigma and trans stigma; for instance, a gay trans man can experience marginalization due to their sexuality and gender identity.

Stigma functions to define the boundaries of acceptable sexual and gender identities, practices, expressions, and communities and creates social consequences for violating these boundaries. Heterosexism operates across social, cultural, religious, political, and legal domains to erase the representation of, and devalue, sexual and gender diversity and to produce heterosexuality as normal, natural, and universal (Rubin, 1994). This has been conceptualized as compulsory heterosexuality: where all persons are assumed to *be* heterosexual and where it is assumed that all persons *should be* heterosexual (Fish, 2008). Compulsory heterosexuality is enacted in society by punishing persons who are not heterosexual (e.g., with stigma) and by having incentives at material (e.g., ability to marry) and ideological (e.g., acceptance by religion) levels for heterosexual persons (Rich, 1980). The parallel term cisnormativity refers to the ways in which sociocultural norms and expectations surround gender in ways that assume all persons *are*, and *should be*, cisgender (Bauer et al., 2009). Compulsory heterosexuality maps onto what Phelan, Link, and Dovidio describe as functions of LGBTQ stigma and other stigmas to “keep people in” (i.e., keep people within the “in group” by enforcing social norms) and may be applied to characteristics that are perceived to be voluntary or chosen. LGBTQ stigma reproduces the discourse that persons who do not adopt heterosexual and/or binary gender norms do so voluntarily, and thus, their sexuality and gender can be changed. There continues to be a long-standing debate over whether or not gender and sexuality are innate (something that one is born with) or whether they are fluid and changing (thus may change over one’s life). Regardless of this debate, stigma reproduces inequities that pressure conformity with hegemonic gender norms and punish those that do not conform.

Historically, compulsory heterosexuality and cisnormativity were often introduced during colonization, thereby creating new hegemonic gender norms within colonized societies. In some places, such as among many indigenous societies in the Americas, compulsory heterosexuality and cisnormativity were enforced among people who

previously recognized and accepted gender and sexual diversity (Jacobs et al., 1997). In other places, such as among the Yorùbá in Western Africa, gender binaries were introduced to people who had not previously recognized an overarching gender system (Oyěwùmí, 1997). By introducing and enforcing compulsory heterosexuality and cisnormativity, LGBTQ stigma was essentially created in some societies where it did not previously exist. The creation of hierarchical social categories, spanning sexual orientation, gender, race, and other lines, was a tool of exploitation that helped colonizers establish power and control over indigenous people (Lugones, 2010).

### ***2.1.2 Stigma Contextualized***

Norms surrounding gender and sexuality vary across cultural contexts, and thus LGBTQ stigma manifests differently across cultural contexts. For example, holding hands is a normative behavior for heterosexual men in many areas of the world, including Saudi Arabia, India, and Bangladesh. In these contexts, holding hands is within the boundaries of acceptable masculine behaviors, and there are no negative social consequences associated with the behavior. In many Western countries, however, holding hands, as well as other casual physical contacts between men, is not normative and violates accepted norms of masculinity. In these settings, two men holding hands is a clear violation of the proscribed norms of masculinity, and such behaviors are policed by others in the culture who may respond with behaviors ranging from disapproving looks to physical assault (Logie et al., 2016). Yet the expectations to adhere to gender norms, and the stigma and negative consequences that follow from breaking these gender norms, reflect the concept of hegemonic masculinity (Gibbs et al., 2014). Relational approaches to conceptualizing gender suggest that gender hierarchies underpin the ways that masculinity and femininity are constructed and controlled (Connell, 2012). Although gender and sexuality norms may vary between contexts, most are centered on gender inequity and the use of violence as a way of gaining power and reproducing adherence to gender norms (Gibbs et al., 2014; Torres et al., 2012).

Stigma is further theorized to be dependent on, or rooted in, specific historical, social, and cultural contexts (Crocker & Major, 1989; Yang et al., 2007). Although stigma seems to exist everywhere, the extent to which certain characteristics and identities are stigmatized, the ways in which stigma is manifested, and how stigma affects health may vary across time and place. For example, the transgender stigma has both waxed and waned in India over the last several centuries (Michelraj, 2015). Historically, India recognized a “third sex” called hijras, which included persons who do not conform to binary conceptions of gender. Throughout history, hijras played socially valued positions within society, including as political advisors and generals. Starting in the eighteenth century, however, hijras were criminalized under British colonial law, leading to a growing anti-transgender sentiment in India and stigma toward the hijra community. During this time, myths spread that hijras kidnapped young boys for sex, and many hijras were forced to turn to sex work as other forms of employment and economic empowerment were denied to them (Nanda, 1986). In 2014, India’s Supreme Court officially recognized a third gender, both reflecting and contributing to weakening transgender stigma.

Yang and colleagues (Yang et al., 2014) propose that stigma undermines individuals' capacity to participate in "what matters most" within a cultural context, thereby preventing individuals from achieving full status within their cultural group. For example, contributing to family lineage through heterosexual marriage and having children is valued in many Asian cultures (Raymo et al., 2015). South Asian gay men describe experiencing shame and bringing dishonor to their families if they do not participate in these social obligations (Mckeown et al., 2010). In African and Caribbean cultures, wherein heterosexual conceptualizations of masculinity are valued, being gay is viewed as a "white/European" disease, and African and Caribbean gay men are accused of rejecting their cultural background (Mckeown et al., 2010; Semugoma et al., 2012).

### ***2.1.3 Intersectional Stigma***

Intersectionality theory emphasizes that individuals live with multiple interconnected identities and characteristics that represent dimensions of both marginalization and privilege (Crenshaw, 1991; hooks, 1990; Rosenthal, 2016). In addition to experiencing stigma associated with their sexual orientation and/or gender identity, LGBTQ individuals may experience stigma associated with other identities and characteristics such as their race or ethnicity, socio-economic status, or physical or mental health. Similarly, LGBTQ individuals may also experience privilege associated with other identities and characteristics. Thus, intersectionality theory draws attention to the great amount of variability in stigma-related experiences among LGBTQ individuals. For example, a gay man from New York City in the United States may experience stigma very differently than a lesbian woman from Islamabad in Pakistan. Although both individuals may experience stigma related to their sexual orientation, the ways in which they experience and respond to this stigma, and the extent to which it undermines their health, may be shaped by how their sexual identity intersects with their other identities including race, ethnicity, gender, and/or religion (Logie, 2014). The current chapter focuses on LGBTQ stigma but considers how experiences related to individuals' other identities and characteristics intersect with their experiences of LGBTQ stigma.

## **2.2 LGBTQ Stigma Manifestations and Experiences**

### ***2.2.1 Structural Stigma***

LGBTQ stigma is manifested at multiple levels, and stigma at each level has both direct and indirect effects on LGBTQ health inequities. At the structural level, stigma is manifested within common and/or civil laws, religious teachings and laws, and historical traumatic assaults. Notably, the overlap between common/civil and religious law exists on a continuum globally (Sands, 2007). That is, there is much



overlap between common/civil and religious law in some countries, wherein religious law dictates or overlaps with common/civil law. For example, in some Islamic countries, there is a great deal of overlap between Shariah law, which is Islamic law, and common/civil law. In other countries, there is a greater separation of common/civil and religious laws. We differentiate between common/civil and religious law below but recognize the overlap between the two in many areas of the world.

### 2.2.1.1 Common and Civil Law

Worldwide, there are a range of government laws that criminalize the gender expression and/or sexual practice of LGBTQ individuals. According to the International Lesbian, Gay, Bisexual, Trans and Intersex Association's State-Sponsored Homophobia Report, 71 countries (37% of all UN countries) criminalized same-sex acts between men, and 45 countries criminalized acts between women in 2017 (Carroll & Mendos, 2017). For example, Burundi's Article 567 states, "Whoever has sexual relations with someone of the same sex shall be punished with imprisonment for three months to two years and a fine of fifty thousand to one hundred thousand francs or one of those penalties" (Carroll & Mendos, 2017). This law applies to both men and women. Some countries with such laws enforce them very rarely or never, but Article 567 was enforced in Burundi between 2014 and 2017. Eight countries apply the death penalty as a consequence of violation of the law. For example, areas held by Daesh (i.e., ISIS/ISIL) in Iraq and Syria have a law entitled "Punishment for Sodomy," which states, "The religiously sanctioned penalty for sodomy is death, whether it is consensual or not. Those who are proven to have committed sodomy, whether sodomiser or sodomised, should be killed." Several additional countries, including Afghanistan, Pakistan, Qatar, the United Arab Emirates, and Mauritania, have codified the death penalty into the law but have not enforced it for same-sex practices in recent years.

There are also laws that criminalize the gender expression of transgender individuals and/or deny the affirmation of their gender identity. Malaysian states have had laws prohibiting a "male person posing as woman" or "female person posing as man" (Human Rights Watch, 2014). In 2014, 16 Malaysian transgender women were arrested for engaging in so-called cross-dressing behavior and sentenced to seven days in jail. The ruling was appealed, and the appeals court ruled the cross-dressing law to be unconstitutional, describing it as "discriminatory and oppressive and denies the appellants the equal protection of the law" (Human Rights Watch, 2014). In Iran, the law requires individuals to wear "gender-appropriate" clothes in public (Bagri, 2017). As examples, women must wear the hijab and cover their heads, arms, and legs, and men cannot have long hair or plucked eyebrows. Transgender individuals in Iran report frequent harassment from the police for violating clothing laws. Laws limiting access to bathrooms and locker rooms that match individuals' gender identity, which have been proposed and sometimes passed in the United States, represent additional forms of structural stigma (Barnett et al., 2018).

In addition to civil laws criminalizing same-sex practices or gender expression specifically, 19 countries (10% of UN countries) had promotion (“propaganda”) and morality laws limiting freedom of expression related to sexual orientation and gender identity in 2017 (Carroll & Mendos, 2017). For example, Article 198 of Kuwait’s Penal Code states: “Whoever makes a lewd signal or act in a public place or such that one may see it or hear it from a public place, or appears like the opposite sex in any way, shall be punished for a period not exceeding one year and a fine not exceeding 1000 Dinar or one either of these punishments.” In the United States, seven states have enacted local laws that restrict health/sexuality education teachers from discussing LGBTQ people and/or topics in a positive light (GLSEN, 2019). The Gay, Lesbian and Straight Education Network has criticized these laws because they prevent LGBTQ students from learning important health information and provide false, misleading, and/or incomplete information about LGBTQ people. Moreover, 25 countries (13% of UN countries) have laws preventing the formation, establishment, or registration of LGBTQ-related nongovernmental organizations (NGOs; Carroll & Mendos, 2017). These laws prevent nonprofit advocacy and service organizations from formally representing LGBTQ groups in national and international forums, wherein they can advocate for LGBTQ rights. For example, Bahrain’s Law 21 Article 3 details that groups which “contradict(s) the public order or moral” or undermine the “social order” are illegal.

### 2.2.1.2 Religious Teaching and Law

LGBTQ stigma is further manifested at the structural level within religious teachings and laws. The most popular religions globally include Christianity (31.2% of the world population in 2015), Islam (24.1%), and Hinduism (15.1%) (Hackett & McClendon, 2017). Notably, there is variability in how members of all religions view and treat LGBTQ individuals, with some sects and members of each religion adopting more accepting and welcoming approaches than others. Given the focus of this chapter, we focus on stigmatizing aspects of religious teachings and laws herein but acknowledge this variability.

Christianity has historically held that sex should be engaged in for reproductive purposes only, and nonreproductive sex, including sex between men or women, was deemed unnatural and immoral (Sands, 2007). Many Christian denominations teach that same-sex practices are sinful. Several denominations acknowledge that attraction to members of the same sex is not voluntary, or a personal choice, but recommend that individuals who are attracted to members of the same sex practice chastity. Christian organizations have supported conversion therapy and camps, which aim to change the sexual orientation, gender identity, and/or gender expression of LGBTQ people (Mallory et al., 2018). The Williams Institute estimates that 698,000 LGBT adults have received conversion therapy in the United States, about half of whom were exposed to this therapy as adolescents. Although several professional health associations, including the American Medical Association and American Psychological Association, have issued statements opposing conversion therapy, they remain legal in

most states in the United States and countries globally (Mallory et al., 2018). Notably, some Christian denominations, including the Church of England, are changing their stances and calling for bans on conversion therapy (Sherwood, 2017).

Similar to Christianity, sex outside of marriage is prohibited within Islam, and marriage must be between a man and a woman (Siker, 2007). Shariah law, or Islamic religious teachings, defines various punishments for same-sex sexual practices in different contexts, ranging from fines, flogging, and imprisonment to death (Sands, 2007). As an example, sexual intercourse between men is defined as a misdemeanor under Shariah law in Saudi Arabia (Carroll & Mendos, 2017). Although same-sex sexual practices are not specifically described as punishable by death, same-sex marriage is not legal, and having sex outside of marriage is punishable by death by stoning. Shariah law additionally targets the gender expression of transgender individuals by prohibiting men from “posing” as women or women from “posing” as men (Human Rights Watch, 2014). Gender-affirming surgery is treated differently in various Muslim countries. For example, gender-affirming surgery among Muslims in Malaysia is prohibited by a fatwa (i.e., religious ruling) (Human Rights Watch, 2014). Although this rule does not technically apply to non-Muslims, transgender individuals of all faiths have difficulty accessing gender-affirming surgery. In contrast, Iran partially subsidizes gender-affirming medication and surgery (Bagri, 2017; Carter, 2010). A fatwa permits sex changes for individuals with gender identity disorders, which may be diagnosed by a doctor, judge, or Imam (Carter, 2010). Medication and surgery are offered, in part, because transgender individuals are viewed as having a psychological problem in need of treatment. Moreover, medication and surgery reinforce traditional conceptualizations of binary genders. The alternative to undergoing medication and surgery is the death penalty (Bagri, 2017).

In Hinduism, religious law is somewhat more ambiguous in its treatment of same-sex practices (Sands, 2007). Several religious texts, including the Dharma and Arthaśāstra, forbid and/or penalize same-sex sexual practices. Yet, some traditional aspects of Hinduism support same-sex sexual practices. The Kama Sutra includes instruction on same-sex sexual pleasure, and hijras represent a third-sex tradition who are born male but may assume feminine identities and have sex with men. In 2014, India’s supreme court recognized transgender people as an official third gender, thereby granting hijras legal status, protections, and rights (Khaleeli, 2014).

### 2.2.1.3 Historic Traumatic Assaults

Recent stigma scholarship has increasingly recognized the role of historical traumatic assaults on health inequities (Sotero, 2006). Historic traumatic assaults include historical examples of extreme discrimination, typically at the structural level, toward LGBTQ people. The spread of criminalization of same-sex sexual practices under British colonialism represents a key example of historic traumatic assaults that has had a pronounced and lasting legacy (Han et al., 2014). Starting in 1860, the British Empire spread legal codes to its colonies that criminalized same-sex sexual practices with punishments including fines and lengthy imprisonment. For example, Section 377 of the

British Penal Code criminalized “unnatural” sexual acts, including those between men (Carroll & Mendos, 2017). These codes were designed to prevent both British soldiers and colonial administrators from engaging in same-sex sexual practices as well as enforce heterosexual Christian values (Han et al., 2014). Today, former British colonies are more likely than others to have laws that criminalize same-sex sexual practices (Han et al., 2014). For example, countries including Bangladesh, Brunei, Malaysia, Myanmar, Pakistan, Singapore, and Tanzania continue to uphold Section 377. Some have commented on the “irony of African homophobia,” whereby countries that kept colonial laws have been constructed as “backward” by former colonizers such as Britain who has since changed those laws (Semugoma et al., 2012).

More recently, the Nazis persecuted LGBTQ populations as part of their efforts to morally and culturally purify Germany (Plant, 1986; United States Holocaust Memorial Museum, 2019). Between 1933 and 1945, an estimated 100,000 men were arrested for violating laws against homosexuality, 50,000 were sentenced to prison, and 5000 to 15,000 were sent to concentration camps. During this time period, the police raided the Institute for Sexual Science in Berlin and burned a collection of tens of thousands of books and pictures documenting LGBTQ culture. Other examples of historical trauma may be characterized as less violent in nature, but still impactful. In the United States, the Diagnostic and Statistical Manual of Mental Disorders pathologized homosexuality until 1973 (Drescher, 2015). This licensed psychologists and physicians to attempt to “cure” sexual minorities via a range of so-called “conversion therapies.” Although the impact of historic traumatic assaults on health inequities is understudied in comparison to other stigma manifestations, evidence suggests that awareness of these historic events and traumas leads to psychological distress and unhealthy behaviors (e.g., elevated substance use, perhaps as a coping mechanism) (Sotero, 2006).

#### **2.2.1.4 Other Institutional and Organizational Policies**

Structural stigma is further manifested within institutional and organizational policies, which exist outside of civil and religious laws. These include institutional policies that prohibit the changing of gender or sex and name on identification cards, legal documents, and medical records, thereby denying transgender individuals’ affirmation of their gender identity. There are also policies that prohibit same-sex couples from adopting children, thereby denying gay and lesbian couples rights to parenthood. This structural stigma may additionally affect the health of LGBTQ individuals who live in, work for, or receive healthcare from these institutions and organizations.

#### **2.2.2 Individual Level**

At the individual level, stigma is manifested both among people who do not identify as LGBTQ as well as people who do identify as (or are perceived by others to be) LGBTQ. People who do not identify as LGBTQ may be referred to as “perceivers”

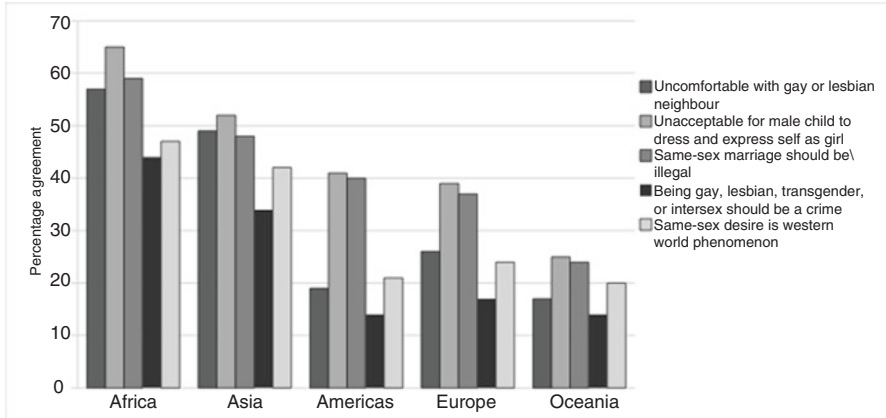
or “perpetrators” (Bos et al., 2013) These may include members of the general public, healthcare workers, the police, religious leaders, friends and family members, employers and coworkers, and others. Stigma is further manifested among LGBTQ individuals who may be referred to as “targets” of stigma (Bos et al., 2013).

### 2.2.2.1 Perceivers

Stigma among perceivers is manifested as perceived stigma, prejudice, stereotypes, and discrimination. Perceived stigma involves the awareness of and perception that people with minority sexual orientations and gender expressions/identities are socially devalued and discredited (Herek, 2007; Stangl et al., 2019). Prejudice involves negative emotions and feelings that people feel toward LGBTQ individuals, such as discomfort and disgust (Herek, 2007; Stangl et al., 2019). Stereotypes are thoughts and beliefs that people hold about LGBTQ individuals, such as gay men being effeminate or lesbian women being masculine (Herek, 2007; Stangl et al., 2019). Discrimination includes unfair or unjust treatment of LGBTQ individuals (Herek, 2007; Stangl et al., 2019). As previously noted, discrimination may range from subtle treatment, such as social rejection, to more extreme treatment, such as physical violence. Evidence suggests that prejudice, stereotyping, and discrimination may be explicit, wherein perceivers are aware of their own bias toward LGBTQ individuals, or implicit, wherein perceivers are unaware of their own bias toward LGBTQ individuals (Dovidio et al., 2008; Dovidio & Gaertner, 2004).

There is a great deal of variability in these individual-level stigma manifestations globally. In 2016, the International Lesbian, Gay, Bisexual and Trans and Intersex Association and RIWI (Real-Time Interactive World-Wide Intelligence) Corp surveyed 96,331 people in 54 countries about their attitudes toward LGBTI (lesbian, gay, bisexual, transgender, and intersex) people (Carroll & Robotham, 2016). Responses to several survey items, including indicators of prejudice and discrimination, are displayed in Fig. 2.1. Results generally suggest the most negative attitudes toward LGBTI people among respondents in Africa, followed by Asia, the Americas, and Europe, and the most positive attitudes in Oceania.

Stigma theory suggests that individual-level stigma manifestations are shaped, in part, by sociocultural context. A 2009 study including data from individuals in 19 countries found that 29% of the variance in individuals’ attitudes toward LGB people was shaped by their country context (i.e., between-nation variance), with the remainder shaped by individual beliefs and characteristics (i.e., within-nation variance, including sociodemographics and religious affiliation) (Adamczyk & Pitt, 2009). This study additionally found that individuals living in Muslim-majority countries have more disapproving attitudes toward LGB people than individuals living in Catholic- and Protestant-majority countries, regardless of their personal religious affiliation. Finally, individuals living in nations characterized by survivalist orientations, which often arise from political and economic uncertainty and insecurity, had more disapproving attitudes toward LGB people.



**Fig. 2.1** Regional differences in attitudes toward LGBTI people. (Data are from the 2016 ILGA/RIWI Global Attitudes Survey on LGBTI People (Carroll & Robotham, 2016))

### 2.2.2.2 Targets

Similar to perceivers of stigma, targets may experience perceived stigma. That is, they may be aware of LGBTQ stigma and perceive that people with minority sexual orientations and gender expressions/identities are socially devalued and discredited (Herek, 2007; Logie et al., 2016, 2018b, c; Stangl et al., 2019). Targets of stigma may additionally experience several unique stigma mechanisms, including internalized stigma, enacted stigma, and anticipated stigma. Internalized stigma has also been called internalized homophobia and self-stigma, and refers to the degree to which LGBTQ individuals are aware of the negative beliefs and feelings about LGBTQ individuals and apply them to the self (Herek, 2007; Stangl et al., 2019). According to minority stress theory (Meyer, 1995), LGBTQ people are aware of these negative beliefs and feelings early in life, even before they begin to develop their own sexual and gender identities. As LGBTQ individuals begin to become aware of their sexual and gender identities, they may also begin to apply these negative beliefs and feelings to the self. On average, internalized stigma is theorized to be highest during the early stages of LGBTQ identity development and then decreases over time (Meyer, 1995). Internalized stigma may be shaped, in part, by sociocultural context. For example, LGBTQ individuals with strong Christian religious and spiritual affiliations describe intense feelings of shame, fear, and guilt during adolescence that led to psychological distress (Kubicek et al., 2009). With time, some LGBTQ individuals report beginning to more critically evaluate religious messages and develop stronger coping mechanisms, ultimately leading to decreased internalized stigma. This critical reflection and reframing of religious values and cultural identities can also be done in solidarity and conversation with other LGBTQ persons, as observed in Swaziland, Lesotho, and Jamaica (Logie et al., 2016, 2018c). For instance, participatory theater has been used to represent stories of stigma experienced by LGBTQ individuals in Swaziland and Lesotho

(Logie et al., 2019a). Audience members are called upon to identify stigmatizing experiences portrayed within a skit and develop solutions, which promotes self-reflection, empathy, and solidarity.

Enacted stigma, which has also been called the experienced stigma, involves perceptions of experiences of discrimination from others in the past or future (Herek, 2007; Stangl et al., 2019). LGBTQ individuals report a wide range of experiences of enacted stigma in a variety of social contexts (e.g., familial, employment, housing, and medical care) globally (Logie et al., 2018a). The Human Rights Campaign and Human Rights Watch have documented often extreme forms of physical and sexual violence toward LGBTQ individuals globally, including those described in the introduction to this chapter. In addition to its acute and blatant forms, enacted stigma may also be chronic and subtle. Recent scholars have developed a taxonomy of subtle forms of enacted stigma, sometimes referred to as microaggressions (Nadal et al., 2016). According to Nadal and colleagues, prominent forms of microaggressions that impact LGBTQ people include exposure to heterosexist or transphobic terminology (e.g., “that’s so gay”), being fetishized, encountering denial of LGBTQ stigma, and being expected to hide one’s sexual orientation and/or gender identity or expression. Additional forms of subtle, yet pernicious, enacted stigma experienced by transgender individuals may include dead-naming (i.e., using the birth name of someone who has since changed their name) or misgendering (i.e., referring to someone with a pronoun or word that does not reflect their gender identity).

Anticipated stigma involves expecting to experience discrimination from others in the future (Stangl et al., 2019). Given that minority sexual orientation and gender expression/identity are often concealable, LGBTQ individuals may worry about how others will respond to them if and when they learn of their LGBTQ identity. This may include fear or worry of social rejection, physical or sexual violence, or other consequences if others learn of one’s LGBTQ identity. Importantly, individuals do not have to personally experience enacted stigma to anticipate stigma. They may anticipate stigma based on perceiving stigma in their environment or becoming aware of other LGBTQ people experiencing enacted stigma. This can result in persons hiding and concealing their sexual and/or gender identities, which in turn can contribute to isolation and depression.

### **2.3 Processes Linking LGBTQ Stigma with Health**

Stigma undermines a wide range of health outcomes among LGBTQ individuals, including those focused on within other chapters of this book. Several key mediating mechanisms linking stigma with health have been identified, including social isolation; access to resources; and psychological, behavioral, and biological responses (Chaudoir et al., 2013; Hatzenbuehler et al., 2013). Each of these mediating mechanisms represents pathways through which stigma affects health outcomes.

### 2.3.1 *Social Isolation*

Stigma leads to social isolation, which undermines health. LGBTQ people throughout the world experience rejection from family members. This rejection may be particularly harmful within cultures wherein social relationships are interdependent (as in many Global South societies), in part, because individuals' perceptions of themselves are more strongly influenced by their relationships with their family members (i.e., interdependent self-construal) (Chow & Cheng, 2010; Markus & Kitayama, 1991). Therefore, rejection from family members may result in more internalized stigma. Among lesbian women in Hong Kong, for example, lower perceived social support from family was shown to be associated with greater shame and less outness to friends, which may lead to greater social isolation and less social support (Chow & Cheng, 2010). Social support, including comfort, information, and/or assistance from others, is a powerful predictor of positive health outcomes; social isolation prevents individuals from drawing on this health-promoting resource.

Social rejection and isolation often begin at an early age (Ryan et al., 2009) and may be experienced throughout the lifespan. LGBTQ youth experience elevated rates of bullying from peers in school, which is often characterized by social distancing and rejection, and is associated with an increased risk of suicidal ideation, attempts, and completion (Earnshaw et al., 2017). Social isolation continues into middle and older adulthood. In Thailand, relationships between young transmasculine "toms" and young cisgender women are viewed as protecting cisgender women from engaging in "real sexual" relationships with cisgender men before marriage (Sinnott, 2004). Yet, these partnerships to preserve cisgender women's virginity are often only temporary: Once cisgender women are ready to enter into heteronormative marriages, they end their relationships with their transmasculine partners (Sinnott, 2004). This results in a multitude of middle-aged and older transmasculine tom adults who are stigmatized for being LGBTQ and single. Research in Jamaica additionally describes the role that stigma plays in preventing close, intimate, and lasting same-sex relationships, once again increasing the likelihood of persons not being able to benefit emotionally and financially from long-term relationships, if they chose (Logie et al., 2018a). In Brazil, social rejection from family members leads some transgender women of color to become overly dependent on support from romantic partners, some of whom take advantage of them (Kulick, 1998). Moreover, although LGBTQ older adults are more likely to receive caregiver support from friends, they are less likely to receive support from family members as older adults (Croghan et al., 2014).

### 2.3.2 *Access to Resources*

Stigma constrains access to resources that promote health in a wide range of contexts. For example, Badgett documented the exclusion of LGBTQ individuals from education and employment settings in India (Badgett, 2014). Educational opportunities may



be denied to LGBTQ Indians, and LGBTQ Indians may leave educational settings due to enacted stigma from fellow classmates and teachers. This results in lower rates of literacy and educational achievement among LGBTQ Indians, including transgender individuals and men who have sex with men. LGBTQ Indians report being denied workplace opportunities, harassed by co-workers, and overhearing anti-gay comments at work. Badgett concludes that stigma in education and employment settings plays a role in elevated rates of poverty observed among LGBTQ Indians, which in turn affects health. Badgett further identifies LGBTQ stigma as leading to homelessness among LGBTQ Indians, who report having difficulty obtaining housing. Poverty and housing insecurity are powerful determinants of health.

Stigma additionally creates roadblocks to accessing healthcare. As documented earlier in this chapter, transgender individuals have difficulty accessing gender-affirming medications, surgeries, and treatment in many areas of the world, often due to structural stigma. At the individual level, research suggests that stigma endorsed by healthcare providers is associated with the provision of worse care to stigmatized individuals (Dovidio et al., 2008). For example, our previous work has documented substantial prejudice toward men who have sex with men among medical students in Malaysia (Jin et al., 2014), which is related to intentions to discriminate against this group within healthcare settings (Earnshaw et al., 2016b). We have found similar dynamics among medical doctors in Malaysia, who endorse prejudice toward and intend to discriminate against transgender patients (Vijay et al., 2018). Additional work suggests that providers who endorse greater LGBTQ stigma are less likely to prescribe pre-exposure prophylaxis (PrEP; i.e., an HIV prevention medication) to men who have sex with men (Calabrese et al., 2017).

Moreover, LGBTQ individuals may avoid healthcare settings and delay needed care because they have experienced or expect to experience stigma from healthcare providers. In Jamaica, misgendering and judgment from nurses present barriers for LGBTQ persons accessing HIV testing (Logie et al., 2018a). Moreover, stigma regarding same-sex practices among men presents barriers for gay and bisexual men purchasing condoms and lubricants, and many order lubricants online from the United States to reduce experiences of stigma and discrimination when accessing these sexual health resources (Logie et al., 2018a). In Swaziland, lesbians also experience stigma and judgment from healthcare providers, including “virginity” tests where healthcare providers examine the hymen to assess if women have had penetrative sex (Logie et al., 2018c). This suggests the role that compulsory heterosexuality (not believing persons who state they are lesbian/gay) plays in shaping LGBTQ persons’ healthcare experiences.

### ***2.3.3 Biological, Psychological, and Behavioral Responses***

Stigma is additionally associated with a range of biological, psychological, and behavioral responses that have implications for health. Stress is highlighted as a central mechanism through which stigma gets “under the skin” and leads to LGBTQ health

inequities (Hatzenbuehler et al., 2009; Meyer, 1995, 2010). Stigma results in physical stress and psychological stress, or perceptions that demands in the environment exceed one's capacity (Cohen et al., 2007). Acute experiences of stress have an immediate impact on the body, including activation of the sympathetic nervous system, which leads to increases in blood pressure and heart rate, and hypothalamic-pituitary-adrenal axis, which leads to the production of corticosteroids including cortisol (Taylor & Stanton, 2007). Chronic experiences of stress, which include threats that last over long periods of time, effect the regulation of immune and inflammatory processes that may, over time, lead to a range of diseases including coronary artery disease, autoimmune disorders, cancer, and many others (see Chaps. 4 and 5) (Baum, 1990; Cohen et al., 2012, 2007). Importantly, LGBTQ individuals may experience stigma in both acute ways, such as an episode of enacted stigma involving physical violence, and chronic ways, such as anticipated stigma involving constant worry over treatment from others, all of which may undermine health. Stress additionally leads to problems with emotional regulation and cognitive processing, which increase risks for mental illness, including depression and anxiety (see Chap. 3) (Hatzenbuehler, 2009). Individuals may cope with stress resulting from stigma with health-compromising behaviors. For example, LGBTQ individuals who experience greater stigma may also engage in greater substance use and sexual practices that put them at risk for sexually transmitted infections (e.g., sex without a condom, transactional sex) (Diaz et al., 2004; Hatzenbuehler, 2009). In this way, LGBTQ stigma may play a role in HIV/STI disparities experienced by men who have sex with men and transgender women globally.

## 2.4 Interventions to Address LGBTQ Stigma

It is critical to develop and implement efficacious interventions that address stigma to improve the health of LGBTQ people globally. Recent theorists have emphasized that stigma interventions must be multilevel to be efficacious, spanning both structural and individual levels (Cook et al., 2014; Rao et al., 2019). Below, we summarize intervention strategies to change structural stigma, reduce stigma among perceivers, and enhance resilience to stigma among targets, many of which have been implemented globally. Cook et al. (2014) emphasize that the effects of stigma-reduction interventions are often bidirectional and reinforcing both within and between social-ecological levels. For example, an intervention to reduce stigma among perceivers may ultimately lead to structural change, which may in turn reduce stigma among targets.

### 2.4.1 *Structural Change*

At the structural level, stigma interventions include legal and policy changes, as well as education and social norm campaigns to reduce social stigma. Legal and policy changes can target repealing stigmatizing civil and religious laws,

including those reviewed within this chapter, as well as enacting protections for LGBTQ people. These legal and policy changes are slowly happening throughout the world. For example, the Supreme Court of India struck down Section 377, a remnant of the British Penal Code that criminalized same-sex sexual practices, in 2018 on the basis that it violated the Constitution's recognition that all persons are equal before the law (Narain, 2018). The ruling followed close to a decade of court cases that both challenged (e.g., *Naz Foundation vs. NCT Delhi* in 2009) and upheld (e.g., *Kumar Koushal vs. Naz Foundation* in 2013) the constitutionality of Section 377. These cases coincided with a social movement characterized by greater visibility and acceptance of LGBTQ people (e.g., as evidenced by the release of movies with LGBTQ characters and public discourse surrounding sexuality). In his judgment, Justice Chandrachud wrote, "It is difficult to right the wrongs of history. But we can certainly set the course for the future. That we can do by saying, as I propose to say in this case, that lesbians, gays, bisexuals, and transgenders have a constitutional right to equal citizenship in all its manifestations" (p. 15) (Narain, 2018).

The Universal Periodic Review, conducted by the United Nations, has been identified as a key mechanism for advocating for legal and policy changes (Itaborahy & Zhu, 2014). It begins with an analysis of each country's human rights situation by other United Nations countries. The other countries then make recommendations that the state under review may either accept or reject. Itaborahy and Zhu observed that highly targeted recommendations (e.g., police education and protections against violence) were more likely to be accepted than generalist recommendations to end criminalization of or discrimination toward LGBTQ people (Itaborahy & Zhu, 2014). Social media has additionally become an important platform for LGBTQ activism for legal and policy change. For example, Southern African LGBTQ organizations use digital strategies to raise global awareness of human rights violations, share information with LGBTQ individuals globally, and mobilize for activism (Mutsvairo, 2016).

In addition to decriminalizing LGBTQ identities, sexual practices, and expressions, laws enacted to protect the rights of LGBTQ people can reduce stigma. As of 2017, 9 countries prohibit discrimination based on sexual orientation within their constitution, 72 prohibit discrimination in employment, and 43 criminalize acts of violence based on sexual orientation and/or gender identity (Carroll & Mendos, 2017). Moreover, 26 countries recognize joint adoption by same-sex couples, and 22 legally recognize marriage for same-sex couples. Evidence suggests that structural change can trickle down, benefiting the well-being of LGBTQ individuals. For example, sexual minority men living in the state of Massachusetts in the United States had a decrease in mental health and medical care visits after same-sex marriage was legalized in their state in 2003, indicating improved mental and physical health among this population following the enactment of this law (Hatzenbuehler et al., 2012).

### 2.4.2 *Stigma Reduction Among Perceivers*

Reducing LGBTQ stigma among people who do not identify as such is key to ensuring that LGBTQ individuals are not exposed to negative treatment from others. Popular intervention strategies for reducing stigma among perceivers include enhancing education and providing opportunities for interpersonal contact (Cook et al., 2014). Education involves building knowledge via courses, texts, online platforms, and other venues and can help to challenge stereotypes that perceivers may hold about LGBTQ people. Evidence from Europe, North and South America, Asia, and Australia suggests that educational interventions can reduce stigma, but may not eliminate stigma on their own (Cook et al., 2014). In Senegal, wherein same-sex practices are criminalized (Carroll & Mendos, 2017), education strategies have been implemented in conjunction with other stigma-reduction strategies to address stigma among healthcare providers (Lyons et al., 2017). Interpersonal contact, involving interaction between LGBTQ and non-LGBTQ individuals, is another popular stigma reduction intervention strategy. Research from North and Latin America, Europe, Israel, Australia, New Zealand, Africa, and Asia suggests that intergroup contact reduces prejudice by enhancing knowledge about LGBTQ people, lowering anxiety surrounding interactions with LGBTQ people, and increasing empathy toward and perspective taking with LGBTQ people (Pettigrew & Tropp, 2006, 2008). For instance, as previously discussed, a participatory theater intervention in Swaziland and Lesotho has been used to change attitudes toward LGBTQ persons (Logie et al., 2019). Findings suggest that creative strategies that engage persons in developing solutions to stigma, including healthcare providers, can increase understanding and awareness of LGBTQ stigma and its harmful impacts, can build empathy, and foster self-reflection. Such approaches should be contextually tailored and provide examples of stigma that are grounded in the lived experiences of LGBTQ persons. Importantly, the evidence indicates that contact must occur under a set of “optimal conditions,” including equal status between LGBTQ and non-LGBTQ people, common goals, intergroup cooperation, and support of authorities (Pettigrew & Tropp, 2006).

It may be important to prioritize intervention efforts targeting individuals from whom stigma is particularly detrimental to LGBTQ people. For example, childhood and adolescence are sensitive periods during which individuals may be particularly vulnerable to the negative health effects of LGBTQ bullying (Earnshaw et al., 2016a, 2017). Therefore, it may be particularly important to implement interventions to reduce LGBTQ stigma within school settings starting at young ages. The results of a recent systematic review demonstrated that interventions to address LGBTQ bullying are increasing overall but remain limited to North America, Europe, and Oceania (Earnshaw et al., 2018). Stigma from family members can lead to social rejection, which in turn leads to social isolation. The Family Acceptance Project, which was developed in the United States and is now being implemented internationally, aims to increase the acceptance of LGBTQ youth by family members (Katz-Wise et al., 2017; Ryan, 2010). Moreover, stigma endorsed by medical

doctors can lead to poor provision of medical care to stigmatized individuals (Dovidio et al., 2008). In addition to enhancing education and providing opportunities for interpersonal contact, evidence suggests that interventions aiming to build clinical skills for working with stigmatized populations can reduce stigma (Stangl et al., 2013). This may involve teaching medical students and doctors about stigma-free language, how to take medical and sexual histories of LGBTQ patients, and how to deliver gender-affirming medical care to transgender individuals.

### ***2.4.3 Enhancing Resilience Among Targets***

History indicates that eliminating any kind of stigma, including LGBTQ stigma, at the structural level and among perceivers will take time. While stakeholders develop, test, and implement intervention strategies to eliminate LGBTQ stigma at these levels, it is important to enhance resilience among LGBTQ people to attenuate the effect of stigma on health. Minority stress theory emphasizes the importance of enhancing resilience to buffer LGBTQ individuals from the effects of enacted and anticipated stigma and/or reduce internalized stigma among LGBTQ individuals (Meyer, 1995, 2010). In this section we discuss participatory theater approaches, interventions that enhance coping, and interventions that enhance mindfulness.

Participatory theater approaches aim to enhance resilience to stigma among targets, reduce stigma among perceivers, and disrupt stigma within communities. Such multilevel stigma reduction interventions are recommended to create more impactful change than single-level interventions (Rao et al., 2019). Participatory theater approaches originate in Theatre of the Oppressed, which is a pedagogical tool developed in Brazil by Augusto Boal and inspired by Paulo Freire's Pedagogy of the Oppressed (Boal, 1974). Theatre of the Oppressed is designed to promote empowerment among targets of stigma, critical consciousness among targets and perceivers of stigma, and social transformation within communities. Participatory theater approaches have been shown to build self-acceptance and feelings of solidarity among trans women of color in Canada (Logie et al., 2019b) and reduce LGBTQ stigma among healthcare providers, educators, students, and community members in Swaziland, Lesotho, Canada, and the United States (Logie et al., 2019a; Tarasoff et al., 2014; Wernick et al., 2013). Thus, participatory theater approaches represent a multilevel and multifaceted stigma-reduction tool that originated in the Global South and has been applied in the Global North.

Interventions to enhance coping among targets aim to strengthen psychosocial resources and strategies to mitigate the impact of enacted and anticipated stigma on stress responses, ultimately buffering individuals from the effect of stigma on health (Chaudoir et al., 2017). A recent systematic review of the intervention "toolkit" to address sexual minority stress identified 12 interventions to bolster skills to cope with stigma, most of which were developed in the United States (Chaudoir et al., 2017). Examples of effective intervention strategies included cognitive behavioral therapy to reduce depression and help individuals identify adaptive coping responses to stigma,

expressive writing to bolster cognitive and emotional processing of enacted stigma, and attachment-based family therapy to help adolescents process stigma originating within family relationships. Interventions addressing intersectional stigma experienced by LGBTQ individuals are also being tested. The results of *Still Climbin*, a group-based intervention among HIV-positive Black sexual minority men in the United States, improved functional coping, humor-based coping, and cognitive/emotional debriefing in response to enacted stigma (Bogart et al., 2018). Peer-based support approaches have been used to address HIV and LGBTQ stigma among men who have sex with men in Senegal (Lyons et al., 2017). These approaches were based on previous interventions developed in Senegal, Kenya, Vietnam, and Thailand.

Interventions to enhance mindfulness have shown some success in addressing internalized stigma. Rather than attempting to reduce stigmatizing thoughts and feelings directly, these interventions focus on the relationships between thoughts, feelings, and behaviors (Luoma et al., 2008). For example, in acceptance and commitment therapy, individuals are taught to observe their thoughts and fully feel their emotions, including those reflecting internalized stigma, and then enact actions that will take them in valued directions, such as self-love and acceptance (Luoma et al., 2008; Skinta et al., 2015). Acceptance and commitment therapy has been leveraged to reduce internalized stigma among people with a range of stigmatized identities and characteristics, including LGBTQ individuals (Luoma et al., 2008; Mittal et al., 2012; Skinta et al., 2015; Yadavaia & Hayes, 2012). Other strategies to address the internalized stigma that have been implemented in the Global South and North include psychotherapy, psychoeducation, and community participation (Ma et al., 2019). For example, one study conducted in Thailand increased interactions between members of stigmatized groups, their families, and community members via educational, volunteer, and community events (Apinudecha et al., 2007).

## 2.5 Conclusion

Stigma is experienced by LGBTQ people worldwide and acts as a powerful and pernicious determinant of global LGBTQ health inequities. As the field moves toward addressing stigma to achieve LGBTQ health equity, it is worth bearing in mind that stigma is neither fixed nor insurmountable. Rather, it is malleable and intervenable: it has changed and will continue to change with time. Signs of change are visible everywhere. Laws that protect the civil rights of LGBTQ people are becoming more numerous. In 2017, there were 63 countries with laws designed to protect LGBTQ from various forms of discrimination (e.g., bans on blood donation, protection against bullying), 22 countries that recognized same-sex marriage, and 26 countries that recognized the rights of same-sex parents to adopt children (Carroll & Mendos, 2017). Pride, a movement that celebrates LGBTQ people, commemorates past historic traumatic assaults and civil rights victories (i.e., 1969 Stonewall police raid and riots), and protests ongoing civil rights inequities, gains momentum every year as it spreads to new cities around the world and more people attend. As



Lebanon map showing major population centers as well as parts of surrounding countries and the Mediterranean Sea. (Source: Central Intelligence Agency, 2021)

this change in stigma slowly occurs, LGBTQ people are building community, and providing and receiving support, to build resilience and protect LGBTQ individuals from the effects of stigma. The Trevor Project, which provides crisis intervention and suicide prevention services in the United States, represents an example of the response from the LGBTQ community to address suicidality among LGBTQ youth (The Trevor Project, 2019). Public health researchers, practitioners, policymakers, and other stakeholders have key roles to play in supporting these efforts and advocating for continued change in LGBTQ stigma worldwide.

## 2.6 Case Study: Tackling LGBTQ Stigma in Lebanon

LGBTQ visibility and activism in Lebanon have been steadily increasing over the past few decades. Multiple, diverse LGBTQ organizations have formed, the local LGBTQ community has mobilized to advocate against police violence and criminalization of same-sex sexual practices, and Beirut has become one of the most socially progressive cities in the region, holding its first LGBTQ Pride event in 2017 (OutRight, 2018; McCormick, 2011; Healy, 2009).

Despite this progress, LGBTQ people face pervasive stigma at multiple socio-ecological levels, including the interpersonal, community/institutional, and structural levels (Wagner et al., 2013; Nasr & Zeidan, 2015). Many Lebanese citizens remain opposed to the acceptance of LGBTQ people into society, viewing LGBTQ people as psychologically or medically defective and as a threat to traditional heteropatriarchal values. Harassment and discrimination against LGBTQ individuals are common, even in healthcare facilities (OutRight, 2018). Pride 2018 was canceled after the organizer was arrested and threatened with criminal prosecution for promoting debauchery (Homsy, 2018). A law passed in 1942 criminalizing same-sex sexual practices continues to be implemented to arrest LGBTQ people, and such arrests have steadily increased in recent years (OutRight, 2018; Tohme et al., 2016).

Prior research across the globe has consistently demonstrated that social and structural stigma impacts the sexual health of sexual and gender minorities (Fitzgerald-Husek et al., 2017; Hatzenbuehler, 2016; Link & Hatzenbuehler, 2016). Stigma has been linked to high-risk sexual behaviors and low uptake of sexual healthcare services (Fitzgerald-Husek et al., 2017). Although, in general, research on LGBTQ populations in Lebanon is limited, a similar link has been demonstrated with cisgender sexual minority men in Beirut, with social and structural stigma being related to condomless anal intercourse with partners of unknown HIV status (Wagner et al., 2015). This occurs in a population where HIV is likely concentrated, where condomless anal intercourse is already common, and where HIV-related knowledge and perceived risk for HIV acquisition are low (Mumtaz et al., 2011, 2019; Wagner et al., 2014; Mahfoud et al., 2010).

The stigma experienced by LGBTQ people in Lebanon has ties to the country's history, culture, and religious environment. The structural stigma seen in the Lebanese penal code stems from a 1942 law ratified under French colonial rule



(OutRight, 2018). In addition, Lebanon has a history of sectarian conflict, and over 90% of the population identifies as Muslim or Christian (Haddad, 2002). A legacy of colonialism and sectarian conflict, the ongoing use of colonial law to arrest LGBTQ people, and the social values and practices of dominant religious institutions have no doubt played, and continue to play, a role in shaping sociocultural conditions, attitudes, and norms with regard to sexuality and gender, essentially underpinning the stigmatization of LGBTQ people.

Several local LGBTQ organizations have been integral in addressing much of this stigma and its associated sequelae. Three organizations of note are Helem, the Lebanese Medical Association for Sexual Health, (LebMASH), and Marsa Sexual Health Center, all of which are located in Beirut. The work of these three organizations provides a blueprint for multilevel stigma mitigation interventions in Lebanon that tackle both the source and effects of stigma. Helem intervenes at the policy level, targeting one of the primary drivers of stigma, and also at the community level, providing safe spaces for LGBTQ people to gather. Marsa and LebMASH both intervene across the community and institutional levels. Marsa provides stigma-free sexual healthcare services to LGBTQ people, while LebMASH engages in LGBTQ-related scholarship and education.

Since its formulation, Helem, a non-profit organization, has devoted its efforts to addressing structural issues that target LGBTQ people, particularly the law criminalizing same-sex sexual practices. Helem has spent years advocating for decriminalizing same-sex sexual behavior, and a series of court rulings over the past 10 years indicate movement toward that end. The first came in 2009, when a judge refused to apply the law to two cisgender men, reasoning that the law criminalizing same-sex behavior was no longer consistent with social change. Five years later, a judge refused to apply the law in a case involving a transgender woman and a cisgender man, reasoning that the individual's gender identity should be accepted, rendering the application of the law null and void. In 2017, a judge again refused to apply the law, reasoning that sexual minorities have a right to the same intimate relationships as everyone else, which was later upheld on appeal. Relatedly, Helem has used targeted media campaigns to advocate for a ban on forced anal examinations, which were commonly employed to prove one's homosexuality; in 2012, the Minister of Justice called for an end to the practice. Aside from policy advocacy, Helem also provides a safe physical space for LGBTQ people to gather and holds various events for local LGBTQ people, helping to foster a much-needed sense of community (OutRight, 2018; Mutchler et al., 2018).

LebMASH, a nonprofit, nongovernmental organization, is comprised of healthcare professionals and strives to achieve health equity for sexual and gender minorities. In 2013, LebMASH collaborated with the Lebanese Psychological Association and the Lebanese Psychiatric Society to issue public statements that homosexuality is not a mental illness and that it is not amenable to conversion therapy. LebMASH created a video series to debunk myths regarding homosexuality and holds an annual medical conference entitled National LGBT Health Week to share research and encourage scholarship in the field of LGBTQ sexual health (OutRight, 2018; LebMASH, 2017; Abdessamad & Fattal, 2014).

Marsa Sexual Health Center is a nongovernmental organization that provides confidential, anonymous sexual healthcare services to sexual and gender minorities, as well as other vulnerable, marginalized groups. Their services include free HIV testing and counseling and several subsidized services, including testing for sexually transmitted infections and psychosocial counseling, among others. Marsa explicitly markets its facility as a stigma- and discrimination-free space. Marsa has also developed LGBTQ sexual health education materials for universities and for the general public, as well as general educational materials, to increase the public's understanding of gender minorities (Marsa, 2019; OutRight, 2018).

Sustained by such organizations, LGBTQ people in Lebanon and their allies remain steadfast in their commitment to topple homophobia and bring about a society free of stigma, where social progress and equality flourish (Harb, 2019).

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# Chapter 3

## Global LGBTQ Mental Health



Richard Bränström, Tonda L. Hughes, and John E. Pachankis

### 3.1 Differences in Mental Health Between LGBTQ Individuals and Cisgender Heterosexual Individuals

Research studies from many parts of the world, including countries in Europe, North and South America, Asia, Africa, and Oceania, have demonstrated significantly elevated risk of poor mental health among lesbian, gay, bisexual, transgender, and queer (LGBTQ) individuals as compared to cisgender and heterosexual individuals (Blondeel et al., 2016; Mendoza-Perez & Ortiz-Hernandez, 2019; Meyer, 2003a; Mueller et al., 2017; Mueller & Hughes, 2016; Ploderl & Tremblay, 2015; Valentine & Shipherd, 2018). Earlier reports tended to come from small studies that used nonrepresentative samples and self-report measures of mental health concerns. More recent studies, including from the Netherlands, New Zealand, Sweden, the United Kingdom, and the United States, that used stronger research designs and representative samples have confirmed these findings and increased our knowledge about sexual orientation and gender identity-related mental health disparities (Bränström, 2017; Bränström et al., 2018; Bränström & Pachankis, 2019; Cochran et al., 2003; Sandfort et al., 2014; Semlyen et al., 2016; Spittlehouse et al., 2019).

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R. Bränström (✉)

Department of Clinical Neuroscience, Karolinska Institute, Stockholm, Sweden

e-mail: [richard.branstrom@ki.se](mailto:richard.branstrom@ki.se)

T. L. Hughes

Department of Psychiatry, School of Nursing, Columbia University, New York, NY, USA

e-mail: [th2696@cumc.columbia.edu](mailto:th2696@cumc.columbia.edu)

J. E. Pachankis

Department of Social and Behavioral Sciences, School of Public Health, Yale University, New Haven, CT, USA

e-mail: [john.pachankis@yale.edu](mailto:john.pachankis@yale.edu)

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### 3.1.1 *Types of Mental Health Problems*

Depression, anxiety, suicidality, general distress, and substance use show the largest disparities by sexual orientation and gender identity based on a variety of studies from the United States, Latin America and the Caribbean, Australia, Southern Africa, the United Kingdom, and New Zealand (Bostwick et al., 2010; Caceres et al., 2019; Hughes et al., 2010; Mueller et al., 2017; Ploderl & Tremblay, 2015; Semlyen et al., 2016; Spittlehouse et al., 2019; Valentine & Shipherd, 2018). The results of representative surveys in Sweden and New Zealand show that compared with heterosexual and cisgender people, LGBTQ people are about two to three times as likely to experience depression, anxiety, and substance abuse (Bränström, 2017; Bränström et al., 2018; Lucassen et al., 2017). A considerable number of studies from across the globe have also found substantially elevated risk of suicidal thoughts and suicidal behavior among LGBTQ people, with the majority of studies coming from North America and Europe (di Giacomo et al., 2018; Haas et al., 2010; Hottes et al., 2016; Ploderl et al., 2013; Ploderl & Tremblay, 2015; Salway et al., 2019; Valentine & Shipherd, 2018). Substance use, another area of health disparities affecting LGBTQ individuals, is described in greater detail in Chap. 8.

### 3.1.2 *Cultural Differences in Understanding Mental Health*

Understanding of mental health and mental disorders differs by cultural settings. The manifestations of mental illness vary across cultures, with culture-specific expressions of psychological distress and suffering. This variation makes it harder to uniformly assess symptoms, develop and implement effective mental health treatments, and conduct cross-cultural mental health research globally.

There is also a growing body of research on cross-cultural, transcultural, and global psychiatry spearheaded by organizations such as the World Association of Cultural Psychiatry and the Society for the Study of Psychiatry and Culture, which, respectively, publish the peer-reviewed journals *World Cultural Psychiatry Research Review* and *Transcultural Psychiatry* (Society for the Study of Psychiatry and Culture, 2020; World Association of Cultural Psychiatry, 2020). This body of research often emphasizes Global South contexts and mental health constructs, such as culture-bound syndromes, collectivistic coping, interdependent self-construal, and decolonial interventions and service delivery (Crozier, 2018; Hickling, 2019; Joe et al., 2017; Mascayano et al., 2019; Prakash et al., 2018; Roldán-Chicano et al., 2017; Yeh & Kwong, 2008).

It is important to note, however, that much of the existing LGBTQ mental health research and treatment development work to date has been conducted in the Global North. Consequently, there is currently limited research contextualizing LGBTQ populations within Global South mental health constructs in various parts of the world. In this chapter, we focus on available scientific information about LGBTQ

mental health and its determinants. Because of the relative dearth of research conducted in the Global South, all references will refer to Global North countries/contexts unless otherwise specified.

## **3.2 Differences in Mental Health Across Diverse Populations of LGBTQ Individuals**

Because the LGBTQ population reflects the demographic diversity of the global population, it is of great importance to understand how various sociodemographic characteristics affect the health and lives of LGBTQ people, how such characteristics interact with sexual orientation and gender identity, and which LGBTQ sub-populations are most vulnerable to negative mental health outcomes. An intersectional perspective can help address this. The section below describes sociodemographic characteristics that intersect with LGBTQ identities that are commonly investigated in global LGBTQ mental health research.

### ***3.2.1 Age and Sex***

The increased risk of poor mental health among LGBTQ people begins early in life (Irish et al., 2019) and often persists across the life course (Fredriksen-Goldsen et al., 2013, 2015; Yarns et al., 2016). For instance, a study comparing mental health disparities in sexual minorities and heterosexuals across age groups in the United Kingdom found disparities among both younger (age <35) and older (age 55+) sexual minority individuals (Semlyen et al., 2016). In contrast, a large multi-site study of women enrolled in a US interagency HIV study found no differences in mental health disparities between sexual minority and heterosexual women at mid-age or older (Pyra et al., 2014). Similarly, a community-based study of sexual minority women found that self-perceived mental health was significantly better among older (age 55+) sexual minority women than among their younger age counterparts (Veldhuis et al., 2017). Studies of suicidality have shown that the sexual orientation disparity in this particular mental health risk peaks for LGBTQ individuals around adolescence and young adulthood (Fish et al., 2018; Irish et al., 2019).

### ***3.2.2 Sexual Identity and Gender Identity***

Many studies of sexual minority mental health do not disaggregate gay/lesbian and bisexual individuals when analyzing data and presenting results, but there is growing evidence of substantial variability across sexual minority subgroups. For

example, a number of studies have found higher rates of depression, anxiety, and suicidality among bisexuals compared to gay men and lesbian women (Bostwick et al., 2010; Bränström, 2017; Bränström et al., 2018; Huang et al., 2018a; Hughes et al., 2010; Ross et al., 2018; Salway et al., 2019). There are indications that this heightened risk is particularly strong for bisexual women (Salway et al., 2019). It is not completely clear why the mental health status of bisexuals differs from that of gay men and lesbian women, although possible explanations include experiences of bisexuality-specific discrimination, bisexual invisibility/erasure, and lack of bisexual-affirmative support (Colledge et al., 2015; Hughes et al., 2014; Ross et al., 2018).

Although the large majority of studies on LGBTQ mental health has focused on sexual minorities, an increasing number of studies indicate that transgender individuals are at even greater risk of mental health problems, such as depression, anxiety, suicidality and self-harm, and eating disorders as compared to both non-LGBTQ individuals and sexual minority cisgender people (Calzo et al., 2017; Connolly et al., 2016; Jones et al., 2016; McNeil et al., 2017; Millet et al., 2017; Mueller et al., 2017). Transgender people may be at risk for gender dysphoria, which is significant psychological distress arising from an incongruence between the assigned birth sex and gender identity (American Psychiatric Association, 2021).

### 3.2.3 *Socioeconomic Status*

There is currently strong scientific evidence linking lower socioeconomic status (SES), often defined based on income and level of education, with mental and physical health (Adler et al., 1994; Link & Phelan, 1995). In research concerning the health of LGBTQ people, socioeconomic factors tend only to be used as control variables so as to isolate the effects of LGBTQ status and associated determinants as predictors of mental health disparity by LGBTQ status (McGarrity, 2014). There are, however, reasons to investigate the specific effects that socioeconomic status (e.g., income, education) might have on LGBTQ people's experience of social stress and their ability to cope with such stress. For example, McGarrity (2014) found that openness about one's sexual orientation was associated with positive physical health among gay/bisexual men with higher socioeconomic status in the United States, but the opposite appeared to be true for gay/bisexual men with lower socioeconomic status. Although certain subgroups within the LGBTQ population have been shown to have higher levels of education, particularly gay men (Bränström & Pachankis, 2018; Conron et al., 2018), higher levels of education do not necessarily translate to higher levels of income. Sexual minority women are typically burdened with the gender disadvantage facing women in general, which becomes compounded in same-sex female couples (Badgett, 2009). The ability of SES to both be eroded by LGBTQ-related

discrimination and to moderate the ability of LGBTQ people to cope with such stigma is an important area for future research.

### **3.2.4 Race/Ethnicity**

A good deal of research into the intersection of ethnic minority status and LGBTQ identity has been conducted in the United States, with a focus on the consequences of possessing a double minority status as both a person of color and an LGBTQ individual (Toomey et al., 2017; Trygg et al., 2019). Studies have shown that racial/ethnic minority LGBTQ people may experience stigma and discrimination due to their LGBTQ identity, skin color, and racial/ethnic identity (Toomey et al., 2017; Vu et al., 2019; Wade & Harper, 2017) and that these associated stressors can come both from their racial/ethnic minority communities as well as from white LGBTQ people (Balsam et al., 2011). Studies examining mental health prevalence among ethnic minority LGBTQ individuals compared to ethnic majority LGBTQ individuals present varied results (Rodriguez-Seijas et al., 2019; Toomey et al., 2017). Some studies have found higher levels of mental illness among ethnic minority LGBTQ people (Hwahng & Nuttbrock, 2014; O'Donnell et al., 2011), whereas others have found lower levels of mental illness among this group or no difference (Bostwick et al., 2014; Rodriguez-Seijas et al., 2019; Toomey et al., 2017). Globally, the role of race/ethnicity in mental health varies greatly depending on the country, world region, and migration pattern (Arndt & Hewat, 2009; Toomey et al., 2017; Wade & Harper, 2017). There is a great need for additional research to understand the mental health implications of multiple minority statuses more fully.

### **3.2.5 Migration Status**

Given the wide regional variation in stigmatizing environments and cultural norms globally, LGBTQ people might be particularly likely to migrate in order to escape persecution or to seek freedoms not available to LGBTQ people living in high-stigma global regions. Of course, LGBTQ people are also part of the substantial general global population that migrates across national borders within any given year (Luibhéid, 2008). The mental health of LGBTQ migrants remains relatively unstudied, although the LGBTQ- and migrant-specific support available in LGBTQ migrants' sending and receiving countries appears to be an important determinant of this population's health (Pachankis et al., 2017). Other factors shaping LGBTQ migrants' mental health include violence and acculturation (Alessi et al., 2016, 2017; Alessi & Kahn, 2017; Piwowarczyk et al., 2017).

### **3.2.6 *Geographic Variations in LGBTQ Mental Health***

#### **3.2.6.1 Central and South America**

Although there have been few representative studies of LGBTQ mental health conducted in Central and South America, one study from Mexico among high school students showed a higher risk of mental health problems among sexual minority individuals compared to heterosexuals, confirming the global pattern (Mendoza-Perez & Ortiz-Hernandez, 2019). The disparity was strongest among sexual minority men and was mediated by exposure to violence. In addition, several non-probability studies from Central and South America (e.g., Brazil and Jamaica) suggest a high prevalence of mental health problems among sexual minority individuals in these regions (Caceres et al., 2019; Ghorayeb & Dalgarrondo, 2011; Teixeira & Rondini, 2012; White et al., 2010). Similar elevations in mental health morbidity have been found among transgender women in Argentina, Brazil, and the Dominican Republic (Budhwani et al., 2018; Lobato et al., 2008; Marshall et al., 2016).

#### **3.2.6.2 Middle East/North Africa**

Information about the prevalence of mental health problems among LGBTQ individuals living in the Middle East and North African region is very limited. Some studies using non-probability samples from Israel and Lebanon have shown increased risk of mental health problems (i.e., depression and suicidality) among sexual minority men compared to matched heterosexual controls (Shenkman et al., 2019; Shenkman & Shmotkin, 2011; Wagner et al., 2018). Further, a few studies of transgender individuals receiving gender-affirming surgical treatment in Iran and Lebanon have found elevated prevalence of mental health problems (e.g., anxiety, post-traumatic stress symptoms, and suicidality) among this population both before and after surgery (Gorjian et al., 2017; Havar et al., 2015; Ibrahim et al., 2016; Kaplan et al., 2016). Some of these studies suggest that mental health problems are more common among male-to-female transgender individuals compared to female-to-male transgender individuals, possibly as a result of cultural gender roles and status (Havar et al., 2015; Ibrahim et al., 2016).

#### **3.2.6.3 Sub-Saharan Africa**

Few studies using representative samples have been conducted in sub-Saharan Africa. However, several non-probability studies from this region, mostly with men who have sex with men (MSM), have been reported. For example, high levels of depression symptoms have been reported among MSM in Tanzania and South Africa (Ahaneku et al., 2016; Mgopa et al., 2017; Stoloff et al., 2013); high prevalence of psychological distress among gay men, lesbian women, and bisexual women and men in Botswana (Ehlers et al., 2001); and lower quality of life among gay, lesbian, and bisexual students compared to their heterosexual peers in Nigeria (Boladale

et al., 2015). Studies have also found a high prevalence of suicidal ideation among MSM living in the Gambia, Burkina Faso, Togo, and South Africa (Stahlman et al., 2016; Stoloff et al., 2013). One study using a heterosexual comparison group found almost three times higher prevalence of depression among gay male university students in Nigeria compared to heterosexual students (Oginni et al., 2018). A review of the literature on the health of sexual minority women in Africa (Mueller & Hughes, 2016) highlighted the impact of heteronormativity and social exclusion on mental health, particularly related to psychological distress and elevated rates of depression. In this study, experiences of hate speech, sexual violence, and religion-based stigma and discrimination were associated with mental distress and suicidal ideation among sexual minority women. In the only published study of lesbian and bisexual women's health in Rwanda, Moreland and colleagues (Moreland et al., 2019) found high levels of interpersonal trauma and minority stressors.

#### **3.2.6.4 South, East, and Southeast Asia**

Although there are few studies of LGBTQ mental health reported from South, East, and Southeast Asia using representative samples, a few population-based studies of Chinese sexual minorities have shown an increased risk of suicidality compared to Chinese heterosexuals (Huang et al., 2018a; Lian et al., 2015). Additionally, a large number of non-probability studies have been conducted with sexual and gender minorities, mostly MSM and transgender individuals, from South, East, and Southeast Asia. For example, recent studies have reported high levels of depression symptoms among MSM and transgender women (hijra) living in India (Chakrapani et al., 2017a, b; Logie et al., 2012; Parikh-Chopra, 2019; Sivasubramanian et al., 2011; Tomori et al., 2016). There are reports of elevated depression and suicidality among MSM and transgender individuals living in Nepal (Deuba et al., 2013; Kohlbrenner et al., 2016), gay/bisexual men in Japan (Hidaka & Operario, 2006), and gay/lesbian and bisexual youth in India (Singh & Srivastava, 2018). High risk of suicidality has been identified among transgender individuals in China (Chen et al., 2019); lesbian/bisexual women in Taiwan (Kuang et al., 2003); and gay men, lesbian women, and MSM in South Korea (Cho & Sohn, 2016; Kim & Yang, 2015). A lower degree of psychological well-being has been reported among transgender men (toms) and transgender women (kathoeys) in Thailand (Gooren et al., 2015); elevated risk of suicidality among sexual minority women in Taiwan (Kuang et al., 2003) and among LGBTQ Filipinos (Reyes et al., 2017); and high levels of depression among transgender women in Cambodia (Yi et al., 2018).

#### **3.2.6.5 Oceania and the Pacific Islands**

Few representative studies have been reported from Oceania and the Pacific Islands, but one national population-based study among young women in Australia reported increased risk of depression and anxiety among sexual minority women, especially women who identified as bisexual or mostly heterosexual, compared to exclusively



heterosexual women (Hughes et al., 2010). Non-probability studies from Australia and New Zealand similarly report higher rates of mental health problems (e.g., depression and suicidality) among sexual minorities (Cantor & Neulinger, 2000; Lucassen et al., 2015; Mathy, 2002; Skerrett et al., 2014, 2015).

### 3.2.6.6 Europe

Because of the existence of national health registries in many Northern European countries, some of the earliest population-based studies of LGBTQ mental health came from that region (Sandfort et al., 2001). Europe continues to produce population-based insights into LGBTQ mental health largely not available elsewhere, including studies from the Netherlands, Sweden, and the United Kingdom (De Graaf et al., 2006; King et al., 2003; La Roi et al., 2016; Meads et al., 2007; Sandfort et al., 2001, 2006, 2014). These studies support findings from earlier European research and more recent population-based studies from North America of higher rates of mental health problems such as depression, anxiety, substance use, and suicidality (Bränström, 2017; Bränström et al., 2018; Bränström & Pachankis, 2019; King et al., 2008; Sandfort et al., 2001, 2014; Semlyen et al., 2016; Wang et al., 2012).

Recent European studies have also taken advantage of the wide diversity of social acceptance of LGBTQ people to predict variations in mental health. Indeed, LGBTQ legal rights and protection (e.g., same-sex marriage rights and inclusion of LGBTQ status in hate crime legislation) and population attitudes and acceptance of LGBTQ individuals vary greatly across European countries (Bränström & van der Star, 2013). Studies have shown a clear link between a European country's stigmatizing legislation and attitudes and the life satisfaction of LGBTQ individuals living in that country (Bränström et al., 2021; Pachankis & Bränström, 2018). Preliminary evidence suggests that this association exists due to LGBTQ individuals living in high-stigma countries perceiving a need to conceal their sexual identity to avoid discrimination and victimization.

### 3.2.6.7 North America

As mentioned above, the majority of studies on LGBTQ mental health, especially earlier studies (i.e., those published in the 1990s and early 2000s) were conducted in North America. These earlier studies typically used small, nonrepresentative samples and self-report measures of mental health. The results pointed to greater risk of psychiatric morbidity among sexual minorities than among heterosexuals; the mental health of transgender populations was rarely examined (Cohen-Kettenis & Van Goozen, 1997). However, more recent studies from North America employ representative samples and stronger methodologies and have largely confirmed these early findings (Bostwick et al., 2010; Cochran et al., 2003, 2007; Cochran & Mays, 2000, 2009; Hottes et al., 2016; Meyer, 2003b; Pakula et al., 2016; Pakula &

Shoveller, 2013). There has also been increasing attention to transgender mental health (Cogan et al., 2021; McGuire et al., 2021; Nuttbrock et al., 2010; Samrock et al., 2021). Recent population-based studies show that LGBTQ people in North America have between two- and three-times greater risk of depression, anxiety, and substance abuse problems compared to heterosexual, cisgender individuals (Cochran & Mays, 2009; Meyer, 2003b; U.S. Institute of Medicine, 2011). LGBTQ people in North America also have a severely heightened risk of suicidal thoughts and suicidal behavior (di Giacomo et al., 2018; Fish et al., 2018; Hottes et al., 2016; Salway et al., 2019).

### 3.3 Determinants of LGBTQ Mental Health

Increasing evidence from around the world suggests that the elevated mental health risk among LGBTQ people can be attributed to, at least in part, the greater stigma-related stress that LGBTQ people are exposed to compared with heterosexual and cisgender individuals (see Stigma chapter, Chap. 2). Stigma-related stress among LGBTQ people is described in minority stress theory, originally developed to explain differences in mental health based on sexual orientation (Meyer, 2003a), but in recent years expanded to facilitate understanding of the increased risk of mental health problems among transgender people as well (Operario et al., 2014; White Hughto et al., 2015). According to minority stress theory, LGBTQ people experience specific stressors (e.g., discrimination, violence, threats, social isolation, and identity concealment) that are unique and linked to their sexual or gender identity. Exposure to these stressors across the life course compounds the burden of general life stress to generate higher rates of stress-related mental health concerns (Meyer, 2003a). In the sections below, we review evidence for the cross-cultural relevance of minority stress theory (Sect. 3.1) and possible culturally distinct factors that might extend or challenge the relevance of minority stress theory to certain cultural contexts (Sect. 3.2), barriers to LGBTQ people's societal integration across countries (Sect. 3.3), and the potential impact of LGBTQ conversion therapy on sexual and gender minority individuals' mental health (Sect. 3.4).

#### 3.3.1 *The Cross-Cultural Relevance of Minority Stress Theory*

Because the majority of research linking minority stress exposure to increased risk of mental health among LGBTQ individuals comes from North America and Europe, and the fact that "minority stress" is a construct originating from the Global North, it is not completely clear how applicable these findings might be to non-Western countries and countries in the Global South. However, during the past several years, an increasing number of studies have explored the cultural relevance of minority stress theory to LGBTQ mental health in different parts of the world,

including Central and South America (e.g., Budhwani et al., 2018; Dunn et al., 2014); Middle East/North Africa (e.g., Kaplan et al., 2016); sub-Saharan Africa (e.g., Mgopa et al., 2017; Polders et al., 2008; Stahlman et al., 2015); as well as South, East, and Southeast Asia (e.g., Hu et al., 2016; Sattler & Lemke, 2019). Studies conducted in those global regions have found support for the generalizability of factors proposed by minority stress theory as predictors of mental health problems among LGBTQ individuals. This section reviews those experiences, including victimization, discrimination, concealment/openness with LGBTQ status, lack of social support, and internalized stigma.

Victimization and discrimination, when measured generally, have been found to predict higher risk of mental health problems across countries (Albuquerque et al., 2018; Budhwani et al., 2018; Lyons et al., 2019; Parikh-Chopra, 2019). However, the particular expression and frequency of victimization and discrimination can vary greatly across countries. Examples include the corrective rape experiences of lesbian women in South Africa (Anguita, 2012), exposure to torture and murder attempts of transgender women in the Dominican Republic (Budhwani et al., 2018), and family and school violence among gay and lesbian youths in Mexico (Ortiz-Hernandez & Valencia-Valero, 2015).

In the global literature, the mental health consequences of concealment and openness about LGBTQ identity show significant cross-cultural variation. For instance, in high-stigma settings, being open about one's LGBTQ status has been found to increase the risk of discrimination and victimization, which in turn increases the risk of poor mental health (Bränström et al., 2021; Dunn et al., 2014; Pachankis & Bränström, 2018; Sattler & Lemke, 2019). Therefore, in high-stigma countries where all or most LGBTQ people are unable to be open about any aspect of their sexual orientation, concealment of LGBTQ status serves a protective function and has been found to ameliorate the negative impact of stigma-related stress exposure on mental health problems (Pachankis & Bränström, 2018). For example, a study among sexual minority men and women in Jamaica found a more than five-fold increased risk of current Axis I mental disorders (such as anxiety, mood, and eating disorders) among those who were open about their sexual orientation compared to those who were not (White et al., 2010). However, in lower-stigma countries (i.e., those containing protective legislation and acceptance of LGBTQ individuals) where LGBTQ individuals have the possibility of choosing when and to whom to disclose their sexual orientation, not being open with one's LGBTQ identity appears to increase the stress of making decisions around concealment as well as increase associated social isolation and psychological strain (Lawrenz & Habigzang, 2019). At the same time, protective effects of disclosing one's sexual orientation have been found even in some high-stigma settings such as China and South Africa (Liu et al., 2018; McAdams-Mahmoud et al., 2014), and more research is needed to disentangle the complex relationship between openness/concealment of LGBTQ status and mental health in various cultural contexts.

Social support has been found to buffer the effect of stigma-based stress exposure in numerous studies globally (Huang et al., 2018b; Kaplan et al., 2016; Shilo & Savaya, 2011; Wagner et al., 2018). For instance, the negative effect of

victimization on suicidality among sexual minority youth in Chinese schools (Huang et al., 2018b), transgender women in Lebanon (Kaplan et al., 2016), and young middle eastern MSM (Wagner et al., 2018) has been found to be moderated by supportive interpersonal peer and family connections.

Internalized stigma (e.g., internalized homophobia and transphobia), has been less explored outside of the Global North. However, internalized homonegativity has been found to predict depressive symptoms among sexual minority men in Brazil (Dunn et al., 2014) and Nigeria (Oginni et al., 2018), as well as suicidality among sexual minority men in Chile (Pinto-Cortez et al., 2018). Internalized homophobia has also been shown to vary widely across European countries, with gay and bisexual men living in more LGBTQ-supportive countries showing lower endorsement of internalized homophobia than those living in more stigmatizing countries (Berg et al., 2013).

Additional support for the cross-cultural relevance of minority stress as a predictor of LGBTQ mental health comes from a cross-country study conducted online in Western Europe, Eastern Europe, India, the Philippines, and Thailand. This study, limited to gay and bisexual men, specifically found evidence for the cross-cultural relevance of the factors described in minority stress theory (e.g., victimization, internalized homophobia, concealment) as predictors of life satisfaction across these groups (Sattler & Lemke, 2019).

### ***3.3.2 Cross-Country Variation in Structural Stigma***

Despite major changes in societal attitudes, laws, and policies affecting LGBTQ people in several countries in recent years, LGBTQ people still face discriminatory legislation and limitations in the fulfillment of fundamental human rights in many parts of the world (International Lesbian Gay Bisexual Trans and Intersex Association, 2019). The legal climate influencing the lives of LGBTQ individuals varies from the criminalization of consensual same-sex sexual acts in some countries to protecting against discrimination based on LGBTQ status in others. Studies have shown that stigmatizing legislation seems to go hand-in-hand with stigmatizing population attitudes (Flores & Park, 2018; Hooghe & Meeusen, 2013). Stigma at a societal level is referred to as structural stigma (Hatzenbuehler, 2014). Research on structural stigma demonstrates that LGBTQ individuals' mental health is strongly influenced by where they live. For example, in US states with more discriminatory laws and policies and fewer equal protections for sexual minorities, the disparity in poor mental health based on LGBTQ status has been found to be greater than in more supportive structural contexts (Hatzenbuehler et al., 2010). LGBTQ youth living in municipalities without protective school policies and support have been found to be at greater risk of suicidality than those who live in more supportive contexts (Hatzenbuehler, 2011). Variation in structural stigma also predicts LGBTQ mental health across countries. For instance, life-satisfaction among LGBTQ individuals varies greatly across European countries largely as a function of structural stigma

and associated demands to conceal one's sexual identity to avoid discrimination and victimization (Bränström et al., 2021; Pachankis & Bränström, 2018). See the chapter on Stigma, Chap. 2, for a more detailed discussion of the impact on the lives of LGBTQ individuals and communities.

### 3.3.3 *Barriers to Societal Integration Across Countries*

Although the stigma-based psychosocial stressors described above are most frequently explored as determinants of LGBTQ mental health, some studies have tried to identify less-examined sociological factors that contribute to sexual and gender minority mental health disparities. These studies have been guided by the assumption that a person's lack of integration within society and a lack of societal attachments and commitments can increase their risk of mental health problems. The section below reviews those experiences, including the mental health impact of societal trust and participation, unemployment, lack of stable housing, living without children, and religious affiliation.

A number of studies from the Global South have recently found support for the importance of societal integration in reducing mental health disparities affecting LGBTQ populations. For example, a study from Lebanon found that barriers to societal integration, in the form of unemployment and lack of legal resident status, predicted poor mental health in a sample of young MSM in Beirut (Wagner et al., 2018). In another study, lack of access to stable housing among transgender individuals in Argentina was linked to increased suicidality (Marshall et al., 2016). A study of MSM in three West African countries (i.e., the Gambia, Burkina Faso, and Togo) reported that lower degree of social participation with the broader community was associated with higher likelihood of suicidal ideation (Stahlman et al., 2016). In one study from Kenya, being married to an opposite-sex partner was found to be protective against depression among MSM, possibly by both providing a source of social support and facilitating the concealment of sexual orientation (Secor et al., 2015).

In one of the few studies applying this perspective in the Global North, a study from Sweden found elevated risk of suicidality among sexual minority women and men, which was partially explained by this group's greater lack of societal integration, including being unmarried or living without a partner, not having children, being unemployed, and experiencing low societal trust, compared to heterosexuals (Bränström et al., 2023). In line with these results, a study among Israeli gay fathers found elevated levels of both subjective well-being and meaning in life compared to gay men without children (Shenkman & Shmotkin, 2014). This indicates that raising children may allow for greater integration within Israeli society.

In some cultural contexts, such as the United States, religious affiliation functions as a facilitator of societal integration among people (Lim & Putnam, 2010; for more information see the Community and Social Support chapter, Chap. 6). However, there are several studies showing that religiosity contributes to

detrimental coping and poor mental health among LGBTQ individuals. For example, one study showed an increased negative impact of stigma-based violence on depression among gay men in Tanzania who perceived religion to be important (Ross & Anderson, 2014). The authors conclude that living in a context of religiously motivated anti-gay religious beliefs can have a detrimental effect on coping with stigma-based violence among religious gay men. Similar reports of religiosity as an enhancer of stigma-based stress among religious sexual minority men have been reported among Polish Roman Catholics (Zarzycka et al., 2017) and religious US young adults (Lytle et al., 2018). In a study of sexual minority women in the United States, researchers found that the impact of religiosity and spirituality on depression and substance use differed by race/ethnicity (Drabble et al., 2018). Also in the United States, personal religiosity has been shown to exacerbate suicidality risk among sexual minorities, but not for heterosexuals (Lytle et al., 2018), suggesting that this common global indicator of societal integration can be harmful to sexual and gender minorities in at least some contexts.

### ***3.3.4 LGBTQ Conversion Therapy***

Conversion therapy has predominately been practiced in the United States and other parts of the Global North (Haldeman, 2002a) but is gaining increasing prominence in other global regions such as China (Beijing LGBT Center, 2014). Conversion therapy refers to any kind of treatment with the intention to change an LGBTQ sexual orientation or gender identity to a heterosexual orientation and/or cisgender identity (Drescher et al., 2016; Substance Abuse Mental Health Services Administration, 2015). There is not only a lack of evidence that conversion therapy treatments can be effective in changing sexual or gender identity (Adelson & Child, 2012; American Psychiatric Association, 2000), but substantial research has shown that it harms the mental health of LGBTQ individuals (Beckstead, 2012; Haldeman, 2002a, b; Shidlo & Schroeder, 2002). The spread and reach of conversion therapy globally are hard to assess, and the overall impact of conversion therapy on the mental health of LGBTQ populations from a global perspective is largely unknown and warrants further research, given its potential for significant harm.

## **3.4 Interventions to Improve LGBTQ Mental Health**

### ***3.4.1 Interventions to Reduce LGBTQ Stigma***

As noted above, the degree to which LGBTQ individuals around the world are exposed to stigma-related stress is highly dependent on structural factors at national, regional, or state/provincial levels, such as discriminatory laws and policies and negative societal attitudes (Hatzenbuehler et al., 2009, 2012; 2018). In many parts

of the world, societies' views of LGBTQ individuals have changed a great deal over a relatively short period (Flores & Park, 2018). For example, in Europe, a number of countries have passed same-sex marriage legislation, which has been found to go hand-in-hand with improvements in population attitudes toward LGBTQ people (Hatzenbuehler et al., 2012; Hooghe & Meeusen, 2013). In India, the recent decision to decriminalize homosexuality is expected to be followed by an improvement in societal attitudes and a greater acceptance of same-sex relationships.

In addition to country- or state/provincial-level interventions, a number of interventions targeting the school environment (Hatzenbuehler & Keyes, 2013; Mayberry et al., 2013) and work environment (Button, 2001) have shown promising results in reducing the mental health burden of LGBTQ individuals. These results suggest that community action and other efforts to reduce stigmatizing national laws, policies, and attitudes in cultural settings where LGBTQ individuals have limited legal rights can be expected to yield improvements in LGBTQ individuals' mental health.

### ***3.4.2 Interventions to Promote Coping with Stigma***

There is a clear need for evidence-based prevention and treatments specifically tailored to LGBTQ people. However, few such programs exist partly due to insufficient research on the efficacy of such interventions (Fisher & Mustanski, 2014). Sexual orientation and gender identity are typically not monitored in research evaluating the efficacy of mental health treatments (Heck et al., 2017), and few mental health intervention studies have been conducted with LGBTQ people. It is therefore unknown if mainstream treatments currently offered are effective in reducing LGBTQ individuals' mental health problems, although existing evidence suggests a mixed pattern (Pachankis, 2018).

There is a small but growing literature focusing on mechanisms underlying LGBTQ people's increased risk of mental illness, with implications for interventions with this population (Hatzenbuehler & Pachankis, 2016; Meyer, 2003b). Some of the factors believed to contribute to higher rates of poor mental health among LGBTQ people are elevated experiences of universal risks for psychopathology, such as poor emotion regulation, social isolation, and maladaptive cognitive processes. Such factors are believed to be more common among LGBTQ people than among heterosexual and cisgender people (Hatzenbuehler & Pachankis, 2016). For several of these more general risk factors, effective evidence-based psychological treatments exist, including cognitive behavioral therapy and emotion-focused approaches (Elliott et al., 2004; Farchione et al., 2012). Other mechanisms that underlie the heightened risk of poor mental health outcomes are specific to LGBTQ people, such as stress related to sexual or gender identity non-disclosure, expectations of rejection, and internalization of society's negative attitudes (Pachankis, 2015). Because these risk factors are specific to LGBTQ people, they are likely to require tailored treatment strategies to be optimally effective.

Research into effective psychological treatments to reduce mental illness among LGBTQ people remains limited (Chaudoir et al., 2017; Public Health Agency of Sweden, 2018). In fact, two recent literature reviews identified only one evidence-based mental health treatment specifically developed for LGBTQ people in the United States that had been tested in a randomized controlled trial. This treatment was specifically designed to affirm gay and bisexual men's sexual identities and help them cope with minority stress (Pachankis et al., 2015). In this trial, the intervention showed initial promise for improving gay and bisexual men's mental and sexual health. This treatment focuses on building LGBTQ individuals' capacity to cope with minority stress through strategies such as normalizing the negative impact of minority stress; facilitating emotional awareness and acceptance; reducing avoidance; building self-affirming communication styles; restructuring thoughts relating to minority stress; affirming unique strengths; and encouraging a healthy, rewarding expression of sexuality (Pachankis, 2014). A recent extension of this research shows its preliminary efficacy for sexual minority women as well (Pachankis et al., 2020). Several other studies have examined LGBTQ-affirmative treatments based on these general LGBTQ-affirmative principles but have lacked a comparison group and have included relatively brief monitoring periods (Chaudoir et al., 2017; Public Health Agency of Sweden, 2018).

## 3.5 Future Directions

### 3.5.1 *Improved Research Methodologies for Global LGBTQ Mental Health*

As mentioned above, the majority of studies on global LGBTQ mental health have been conducted using non-probability samples. Although such samples have allowed researchers to recruit large numbers of otherwise hard-to-reach LGBTQ individuals, such as those living in high-stigma settings, there are clear limitations to this approach. First, non-probability samples yield nonrepresentative results and prohibit population estimates of mental health prevalence. Second, individuals recruited using non-probability methods are more likely to be open about their LGBTQ identity, tend to be younger, and otherwise might not represent the full spectrum of diversity within the LGBTQ population (Hottes et al., 2016; Kuyper et al., 2016). Additionally, a disproportionately high number of studies have focused on the mental health of MSM (possibly due to funding streams that favor addressing HIV), and the great majority of studies have been conducted in the Global North. To better understand the mental health of LGBTQ individuals, higher-quality studies are needed that use representative samples of the full spectrum of LGBTQ populations from different parts of the world, including sexual minority women and transgender individuals.



### ***3.5.2 Comparative Research to Identify Cultural Variation in LGBTQ Mental Health***

The best way to explore geographical and cultural differences in LGBTQ mental health is to conduct studies using identical research methodologies across countries. Because the structural climate surrounding LGBTQ individuals varies widely across the globe, and recent studies have demonstrated that variations in structural stigma are likely associated with variations in mental health (Hatzenbuehler et al., 2011; Pachankis & Bränström, 2018), more extensive cross-country research is warranted. The few current studies that have been replicated across countries have produced important information. One such study demonstrated the cross-cultural relevance of factors described in minority stress theory in understanding the determinants of LGBTQ mental health (Sattler & Lemke, 2019). Another cross-European study demonstrated the impact of country-level variations in discriminatory legislation and societal acceptance on life satisfaction among LGBTQ people (Pachankis & Bränström, 2018). Compelling arguments have been made against hegemonizing the sexual and gender minority experience worldwide (Massad, 2002), while at the same time, country-specific variation in experiences of those identities has been argued to vary around common themes (Sullivan, 2001). A recent systematic review of global mental health also emphasized learning from and supporting mental health in Global South countries (Rajabzadeh et al., 2021). To the extent these arguments also apply to the mental health experience of sexual and gender minority individuals, they suggest the need to further understand the shared and distinct experiences of identity and mental health in cross-cultural studies while striving to privilege local understandings.

### ***3.5.3 Dissemination of LGBTQ-Affirmative Mental Health Interventions***

Future research is needed to develop efficient means of distributing LGBTQ-affirmative treatment to LGBTQ populations that most need them. One strategy that has shown initial promise involves training mental health providers to deliver LGBTQ-affirmative mental health treatment in high-stigma, low-resource global settings. For instance, after participating in a 2-day training in LGBTQ-affirmative mental healthcare, 110 mental health professionals in Romania reported significant reductions in stigmatizing beliefs and significant increases in LGBTQ-affirmative clinical skills (Lelutiu-Weinberger & Pachankis, 2017). That half of the trainees participated in the training online and did not differ from the half who attended in-person suggests that delivering remote training and supervision in LGBTQ-affirmative mental healthcare represents an efficient means to provide needed mental health support to a large segment of the global LGBTQ population. In addition, a recent systematic review and meta-analyses found digital interventions to be

effective in Global South countries (Fu et al., 2020). Remote delivery of LGBTQ-affirmative mental health services directly to LGBTQ people living in high-need global regions thus represents a potentially efficient means for reaching these population groups (Leluțiu-Weinberger et al., 2018). Finally, psychosocial interventions, including social capital interventions (such as community engagement and education programs, cognitive processing therapy, sociotherapy, and neighborhood projects), have been effective in both Global South and Global North countries (Barbui et al., 2020; Flores et al., 2018) and could be adapted for LGBTQ populations.

### ***3.5.4 Aging-Related Dementia and Cognitive Decline***

The situation for middle-aged and older LGBTQ populations and the unique aging-related stressors they face is an understudied area and a growing global public health priority. Given the increasing concerns about aging-related dementia and cognitive decline in the general population, more knowledge about the specific needs and concerns of LGBTQ people is warranted (Barrett et al., 2015; McGovern, 2014; Witten, 2014). The current small body of literature on aging-related concerns among LGBTQ people has also been conducted in cohorts who have lived much of their lives before the start of the global LGBTQ rights movement (McGovern, 2014). This research needs to consider the great regional variation in legal rights and population acceptance of LGBTQ people globally, as well as the rapidly changing social realities in some global regions.

## **3.6 Conclusion**

As is apparent based on the amount of research included in this chapter, the mental health of LGBTQ individuals is being studied in some places in the world but not in others. There are clear disparities in mental health for LGBTQ people, especially when disaggregating the data by sexual orientation and/or gender identity. Additionally, when examining mental health through the intersections of sexual orientation, gender identity, race, socioeconomic status, and more, it becomes notable that this disproportionate burden of mental health challenges that LGBTQ people face. Globally, minority stress and social integration barriers greatly impact LGBTQ people and their ability to cope with their mental health, although the interaction between the two is widely unknown. While some geographic areas have more research, large gaps still exist in other areas, especially when studying LGBTQ subpopulations in non-Western countries. Evidence is also missing on the impact of interventions that go beyond the traditional Western ideas of therapy and counseling to include other cultural factors within the Global South and low- and middle-income countries. More in-depth studies of intervention dissemination are also necessary to begin to address the extreme disparities that exist and allow LGBTQ people to both survive and thrive in the world.



Sweden map showing major cities as well as parts of surrounding countries and the Baltic Sea. (Source: Central Intelligence Agency, 2021)

### 3.7 Case Study: LGBTQ Mental Health in Sweden

The burden of mental illness for the LGBTQ population in Sweden is high, with young LGBTQ people having approximately twice the risk of depression, anxiety, and substance abuse problems as young heterosexual people (Bränström, 2017). Additionally, transgender individuals who seek mental health treatment and have a diagnosis of gender dysphoria are up to six times more likely than cisgender people to be treated for depression and anxiety (Bränström & Pachankis, 2019). The outlook for the mental health of LGBTQ people seems bleak; however, over the past several decades there has been a push to improve LGBTQ mental health through several initiatives. For instance, LGBTQ people are included in the Swedish Mental Health Strategy and the global Sustainable Development Goals. Policymakers are making an effort to utilize legislative changes, and continued pressure comes from key nongovernmental organizations focused on equality for LGBTQ people.

A number of studies have examined the mental healthcare of LGBTQ individuals in Sweden (Bränström, 2017; Bränström & Pachankis, 2019; Tholin & Broström, 2018; Zeluf et al., 2016). One longitudinal, prospective, population-based study found that LGBTQ people were at significantly higher risk than heterosexual people for mental health disorders, with especially high risk identified for bisexual women, gay men, and young lesbian women (Bränström, 2017). The study also found that LGBTQ individuals, because of their increased rates of mental disorders, had an elevated rate of mental healthcare usage (Bränström, 2017). This utilization difference is important to note because, according to another study, transgender individuals had elevated rates of mental illness compared to cisgender individuals (Tholin & Broström, 2018). Transgender individuals also believed that healthcare practitioners lacked competency around treating transgender patients (Tholin & Broström, 2018), which needs to be addressed.

Over the past 25 years, Sweden has worked to deinstitutionalize their mental healthcare system and transition to community-based care in order to better serve the people utilizing mental health services. Several major policy changes were adopted between 1995 and 2012 toward this goal (Bergmark et al., 2017). However, most recently, the government's National Mental Health Strategy for 2016–2020 identified, as one of their five foci for 5 years, an area of attention on vulnerable populations that includes LGBTQ people (EuroHealthNet Magazine, 2017; Nationell samordnare, 2016), as they are at disproportionate risk of mental illness in their lifetimes (Bränström, 2017; Bränström & Pachankis, 2019). Additionally, the global Sustainable Development Goals (SDGs), which apply to Sweden and which Swedish organizations have subsequently strived toward, were created in 2015 (Weitz et al., 2015). The SDGs focus on the principle “leave no one behind,” which is repeated throughout. This includes sexual and gender minorities, who are some of the most marginalized and vulnerable people throughout the world. Certain SDGs, like number three, “Ensure healthy lives and promote well-being for all at all ages,” would necessarily include LGBTQ people (Weitz et al., 2015). If Sweden is to address this goal, and others, there need to be strategies that aim to combat the

discrimination, violence, and other minority stress that negatively impact LGBTQ people in Sweden and across the world.

Not only has Sweden worked to improve mental health and protect people who have a mental illness, but they have also broadly defended the rights of LGBTQ people through a series of legislation that addresses discrimination in employment, hate speech, and marriage rights (Swedish Code of Statutes, 1999, 2003, 2009). Many initiatives similar to those advanced in the United States that have shown positive effects on the mental health of LGBTQ people (Buffie, 2011; Hatzenbuehler et al., 2009, 2010; Riggle et al., 2010; Rostosky et al., 2009) have also been introduced in Sweden. One study using data from 23,000 respondents to population-health surveys from 2005, 2010, and 2015 found that decreases in Sweden's structural stigma were associated with lower levels of psychological distress for gay men and lesbian women. However, mental health disparities still persist in the levels of psychological distress experienced by gay men and lesbian women as compared to heterosexuals (Hatzenbuehler et al., 2018).

Along with the structural and governmental changes that have helped improve mental health outcomes for LGBTQ people, one nongovernmental organization has helped to influence several decades of policy and legislative changes that protect LGBTQ rights and improve the accessibility of community-based mental health services. This organization is called Riksförbundet för homosexuella, bisexuella, transpersoner och queeras (RFSL) or the National Organization for Lesbian, Gay, Bisexual, and Transgender Rights (in English), and its goal is for LGBTQ people to have the same rights as everyone else—locally, nationally, and internationally (RFSL, 2018). The RFSL published an analysis of the mental health action plans for the various regions and municipalities of Sweden, including whether LGBTQ people were explicitly included. They found that out of the 21 regions of Sweden, only 11 explicitly included LGBTQ people in the programmatic analysis, and only 1 region, Stockholm, explicitly included LGBTQ people in their action plan (RFSL, 2016). Additionally, the report incorporated recommended strategies to ensure that future action plans involve LGBTQ people and their mental health needs (RFSL, 2016). The RFSL has a dedicated website and resources for transgender Swedes, and their webpage includes a variety of information on the unique mental health needs of this population (RFSL Ungdom, 2019).

Although significant disparities still exist, through the work of this organization as well as the sustained efforts of legislators and other activists in Sweden, the mental health outlook for LGBTQ people is improving. As research has demonstrated, structural change and support for LGBTQ rights have an extremely important effect on making LGBTQ people feel accepted and valued in society. Work needs to continue in this direction to create the best possible future for this population.

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# Chapter 4

## If You Don't Ask, You Don't Count: Elements to Consider in Understanding Global Sexual and Gender Minority Data on Noncommunicable Diseases



Jane A. McElroy and Bennett J. Gosiker

### 4.1 Introduction

Globalization, often narrowly defined as the increasing integration of the world's economies, has aspects beyond economic factors, including technological, political, social, scientific, and cultural phenomena (Huynen et al., 2005). The sociocultural dimension is particularly germane to the discussion of noncommunicable diseases (NCDs or physical chronic conditions) among sexual and gender minorities (SGMs) that will be discussed in the next chapter. In the twentieth century, scholars in sexuality and nationalism presented alternatives to the beliefs that sexuality is “private,” apolitical, sinful (according to religious authorities), or deviant (according to mental health experts) (Foucault, 1984; Rosario et al., 2002).

One alternative perspective uses the concept of sexual scripts to understand the three interrelated categories of human sexuality: attraction, behavior, and identity (i.e., orientation) (Seidman, 2003). This idea can also be extended to gender scripts, such as ones related to gender as binary, linked to anatomical features, and fixed at birth. This perspective argues that sexual and gender scripts that people use are rooted within each nation's establishments, such as churches, schools, and laws, and are implemented by socializing agents, such as religious leaders, peers, and the media (Stambolis-Ruhstorfer, 2017). SGMs living in places or within racial/ethnic groups where the scripts associated with SGM identity, behaviors, and/or attraction are nonexistent, associated with allegations of not being legitimate, or depicted as an inherent erotic, racially centric characteristic have ramifications on

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J. A. McElroy (✉)

Department of Family & Community Medicine, School of Medicine, University of Missouri, Columbia, MO, USA

e-mail: [mcelroyja@umsystem.edu](mailto:mcelroyja@umsystem.edu)

B. J. Gosiker

Kaiser Permanente Bernard J. Tyson School of Medicine, Pasadena, CA, USA

e-mail: [bgosiker@gmail.com](mailto:bgosiker@gmail.com)

characterizing the health of SGM people (Carrillo & Fontdevila, 2014; Decena, 2011; Epstein & Carrillo, 2014; Provencher, 2016). Specifically, these scripts reduce the likelihood of describing NCD outcomes for these populations due to receiving low or no priority in scientific and medical research.

Not only is globalization a multidimensional phenomenon, but contemporary global health issues have moved from an emphasis on the health burden tied to infectious disease to that of NCDs. In the twenty-first century, cardiovascular disease, cancer, diabetes mellitus, and chronic respiratory diseases are associated with 71% of all premature deaths worldwide. Among those aged 30–69 years, over 85% of premature deaths linked to these health conditions occur in low- and middle-income countries (Adeyi et al., 2007; Lopez et al., 2006; World Health Organization, 2005, 2018). Extensive evaluation and modeling of mortality patterns by the Global Burden of Disease Study demonstrated that some NCDs topping the list as leading regional contributors of years of lost life (YLLs: a standard metric for mortality studies) also showed considerable intraregional differences based on a composite sociodemographic index as well as between subpopulations; this index is comprised of the geometric mean of income per capita, educational attainment, and total fertility rate in the current year (GBD 2017 Disease and Injury Incidence Prevalence Collaborators, 2018). To illustrate, NCD burden in New Zealand (NZ) has significant variation between indigenous Polynesian people of NZ (i.e., Maori) compared to non-Maori populations (GBD 2017 Disease and Injury Incidence Prevalence Collaborators, 2018). This finding highlights the importance of recognizing that the prevalence of NCDs by region or within countries in which SGM-specific data are unavailable may not accurately represent SGM's health status in those places.

A parallel metric to capture disease burden is disability-adjusted life year (DALY), which adds both years of life lost (YLLs) and years lived with disability (YLDs) (Murray et al., 2012). This metric was developed in the 1990s specifically to compare national health burden around the world, as it is an acceptable measure of the effects of chronic illness on population health burden (Murray, 1994). As the selected NCDs described in the next chapter contribute to premature death and/or disability, especially in countries with limited health interventions, this metric is particularly valuable. According to the Global Burden of Disease Study, which analyzed and modeled data to describe the burden of both communicable and noncommunicable diseases in 195 countries and territories, NCDs contributed an estimated 54% of the DALYs in 2010, with 25.3% by the selected five NCDs (i.e., cardiovascular diseases (CVD), including strokes, at 11.8%, cancer at 7.6%, diabetes mellitus at 1.9%, asthma at 0.9%, COPD at 3.1%) (Murray, 1994).

## 4.2 On the Impact of COVID-19

The COVID-19 pandemic links both infections from a severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) with NCDs. First detected in Wuhan, China in December 2019, the World Health Organization declared COVID-19 a pandemic on

March 11, 2020 (Neher et al., 2020; Zhou et al., 2020). A higher risk of severe COVID-19 disease is experienced by two groups of people; adults aged 65 years or older and people with underlying medical conditions, such as those NCDs described in the subsequent chapter (CVD, cancer, diabetes, asthma, and COPD) (Azarpazhooh et al., 2020). Among younger patients diagnosed with COVID-19 (18–49 years), obesity, underlying chronic lung disease (primarily asthma), and diabetes are the most prevalent chronic disorders (Stokes et al., 2020). According to Clark and colleagues, among the global population, countries with older populations, African countries with high HIV/AIDS prevalence, and small island nations with high diabetes prevalence are estimated to be at the highest increased risk for severe COVID-19 illness (Clark et al., 2020). No research has addressed the impact of the COVID-19 pandemic on gender minority populations with NCDs. Some work has been done to characterize reduced access to gender-affirming services, including one study with a global sample of 849 transgender and non-binary people representing Europe ( $n = 382$ ), Southeast Asia ( $n = 215$ ), the Americas ( $n = 81$ ), Eastern Mediterranean ( $n = 76$ ), Western Pacific ( $n = 40$ ), and Africa ( $n = 31$ ). The authors found reduced access to gender-affirming services as well as increased levels of anxiety and depression among their sample (Restar et al., 2021). Unfortunately, at the writing of this chapter, no studies have reported on SGM individuals' risk for severe COVID-19, though it is possible that multiple syndemic factors may increase this population's risk of exposure (Cahill et al., 2020).

### 4.3 Chronic Stress and Immune Dysregulation

Segerstrom and Miller evaluated over 300 studies and concluded that chronic stress was associated with numerous measures of immune dysregulation, such as inflammatory engagement and poor antibody responses (Segerstrom & Miller, 2004). However, inconsistent results using biological markers of stress, such as cortisol or C-reactive protein levels, comparing SGM and non-SGM participants have been published with virtually all of these data from developed countries (Austin et al., 2016; Cohen et al., 2017; DuBois et al., 2017; Huebner & Davis, 2005; Juster et al., 2013, 2015). As noted by Segerstrom and Miller, many studies suffer from methodological limitations in sampling with a variety of biomarkers used to signal stress which adds uncertainty to understanding the stress response (Segerstrom & Miller, 2004).

### 4.4 Factors Contributing to Chronic Illnesses

Since the major causes and/or significant risk factors of the leading NCDs are known, approximately 60% of these deaths are preventable. For example, the Oxford Health Alliance (OHS) developed a conceptual model called “4four60” to support effective

communication on the prevention of NCDs. They link four risk factors (poor diet, physical inactivity, tobacco use, and excess alcohol consumption) known to be associated with four leading NCDs (cardiovascular disease, cancer, diabetes, and chronic lung disease) to the contribution of 60% of all global premature deaths (Colagiuri et al., 2007). Both poor diet and physical inactivity in association with these NCDs are often associated with high body mass index (BMI). As a sidenote, BMI is often used as a standardized and convenient method to classify people into weight categories, though numerous limitations have been reported in using this metric (Nuttall, 2015). In a systematic review comparing BMI, waist circumference, and waist-to-height ratio (WHtR) measurements to visceral adipose tissue (VAT) measurement, waist circumference and WHtR were better predictors of VAT than BMI (Browning et al., 2010). Using indexes that account for body fat distribution such as waist-to-hip or WHtR ratio, intra-abdominal fat depot volume, or waist-to-height ratio provides a more accurate means of risk assessment associated with obesity.

Regarding dietary choices, a significant downstream effect of globalization is the unprecedented increase in the global food trade, which has been dominated by large transnational companies (Pang & Guindon, 2004). Global brand names and aggressive marketing strategies have adapted to local environments such that recognition of brand names of popular beverages and fast foods has been especially rapid (Chopra et al., 2002). This situation has contributed to the global epidemic of obesity by replacing traditional diets with fat- and calorie-rich foods (Gakidou et al., 2017). The results from the Global Burden of Disease study on high BMI found 12% of the adult population (603.7 million adults; 95% uncertainty interval: 592.9 to 615.6) were obese worldwide with a consistently higher prevalence of obesity among women. In 2015, high BMI contributed to deaths from any cause worldwide at 7.1% (95% uncertainty interval: 4.9 to 9.6) with obesity-related cardiovascular disease and diabetes as leading causes of these mortality statistics (Afshin et al., 2017). Beyond mere statistics, the threats to population health in many LMICs are occurring on two fronts simultaneously: “In the slums of today’s megacities, we are seeing NCDs caused by unhealthy diets and habits, side by side with undernutrition” according to former Director-General of World Health Organization, Dr. Gro Harlem Brundtland (World Health Organization, 2002, p. x).

Although considerable data have been compiled with recent excellent work by the Global Burden of Disease study (Benziger et al., 2016), sparse data are available to address the question of the burden of NCDs among sexual and gender minority (SGM) populations. SGMs in some parts of the world, where data are available, have a higher prevalence of known risk factors (as detailed by the aforementioned “4for60” model) associated with leading NCDs. For example, in a systematic review of literature, Eliason and colleagues reported that lesbian and bisexual women had a higher prevalence of a BMI over 30 compared to heterosexual women (Eliason et al., 2015); however, of the 20 studies included, only two (Australia and Great Britain) were outside of the USA, thus limiting the global picture. Similarly, some studies in the USA have suggested a higher prevalence of overweight but not obese status among transmasculine individuals compared to cisgender women (Caceres et al., 2019; Reisner et al., 2013).

A fundamental question that remains largely unanswered is whether factors related to SGM status, and perhaps the synergistic or syndemic effects between SGM status and health-related behaviors (e.g., unhealthy weight, smoking, excessive alcohol consumption), are associated with an increased prevalence of NCDs among SGMs (Coulter et al., 2015). For example, in Western countries, the minority stress model is often used to help explain health disparities experienced by SGMs, with similar stressors identified in other counties (Bowling et al., 2018; Kontos et al., 2011; Laćan, 2015; Lobato et al., 2019; Mahdavi, 2019).

To understand this issue, extramural funding and/or intramural funding priorities are critical. Perhaps a systematic bias in selecting grant proposals worthy of funding or considering SGM issues beyond HIV/AIDS research is due to (unconscious) bias. Historically, bias in US National Institutes of Health (NIH) funding (Kaiser, 2011) culminated in NIH mandating justification for studies if women and minority groups (race/ethnicity) were not included. It is not unreasonable to consider bias as a factor in funding focused on SGM issues. The catch-22 of rejections in grant applications, particularly in the USA and other countries in which extramural funding is expected of researchers, is that young researchers will either move on to more fundable opportunities with a non-SGM focus, since successful funding is necessary for tenure and promotion or move out of the research arena entirely.

## 4.5 Health Disparity Theories

A recent study in Sweden tested another related hypothesis to explain health disparities faced by SGMs, called the *fundamental cause theory* (Branstrom et al., 2016). In a comparison of advantaged (heterosexuals) and disadvantaged (SGMs) groups, they found the prevalence of high-preventable diseases—ones that could be prevented or effectively treated—was significantly higher among SGMs. They posit that for preventable diseases, disadvantaged groups cannot leverage the resources necessary (i.e., knowledge, prestige, power, or supportive social connections) to achieve healthy outcomes. To bolster this theory, analysis of low-preventable diseases—ones that cannot be effectively prevented or cured—had similar outcomes between the two groups (Branstrom et al., 2016). Although this study provides evidence that a true health disparity for NCDs may exist for the SGM population that cannot be explained by an increased prevalence of established risk factors linked to these NCDs, we are still left with a very difficult construct to assess and compare across countries. Further, the validity of the construct has not been tested, although tangential information partially supports the fundamental cause theory (Branstrom et al., 2016). For example, in Niger, general population patients were typically viewed as passive or without a “voice” by their local nurse, and therefore obtaining services beyond the local health centers rarely occurred. One could extrapolate this characteristic to SGM individuals in which presumably their lower prestige and/or power could limit optimizing their health-seeking behavior (Bossyns & Van Lerberghe, 2004).



National legislation and political rhetoric can also have the effect of reduced privilege and/or power for SGM citizens (see Stigma chapter, Chap. 2), which can create dissonance between one's personal self and one's national self and likely engenders a sense of powerlessness. Alternatively, some countries, such as Canada, Spain, and the Netherlands, embrace SGM rights as a key characteristic of national belonging (Stambolis-Ruhstorfer, 2017). However, the intersection of SGM identity and nationalism ideology can also create discordance ("Muslim and gay: seeking identity coherence in New Zealand," 2016). For SGMs who also identify with other ethnicities, such as a Muslim with family from Iran (known for its extreme anti-gay laws), national rhetoric from any country that supports SGM rights may require its citizens to reject or renounce their ethnic communities in order to gain acceptance; thus, these individuals may experience one aspect of their identity being pitted against another aspect of their identity. These situations could have a negative influence on their health either from a stigmatizing position (i.e., minority stress theory (Meyer, 2003)) or an inability to leverage necessary resources to optimize health (i.e., fundamental cause theory). Regardless of the source of such disparities, it is critical to characterize potential sources that create dissonance so that the health of SGM populations can be better understood and disparities addressed across various healthcare delivery systems.

Two theories have been suggested regarding aging, health disparity, and NCD prevalence. *Compression of morbidity theory* for health disparities posits that with increasing years lived, the disparity gap narrows since only the hardiest individuals survive (Beckett, 2000; House et al., 2005). On a global scale, countries first need to achieve a more equal comparison of *three domains* before the hardiest individuals would have the opportunity to survive. *One domain* is for countries to transition more fully from health outcomes based on injury/violence, infection, and maternal/perinatal/nutritional issues to NCDs, known as the epidemiological transition (Omran, 2005). To illustrate, sub-Saharan Africa (of 48 countries) has the highest under-five mortality rate (1 in 13 births) and modest life expectancy of 61 years (range: 52 years in the Central African Republic to 74 years in Mauritius) versus Australia and New Zealand with the lowest mortality rate (1 in 263 births) and a life expectancy of 82 years (World Bank Group, 2019; United Nations Inter-agency Group for Child Mortality Estimation, 2018). A *second domain* is achieving a relatively equable performance of the country's health system to treat medical conditions including NCDs, thereby supporting the potential for an aging population (Gordon-Larsen et al., 2000; Schutte et al., 2018). The *third domain* encompasses similar NCD risk-attributable burden (i.e., tobacco use, excessive alcohol consumption, obesity, and inactivity) at the population level among the countries (GBD 2017 Disease and Injury Incidence Prevalence Collaborators, 2018). For example, worldwide, the age-standardized prevalence of daily smoking was 25% (95% uncertainty interval 24.2–25.7) for men and 5.4% (5.1–5.7) for women. However, wide variability exists globally, with half the population smoking in Greenland (women at 44% and men at 43%) compared to rare smoking behavior in Sudan (women at 0.4% and men at 1.3%) (Reitsma et al., 2017).

The second theory, the *cumulative disadvantage hypothesis*, advocates the opposite—a widening of the health disparity gap due to the accumulation of burden over time (Dupre, 2007; Kim & Durden, 2007; Lauderdale, 2001). The concept of chronic stress experienced by SGM individuals over a lifetime translates into the wearing down of biological coping systems and thereby results in an increased prevalence of NCDs per this hypothesis (Schneiderman et al., 2005). As with the first theory, applying this hypothesis on a global scale requires more equitable treatment of SGM populations worldwide. As explored in the Stigma chapter (Chap. 2), there is considerable variability in how the people and institutions within any country accept and embrace SGM citizens. Establishing the prevalence of NCDs over the life course among sexual and gender minorities compared to heterosexual groups can provide support for one of these theories within individual countries. From a global perspective, further narrowing of differences among countries on aforementioned health domains as well as capturing data on SGM populations will provide evidence regarding the health of SGMs worldwide.

## 4.6 Methodological Considerations

Regardless of a potential mechanism(s) underpinning differences in NCD prevalence, systems have to be in place to detect such a potential difference. Much of health research is guided by opportunities either directly through funding initiatives or through agency/organization's priorities, and a critical component in being selected as a research priority lies in the generalizability of results. Two critical components of the generalizability of results are determined from a sufficient sample size and the use of probability-based sampling of participants. Sexual minorities (SM) comprise 6–14% of the global population (Rahman et al., 2020). The visible (“out”) number of SM individuals comprises a sufficiently large group to warrant inclusion on national NCD surveillance surveys with the caveat that up to 83% of SM individuals, globally, may conceal their identity from most or all others (Pachankis & Branstrom, 2019). This concealment means their perspectives may not be represented in NCD prevalence and incidence statistics and therefore reduces the generalizability of the study results. Alternatively, estimates of the global prevalence of transgender identity range from 0.3 to 0.5% (Gender Identity in US Surveillance (GenIUSS) Group, 2014; Reisner et al., 2016) and vary depending on how transgender identity is defined (Collin et al., 2016; Reisner et al., 2016). According to Collin and colleagues, the prevalence estimates vary by degree of medical intervention with surgical or gender-affirming hormonal therapy (GAHT: i.e., estrogen and testosterone supplementation) or transgender-related diagnoses versus self-reported transgender identity (Collin et al., 2016). For the former, estimates range from 1 to 30 per 100,000 (0.001–0.03%) persons, and the latter is 100–700 per 100,000 (0.1–0.7%) (Collin et al., 2016; Peitzmeier, 2013). Although transgender identity prevalence seems to be increasing over time (Ahmadzad-Asl et al., 2010; Blosnich et al., 2013; Eklund et al., 1988; Kauth

et al., 2014; Meier & Labuski, 2013), one limitation in understanding NCD issues among transgender populations is the relatively small sample size that would be captured on any national surveillance study. Unless intentional over-sampling of the transgender population is implemented, a small sample size will limit reporting outcomes among this population in large surveillance studies. Finally, for both the SM and transgender populations, participation in research is voluntary. Therefore, until it is safe and acceptable for individuals to disclose their SGM status, it is unlikely that estimates of NCD prevalence will capture the true state of health among these populations.

A second strong element in the generalizability of study results is the use of probability-based sampling as opposed to convenience sampling. A mantra often used by SGM researchers advocating inclusion of sexual orientation/gender identity (SOGI) questions on surveillance surveys is, “If you don’t ask, you don’t count.” Probability-based sampling requires a list of all eligible participants from which a random sample is selected. Unless these identities are collected in a similar manner as other commonly acquired demographics such as age, marital status, race/ethnicity/nationality, and educational attainment, researchers will be hampered in designing studies that accurately reflect the state of SGM health. For NCD research, these two components are critical for credible research findings. One objective downstream effect of these elements of scientific rigor determines which countries contribute to the SGM research agenda as described in the next chapter.

Another important aspect of SGM research associated with the prevalence of NCDs is age. For transgender health research, virtually no NCD research has been done to explore the health impact of age of medical affirming interventions, GAHT use, and experience of gender dysphoria. Among those who have medical affirming interventions, these three characteristics are likely to vary with age. For example, in a small cohort of transfeminine patients aged 19–66 years who were undergoing gender-affirming surgery in Germany, the reported age of gender dysphoria was between 4 and 63 years. Age of GAHT use for this cohort was not provided for individual participants but was between 18 and 63 years (Zavlin et al., 2019). In general, most NCD findings have been reported without details on these three characteristics (Goodman & Nash, 2018). For SM individuals, status is more fluid across the lifespan without clear patterns of stability at any age cohort (Morgan, 2013). For example, about two-thirds of participants aged 36–50 ( $n = 762$ ) reported a shift in sexual orientation labels over time (Kinnish et al., 2005), and very little is known about the health impact of changing sexual orientation labels as one ages. In a systematic review of national, international, state, and regional health surveillance data sources that capture SOGI information, Patterson et al. (2017) reported substantial gaps in the SM measurement of older adults. As most NCDs selected for the study are age-dependent, this age discrepancy limits the quality of health surveillance results since extrapolation of younger SM health may not reflect older SM health (Patterson et al., 2017).

## 4.7 Conclusion

The forces shaping the mere ability to acknowledge, enumerate, and engage SGM populations across the globe are ever-changing and heavily influenced by country-specific cultural norms. Further, a lack of security is felt by many SGMs locally due to structural stigma, outright violence, and discrimination, as well as local laws and political rhetoric, which lends itself to the SGM population remaining difficult to identify. With the pressures of globalization weighing strongly on the burden of NCDs across the globe, it is critical to accurately capture the SGM population's similarity or divergence from regional NCD patterns. The path forward is fraught with competing tensions that make the gold standards of universal acceptance of this population as well as data collection currently unattainable. In the interim, it behooves researchers across the globe to proactively include SGM populations in their research agenda. The first step is to consistently incorporate answer options to the question on gender that includes gender options beyond male/female as well as asking specifically about sexual orientation (Brown & Herman, 2020; Gender Identity in US Surveillance (GenIUSS) Group, 2014; Sexual Minority Assessment Research Team (SMART), 2009). Ultimately, we return to a concluding point: "If you don't ask, you don't count" and a hope that, in the near future, the SGM population will be counted in assessing the health of each nation.

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# Chapter 5

## Sexual and Gender Minority Population's Health Burden of Five Noncommunicable Diseases: Cardiovascular Disease, Cancer, Diabetes, Asthma, Chronic Obstructive Pulmonary Disease



Jane A. McElroy and Bennett J. Gosiker

### 5.1 Introduction

As advances are made in precision medicine, life expectancies move steadily toward the century mark, and there is a growing expectation of living healthy lives into advanced age, there is value in comparing the health status between the sexual and gender minority (SGM) populations and heterosexual/cisgender populations. In the realm of noncommunicable diseases (NCDs), incidence and prevalence are markers of the health of a population. Evaluating these statistics between populations allows for the discovery of disparities and subsequent targeted interventions to close health gaps. Globally, factors ranging from overt discrimination, economic deprivation, and lack of access to healthcare resources may drive potential differences in NCD prevalence among SGM populations. With the intention to describe the health of SGM populations across the globe, a thorough literature review was undertaken to capture peer-reviewed manuscripts that reported on NCDs prevalence or incidence in the SGM population.

Among the 169 selected articles garnered from the literature review that addressed the five selected noncommunicable diseases (NCDs), most did not report on prevalence or incidence among SGM individuals, but rather risk factors only or as a review of studies on NCDs. Nevertheless, among these, 71% ( $n = 119$ ) studied the US population, with the next top five countries for the number of studies being

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J. A. McElroy (✉)

Department of Family & Community Medicine, School of Medicine, University of Missouri, Columbia, MO, USA

e-mail: [mcelroyja@health.missouri.edu](mailto:mcelroyja@health.missouri.edu)

B. J. Gosiker

Kaiser Permanente Bernard J. Tyson School of Medicine, Pasadena, CA, USA

e-mail: [bgosiker@gmail.com](mailto:bgosiker@gmail.com)

the Netherlands ( $n = 10$ ), Australia ( $n = 8$ ), England/United Kingdom ( $n = 5$  each), and Italy/Canada ( $n = 3$  each). Data reported here represent 22 countries. The geographic distribution was striking, with sexual minority original research almost exclusively provided by a few “mature” countries ( $n = 9$ ), and only one study on CVD from Guam, a “developing” county. In contrast, studies of cancer among transgender populations are almost exclusively case studies or case series ( $n = 48$ ) and span the globe. For sexual minority results, except for Australia, North America, and Western European countries, limited generalizations can be made for other regions given sparse data. For studies of transgender populations, only 11 provided evidence for the population as opposed to unique aspects of individual patients as reported in the case studies and case series.

Beyond the obvious sparse data available to assess the global burden of NCDs, another important factor is the supporting role of the medical system. An in-depth discussion of this system-level factor in NCD morbidity is beyond the scope of this chapter. Briefly, however, the Economist Intelligence Unit created a healthcare index that used data from 60 countries of various income levels (The Economist Intelligence Unit, 2019). In this analysis, three categories were developed to describe the region’s ability to provide appropriate health services. African and Middle Eastern countries generally scored as “emerging.” In Africa, the major challenge is addressing infectious diseases, NCDs, and traumatic injuries with workforce shortages (Azevedo, 2017). In contrast, Middle Eastern countries struggle to address the increased incidence of NCDs as well as considerable variability in health service inequities due to the effects of social determinants of health (Kauth et al., 2017).

For the next group, Asia-Pacific nations and most countries in Latin America scored “developed.” The challenges in these regions are divided into disparities between wealthier countries, such as Japan and Australia, and less wealthy countries, such as Afghanistan and Bolivia. In wealthier countries, the challenge is providing adequate care for historically marginalized populations, such as the Maori of New Zealand (Ellison-Loschmann & Pearce, 2006). Among the poorer countries, a challenge is delivering healthcare services to their population living on remote islands or in rural areas. Numerous studies examining healthcare access in developed countries have reported multiple barriers at both the individual and structural levels (Baptiste-Roberts et al., 2017), whereas disentangling sexual politics from healthcare to allow for safe access continues to be challenging in emerging and developed countries (Kelly-Hanku et al., 2020; Mahdavi, 2019).

The third category comprised of Europe and North America scored “mature.” Although these regions, in general, provide high-quality care, there are large disparities in affordability and access to care within some countries. Compared to European countries, the United States has recently witnessed a widening of health inequalities (Mackenbach et al., 2018). Using a different metric, the Global Burden of Disease Study 2016 also described healthcare access and quality for each country in the world with similar but more nuanced findings (G. B. D. Healthcare Access and Quality Collaborators, 2018). A logical correlation between access to care and quality of care for NCDs will influence the trajectory of disease management. This trajectory can be negatively exacerbated among SGM populations.

Each section of this chapter will begin with a brief overview of the global burden of the specific NCD followed by a description of the burden in sexual minority and transgender populations, respectively. We recognize the wide diversity in both sexual orientation and gender identity across the globe. For the purposes of this chapter, we will address groups identifying as lesbian, gay, or bisexual for sections concerning sexual orientation. While we recognize that gender is not a binary construct, the existing literature broadly focuses on people identifying as transfeminine, transmasculine, and non-binary. As such, those are the groupings we will use in discussing the literature. This method of organization inherently leaves out individuals not identifying in these groups but who are still considered sexual or gender minorities.

## 5.2 Cardiovascular Disease (CVD)

CVD is a group of medical conditions that affect the heart and blood vessels. Diseases include coronary artery diseases (CADs) such as myocardial infarction (aka “heart attack”), stroke, and peripheral artery disease. Although not covered in this section, hypertension (HTN; aka high blood pressure) is also considered a CVD. HTN is often called a “silent killer” as there are rarely signs and symptoms thereby leading to substantial underreporting of this condition. Several medical conditions can lead to secondary HTN, including kidney disease, obstructive sleep apnea, thyroid problems, and adrenal gland tumors (Puar et al., 2016). Numerous concerns limit the ability to compare primary/secondary hypertension around the world that led to the decision to not report these findings since the interpretation of study results would be country-specific and more importantly year-specific.

CVD continues to be the leading cause of death in the world for both men and women (Clark, 2013). However, incidence rates for CVD vary by gender among younger cohorts. Specifically, CVD tends to develop 7–10 years later in women compared to men (Maas & Appelman, 2010). Afterward, the incidence rates are similar between men and women (Kazis et al., 2012). Among countries with greater than 15% of the population aged 65 and older (i.e., Japan and some European countries) or a projected growing aging population by 2050 (except Pakistan, Afghanistan, Yemen, Iraq, Papua New Guinea, and sub-Saharan Africa (except for Botswana)), CVD burden can be expected to persist or increase (Population Reference Bureau, 2018).

The impact of CVD on each nation's population remains high. Globally, disability-adjusted life years (DALY) for ischemic heart disease was ranked third in 1990 and almost 20 years later in 2019 remains at the same level of prevalence among 25–49-year-olds. In 2019, stroke ranked ninth for this age group. For those 50 and older, ischemic heart disease is ranked first and stroke second as a leading cause of DALY (G. B. D. Diseases and Injuries Collaborators, 2020) over the 30-year period.

### 5.2.1 *Epidemiology of CVD in Sexual Minority Populations*

According to our literature review, over 30 studies have been published on CVD incidence and/or risk comparing sexual minority (SM) populations to heterosexual populations. All of these studies on CVD prevalence described US residents, with a small number of studies on CVD risk from other mature countries (e.g., Sweden (Branstrom et al., 2016), Canada (Steele et al., 2009; Veenstra, 2013), and Switzerland (Wang et al., 2007)). Three systematic reviews have been completed, with one evaluating CVD prevalence among SMs using studies published from 1985 to 2015 (Caceres et al., 2017). The second included a meta-analysis and reported the prevalence of three NCDs—diabetes mellitus and cardiovascular and respiratory conditions in SM women using studies published from 2010 to 2016 (Meads et al., 2018). The third systematic review evaluated the prevalence of NCDs, including the five selected for this chapter, among SM women using studies published from 2009 to 2013 (Simoni et al., 2017). Finally, two critical reviews of the CVD prevalence literature for the SM population were completed (Caceres et al., 2017; McElroy & Brown, 2018).

Among the numerous studies, a few reported a significant increased prevalence of CVD among SMs compared to heterosexual populations. In a study comparing SM women and men to heterosexuals, Fredriksen-Goldsen and colleagues reported only lesbians and bisexual women aged 50 years and older (range 50–94 years for females) had increased CVD prevalence, defined as physician-diagnosed heart attack, angina, or stroke diagnosis (Fredriksen-Goldsen et al., 2013b). One small study completed by the Los Angeles County Health Department in California reported increased CVD prevalence for lesbians and bisexual women compared to heterosexual women (Diamant & Wold, 2003; Diamant et al., 2000).

Some studies found bisexuals at higher risk, with one study finding bisexual men, but not gay men, lesbians, or bisexual women had a higher CVD prevalence (Blosnich et al., 2014). Another study found that bisexual women had higher stroke prevalence compared to heterosexual women (Caceres et al., 2019b). With regard to age differences, Boehmer and colleagues found increased CVD prevalence among only young male and female SMs (<40 years old) compared to heterosexuals but no difference among older age groups: 40–59 years or >59 years for either sex (Boehmer et al., 2014).

Comparing race/ethnicities using the 2013–2015 US National Health Interview Survey (NHIS) data, white and Black SM women were more likely to report stroke but not heart disease compared to white and Black heterosexual women, respectively. However, in this same study, Hispanic/Latina SM women were less likely to report heart disease compared to white heterosexual women (Trinh et al., 2017).

In contrast to these handful of studies, many more studies found no difference in or even reduced CVD prevalence between SMs compared to heterosexual populations (Andersen et al., 2014; Blosnich & Silenzio, 2013; Caceres et al., 2019b; Cochran & Mays, 2007; Conron et al., 2010; Diamant & Wold, 2003; Diamant et al., 2000; Garland-Forshee et al., 2014; Matthews & Lee, 2014; Mays et al., 2002;

Patterson & Jabson, 2018; Stupplebeen et al., 2019; Swartz, 2015; Trinh et al., 2017; Valanis et al., 2000; Wallace et al., 2011; Ward et al., 2015). These null findings were supported by Meads and colleagues' meta-analysis of data from 15 CVD prevalence studies in which no difference was found between male or female SMs and their respective heterosexual counterparts for CVD prevalence (Meads et al., 2018).

Several limitations of these studies reduce the generalizability of the findings. The most striking limitation is the lack of peer-reviewed publications from any other country aside from the United States on CVD prevalence by SM status. Among the US studies, comparability was difficult due to differences in measures of CVD (e.g., self-reported, chart extraction), inclusion criteria for CVD medical conditions, and established (and adjustment for) CVD risk factors, such as alcohol consumption, smoking, and obesity. For example, in the systematic review (Caceres et al., 2017), only 7 out of 24 studies that included smoking status used a standardized measure, and only 2 included all nicotine products (Blosnich et al., 2014). Virtually all analyses used self-reported data on CVD risk factors, with less than a quarter of the studies using clinically obtained data to establish the presence of CVD (Caceres et al., 2016). Another limitation in the majority of the studies was the younger age of the SM participants compared to heterosexual participants, although some, but not all, used age-adjusted models. In addition, most studies had a median or mean age of 38–44 years for the SM participants, which is a couple of decades younger than the average age of one type of CVD, heart attack (63 years for men and 73 years for women in the United States; 62.1 years for men and 69.3 years for women globally) (Fuster & Kelly, 2010).

### ***5.2.2 Epidemiology of CVD in Transgender and Non-binary Populations***

About the same number of studies as have been done for the SM population have also been completed with transgender populations ( $n = 30$ ). 22 studies were located in eight countries: Belgium, China, Germany, Italy, the Netherlands, Spain, Thailand, and the United States. They characterized changes in biological markers of CVD risk (e.g., total cholesterol, weight, endothelin levels, etc.) following gender-affirming hormone therapy (GAHT) initiation (Bunck et al., 2006; Chandra et al., 2010; Deutsch et al., 2015; Emi et al., 2008; Fisher et al., 2016; Giltay et al., 2004; Jacobeit et al., 2007, 2009; Mueller et al., 2006, 2007; Pelusi et al., 2014). Studies comparing the incidence or risk of CVD between transgender and cisgender populations ( $n = 8$ ) described populations in four countries: Germany, Guam, the Netherlands, and the United States. The five studies not conducted in the United States focused on transgender populations initiating GAHT (Asscheman et al., 1989; Bazarra-Castro et al., 2012; Ott et al., 2010; van Kesteren et al., 1997; Wierckx et al., 2013), whereas US-based studies largely did not account for this

characteristic (Alzahrani et al., 2019; Meyer et al., 2017; Nokoff et al., 2018). Two Europe-based cohorts (Sweden and the Netherlands) assessed CVD-related mortality among transfeminine populations (Asscheman et al., 2011; Dhejne et al., 2011). One US-based study explored CVD among gender non-binary individuals, comprised of both those assigned female at birth (AFAB) as well as those assigned male at birth (AMAB) (Nokoff et al., 2018).

Five reviews have been published to synthesize the evidence concerning CVD among transgender populations (Gooren et al., 2014; Irwig, 2018; Maraka et al., 2017; Streed et al., 2017; Velho et al., 2017). Two scoping reviews of publications from 1989–2011 and 1997–2017 stratified by GAHT use and CVD health outcomes or risk factors (Gooren et al., 2014; Irwig, 2017). Streed et al. conducted a narrative review of literature published 1989–2016 focused on CVD health events among transmasculine and transfeminine populations receiving GAHT and focused distinctly on clinical guidelines for GAHT regimes (Streed et al., 2017). Maraka et al. conducted the only meta-analysis to quantify changes in lipid profile, venous thromboembolism, CVD health events, and mortality among transgender adults receiving GAHT from studies published in 1989–2016 (Maraka et al., 2017). Finally, Velho et al. conducted a systematic review of studies published in 2004–2016 and focused on changes in BMI, blood pressure, and routine blood test results (such as lipid panels) of transmasculine populations following testosterone therapy (Velho et al., 2017). The length of follow-up of these studies ranged from 4 months to 2 years after GAHT initiation.

A number of studies focused on characterizing CVD risk factor changes after initiation of GAHT among transgender populations. The underlying assumption seems to be that the hormonal milieu specific to sex is linked to CVD risk given that among similarly aged men and women, men experience more CVD events; after menopause, more women experience CVD events; and hyperandrogenism in women confers a higher CVD risk (Kannel, 2002; Liu et al., 2001; Wild et al., 2000). However, current thinking explores the multifactorial understanding of CVD risk beyond the hormonal milieu, including genomic and nongenomic effects (Vitale et al., 2010). Findings from these and additional studies will be discussed below.

### **5.2.2.1 Transfeminine Population**

#### **5.2.2.1.1 CVD Risk Factors**

Among transfeminine individuals, CVD risk factor changes included increases in weight (Elbers et al., 2003; Giltay et al., 1998, 1999; Gooren et al., 2014; Quiros et al., 2015), body mass index (Klaver et al., 2020; Suppakitjanusant et al., 2020), total body fat (Elbers et al., 2003; Gooren & Giltay, 2014), visceral fat (Giltay et al., 1998), triglycerides (Giltay et al., 1998, 1999; Klaver et al., 2020), fibrinolysis (Elbers et al., 2003; Giltay et al., 1998), and endothelin levels (Polderman et al., 1993). Mixed results among transfeminine individuals were seen for changes in low-density lipoprotein (LDL) cholesterol (Elbers et al., 2003; Gooren & Giltay,

2014; Klaver et al., 2020; Kulprachakarn et al., 2020), blood pressure (Elbers et al., 2003; Giltay et al., 1999; Klaver et al., 2020; Kulprachakarn et al., 2020; Quiros et al., 2015), and markers of inflammation (measured by IL-4, IFN- $\gamma$ , and C-reactive protein (CRP)) (Giltay et al., 2003; Gooren & Giltay, 2014; Kulprachakarn et al., 2020). No effects among transfeminine individuals were seen in total cholesterol (Elbers et al., 2003; Giltay et al., 1999; Gooren & Giltay, 2014; Klaver et al., 2020; Kulprachakarn et al., 2020), very low-density lipoprotein (VLDL) (Elbers et al., 2003), heart rate (Giltay et al., 1999), or arterial stiffness (measured by distensibility and compliance coefficients of the carotid, femoral, and brachial arteries) (Giltay et al., 1999). Two studies noted an increase in high-density lipoprotein (HDL) cholesterol (Elbers et al., 2003; Gooren et al., 2014). A meta-analysis by Maraka et al. found statistically significant changes only for triglycerides after  $\geq 24$  months of follow-up subsequent to GAHT initiation. In this meta-analysis, other lipid measures assessed (i.e., LDL, HDL, and total cholesterol) had no statistically significant change after GAHT initiation (Maraka et al., 2017) (see Table 5.1).

One known risk factor for dangerous clot formation that can lead to CVD events in cisgender women is exogenous estrogen supplementation (Laliberte et al., 2011; Vinogradova et al., 2019). A similar finding of pulmonary embolism and venous thromboembolism was also described in four cohort studies among transfeminine individuals (Asscheman et al., 1989; Getahun et al., 2018; Goodman & Nash, 2019; van Kesteren et al., 1997). One narrative review considered evidence of the association between specific GAHT regimens and venous thromboembolism and pulmonary embolism and suggested that clinicians should favor “low-dose transdermal estrogen and oral bioidentical estrogens (such as 17 $\beta$ -estradiol, estrone, and estriol) and limiting the use of high-dose oral ethinyl estradiol” (Streed et al., 2017, p. 261). Outside of analyses reporting results, this is one of the only sources to suggest specific clinical guidance based on the limited evidence available.

#### 5.2.2.1.2 CVD Prevalence

Mixed results are seen for CVD prevalence when comparing transfeminine individuals with cisgender men across an array of events and conditions including myocardial infarction, congestive heart disease, and stroke (Alzahrani et al., 2019; Bazarra-Castro et al., 2012; Getahun et al., 2018; Nokoff et al., 2018). The largest studies to assess CVD among transfeminine persons compared to cisgender men ( $n = 3477$  and  $n = 4394$ ) found equivalent incidence of myocardial infarctions and increased incidence of stroke (Goodman & Nash, 2019). Two other studies found no difference in incidence rate (Getahun et al., 2018) or prevalence (Wierckx et al., 2013) of myocardial infarction when comparing transfeminine individuals using GAHT to cisgender men.

Much of the literature focuses on CVD events (stroke, myocardial infarction, venous thromboembolism, and pulmonary embolism) with less attention paid to CVD conditions that lead up to those events such as hyperlipidemia, hypercholesterolemia, and hypertension. One of the larger studies to assess CVD health did not



**Table 5.1** CVD risk profile changes in transfeminine individuals following GAHT initiation

CVD risk factor	Change after GAHT initiation	CVD risk profile status	References
Weight	Increase	Increase	Gooren et al. (2014), Elbers et al. (2003), Giltay et al. (1998, 1999) and Quiros et al. (2015)
Total body fat	Increase	Increase	Elbers et al. (2003) and Gooren and Giltay (2014)
Visceral fat	Increase	Increase	Giltay et al. (1998)
Triglycerides	Increase	Increase	Giltay et al. (1998, 1999), Kulprachakarn et al. (2020) and Klaver et al. (2020)
Fibrinolysis	Increase	Increase	Elbers et al. (2003) and Giltay et al. (1998)
Endothelin levels	Increase	Increase	Polderman et al. (1993)
LDL (low-density lipoprotein) cholesterol	Mixed evidence	NA	Elbers et al. (2003), Gooren and Giltay (2014), Kulprachakarn et al. (2020) and Klaver et al. (2020)
Blood pressure	Mixed evidence	NA	Elbers et al. (2003), Giltay et al. (1999), Quiros et al. (2015), Kulprachakarn et al. (2020) and Klaver et al. (2020)
Inflammatory markers (CRP, IFN- $\gamma$ , IL-4)	Mixed evidence	NA	Gooren and Giltay (2014), Kulprachakarn et al. (2020) and Giltay et al. (2003)
Total cholesterol	Mixed evidence	NA	Elbers et al. (2003), Giltay et al. (1999), Gooren and Gilray (2014), Kulprachakarn et al. (2020) and Klaver et al. (2020)
Very low-density lipoproteins	No changes	Null	Elbers et al. (2003)
Heart rate	No changes	Null	Giltay et al. (1999)
Arterial stiffness	No changes	Null	Giltay et al. (1999)
HDL (high-density lipoprotein) cholesterol	Mixed evidence	NA	Gooren et al. (2014), Elbers et al. (2003), Kulprachakarn et al. (2020) and Klaver et al. (2020)
Heart rate	No changes	Null	Kulprachakarn et al. (2020)
Ankle-brachial index (ABI)	Decrease	Increase	Kulprachakarn et al. (2020)
Pulse wave velocity	No changes	Null	Kulprachakarn et al. (2020)
Cardio-ankle vascular index (CAVI)	No changes	Null	Kulprachakarn et al. (2020)
Carotid intima-media thickness (CIMT)	No changes	Null	Kulprachakarn et al. (2020)
Fasting plasma glucose	No changes	Null	Kulprachakarn et al. (2020) and Klaver et al. (2020)
Body mass index (BMI)	Increase	Increase	Suppakitjanusant et al. (2020) and Klaver et al. (2020)

stratify by GAHT use and found no difference in adjusted odds of hypertension when comparing transfeminine individuals ( $n = 369$ ) to cisgender men ( $n = 60,009$ ) or cisgender women ( $n = 78,548$ ) (Nokoff et al., 2018).

Many of the studies accounting for GAHT are limited by their short duration of post-GAHT follow-up. One may expect that extended use of GAHT among transfeminine individuals may change the hormonal profile-attributable aspects of cardiovascular risk. Without extensive follow-up, this dynamic cannot be understood. Even among individuals using GAHT, which presumably mimics the female hormonal milieu, the CVD risk profile of transfeminine individuals may be closer to that of cisgender men, who share their sex assigned at birth, than that of cisgender women. Additional research is needed to deepen our understanding of genomic and non-genomic factors associated with CVD risk.

### 5.2.2.2 Transmasculine Populations

#### 5.2.2.2.1 CVD Risk Factors

Among transmasculine individuals initiating GAHT, decreases in HDL cholesterol were observed (Chandra et al., 2010; Deutsch et al., 2015; Giltay et al., 1998, 1999; Klaver et al., 2020; Mueller et al., 2007, 2010). Increases were seen for triglycerides (Emi et al., 2008; Giltay et al., 1998; Klaver et al., 2020; Quiros et al., 2015) and weight (Giltay et al., 1998, 1999, 2004; Gooren & Giltay, 2014). Mixed changes were observed in blood pressure (Elbers et al., 2003; Emi et al., 2008; Giltay et al., 2003; Gooren & Giltay, 2014; Klaver et al., 2020). No effect was seen on arterial stiffness (Giltay et al., 1999), fibrinolysis (Giltay et al., 1998), total cholesterol (Elbers et al., 2003; Gooren & Giltay, 2014; Gooren et al., 2014; Klaver et al., 2020), or BMI (Klaver et al., 2020; Suppakitjanusant et al., 2020). Comparing transmasculine individuals receiving GAHT to cisgender women in routine blood test results for CVD risk factors (such as cholesterol) did not find any difference (Asscheman et al., 1989, 2011; Bazarra-Castro et al., 2012; van Kesteren et al., 1997; Wierckx et al., 2013) (see Table 5.2).

#### 5.2.2.2.2 CVD Prevalence

The largest analysis of transmasculine individuals to date ( $n = 2893$ ) was a US-based cohort that found no difference in venous thromboembolism, myocardial infarction, or stroke when compared to cisgender women ( $n = 63,855$ ) (Goodman & Nash, 2019). With the exception of one US-based study that did not account for GAHT usage (Alzahrani et al., 2019), the current evidence does not support an elevated CVD morbidity among transmasculine populations for myocardial infarction, stroke, venous thromboembolism, pulmonary embolism, or hypertension (Asscheman et al., 1989, 2011; Getahun et al., 2018; Goodman & Nash, 2019; van

**Table 5.2** CVD risk profile changes in transmasculine individuals following GAHT initiation

CVD risk factor	Change after GAHT initiation	CVD risk profile status	References
HDL (high-density lipoprotein) cholesterol	Decrease	Increase	Chandra et al. (2010), Deutsch et al. (2015), Giltay et al. (1998, 1999), Mueller et al. (2007, 2010), Emi et al. (2008) and Klaver et al. (2020)
LDL (low-density lipoprotein)	Increase	Increase	Klaver et al. (2020)
Triglycerides	Increase	Increase	Giltay et al. (1998), Emi et al. (2008), Quiros et al. (2015) and Klaver et al. (2020)
Weight	Increase	Increase	Giltay et al. (1998, 1999, 2004) and Gooren and Giltay (2014)
Blood pressure	Mixed evidence	NA	Emi et al. (2008), Gooren and Giltay (2014), Elbers et al. (2003), Giltay et al. (2003) and Klaver et al. (2020)
Arterial stiffness	No changes	Null	Gitay et al. (1999)
Fibrinolysis	No changes	Null	Giltay et al. (1998)
Total cholesterol	Mixed evidence	NA	Gooren and Giltay (2014), Elbers et al. (2003), Gooren and Wierckx (2014) and Klaver et al. (2020)
Body mass index (BMI)	Mixed evidence	NA	Suppakitjanusant (2020) and Klaver et al. (2020)

Kesteren et al., 1997; Wierckx et al., 2013). This assessment is greatly limited by the younger average age of transgender populations in these studies.

### 5.2.2.3 Gender Non-binary Populations

One general US population-based study accounted for gender non-binary individuals in their analyses (Behavioral Risk Factor Surveillance Study: BRFSS). BRFSS is an annual national study with probabilistic sampling for each state to provide data on health-related risk factors, health outcomes, and healthcare utilization for individual states. Each state had the option of including the Centers for Disease Control and Prevention's approved question on sexual orientation and gender identity (SOGI) beginning in 2014. However, some states included their own version of a SOGI question as early as 2001 (Baker & Hughes, 2017). Comparison groups were selected based on natal sex. In adjusted analyses of non-binary individuals (AFAB,  $n = 61$ ), no differences were found in odds of obesity, overweight status, myocardial infarction, angina/CHD, or stroke when compared to cisgender females ( $n = 78,548$ ). Among non-binary individuals (AMAB,  $n = 68$ ), no differences were seen for myocardial infarction or angina/CHD when compared to cisgender males ( $n = 60,009$ ). Non-binary individuals with male natal sex were found to have higher odds of obesity/overweight status and lower odds of stroke (Nokoff et al., 2018).

The generalizability of the existing data is limited due to a narrow geographic scope and small sample size. Differences in comparison groups for transgender populations also make comparison of study results challenging. While some smaller studies from the Netherlands indicated specific GAHT regimens, few large-scale studies noted GAHT regimen or duration. This lack of information presents an interpretation challenge when trying to assess the effect that GAHT may have on CVD prevalence. It is also of note that recommended GAHT formulations have changed over the years with potential concomitant health effects. In addition, there is likely a cohort effect due to this change that would need to be considered in comparing studies. Another challenge is that many samples of transgender individuals skew younger, notably in some of the early studies with smaller sample sizes. Younger samples make it more difficult to draw conclusions about CVD outcomes, which have strong relationships with age. Additionally, the mean age reported by a study may not reflect the distribution of the data. Analytically, if a sample has a low number of older transgender individuals and is not a random sample, then selection bias may be introduced, and simply applying statistical adjustments for age may not be a sufficient analytic approach. Among the larger cohort studies represented, the median age was usually in the 40–50-year age bracket (Caceres et al., 2019a; Getahun et al., 2018; Meyer et al., 2017; Nokoff et al., 2018). This is an important context for any discussion of NCDs where age is strongly related, particularly CVD.

### 5.3 Cancer

Approximately 5% of the world's population are cancer survivors (43.8 million), with 20% and 16% of men and women, respectively. In 2018, there were an estimated 18.1 million new cancer cases and 9.6 million cancer deaths. India, China, and other East and Central Asian countries make up approximately half of new cancer cases (American Cancer Society, 2019). Lung, female breast, and colorectal cancers dominate worldwide, together comprising one-third of the cancer burden (Bray et al., 2018). The global picture of cancer incidence shows a mosaic of 23 individual cancer sites that describe 90% of the cancer incidence burden (Bray et al., 2018). By 2040, these numbers are expected to double due to growth and aging populations as well as changes in the prevalence of established cancer-related risk factors such as overweight/obesity, unhealthy diet, physical inactivity, tobacco use, alcohol use, and air pollution (World Health Organization, 2018). The increased prevalence is also expected to be the most pronounced in emerging and developing countries due to an expected shift from cancers related to poverty and infections to cancers associated with lifestyles more typical of mature countries (International Agency for Research on Cancer, 2018; Omran, 2005).

Cancer burden can be described in three ways: incidence, prevalence, and mortality. For this chapter, both incidence and prevalence will be described. Incidence data means the number of all new cancer cases, either overall or for a specific

cancer, typically defined over a year period for the population at risk for that cancer, whereas prevalence includes both newly diagnosed and survivors of cancer.

A frequent statistic used is that 4 in 10 cancer diagnoses are preventable since many cancers are strongly or causally linked to modifiable lifestyle behaviors or treatable/avoidable exposures. The top risk factors are cigarette smoking; second-hand smoke exposure; excess body weight; drinking alcohol; eating red and processed meat; diets low in fruits and vegetables, dietary fiber, and dietary calcium; physical inactivity; ultraviolet (UV) radiation from the sun or indoor tanning; and cancer-associated viruses, including helicobacter pylori, hepatitis B virus (HBV), hepatitis C virus (HPC), human herpes virus type 8 (HHV8), human immunodeficiency virus (HIV), and human papillomavirus (HPV) (Islami et al., 2018). The majority of studies that address cancer burden among the SM population inevitably suggest a disparity in many of the aforementioned established risk factors compared to heterosexual populations (Boehmer & Elk, 2015; Mansh et al., 2015; Meads & Moore, 2013; van der Zee et al., 2013; Ward et al., 2014). However, little is known about the prevalence of most of these risk factors by SM status for the majority of the world's population.

### ***5.3.1 Epidemiology of Cancer in Sexual Minority Populations***

The preponderance of studies that describe cancer in SM populations assesses cancer risk with established cancer-related risk factor data and possibly cancer screening behavior. Most of these studies report an increased cancer risk for SMs compared to heterosexual populations. Because of the lack of SM identity in established data systems, such as cancer registry data, a handful of studies have used geography to evaluate cancer risk. For example, San Francisco, California in the United States is known to have a large SM population. Using this knowledge, compared to the state of California's age-adjusted anal cancer incidence rates, San Francisco county had higher rates, attributed to the higher proportion of men who have sex with men (Cress & Holly, 2003).

To our knowledge no country in the world systematically collects SM demographic data as part of the patient's medical record and/or for a cancer registry data element. The consequence of this omission is that incidence data cannot be ascertained reliably for any country or for comparison among countries or regions. For example, the Behavioral Risk Factor Surveillance Study (BRFSS), a national survey in the United States, does not include SOGI data from all 50 states, which results in an "incomplete picture" of both the nationwide health needs and cancer disparities among LGBTQ+ people (National LGBT Cancer Network, 2021, p. 1).

Less than a dozen unique studies have been published on cancer comparing SM populations to heterosexual populations with the caveat that studies focusing on HIV/AIDS were excluded (see Chap. 7). Studies that compare overall cancer prevalence include three from the United States and one from England (which also described individual cancers) (Blosnich et al., 2016; Patterson & Jabson, 2018;

Saunders et al., 2017; Trinh et al., 2017). Incidence data calculated among SM cohorts of a longitudinal study were described in one Australian study for any cancer; one Danish study for both overall and individual cancer incidence; and one US study of SM female participants (Brown et al., 2015; Frisch et al., 2003; Valanis et al., 2000). Two more studies from the United States evaluated individual cancers of the skin and breast among SMs (Cochran et al., 2001; Mansh et al., 2015).

The preponderance of aforementioned studies described no statistical difference in overall cancer prevalence or incidence between SM males/females and heterosexuals (Blosnich et al., 2016; Brown et al., 2015; Frisch et al., 2003; Patterson & Jabson, 2018; Saunders et al., 2017; Valanis et al., 2000). The one exception for overall cancer was the US National Health Interview Survey (NHIS). This national surveillance survey, conducted yearly, included a sexual orientation question since 2013. Pooled data (2013–2015) stratified by race/ethnicity and using direct standardization for age reported an increased cancer prevalence for white SM women but not Latina, whereas Black SM women were at a reduced cancer prevalence compared to white heterosexuals. Among SM men, only white SM men were at an increased cancer prevalence compared to white heterosexuals (Trinh et al., 2017). In the second NHIS study using pooled data (2013–2016) and adjusting for demographic and socioeconomic factors, gay men and bisexual women had a higher prevalence of any cancer than their respective heterosexual counterparts. This finding was more pronounced among those aged 65 years and older (Gonzales & Zinone, 2018).

Machalek and colleagues' systematic review reported on anal HPV infection and cancer among men who have sex with men (Machalek et al., 2012). They stratified studies by HIV status (Chaturvedi et al., 2009; D'Souza et al., 2008; Dal Maso et al., 2009; Franceschi & De Vuyst, 2009; Frisch et al., 2003; Koblin et al., 1996; Piketty et al., 2008; Silverberg et al., 2009; van Leeuwen et al., 2009). Neither of the two studies of HIV-negative men who have sex with men reported an increased anal cancer incidence (D'Souza et al., 2008; Koblin et al., 1996). In Machalek's meta-analysis of these studies, the incidence of anal cancer was significantly higher in HIV-positive men compared to HIV-negative men (Machalek et al., 2012). Van der Zee and colleagues also reported similar findings of a significantly increased standardized incidence ratio for anal cancer in HIV-positive men who have sex with men (van der Zee et al., 2013). Similarly, other studies have shown no increased cancer prevalence among HIV-negative gay men (Frisch et al., 2003; Lyter et al., 1995). It is noteworthy to mention that neither of the NHIS studies described above that reported an overall increased cancer prevalence for gay men and bisexual women adjusted for HIV/AIDS infection (Gonzales & Zinone, 2018; Trinh et al., 2017).

Evaluating the literature on participants living with HIV and/or HPV and cancer is beyond the scope of this chapter. However, a brief comment is warranted. Six cancers have been identified with strong evidence of a causal cancer relationship with HPV: cervix, penis, vulva, vagina, anus, and oropharynx (IARC Working Group on the Evaluation of Carcinogenic Risks to Humans, 2012). Similarly, an International Agency for Research on Cancer (IARC) working group indicated a

causal role of HIV infection for Kaposi sarcoma, non-Hodgkin's lymphoma, Hodgkin's lymphoma, as well as cancer of the cervix, anus, and conjunctiva (IARC Working Group on the Evaluation of Carcinogenic Risks to Humans, 2012; International Agency for Research on Cancer). Some of these HIV-related cancers are the most prevalent in several African counties. From a global perspective, HPV and HIV-related cancer may be less associated with SM status in many countries where the transmission route is predominantly among heterosexual contacts, such as sub-Saharan Africa (Forman et al., 2012; Gayle & Hill, 2001; Williamson, 2015). In the two studies in which individual cancer incidence was described, SM men were over-represented among men with Kaposi's sarcoma, penile cancer, anal cancer, and/or non-Hodgkin's lymphoma (Frisch et al., 2003; Saunders et al., 2017). In one of these two studies, SM women were over-represented among women with oropharyngeal cancer (Saunders et al., 2017).

The most striking limitation to understanding the global burden of cancer among SM populations is no peer-reviewed publication on national cancer incidence for the SM population exists. Data to evaluate cancer prevalence or incidence (from longitudinal studies) were also limited to four countries—all mature countries. Until SM status is systematically collected, it will be difficult to definitely determine whether or not SM populations are at increased cancer risk.

### ***5.3.2 Epidemiology of Cancer Among Transgender Populations***

Population-level data does not exist with respect to cancer incidence or prevalence for transgender populations. Broadly, the literature falls into the categories of case studies ( $n = 48$ ) and incidence and prevalence measures of cancers in cohorts of transgender patients ( $n = 8$ ).

Case studies form the majority of literature and chronicle a single or up to five patients with a given cancer. The case studies have the most geographic variation compared to cohort studies with 17 countries represented: Australia ( $n = 2$ ), Belgium ( $n = 1$ ), Brazil ( $n = 1$ ), Canada ( $n = 1$ ), Czech Republic ( $n = 2$ ), France ( $n = 1$ ), Germany ( $n = 3$ ), Italy ( $n = 2$ ), Japan ( $n = 1$ ), the Netherlands ( $n = 5$ ), Serbia ( $n = 1$ ), Singapore ( $n = 1$ ), Spain ( $n = 3$ ), Switzerland ( $n = 2$ ), Thailand ( $n = 1$ ), the United Kingdom ( $n = 8$ ), and the United States ( $n = 15$ ). Among the 48 publications, 59 cases were detailed, as some publications described more than one case. Among the 59 case reports, transfeminine individuals comprised 71% ( $n = 42$ ). Cancer incidence and prevalence studies ( $n = 9$ ) using cohorts comprised less geographic diversity, including populations from Belgium, the Netherlands, and the United States.

#### **5.3.2.1 Case Studies**

Among transfeminine individuals, case studies were found describing testicular (Chandhoke et al., 2018), anal (Caricato et al., 2009), neovaginal (Fernandes et al., 2014; Harder et al., 2002), prostate (Dorff et al., 2007; Markland, 1975; Miksad

et al., 2006; Nguyen & O'Leary, 2018; Thurston, 1994; Turo et al., 2013; van Haarst et al., 1998), and breast cancers (Chotai et al., 2019; Dhand & Dhaliwal, 2010; Ganly & Taylor, 1995; Gooren et al., 2015; Grabellus et al., 2005; Maglione et al., 2014; Pattison & McLaren, 2013; Pritchard et al., 1988; Sattari, 2015; Symmers, 1968; Teoh et al., 2015), as well as meningiomas (Bergoglio et al., 2013; Cebula et al., 2010; Deipolyi et al., 2010; Gazzeri et al., 2007) and prolactinomas (Bunck et al., 2009; Cunha et al., 2015; Garcia-Malpartida et al., 2010; Gooren et al., 1988; Kovacs et al., 1994; Mueller & Gooren, 2008). For transmasculine individuals, case studies were found for uterine (Urban et al., 2011), breast (Burcombe et al., 2003; Nikolic et al., 2018; Shao et al., 2011), cervical (Dizon et al., 2006), ovarian (Dizon et al., 2006; Hage et al., 2000), and endometrial cancers (Urban et al., 2011). Most of the case studies identified individual cases associated with reproductive organs (testicular, uterine, cervical, ovarian, endometrium), breast cancer, hormone-associated masses (prolactinomas and meningiomas), as well as prostate and anal cancers. The majority of cases were among individuals who had initiated GAHT. Little information was provided on sexual behavior. Although these case studies are important for exploring pathophysiology, treatment, and prognosis, they do not appropriately characterize population-level cancer burden (see Appendix).

### 5.3.2.2 Transgender Cohort Studies

In total, eight cohort studies were found that assessed cancer among transgender populations (see Table 5.3). One of the larger cohorts of transgender persons (1578 transfeminine individuals and 3557 transmasculine individuals) was from a US-based cohort of military veterans. The mean age of transfeminine and transmasculine individuals in the study was 56 years. This study found a decreased incidence of breast cancer and an increased incidence of prostate cancer among transfeminine individuals compared to the group of cisgender male and female individuals combined (10,671 cisgender men and 4734 cisgender women), after adjusting for established risk factors (Brown & Jones, 2016). Another large US-based cohort found an elevated risk of endocrine gland cancers (i.e., thyroid, adrenal, pituitary, and pineal gland cancers) and reduced risk of prostate cancers when comparing transfeminine individuals ( $n = 2793$ ) to cisgender males ( $n = 63,813$ ) who were enrolled in a private health insurance plan over 8 years of follow-up and were age-matched for analyses (Goodman & Nash, 2019). In this sample of transfeminine individuals, 47% were  $\geq 36$  years, and 14% were  $>55$  years. The same study also found the equivalent risk of intestinal, lymphatic, smoking-related (i.e., lung/bronchus, trachea, esophagus, larynx, cervix, stomach, pancreas, urinary bladder, kidney, and renal pelvis), and viral infection-induced (i.e., anus, base of tongue/tonsil, oropharynx, nasopharynx, pharynx, liver, Kaposi sarcoma, non-Hodgkin's lymphoma, and Hodgkin's lymphoma) cancers comparing the two populations. In the same cohort, no differences were noted between transmasculine participants ( $n = 2099$ ) and cisgender women ( $n = 63,855$ ) for incidence of breast, cervical, smoking-related, or viral infection-induced cancers over 8 years of follow-up (Goodman & Nash, 2019). In this



**Table 5.3** Cohort studies assessing cancer among transgender populations

Study	Transgender Population	Comparison Group	Elevated	Equivalent	Lower	Study Measure	Cohort Description	Country
Brown, 2016	5135 (1578 TF, 3557 TM)	15405 (4734 CW, 10671 CM)	Prostate	–	Breast	Odds ratio	US military veterans	United States
Braun, 2016	354 transgender individuals	CM, number not specified	Anal, breast, Kaposi sarcoma, non-Hodgkin's lymphoma	Tongue, pharynx, colorectal, kidney, liver, lung, pituitary, bladder	Melanoma	Proportional incidence ratio	US National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) database	United States
		CW, number not specified	Anal, Kaposi sarcoma, liver, lung, non-Hodgkin's lymphoma, bladder	Colorectal, kidney, pituitary	Breast, melanoma			
De Blok, 2019	2260 TF individuals using GAHT	2260 age-matched CM	Invasive breast and noninvasive breast cancers	–	–	Standardized incidence ratio	VU University Medical Centre in Amsterdam patients matched with the Nationwide Network and Registry of Histopathology and Cytopathology in the Netherlands (PALGA)	Netherlands
		2260 age-matched CM	–	–	Invasive breast and noninvasive breast cancers			
	1229 TM individuals using GAHT	1229 age-matched CM	Invasive breast cancer	–	–			
		1229 age-matched CW	–	–	Invasive breast cancer			

Nash, 2018	805 transgender individuals	10,928,591 CW	Anal, tongue, colorectal, esophageal, hematopoietic, Hodgkin's lymphoma, Kaposi sarcoma, laryngeal, liver, lung, non-Hodgkin's lymphoma, bladder, and vaginal cancers	Brain, kidney, melanoma, ovarian, pancreatic, pituitary, stomach, and thyroid cancers	Breast, cervical, and endometrial cancers	Proportional incidence ratio	North American Association of Central Cancer Registries (NAACCR) database	United States
		10,896,000 CM	Anal, breast, Kaposi sarcoma, and non-Hodgkin's lymphoma cancers	Tongue, brain, colorectal, esophageal, hematopoietic, Hodgkin's lymphoma, kidney, laryngeal, liver, lung, pancreatic, pituitary, stomach, thyroid, and bladder cancers	Melanoma, prostate, and testicular cancers			

(continued)

**Table 5.3** (continued)

Study	Transgender Population	Comparison Group	Elevated	Equivalent	Lower	Study Measure	Cohort Description	Country	
Goodman, 2019	2793 TF	63183 CW	Lymphatic and hematopoietic cancers	Endocrine gland cancers <sup>a</sup> , intestinal, melanoma of the skin, smoking-related cancer <sup>b</sup> , colorectum, viral-infection induced <sup>d</sup>	–	Adjusted hazard ratio	Commercially insured patients under Kaiser Permanente	United States	
		63855 CM	Endocrine gland cancers <sup>a</sup>	Intestinal, melanoma of the skin, lymphatic, smoking-related cancer <sup>b</sup> , colorectum, viral-infection induced <sup>d</sup>	Prostate cancer, screening-detectable cancers <sup>c</sup>				
	2099 TM	63855 CM	Breast, smoking-related <sup>b</sup> , screening-detectable cancers <sup>c</sup> viral-infection induced <sup>d</sup>	–	–	Adjusted hazard ratio	US military veterans	United States	
		63183 CW	–	Breast, cervical, smoking-related <sup>b</sup> , screening-detectable cancers <sup>c</sup> viral-infection induced <sup>d</sup>	–				
	4266 TF	42660 CM	42660 CM	–	Colorectal, lung, melanoma of the skin, liver, kidney, bladder cancers	Prostate cancer	Adjusted hazard ratio	US military veterans	United States
			42660 CW	–	Colorectal, lung, melanoma of the skin, liver, kidney, bladder cancers	–			

Wierckx, 2013	214 TF	640 age-matched CM	–	Any cancer	–	Patients at the Center for Sexology and Gender Problems at the Ghent University Hospital	Belgium
		619 age-matched CW	–	Any cancer	–		
	138 TM	414 age-matched CM	–	Any cancer	–	US military veterans	United States
		414 age-matched CW	Any cancer	–	–		
Brown, 2015	138 transgender individuals	188 cisgender individuals	–	Prostate and breast cancer	–	Odds ratio	United States
Brown, 2015	1579 TF	10671 CM	Breast cancer	–	–	Standardized incidence ratio	United States
		4734 CW	–	Breast cancer	–		
	3566 TM	10671 CM	Breast cancer	–	Breast cancer	–	

Abbreviations: *TM* transmasculine, *TF* transfeminine, *CM* cisgender men, *CW* cisgender women

<sup>a</sup>Includes cancers of the thyroid gland, adrenal gland, pituitary gland, and pineal gland

<sup>b</sup>Includes cancers of the lung/bronchus, trachea, esophagus, larynx and other head/neck, cervix, stomach, pancreas, urinary bladder, kidney, and renal pelvis

<sup>c</sup>Includes cancers of the colorectum, melanoma of the skin, and prostate; the analyses are natal-sex specific. 6 Includes cancers of the cervix, breast, colorectum, and melanoma of the skin; the analyses are natal-sex specific

<sup>d</sup>Includes cancers of the anus, base of tongue/tonsil, oropharynx, nasopharynx, pharynx, liver, and Kaposi sarcoma, non-Hodgkin's lymphoma, and Hodgkin's lymphoma. 6 Includes cancers of the cervix, breast, colorectum, and melanoma of the skin; the analyses are natal-sex specific

<sup>e</sup>All cancers of the cervix

sample of transmasculine individuals, 24% were  $\geq 36$  years and only 4.2% were  $>55$  years. Another US-based cohort of transfeminine veterans ( $n = 4394$ ) found a reduced risk of prostate cancer when compared to cisgender males ( $n = 14,431$ ) and an equivalent risk of colorectal, lung, skin (melanoma), liver, kidney, and bladder cancers over 17 years of follow-up with a median study population age of 46–55 years (Goodman & Nash, 2019).

There is some evidence of an increased risk of breast cancer among transfeminine individuals as compared to cisgender men (Braun et al., 2017; de Blok et al., 2019; Gooren et al., 2013). Other studies among transfeminine individuals compared to cisgender male populations detected increased incidence of anal, Kaposi-Sarcoma, non-Hodgkin's lymphoma, prostate, and HPV-induced cancers after adjusting for age at diagnosis (Braun et al., 2017; Brown & Jones, 2015; Nash et al., 2018). Though statistically significant differences in cancer incidence exist, the relatively small number of cases (4–15) for any single cancer among transfeminine participants does not allow for population-level inferences. Instances of decreased cancer levels were isolated to invasive breast, noninvasive breast, prostate, and colorectal cancers as well as melanoma of the skin comparing transfeminine individuals to cisgender men and invasive breast cancer when comparing transmasculine individuals to cisgender women (de Blok et al., 2019; Goodman & Nash, 2019; Nash et al., 2018).

As described above, the eight cohort studies used different comparison groups to calculate estimates including cisgender women, cisgender men, or combined cisgender persons (both cisgender men and women together) for the transfeminine group as well as for the transmasculine group. Consequently, comparing the results from the nine cohort studies cannot be reasonably done given different comparison groups. Another major issue in understanding cancer incidence among transgender populations is the relatively small number of cases within even the largest cohorts of transgender patients. Assessing cancer risk is complicated further by a lack of data concerning medical gender affirmation treatments for transgender individuals, preventing analyses from stratification on this basis. GAHT in particular has raised concerns related to the risk of some cancers, as has been the focus of case studies, especially given some cancers are hormone-dependent, such as breast cancer (Wierckx et al., 2013). None of the largest studies of cancer among transgender populations accounted for GAHT use. As mentioned in the SM section, HIV-positive status is associated with certain cancers. In the United States among transgender populations, the estimate of the prevalence of HIV is 14% (Becasen et al., 2019). HIV status is another factor not considered in the studies that estimated cancer incidence. Of note is that some of the top global cancers (lung and colorectal) are sparsely mentioned in the literature for transgender populations. This distinction is particularly germane for hormone-dependent cancers, where multiple comparison groups (i.e., cisgender women and cisgender men separately) may be needed to most appropriately draw conclusions.

## 5.4 Diabetes Mellitus

Diabetes mellitus (DM) is a medical condition in which glucose (i.e., blood sugar) levels are abnormally high because the body is not properly using or does not make the hormone insulin. Insulin is made in the pancreas and allows the body to use glucose from consumed foods or to store glucose for future use. Insulin helps keep glucose levels from getting too high or too low (Palicka, 2002).

Approximately 7–12% of DM cases in mature countries are Type 1 (formerly known as juvenile or insulin-sensitive DM in which the body does not produce (enough) insulin) (International Diabetes Federation, 2019; Olokoba et al., 2012). The majority of cases, where data are available, are attributed to Type 2 diabetes (formally known as non-insulin dependent, insulin-insensitive, or adult-onset DM, which indicates that the cells in the body do not respond well to insulin and therefore cannot use glucose for energy) (D'Adamo & Caprio, 2011; Gale, 2002; Klonoff, 2009; Motala et al., 2003; Olokoba et al., 2012). Significant and alarming increases in Type 2 diabetes among children and adolescents have been described in Europe, New Zealand, Oceanic, and Asian countries (Pinhas-Hamiel & Zeitler, 2005). Almost all surveillance studies about NCDs make no distinction between Type 1 and Type 2 DM. Consequently, if not specified, the term diabetes refers to the combination of both Type 1 and Type 2.

Diabetes has emerged as a leading cause of disability globally, ranking as the fourth leading cause of age-standardized years of life disabled (YLDs) in 2017 up from a ninth position in 1990 (Institute for Health Metrics and Evaluation, 2018). This increased burden was observed across all levels of economic development (G. B. D. Risk Factor Collaborators, 2018).

### 5.4.1 *Epidemiology of Diabetes Mellitus in Sexual Minority Populations*

As with surveillance data on DM globally for the general population, the prevalence of DM reported in the studies with SM populations does not differentiate between Type 1 and Type 2. Consequently, it is assumed that prevalence data reflect a combination of both types. Over 30 studies, virtually all completed by US respondents, reported DM prevalence or adjusted odds ratios comparing SM populations to heterosexual populations. The data consistently demonstrate no difference in DM between lesbians or gay men and their heterosexual counterparts (Beach et al., 2018; Blosnich et al., 2016; Boehmer et al., 2014; Conron et al., 2010; Diamant & Wold, 2003; Dilley et al., 2010; Jackson et al., 2016; Newlin Lew et al., 2018a, b; Patterson & Jabson, 2018; Wallace et al., 2011; Wang et al., 2007).

For bisexual males and females, among the 13 studies that reported bisexual female statistics, all but three (Diamant et al., 2000; Dilley et al., 2010; Newlin Lew et al., 2018b) reported no difference in DM prevalence (Beach et al., 2018; Boehmer

et al., 2014; Clark et al., 2015; Conron et al., 2010; Diamant & Wold, 2003; Jackson et al., 2016; Patterson & Jabson, 2018; Wallace et al., 2011; Ward et al., 2015) compared to heterosexual females. Among the three studies, two showed increased and one decreased DM prevalence. The increased DM prevalence was among studies of specific places in the United States: Los Angeles, California (data collected in 1997), and Washington state (data collected in 2003–2006). For bisexual men, half of the studies indicated significantly increased DM prevalence (Beach et al., 2018; Dilley et al., 2010; Farmer et al., 2013; Newlin Lew et al., 2018a; Wallace et al., 2011), and the other half indicated no difference (Boehmer et al., 2014; Clark et al., 2015; Conron et al., 2010; Jackson et al., 2016; Patterson & Jabson, 2018; Ward et al., 2015) compared to heterosexual men. It is not clear what unique risk factors support the finding of a possible increased risk of diabetes for bisexual men. Nor is it clear why half of the studies found bisexual men at no increased risk but the other half identified an increased risk.

Among the US studies, one-third used BRFSS. Of the 10 BRFSS studies exploring DM, 4 focused on older age or age groups, and all found no difference between SM and heterosexual populations (Boehmer et al., 2014; Fredriksen-Goldsen et al., 2013a; Garland-Forshee et al., 2014; Matthews & Lee, 2014).

Two studies carefully considered weight status (i.e., underweight-healthy weight (<25.0 body mass index (BMI)) as a reference category, and three increasing weight categories) and diabetes (Eliason et al., 2017; Stuppelbeen et al., 2019). Each overweight category compared to a reference weight category demonstrated an increased likelihood of DM among SM men and women and heterosexual men and women independently. However, for both SM men and women, the increased likelihood of DM was much stronger compared to their heterosexual counterparts (Eliason et al., 2017; Stuppelbeen et al., 2019). Further, a strong positive DM trend was also reported with increasing weight. Corliss and colleagues support this finding (Corliss et al., 2018). The implication of this remains to be determined, but current work explores inflammation pathways in obesity, diabetes prevention, and diabetes management (Monteiro & Azevedo, 2010; Tsalamandris et al., 2019).

A severe limitation to understanding the global burden of DM, or lack thereof, among SM populations is virtually nonexistent data on this topic, globally. Evidence exists for only the US Patterns of DM prevalence or risk cannot be generalized beyond US borders. Even within the United States, the literature on DM typically mixes Type 1 and Type 2. With the increase in Type 2 DM among children and adolescents globally, disentangling information from participants on the type of DM will become increasingly important.

#### ***5.4.2 Epidemiology of Diabetes Mellitus in Transgender and Non-binary Populations***

The studies ( $n = 11$ ) assessing DM among transgender populations are represented by Belgium (Defreyne et al., 2017), the Netherlands (Elbers et al., 2003; Giltay et al., 1999; Nokoff et al., 2018; Polderman et al., 1993; Wierckx et al., 2013), and

the United States (Alzahrani et al., 2019; Caceres et al., 2019a; Dragon et al., 2017; Herman et al., 2017; Nokoff et al., 2018). Three studies from the Netherlands assessed changes in biomarkers for DM risk following the initiation of GAHT among small cohorts of transgender individuals (Elbers et al., 2003). Five studies compared the prevalence of DM among transgender populations to cisgender populations (Alzahrani et al., 2019; Caceres et al., 2019a; Dragon et al., 2017; Herman et al., 2017; Wierckx et al., 2013), four of which were general population samples. The fifth study specifically compared transgender populations that were elderly (age over 65 years) or experiencing disability to their cisgender counterparts (Dragon et al., 2017). One study assessed the prevalence of DM in a cohort of transgender individuals but did not have a comparison group (Defreyne et al., 2017). Another general US population study (using BRFSS data) compared the odds of DM status among transmasculine, transfeminine, and non-binary populations to cisgender comparator groups (Nokoff et al., 2018). Only one of the studies on DM stratified estimates by GAHT use (Defreyne et al., 2017). Unlike DM studies among sexual minority populations, two studies among the transgender population differentiated between Type 1 and Type 2 DM (Defreyne et al., 2017; Wierckx et al., 2013).

The three studies assessing biomarkers for diabetes before and after GAHT initiation were relatively small with 12–20 transfeminine individuals and 12–17 transmasculine individuals (Elbers et al., 2003; Giltay et al., 1999; Polderman et al., 1993). One study found reduced insulin sensitivity among transfeminine individuals and no change among transmasculine individuals following GAHT (Elbers et al., 2003). The second study found decreased endothelin levels among transfeminine individuals and increased endothelin levels among transmasculine individuals following GAHT initiation (Polderman et al., 1993). The third study noted no change in insulin levels among transmasculine individuals and an increase among transfeminine individuals following GAHT initiation (Giltay et al., 1999). Notably, these studies were published over two decades ago and standard GAHT formulations have changed in the interim.

The largest general population surveillance study to date on DM used data from a US state-based study with BRFSS data. This study contained 829 transmasculine individuals, 1373 transfeminine individuals, and 570 gender non-binary persons compared separately to cisgender women ( $n = 368,220$ ) and cisgender men ( $n = 291,911$ ) (Caceres et al., 2019a). The breakdown of birth-assigned sex for the gender non-binary individuals in the study was not provided. No statistically significant difference was seen in adjusted DM prevalence when comparing transmasculine, transfeminine, or gender non-binary persons to cisgender men or among transmasculine or gender non-binary individuals compared to cisgender women. Transfeminine individuals were found to have a higher adjusted DM prevalence when compared to cisgender women. Analyses were adjusted for the state of residence, age, survey year, race/ethnicity, income, education, marital status, employment status, self-rated health, healthcare coverage, delayed care, routine checkup, current tobacco use, heavy drinking, and exercise but not obesity status.

Another large cohort study using BRFSS data found no differences in the prevalence of DM comparing transfeminine individuals ( $n = 1788$ ) or transmasculine individuals ( $n = 1267$ ) separately to cisgender men ( $n = 306,046$ ) or cisgender



women ( $n = 410,828$ ). These were unadjusted analyses, with each group having a similar average age (Alzahrani et al., 2019). A smaller study ( $n = 369$  transfeminine individuals,  $n = 239$  transmasculine individuals,  $n = 78,548$  cisgender women, and  $n = 60,009$  cisgender men) using BRFSS data had similar findings comparing transfeminine and transmasculine individuals to cisgender women and men. The only comparison to note a difference was lower adjusted odds of DM comparing transmasculine individuals to cisgender women (Nokoff et al., 2018). Adjusted odds of DM were not statistically significantly different when comparing gender non-binary (AFAB) ( $n = 61$ ) to cisgender women or gender non-binary (AMAB) ( $n = 68$ ) to cisgender men.

A study analyzing the prevalence of Type 2 DM among transfeminine individuals ( $n = 214$ ) and transmasculine individuals ( $n = 138$ ) in Belgium used age-matched control groups. The transfeminine cohort was compared, separately, to age-matched cisgender men ( $n = 640$ ) and cisgender women ( $n = 619$ ). Similarly, the age-matched comparator groups for transmasculine individuals had cisgender men ( $n = 414$ ) and cisgender women ( $n = 414$ ) (Wierckx et al., 2013). Higher prevalence of DM was found when comparing transfeminine individuals to cisgender men and to cisgender women. Similarly, a higher prevalence of Type 2 DM was found when comparing transmasculine individuals to cisgender women. Transmasculine individuals did not have a statistically significant difference in Type 2 DM prevalence when compared to cisgender men (Wierckx et al., 2013).

Four studies used general population samples and showed mixed evidence of DM among transfeminine, transmasculine, and gender non-binary individuals in the United States and Belgium compared to cisgender men and cisgender women (Alzahrani et al., 2019; Herman et al., 2017; Wierckx et al., 2013). Two high-quality studies noted higher prevalence of DM among transgender women compared to cisgender women, and one found a higher prevalence compared to cisgender men (Alzahrani et al., 2019; Caceres et al., 2019a; Wierckx et al., 2013). All other studies noted no difference in DM prevalence compared to either cisgender men or women. Among transmasculine patients, one study noted a higher prevalence when compared to cisgender women and men separately, but all other studies found no difference (Wierckx et al., 2013). Studies assessing changes in DM risk profile following GAHT initiation among transfeminine individuals had mixed results, with two studies noting increases in DM risk profile (based on insulin sensitivity and insulin levels) and one noting a reduced risk profile (by endothelin levels). Among transmasculine individuals, one study found an elevated DM risk profile (based on endothelin) following GAHT initiation, and two others found no significant changes. Notably, the samples for these studies were relatively small (less than 30) (Elbers et al., 2003; Giltay et al., 1999; Polderman et al., 1993).

There does not seem to be substantial evidence to suggest a difference in DM comparing transmasculine individuals to cisgender men or women. With mixed evidence concerning transfeminine individuals, more high-quality research is needed to make a conclusion on DM risk compared to cisgender populations. Too few high-quality studies have been conducted stratifying by GAHT status to make meaningful recommendations. A single study with a small sample size explored

DM among gender non-binary individuals, so no conclusions can be drawn here either. No studies address DM among transgender populations outside of the United States, Belgium, and the Netherlands, and similarly they do not incorporate consideration of diabetes risk factors. Some studies controlled for age, while others relied on similarly distributed age or did not account for it in their analysis, presenting challenges with drawing population-level conclusion given DM's strong association with age.

## 5.5 Asthma

Among chronic respiratory diseases, asthma is the most common. Asthma is sometimes reported as a "lifetime" diagnosis; in other words, ever diagnosed with asthma. "Lifetime" diagnosis includes childhood asthma, which is "outgrown" by adulthood in more than two-thirds of patients (Sears et al., 2003). In other studies, current asthma includes both adult-onset asthma and unresolved childhood asthma (de Nijs et al., 2013). For international studies, the accepted gold standard question is "wheezing in the last 12 months" as the response to determine the prevalence of asthma or diagnosed by physicians (Masoli et al., 2004; Pearce et al., 2000). However, there is no single test or clinical feature that defines the presence or absence of asthma. As a result, the prevalence of current asthma symptoms is not equivalent to the prevalence of clinically diagnosed asthma.

Worldwide, approximately 339 million people have asthma (Marks et al., 2018). Globally, asthma is ranked 16th among the leading causes of years lived with disability and 23rd among the leading causes of burden of disease, as measured by disability-adjusted life years (DALYs) in 2015 (G. B. D. Chronic Respiratory Disease Collaborators, 2017). Established risk factors for asthma include smoking and chemical irritants in the workplace, whereas other strongly suspected exposures include indoor pollutants, outdoor allergens such as pollens and molds, and air pollution (G. B. D. Chronic Respiratory Disease Collaborators, 2017; World Health Organization, 2019). Sparse surveillance data are available on older and elderly populations globally. Overall, a U-shaped pattern exists between asthma prevalence and country income, with emerging and mature countries both facing the greatest asthma burden (Sembajwe et al., 2010).

### 5.5.1 *Epidemiology of Asthma in Sexual Minority Populations*

About two dozen studies describe asthma prevalence in SM, with only three studies restricted to current asthma diagnosis only. Among the studies that separated lesbians and bisexual females, the majority reported an increased asthma prevalence for both populations compared to heterosexual populations (Blosnich et al., 2014; Boehmer et al., 2014; Conron et al., 2010; Dilley et al., 2010). Similarly, in

a meta-analysis of nine studies, Meads and colleagues reported an increased asthma risk for lesbians and bisexual women compared to heterosexual women (Meads et al., 2018). However, the only study conducted outside of the United States in Australia reported asthma prevalence among their four groups of participants: exclusively heterosexual, mainly heterosexual, bisexual, and lesbian. Among these four groups, bisexual and mainly heterosexual females had a statistically increased asthma prevalence. When the model controlled for current smoking, the difference was found to be nonsignificant for current smokers but remained significant for those who had never smoked or were former smokers by sexual identity (McNair et al., 2011).

Studies comparing gay or bisexual men to their heterosexual counterparts generally found similar asthma prevalence between the two groups (Blosnich et al., 2014, 2016; Boehmer et al., 2014; Cochran & Mays, 2007; Conron et al., 2010; Dilley et al., 2010; Kim & Fredriksen-Goldsen, 2012; Stuppelbeen et al., 2019). In the BRFSS studies described under the diabetes section that focused on older populations, asthma was similar between SM men and women compared to their respective heterosexual groups (Boehmer et al., 2014; Fredriksen-Goldsen et al., 2013b, 2017; Matthews & Lee, 2014).

To evaluate the heterogeneity in the published literature regarding the role of obesity in asthma incidence, Beuther and colleagues completed a meta-analysis that included seven studies (sexual orientation was not noted) (Beuther & Sutherland, 2007). A dose-response effect of elevated BMI on asthma incidence was observed in both men and women (Beuther & Sutherland, 2007). Obesity status and asthma were evaluated in three studies (Blosnich et al., 2013; Eliason et al., 2017; Stuppelbeen et al., 2019). For example, in Blosnich and colleagues' study, overweight/obese status was a significant predictor of both current and lifetime asthma diagnosis among same-sex partners as well as opposite-sex partners for women but not for men. Some risk factors for asthma, such as smoking and obesity, were much higher among lesbians compared to heterosexual females (Garland-Forshee et al., 2014).

Smoking is also considered a risk factor for adult onset of asthma. In a Finnish case-control study, both workplace and total environmental tobacco exposures (combining both workplace and home exposure) during a 12-month period were significantly related to general population adult-onset asthma diagnosis (Jaakkola et al., 2003). As higher smoking rates have been consistently noted for SM populations compared to heterosexual populations, this is an important component in understanding asthma risk among SMs. See Chap. 6 (Substance Use) for more details on smoking among the SM populations. Most of the studies controlled for smoking by adding this variable to the models to assess asthma risk. However, the definition of smoking varied (current versus ever), and none considered environmental tobacco exposure, thereby limiting the comparability among studies.

Similar to diabetes, virtually no studies have been published on asthma risk for the SM population beyond the United States. This dearth of information limits the generalizability of findings. It also does not provide an assessment of the global

burden of asthma in other places where triggers and links to asthma may be considerably different than in the United States.

### ***5.5.2 Epidemiology of Asthma in Transgender and Non-binary Populations***

A limited number of studies ( $n = 5$ ) have assessed the prevalence of asthma in transgender populations, all of which were based in the United States. Three of the studies were national samples (Dai & Hao, 2019; Downing & Przedworski, 2018; Dragon et al., 2017), while the fourth (Herman et al., 2017) was limited to the state of California. Each used varying comparison groups for transfeminine and transmasculine individuals. One study that accounted for non-binary individuals did not conduct comparative analyses (Dai & Hao, 2019).

Data from the 2014 BRFSS survey found no statistically significant differences in the prevalence of asthma comparing 206 transmasculine individuals to 60,485 cisgender men and 351 transfeminine individuals to 85,739 cisgender women after adjusting for age, race, ethnicity, education, income, employment status, and depression. The study calculated the prevalence for the 112 gender-nonconforming persons but did not conduct analyses comparing them to cisgender populations (Dai & Hao, 2019). The proportion of participants aged 45 years and older was similar across the groups, ranging from 59% among transfeminine individuals to 51% among gender non-binary individuals (Dai & Hao, 2019). The breakdown of sex assigned at birth for individuals identifying as gender non-binary was not included in the study. Another study of 85 transgender persons in California showed a similar prevalence of asthma to a sample of 32,142 cisgender individuals at 8% (Herman et al., 2017). This estimate is nearly identical to CDC estimates for the prevalence of asthma in the general population in the United States (Asthma and Allergy Foundation of America, 2019).

Data from the 2014 to 2016 BRFSS surveys analyzed 1073 transfeminine individuals, 699 transmasculine individuals, and 449 non-binary individuals. The breakdown of sex assigned at birth for individuals identifying as gender non-binary was not included in the study. Each of these groups was compared independently to samples of 297,810 cisgender women and 218,021 cisgender men. Transfeminine individuals in the study had a lower adjusted odds ratio (aOR) of having asthma as compared to cisgender females after adjustment for age, race/ethnicity, relationship status, educational attainment, health insurance coverage, and state of residence. All other comparisons were not statistically significantly different (Downing & Przedworski, 2018).

In contrast, two studies reported an increased prevalence of asthma among transgender populations. The first study focused on two mutually exclusive groups: US residents aged 65 or older (age-entitled Medicare beneficiaries) and disability-entitled Medicare beneficiaries using a large claims database from a

government-funded health plan (Dragon et al., 2017). All of the analyses presented were unadjusted for relevant covariates, such as age. This is particularly relevant for the disability-entitled Medicare beneficiaries, where the transgender population was statistically significantly younger. The age distribution in the three groups (18–44, 45–54, and 55–64 years) are almost exact opposites with about 50% of transgender individuals in the youngest age group and 50% of cisgender individuals in the oldest age group. The study found higher prevalence estimates of asthma among 2133 transgender individuals (transfeminine and transmasculine combined) as compared to 32,588,061 combined cisgender individuals (cisgender women and men combined) who were age-entitled Medicare beneficiaries and for the 5321 transgender disability-entitled Medicare recipients compared to 6,548,168 combined cisgender disability-entitled Medicare recipients (mean age 44.9 and 51.3, respectively). In unadjusted estimates, a prevalence of 20.9% was found among transgender age-entitled Medicare beneficiaries compared to 12.7% among cisgender age-entitled Medicare beneficiaries. Among the disability-entitled Medicare beneficiaries, the unadjusted prevalence was 33.2% among transgender individuals and 18.0% among cisgender individuals (Dragon et al., 2017). However, this analysis did not adjust for any risk factors, such as smoking status, indoor air pollution, or family history of asthma due to the limitation of these data and included only individuals who have this health plan. The second study was a quantitative needs assessment among transmasculine individuals ( $n = 73$ ) in the United States and also reported elevated age-standardized asthma prevalence of 33.3% compared to the CDC-reported age-standardized estimate for all US males of 11.0% (Reisner et al., 2013).

In summary, the one probabilistic-based study reported no difference in asthma prevalence when comparing transgender populations to their cisgender counterparts (Herman et al., 2017). None of the studies indicated whether they inquired specifically about lifetime, adult-onset, or current asthma. Conflating these would have direct implications, as many people have asthma during childhood that does not persist into adulthood. Given evidence only existing for US populations, limited generalizations can be made as to the burden of asthma in transgender populations globally. Finally, studies that do not evaluate transfeminine and transmasculine populations separately have limited value in understanding their asthma burden since these groups have unique asthma-related risk factors (Naeem & Silveyra, 2019). Additionally, disability status is highly correlated with NCDs, and assessment of disability status has received focused attention recently. As indicated in the Dragon et al.' (2017) study described above, disability may disproportionately affect the transgender population and therefore warrants further investigation. The Washington Group on Disability Statistics has validated a six-item question in all regions of the world that provides a standardized instrument to characterize disability status (Groce & Mont, 2017).

## 5.6 Chronic Obstructive Pulmonary Disease (COPD)

Chronic obstructive pulmonary disease (COPD) is a medical condition characterized by incompletely reversible chronic obstruction of lung airflow that interferes with normal breathing (Viegi et al., 2007). This occurs as a response to inflammation. COPD has been associated with inhalation of toxins from cigarette smoke, combustion of biomass for cooking and heating, and environmental pollution (Global Initiative for Chronic Obstructive Lung Disease, 2018). A population-based US study estimated that the fraction of COPD attributable to workplace exposure was 19.2% in smokers and 31.1% in nonsmokers (Hnizdo et al., 2002). Household air pollution from exposure to smoke from the combustion of solid or biomass fuels is a frequently reported COPD risk factor in nonsmoking populations (Gnatiuc & Caramori, 2014; Gordon et al., 2014; Mortimer et al., 2012; Salvi et al., 2012). Other COPD risk factors include age, genetics, socioeconomic status, and lung growth and development (Chinai et al., 2019).

Unlike the term asthma that has been used for over 3000 years, the term COPD has only been used since the mid-twentieth century. Prior to the adoption of the term COPD, American physicians used the term ‘emphysema,’ whereas British physicians used the term “chronic bronchitis” for the same condition (Petty, 2006). Describing the global burden of COPD is hampered for several methodological reasons (Salvi et al., 2012; Soriano & Lamprecht, 2012) as well as 72–92% of COPD cases being underdiagnosed (Casas Herrera et al., 2016).

Globally, COPD is projected to rank seventh in 2030, up from the 11th position in 2002, in DALYs (Mathers & Loncar, 2006). This translates into approximately 168 million men and 160 million women worldwide (Vos et al., 2012). COPD accounted for 5% of all deaths worldwide in 2015, with more than 90% of COPD deaths occurring in emerging and developed countries (World Health Organization, 2017). The prevalence of COPD is around 10%, but considerable variation in prevalence by country exists (Buist et al., 2007; Halbert et al., 2006; Menezes et al., 2005).

### 5.6.1 *Epidemiology of Chronic Obstructive Pulmonary Disease in Sexual Minority Populations*

Given the methodological issues in ascertaining the global burden of COPD, it is not surprising that very limited studies are available to describe the global burden of COPD among the SM population (Salvi et al., 2012; Soriano & Lamprecht, 2012). The Geneva Gay Men's Study indicated that gay men were much more likely to be treated for bronchitis in the previous 12 months than heterosexual men (Wang et al., 2007). Similarly, Patterson and colleagues also found an increased risk for chronic bronchitis in the United States among gay men but not bisexual men or heterosexuals who have a history of opposite-sex sexual behavior (Patterson & Jabson, 2018). In contrast, two other US-based studies did not find an increased risk for

emphysema or COPD, respectively, for SM men (Blosnich et al., 2016; Ward et al., 2015).

The two studies that reported on COPD for SM women produced mixed results. One study reported no difference in COPD prevalence between lesbians and bisexual women compared to heterosexual women (Ward et al., 2015). The second study only reported an increased risk for chronic bronchitis among lesbians but not bisexuals, lifetime lesbians or bisexual females, or those self-identified as SM with or without same-sex sexual behavior (Patterson & Jabson, 2018).

Smoking is the most common risk factor for COPD (Global Initiative for Chronic Obstructive Lung Disease, 2018). A family history of asthma is another significant risk factor (Silva et al., 2004; Vonk et al., 2003). SMs have an increased smoking prevalence, and SM women may also have an increased asthma prevalence. (See Chap. 6 (Substance Use) on smoking prevalence among SMs.) No studies have been published that evaluate the additional risk factors associated with COPD for the SM population.

### ***5.6.2 Epidemiology of Chronic Obstructive Pulmonary Disease in Transgender and Non-binary Populations***

COPD is a growing cause of morbidity and mortality in countries at all levels of economic development (Buist et al., 2008; Mannino & Buist, 2007). Similar to the SM section on COPD, sparse data are available for the transgender population. This may reflect a global issue of the younger age of participants who provide data, whereas COPD is considered a disease of the elderly (Holm et al., 2014). Only two studies were found that explored the prevalence of COPD among transgender populations, both of which focused on US-based cohorts. One study focused on transgender individuals with government-provided health insurance noted in the prior section on asthma also explored COPD prevalence (Dragon et al., 2017). In unadjusted analyses, the prevalence of COPD was higher among transgender individuals among both age-entitled and disability-entitled Medicare beneficiaries compared to similarly defined cisgender beneficiaries. The unadjusted prevalence of COPD among patients older than 65 was 30.4% in transgender patients (transmasculine and transfeminine patients combined) as compared to 20.7% in cisgender beneficiaries (cisgender women and men combined). Among disability-entitled Medicare beneficiaries, the unadjusted prevalence of COPD was 26.1% among transgender patients as compared to 21% among cisgender patients. No adjusted analyses were presented.

Similarly, in the 2014 BRFSS study also described in the asthma section, no differences in unadjusted COPD prevalence were found when comparing transmasculine individuals to cisgender women, transfeminine individuals to cisgender men, and gender non-conforming individuals to both cisgender men and women (Dai & Hao, 2019). Adjusted analyses comparing COPD prevalence among the three aforementioned transgender populations to gay cisgender men also showed no differences.

With only two studies, both in the United States, exploring COPD among transgender populations and one of these two studies not evaluating the prevalence separately for transfeminine and transmasculine participants, generalizations cannot be drawn as to the global burden of COPD in transgender populations. However, given that smoking is the leading cause of COPD, and smoking prevalence among transgender populations has been reported at higher rates than either the SM or cisgender heterosexual populations (Buchting et al., 2017; McElroy et al., 2011; Tamí-Maury et al., 2020), the prevalence of COPD would be expected to be much higher in transgender populations. This higher prevalence would be particularly noticeable in countries with high tobacco smoking prevalence (Reitsma et al., 2017).

## 5.7 Conclusion

In the scoping review of SGMs and the top five NCDs, 11% of the countries in the world were represented. A note of caution should be at the forefront when considering the global burden of NCDs represented in this chapter given the clear overrepresentation of data from one country. Specifically, the United States contributed almost three-quarters of research articles. Further, findings from only a few and mostly mature countries as described in this chapter limits the generalizability given the lack of representation of many countries and regions of the world. With that being said for the SM population, the literature suggests an increased burden only for asthma among lesbians and bisexual women. Little evidence exists of an increased burden among SMs for cancer, COPD, diabetes mellitus, or CVD. This is in stark contrast to established risk factors for NCDs, such as increased weight (SM women), smoking, excess alcohol consumption, and minority stress (see Chap. 2 on Stigma and Chap. 6 on Substance Use for a more in-depth exploration of these factors).

There is minimal evidence of any differential burden of cancer, COPD, diabetes mellitus, or asthma among transgender populations. Too few studies exist to draw conclusions specific to GAHT use for these NCDs. Among transfeminine populations, there is some evidence of elevated CVD risk, with notable increases in venous thromboembolism and pulmonary embolism across multiple studies associated with GAHT use (Getahun et al., 2018; van Kesteren et al., 1997; Wierckx et al., 2013). Large-scale studies centered on transgender populations infrequently accounted for GAHT use, regimen, or duration. The lack of these data drastically inhibits conclusions that may be drawn concerning NCDs among transgender populations given the diversity of various medical and physical gender affirmation processes that individuals may pursue. Smaller studies tended to focus explicitly on NCDs among transgender persons using GAHT, often excluding those who may choose not to pursue GAHT and limiting conclusions that may be drawn.



A very limited understanding of the influence of multiple identities that each person embodies beyond gender is reflected in this research. For example, racial/ethnic minority populations within the SGM community are rarely captured. In Thailand, one such population is the SGM Malay Muslims (Minority Rights Group International, 2018), whereas in the United States, SGM Native Americans comprise another such population. In addition, socio-cultural characteristics such as marriage/co-habitation among same-sex couples or economic position are not commonly considered in these studies. This lack of consideration of important characteristics also restricts the generalizability of findings to the SGM population within any one country and across countries.

Another characteristic reflected in the SGM population is the fluidity of identification over one's life course. This fluidity can be experienced by both sexual minority individuals as well as transgender individuals and is not uncommon (Dickson et al., 2013; Katz-Wise et al., 2014, 2016). The practical implications of this fluidity are unclear. A parallel construct is marital status. At any moment in time, marital status may change but is considered a core socio-demographic characteristic captured in medical records, health-related surveys, and countries' censuses. A rich and deep level of research continues to explore this social behavior, and, going forward, a similar depth and breadth of research is warranted to understand sexual and gender fluidity.

A notable limitation to drawing conclusions concerning NCD incidence and prevalence among SGM populations is that the average age in many studies skews younger. This is most noteworthy in studies with transgender populations, where many have average ages under 50. Some studies dealt with this dilemma by generating estimates adjusting for age or using age-matched samples. Many studies did not account for differences in age structure. This gap in study recruitment prevents strong conclusions given the strong associations between age and disease onset for CVD, cancer, DM, and COPD. Unlike the other NCDs discussed in this chapter, age is not strongly associated with asthma (American Lung Association, 2020; Centers for Disease Control and Prevention, 2021).

In conclusion, the limited data representing a global perspective hint at the possibility of a similar burden for CVD, cancer (excluding HIV/AIDS-related cancers), diabetes mellitus, COPD, and asthma (among SM men and transgender populations) compared to heterosexual and/or cisgender populations with some evidence of an increased asthma risk among SM women and elevated CVD risk among transfeminine populations. Research on long-term use of GAHT is needed since little is known about the influence of these exogenous hormones on the biological system.

The exponential increase in publications over the last two decades on SGM health concerns, albeit with the United States dominating the field, illustrates a promising trend. Increasing research from the 21 other countries who have already contributed to the literature as well as other countries joining this research agenda will undoubtedly provide valuable evidence-based insight into the influence of SGM status on the global burden of NCDs. For this to happen, adding SGM identity questions to national surveillance studies as well as capturing these identities within

healthcare records and in cohort studies would significantly improve our ability to evaluate NCDs as well as other health outcomes among the SGM population.

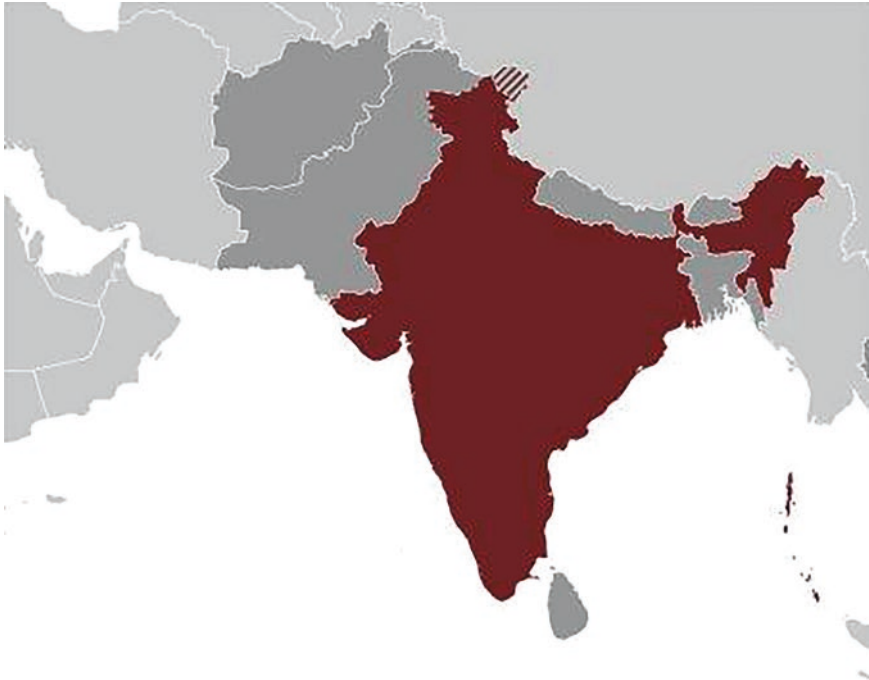
## **5.8 Case Study: Noncommunicable Diseases Among Men Who Have Sex with Men and Transgender Women in India**

The research on cancer and other noncommunicable diseases (NCDs) among sexual and gender minorities (SGM) in India is limited. The one comprehensive literature review of research on SGM people in India identifies one of the major gaps in research as the topic of noncommunicable diseases (Chakrapani et al., 2023). This dearth of research is likely due to multiple factors including the lack of some legal rights and anti-discrimination protections for SGMs in the country. Fear of stigmatization from healthcare providers and other communities can also play a role, preventing SGMs from seeking the routine and appropriate medical care they need and hindering the ability of epidemiologists to track their chronic illness patterns (Patel et al., 2012). Of the research on SGM in India on all topics related to health, there is virtually no research on lesbian women and transmasculine people, with just 4% and 2% of the research, respectively, focusing on these identity groups (Chakrapani et al., 2023). However, there are some studies that allow insight into NCDs among transgender people and illnesses related to HIV-positive status and high-risk human papilloma virus (HPV) infection among men who have sex with men (MSM) in India.

### **5.8.1 NCDs Among Transgender Populations**

The research on the risk and prevalence of NCDs among SGMs in India is scarce; however, there is an emerging body of research exploring risk and disease prevalence for transgender people. One study analyzed data on 200 transgender people, the vast majority of whom were transfeminine, from Puducherry, India, and found that their prevalence of risk factors, such as high blood pressure, obesity, physical inactivity, and unhealthy dietary practices, were significantly higher than the general population (Madhavan et al., 2020). Another study found that among transgender people surveyed in Mumbai, two-thirds suffered from NCDs including diabetes (40%), hypertension (11%), and other musculoskeletal disorders like arthritis (Gupta & Sivakami, 2016).

Transgender women often receive GAHT as part of their gender affirmation journey, and research shows that such transgender women in India are at an increased risk of developing breast cancer when compared to cisgender men (Majumder et al.,



Map of India showing major cities as well as parts of surrounding countries and the Indian Ocean. (Source: Central Intelligence Agency, 2021)

2020). Additionally, the presence of estrogen receptors in prostate tissue raises concern for prostate cancer among transgender women (Majumder et al., 2020). Although prevalence estimates for India are not available for these cancers in transgender women, data collected outside of India showing the increased risk of breast cancer during a relatively short duration of hormone treatment can be extrapolated to this population (Majumder et al., 2020).

### **5.8.2 HIV-Related Cancers Among MSM**

When examining the risk for other NCDs, it becomes apparent that MSM are at increased risk of cancer if they are living with HIV due to the way HIV compromises their immune systems. Globally, HIV status contributes to the risk of certain cancers, specifically called AIDS-defining malignancies, as well as non-AIDS-defining cancers such as those of the anus and oral cavity/pharynx (National Cancer Institute, 2017). One study examined malignancies in over 2500 people with HIV in India in an antiretroviral clinic, of which almost 70% were males (Sharma et al., 2015). With MSM prevalence of HIV higher among MSM, it is likely that some or many of these participants were MSM. Results of a retrospective analysis of patients registered at this clinic found that the frequency of malignancies was higher in the study group than in the general population, suggesting an important connection between their HIV status and these malignancies (Sharma et al., 2015).

When examining sexual behaviors in Indian men living with HIV in relation to cancer risk and incidence, another study screened 126 male patients living with HIV who were accessing antiretroviral therapy. Although 91% were married to female partners, almost 40% of those gave a positive history of anal sex with other men (Gautam et al., 2018). Researchers found that 60% of patients screened had a variety of cytological abnormalities, all of which were precursors to anal cancer (Gautam et al., 2018). Risk factors for these lesions included a history of anal intercourse (Gautam et al., 2018). Finally, one study compared the prevalence of abnormal anal cytology in Indian MSM living with and without HIV. Researchers established that MSM living with HIV had higher rates of abnormal anal cytology than HIV-negative MSM (Arora et al., 2014).

### **5.8.3 HPV-Related Cancers Among MSM**

While there is no national prevalence data on HPV infection in MSM in India, researchers who examined it within West Bengal, an eastern province in India, found that the prevalence of HPV infection among MSM was almost 70% in that region (Ghosh et al., 2012), as compared to 26% in men overall (Bruni et al., 2019). While HPV itself is not cancer, there is overwhelming evidence that certain high-risk strains of HPV cause cancer (Frisch et al., 1997; Hoots et al., 2009). In one

systematic review, high-risk strains of HPV were found in 71% of invasive anal cancer cases (Hoots et al., 2009). Globally, nearly 90% of anal cancers can be attributed to HPV infection, occurring more frequently in males in lower-income countries such as India (de Martel et al., 2017). In one study in India, HPV-attributable cases of penile cancer were almost as frequent as anal cancer in males, which suggests a higher burden of disease for MSM who are at higher risk of contracting HPV (de Martel et al., 2017).

### ***5.8.4 Health Advocacy for SGM Populations in India***

There are multiple organizations in India that are working to both advocate for better health services and change stigmatizing social beliefs about LGBTQ+ people. One of these organizations is Naz, which has an initiative dedicated to fighting for LGBTQIA+ individuals (Naz India, 2020). They empower LGBTQIA+ people to access their rights, including medical care, safer sex information, and HIV testing (Naz India, 2020). Earlier access to appropriate medical care can decrease the risk of cancer going undetected and untreated (World Health Organization, 2020). Additionally, LGBTQ+ people's ability to receive information regarding safer sex and regular HIV testing as well as preventative screening and treatment for illnesses like diabetes and heart disease can reduce the risk for SGM and allow them to get the appropriate treatment should they need it.

Another organization that is fighting for the rights of LGBTQ+ people in India is the Humsafar Trust. This organization has been doing outreach to LGBTQ+ people within the Mumbai metropolitan and surrounding areas for over 25 years (Humsafar Trust, 2020a). Their health-related projects include three targeted interventions among MSM and transfeminine/koti/hijra communities surrounding Mumbai: reduce transmission of HIV, promote access to healthcare for the community, and reduce stigma against these individuals (Humsafar Trust, 2020b). The Humsafar Trust also does research about the LGBTQ+ community in India (Humsafar Trust, 2020c). Their focus is on behavioral health research, which is necessary as mental and behavioral health are inextricably intertwined with chronic illness and physical health outcomes. One example of a research study they are currently conducting is regarding the impact of stigma on depression and sexual risk behavior of MSM and transgender women in India (Humsafar Trust, 2020c). Findings will be able to inform interventions to reduce stigma and discrimination, both of which are associated with physical and sexual health outcomes related to HIV prevention for these populations (Humsafar Trust, 2020c).

Finally, there is an advocacy organization called Swatantra whose mission is to advocate for transgender working-class Indians (Global Human Rights, 2018). They advocate for more inclusive laws and policies on all levels of the Indian government, conduct research on issues impacting the transgender community, and lead community outreach campaigns to support transgender people (Global Human Rights, 2018). All these actions can support the legal protections for and

destigmatization of transgender people in India, ultimately supporting their access to and utilization of healthcare to improve their health outcomes.

The lack of research on the burden of NCDs among SGMs in India is striking and needs to be remedied. While research on HIV- and HPV-related cancer among this population can be connected to inferences about cancer, and there is some research on general health outcomes for transgender people, without research focused on specific conditions such as cancers, CVD, or diabetes, it is not possible to fully understand the scope of the problem. It is necessary to have an epidemiological understanding of NCDs among these populations to feasibly allocate funding for intervention or prevention work. The three organizations described above, Raz, the Humsafar Trust, and Swatantra, are key starting places for further exploration of NCDs among SGM.

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# Chapter 6

## Community and Social Support



Chichun Lin and Sel J. Hwahng

### 6.1 Introduction

In a study of 741 men who have sex with men (MSM) living in New York City, Meyer (1995) found that the men experienced internalized homophobia, societal rejection and discrimination, and direct or indirect stress. Meyer (1995, 2003) called these experiences minority stress, which is defined as chronic feelings of stress on members of marginalized and stigmatized groups. Minority stress can lead to a heightened risk of physical health problems as well as mental health challenges. Studies in the United States have revealed the impact of minority stress associated with negative physical health outcomes (Flentje et al., 2020) and increased levels of depression, anxiety, loneliness, and diminished self-esteem (see Stigma and Mental Health chapters, Chaps. 2 and 3; Bowen et al., 2007; McDougall et al., 2001; Meyer, 2003). Minority stress has also been examined globally in lesbian, gay, bisexual, transgender, and queer (LGBTQ) populations, with relevance among populations in Taiwan (Chan et al., 2022) and South Africa (McAdams-Mahmoud et al., 2014).

This chapter aims to introduce the benefits of a sense of community and social support among LGBTQ populations as an antidote to minority stress. We describe the consequences of a lack of community and social support. We also attempt to highlight and explore the experiences of LGBTQ individuals living in low- and middle-income countries (LMICs) in the Global South. This population tends to experience greater levels of minority stress because of the high levels of homophobia, biphobia, and transphobia in many countries, including the outright illegality of

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C. Lin (✉)

Master of Marriage and Family Therapy Program, Faculty of Education,  
The University of Winnipeg, Winnipeg, Manitoba, Canada  
e-mail: [ch.lin@uwinnipeg.ca](mailto:ch.lin@uwinnipeg.ca)

S. J. Hwahng

Department of Women's and Gender Studies, Towson University, Towson, MD, USA  
e-mail: [shwahng@towson.edu](mailto:shwahng@towson.edu)

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same-sex relationships in some settings; moreover, the poverty-related issues, such as inadequate access to physical and mental health services, limited financial support, low levels of education, and limited capacity of their governments to solve the societal oppression might enlarge the minority stress of LGBTQ people (Detenber et al., 2014; Wang et al., 2009; Williams, 2009; Wong & Tang, 2003). In other words, LGBTQ individuals globally, but particularly in LMICs, tend to experience various health-related challenges that may be mitigated with sufficient social support.

Social support can buffer the negative effects of minority stress on an individual and allow someone to feel cared for, loved, esteemed, valued, and as belonging to a network of mutual obligations. House (1981), a social psychologist in the United States, described four types of social support, including (a) emotional (e.g., love, trust, caring, and listening); (b) appraisal (e.g., validation and positive feedback); (c) instrumental (e.g., money, time, labor, and resources); and (d) informational support (e.g., suggestion and advice). House (1987) also mentioned three aspects of social relationships, which are often referred to as social support, including (a) their existence or quantity (i.e., how many persons exist in the social group); (b) their structure (i.e., how the social group is formed); and (c) their function or behavior (i.e., what the members of the social group do). The members of communities to which an individual belongs are often the main sources of social support. According to Cohen et al. (2000), social support can be provided in a variety of ways through a network of two or more people. This chapter presents a general overview of community and social support research, networks, and organizations for LGBTQ individuals globally.

## 6.2 Support in Families

### 6.2.1 Parental Support

Unlike other stigmatized groups (e.g., racial minorities), LGBTQ individuals usually do not share their stigmatized identity with their parents; therefore, they may face numerous oppressions alone (Pachankis & Hatzenbuehler, 2013; Rothblum & Factor, 2001). Moreover, parental rejection can lead to additional challenges, especially in the Global South or for individuals migrating from the Global South. For example, a survey of 340 self-identified Filipino gay and lesbian adolescents found that parental rejection was a major risk factor leading to their suicidal ideation (Reyes et al., 2015). A qualitative study with female-to-male (FtM) transgender individuals of Asian and Pacific Islander descent in the United States suggested that parental rejections were rooted in a lack of knowledge about transgender and gender variant identities (Mar, 2011).

On the other hand, parental support can promote the well-being of LGBTQ children and improve their mental health (Goldfried & Goldfried, 2001; Needham & Austin, 2010; Pearson & Wilkinson, 2013; Ryan et al., 2009). For instance, a



survey of 277 self-identified Chinese LGB young adults found that perceived parental support in regard to their sexual orientation was associated with positive psychological adjustment (Shao et al., 2018).

### **6.2.2 Sibling Support**

Sibling support also matters. Studies in the United States found that biological and heterosexual siblings' attitudes toward LGBTQ populations were associated with their LGBTQ siblings' suicidal ideation/attempts, self-injurious behavior, use of psychotherapy, and general well-being (Balsam et al., 2005; Hilton & Szymanski, 2011; Toomey & Richardson, 2009). The authors summarized the biological and heterosexual siblings' potential reactions after their LGBTQ siblings came out to them (Hilton & Szymanski, 2011). First, they felt shocked, confused, happy, and/or accepting. Second, they rethought or challenged their own stereotypes toward LGBTQ issues. Third, their sibling relationships started changing, and the biological and heterosexual siblings may have gained more awareness and knowledge about LGBTQ issues. Fourth, if the biological and heterosexual siblings fully accepted their LGBTQ siblings, they became allies to the siblings and provided assistance when the LGBTQ siblings came out to their parents. Fifth, they may have attended LGBTQ pride events with their siblings; moreover, they may have challenged the homophobia, biphobia, and transphobia existing in society.

LGBTQ individuals sometimes choose to come out to their siblings as a first step before sharing their identity with other family members. For example, in a case study, a Muslim lesbian living in Scotland reported that although she experienced many challenges because of her religion compared to other lesbians, she stressed that coming out to her siblings would still be easier and safer than to her parents and other relatives (Siraj, 2011). Similarly, an unpublished doctoral dissertation in which 16 siblings of LGBTQ individuals in Taiwan were interviewed found they were more likely to disclose their sexual and gender identity to their siblings before coming out to their parents; moreover, they connected with their siblings through LGBTQ-only Facebook accounts (in Taiwan, most LGBTQ individuals have two Facebook accounts, one for LGBTQ friends and one for family and straight friends) and shared the LGBTQ-related events with their siblings (Brainer, 2014). These two examples imply that disclosing one's sexual and/or gender minority identity with siblings may be an important step before sharing with one's parents.

## **6.3 Support in Schools**

In addition to the impact of family relationships, school peers and teachers also play key roles in LGBTQ students' mental health. LGBTQ students in the US report greater loneliness and depression than their heterosexual peers (Davies & Kessel, 2017;

Westefeld et al., 2001). Allen (2020) found that heterosexual teachers in the United States often ignore homophobia that exists in the classroom or respond to it ineffectually; moreover, some heterosexual teachers perpetuate homophobia and heterosexism in the process of teaching. In a US study, Bradley et al. (2019) argued that teachers are in an ideal position to prevent the micro-aggressions or bullying of LGBTQ students, but most of them do not have adequate training. In a study with 732 LGBTQ high school and college students in China, students reported that most teachers lack training and awareness about LGBTQ issues, which led the students fearing coming out to the teachers (Wei & Liu, 2019). Another qualitative study in South Africa involved interviews with schoolteachers about their attitudes toward providing sexual education, especially about LGBTQ issues (Francis, 2012). The interviews revealed that teachers did not know how to teach because of their limited knowledge about LGBTQ individuals or because they were against teaching it due to their religious beliefs. However, some teachers were open to teaching LGBTQ+ topics but only to discuss it when students asked the relevant questions.

In another study of bisexual students in South Africa, Francis (2017) strongly recommended that school leaders, managers, and teachers be obligated to develop school support systems to protect sexual minority (SM) students. Glikman and Elkayam (2019) reported that LGBTQ students in Israel continue to experience alienation and opposition in the school environment, and these students strongly believe teachers should oppose and prevent homophobic behaviors in school through receiving relevant training.

A South African study with 35 adolescents who identified as MSM, transgender female, and drag queen adolescents living with HIV in South Africa stated that the participants experienced discrimination, homophobia, and abuse from both peers and teachers (Daniels et al., 2019). Participants reported that these experiences resulted in disengagement from school and limited their willingness to stay connected with education. Moreover, these experiences led them to adopt unhealthy coping behaviors, such as smoking, drinking alcohol, skipping school, and eventually dropping out of school (Daniels et al., 2019). However, the participants expressed their desires to continue education because they aspired to gain social and economic power through educational attainment, especially when their sexual and/or gender identity may have resulted in victimization. In a South African study with 35 adolescents who identified as MSM, transgender, and drag queen and were living with HIV, participants reported experiencing discrimination, homophobia, and abuse from both peers and teachers in schools (Daniels et al., 2019). Those experiences resulted in disengagement from school and limited their willingness to stay connected with education; moreover, the adolescents adopted unhealthy coping approaches, such as smoking, drinking alcohol, skipping school, and eventually dropping out of school (Daniels et al., 2019). In spite of these, the adolescents still expressed their desire to continue education because they could gain social and economic power and change their lives through education (Daniels et al., 2019).

## 6.4 Support in Other Relationships

### 6.4.1 *Intimate Partners*

Besides parent, sibling, peer, and teacher support, intimacy plays an influential role in one's health and well-being. Johnson et al. (1993) found that a romantic partner's support behavior affected the other partner's happiness in an intimate relationship.

A study among sexual minority women in Mumbai, India revealed that intimate partners comprised a fundamental aspect of their closest social support connections (Bowling et al., 2018). Those who had intimate partners described the constant source of support from these relationships. A stable, loving primary partner who could serve as a confidante was the ideal, but single women often had to deal with social stigma, lack of parental acceptance, and financial instability that interfered with meeting and forming long-term relationships with women.

According to Reczek and Umberson (2012), "health behavior work" includes activities that promote a partner's positive health behaviors. These researchers found that in lesbian and gay couples both partners were more likely to mutually take care of each other's health, termed "cooperative health behavior work," compared to heterosexual couples. Despite this mutuality, in a majority of lesbian and gay couples (73% and 80%, respectively), one partner performed work to enhance the other partner's health behavior, usually due to the latter partner engaging in unhealthy behavior that was perceived as needing intervention.

In a systematic review of sexual minority female cancer survivors in the United States, the United Kingdom, and Canada, intimate partners provided important forms of social support, such as emotional, instrumental (e.g., personal and medical care, transportation, meal preparation, and childcare), decision-making, post-treatment adjustment, and medical advocacy (Thompson et al., 2020). Intimate partners were also important for survivors to create pleasurable and fulfilling lives as cancer survivors. In a study among SGM cancer survivors, sexual minority women, compared to sexual minority men, were more likely to have an intimate partner in the room when they learned of their cancer diagnosis (Kamen et al., 2015). In another study, the association between having an intimate partner and a better physical quality of life was stronger for sexual minority women compared to heterosexual women (Boehmer et al., 2005). Sexual orientation disclosure has also been found to affect the level of intimate partner support SMW cancer survivors receive (Boehmer et al., 2005; Fish et al., 2019).

For older sexual minorities (SMs), losing an intimate partner can be particularly devastating. Some SMs experience "disenfranchised grief" (Hughes et al., 2014, p. 323) in which their losses are not openly acknowledged, publicly mourned, or socially supported due to homophobic stigma and exclusion. The loss of an intimate partner can also trigger re-experiencing previous losses that may have incurred during a coming-out process earlier in the life course. And the passing of an intimate partner may also signify the breaking of a bond that had been established upon a shared experience of social marginalization, in which the psychological burden

from social marginalization and exclusion had been alleviated by the relationship. Thus, SMs are particularly vulnerable to experiencing psychological distress and depression due to the passing of an intimate partner (Hughes et al., 2014).

In the Midwestern region of the United States, a bereavement support group specifically tailored for older SMs was developed that received a positive reception from group members (Hughes et al., 2014). The six-week curriculum included understanding the grief process (including experiences and stages of grief), emotional coping, stress management, managing difficult emotions, dealing with holidays, and returning to life after a person one loves has died. Hughes and colleagues also provide several recommendations for tailoring the support group curriculum, interfacing with other community and bereavement providers, and advertising and integrating the support group within the LGBT community (Hughes et al., 2014).

Intimate partner violence (IPV) also plays a crucial role in contributing to negative mental and physical health outcomes (Buller et al., 2014). Walters et al. (2013) found that the lifetime prevalence of rape, physical violence, and/or stalking by an intimate partner was 43.8% for lesbian women, 61.1% for bisexual women, 35% for heterosexual women, 26% for gay men, 37.3% for bisexual men, and 29% for heterosexual men. The rate of IPV in LGB individuals was similar to the rate of IPV in heterosexual individuals. In a study with 99 LGBT individuals in Latin America, Swan et al. (2021) found that 60.61% reported at least one IPV event in their life, with psychological aggression being the most common type. Thus, the reduction of IPV events within LGBTQ couples is a crucial way to improve their well-being.

#### ***6.4.2 Parenting and Family-Building***

It is a well-known fact that a number of positive mental and physical health outcomes result from people who live in stable families (International Federation for Family Development, 2022). Historically, however, there have been a number of systematic factors that have prevented LGBTQ people from parenting and family-building. Simon and Farr (2021) developed a Conceptual Future Parent Grief Scale for LGBTQ+ people to measure the “ambiguous loss” of an idealized future self-involving parenthood as a result of systematic factors that prevent LGBTQ people from pursuing parenthood. They found that LGBTQ+ identity authenticity (i.e., having a positive attitude toward their LGBTQ+ identity) could be protective against ambiguous loss and thus reduce barriers for LGBTQ+ people pursuing future parenthood. In addition, LGBTQ people often experience a myriad of financial, legal, and medical obstacles to starting and building families (Kreines et al., 2018). Social support available in health care can greatly facilitate LGBTQ parenting, yet many countries do not even provide the most basic access for LGBTQ people to build families. For example, many countries limit LGBTQ adoption and restrict in-vitro fertilization, insemination, or other assisted reproductive technologies for LGBTQ people. In the United States, LGBTQ people are less likely to have both personal health insurance coverage as well as family-building health insurance

(Kreines et al., 2018). An analysis of 100 US-based websites on LGBTQ family-building revealed poor reliability (according to criteria such as user feedback, privacy, purpose, identity, content updating, and content development) and a lack of inclusivity among many of the websites (Kreines et al., 2018).

Despite these barriers, a focus on what resources are available for LGBTQ family-building and parenthood can identify ways to augment these resources. A qualitative study among LGBTQ parents in Finland found several factors that contributed to parental empowerment with regard to maternity and child health care (Kerppola et al., 2019). These factors fell into three main categories—recognition and acknowledgment, cooperation and interaction, and equitable care. Recognition and acknowledgment included LGBTQ parents defining their own gender within the health care sector, defining their family constellation and the roles of various members of the family, and being welcomed and acknowledged within health care practice and communication. Cooperation and interaction included health professionals actively listening and inviting parents to speak, providing individualized information, respecting parents' authority and decision-making, and granting non-legal parents equal rights and responsibilities for health care involvement. Equitable care included health professionals providing a sense of security and confidentiality as well as being approachable, non-judgmental, and fair. It was important for LGBTQ parents in this study to experience being treated the same as heterosexual families, including receiving the same services (Kerppola et al., 2019).

In another qualitative study on reproductive health care in Sweden (Klittmark et al., 2019), some LGBTQ participants had experienced disempowering treatment by health care providers such as being assigned incorrect genders for their newborns and themselves, ascribed heteronormative stereotypes with regard to femininity and masculinity, and being questioned or excluded as LGBTQ people. Participants coped in various ways with the inadequate treatment, including using humor, overtly questioning and educating health care providers, and seeking out information and support through the Internet, social media, and social networks.

Through family, friends, and LGBTQ networks, participants in the aforementioned study were also able to seek out pregnancy and birthing clinics that were known to be LGBTQ-competent, and many of these clinics also provided LGBTQ-specific parent education groups (Klittmark et al., 2019). Participants who were able to receive care from LGBTQ-competent clinics or health care providers expressed satisfaction with this quality of care. This competence included providers being knowledgeable about LGBTQ rights and supporting participants to navigate the health care system as LGBTQ people, problematizing cisgender and heterosexual norms, using gender-neutral terms unless otherwise directed, acknowledging the entire family constellation, and being open and inclusive. If health care providers themselves also identified as LGBTQ and/or did not adhere to gender norms, divulging this information to participants also fostered a sense of connection (Klittmark et al., 2019).

LGBTQ+ people in studies in North America also emphasize the need for inclusive and educated health care practitioners as part of culturally competent reproductive and obstetrical environments during the prenatal/antenatal, intrapartum, and

postpartum care periods. This practice of care would include the following: (1) providing “queer-friendly” medical intake forms, sexual history conversations, pictures and posters decorating the facilities, and pornography for sperm donation; (2) providing gender-neutral bathrooms near ultrasound rooms and andrology laboratories to include trans and non-binary gendered people who were pursuing pregnancy or freezing sperm; (3) adopting non-cisgender and non-heteronormative terminology to refer to all patients, family members, and friends, including pregnant and non-pregnant partners; (4) understanding the varying combinations of conception modes, egg origin, and sperm origin; (5) knowledgeable about co-parenting arrangements and considerations, including co-nursing; (6) awareness of health-related risk factors that disproportionately affect LGBTQ+ people; and (7) cognizant of legal issues, such as second parent adoption, that LGBTQ+ parent families may have to navigate (Bushe & Romero, 2017; Gregg, 2018; Juntereal et al., 2020; Ross et al., 2014; Scheib et al., 2020).

The Human Rights Campaign regularly evaluates more than 2200 hospitals and other health care facilities in the United States through a Healthcare Equality Index, which measures how much a given facility has met the national benchmarks to promote LGBTQ equity and inclusion (Human Rights Campaign Foundation, 2022a). This tool may be particularly useful for LGBTQ people interested in accessing the best possible and most inclusive health care for a current or anticipated pregnancy.

A small body of literature exists specifically on sexual minority mothers in same-sex female relationships with regard to pregnancy and health care. In a study of lesbian mothers in South Africa, some participants expressed that their partner was a main source of emotional as well as other types of support in raising children (Van Ewyk & Kruger, 2017). This study also emphasized the importance of bonding between lesbian parents as well as between parent and child. Participants reported that children who were birthed by one woman in a couple often bonded equally with both the biological and non-biological parents. For those parents who adopted, children often loved both adoptive parents equally. The authors emphasized that a bonding relationship with a child was often premised on the attention and care a child received, not from a biological tie (Van Ewyk & Kruger, 2017).

In addition, lesbian mothers in South Africa often participated in equitable co-parenting arrangements so that one parent was not overly burdened with most of the childcare responsibilities. There was often no traditional gendered role division with respect to household chores and childcare in these lesbian-parented families, and a flexible and pragmatic approach was often endorsed for undertaking these tasks (Van Ewyk & Kruger, 2017). This study postulated that these equitable and flexible conditions may have been protective against the birthing mothers experiencing postpartum depression in their study.

In the same study, although some South African lesbian mothers experienced postpartum decreases in sexual activity with their partners, they viewed these decreases as temporary. Socializing with friends also became more difficult, which was viewed as a necessary sacrifice for family-building. Thus, lesbian mothers in South Africa were subversive by contesting the association of motherhood with biology given that both birthing and non-birthing partners identified as mothers.

However, some “traditional” motherhood tropes were still observed, such as that of the self-sacrificing mother (Van Ewyk & Kruger, 2017).

In the United States, many sexual minority female mothers experience heteronormative-based care or homophobia that diminishes their health care experiences (Bushe & Romero, 2017; Gregg, 2018; Juntreal et al., 2020). In fact, some same-sex couples resort to “crusading” to demand affirming treatment from health care providers (Hayman et al., 2015). Mothers in same-sex female relationships in Australia and the United States often use assisted reproductive technologies such as home or medical intrauterine insemination or in-vitro fertilization for conception, although some mothers also choose vaginal insemination (Bushe & Romero, 2017; Gregg, 2018; Juntreal et al., 2020; Power et al., 2020). Sexual minority female mothers in the United States have been found to often have to educate their health care practitioners on practices such as “co-nursing” through induced lactation, in which both the birthing and non-birthing partners nurse the infant (Juntreal et al., 2020). Co-nursing was found to provide a range of mental, physical, and emotional benefits and profound bonding between the mothers and children.

To date, most countries have not legalized same-sex marriage, so adoption or surrogacy for same-sex couples is still very difficult to pursue. Thus, studies about relationships between gay or lesbian parents with their own children are few. The relevant studies mainly seek to answer the question, “Does parental sexual orientation affect child development?” Stacey and Biblarz (2001) compared development among children of divorced lesbian mothers with development among children of divorced heterosexual mothers and found few significant differences. Patterson (2006) also found that children of lesbian couples and children of heterosexual couples showed no difference among levels of social competence, behavior problems, and adaptation to a new environment. Wainright and Patterson (2006) reported there were no significant differences between teenagers living with same-sex parents and those living with other-sex parents on self-esteem, anxiety, school performance, and family relationships. A study with 93 Chinese girls adopted by single mothers, heterosexual couples, and lesbian couples (31 girls in each type of family) showed that girls from the three types of families were not statistically different in behavioral adjustment (Tan & Baggerly, 2009). In this study, the only difference occurred for preschool-aged girls from lesbian couples who had more somatic complaints than those from single-parent households. Also, school-aged girls from lesbian couples had more aggressive behaviors than those from single-parent households (Tan & Baggerly, 2009). Tan and Baggerly (2009) suggested that the difference might be rooted in the socio-cultural environment (e.g., children from lesbian couples might experience more prejudice).

### **6.4.3 Colleague Support**

LGB employees tend to experience more challenges in the workplace than heterosexual employees as a result of their sexual identity. First of all, heterosexual employees do not need to worry about whether and how they disclose their sexual

orientation in the workplace as do LGB employees (Benozzo et al., 2015). There are three strategies for sexual identity management, including counterfeiting a false heterosexual identity; avoiding discussing any issues related to sexuality; and openly acknowledging and advocating for their LGB identity (Button, 2004). First, a sexual minority individual might apply a different strategy in different workplaces based on various factors (e.g., the individual's position in the workplace, the workplace's attitude toward LGB issues, the cost and effect of coming out in the workplace, and the individual's current mental and financial status) (Croteau et al., 2008). Second, LGB employees may worry about their physical and psychological safety in the workplace (Baker & Lucas, 2017). Third, LGB employees may worry about their relationships with co-workers and supervisors, such as whether their co-workers will discover their sexual identity through interactions or tell others in the workplace (Periard et al., 2018). Usually, a supervisor plays a more important role in creating an LGB-friendly environment than a co-worker (Periard et al., 2018). Supervisor support is defined as a type of social support that provides both work-related instrumental and emotional assistance to employees. In addition, employees value supervisor over co-worker support because supervisors are perceived as offering more stability, skill, and experience to employees (Periard et al., 2018).

The ability to be one's authentic self in the workplace could influence an LGBTQ employee's career success. For instance, a study which is phenomenological and qualitative in design with 13 MSM interviewees living in South Africa revealed that the existing prejudices toward MSM in the workplace restricted their freedom and career development (Soeker et al., 2015). In particular, those MSM employees working in lower-level positions or those who had less power in their companies experienced more challenges and had more fear of being transparent in the workplace (Soeker et al., 2015). However, the same study found that those participants who disclosed their identity to colleagues and felt accepted and supported felt free and comfortable in the workplace and were able to fully engage in their job duties.

In India, workplace attitudes toward employees' sexual orientation or gender identity have typically followed a "don't ask, don't tell" pattern (Banerji et al., 2012). However, over the last two decades, India has emerged as one of the most rapidly developing economies, and thus, numerous multinational companies have entered the country (Banerji et al., 2012). Those international companies highlighted LGBT issues within the workplace. Therefore, managers of companies in India began to work on creating LGBT-friendly environments, including (1) ensuring equal opportunity policies for all employees; (2) prohibiting discrimination based on sexual and gender identity; (3) providing diversity training to employees and supervisors; (4) establishing and supporting an LGBTQ network in the workplace; and (5) offering counseling services for any employee, especially for those who experience harassment in the workplace due to their sexual and gender identity (Banerji et al., 2012). These changes might lead not only to safer workplace environments but ones that provide ample social support for LGBTQ employees.



### **6.4.4 *LGBTQ Elders***

A US study defined loneliness as an individual's subjective experience with a lack of engagement in human relationships and a lack of physical and emotional support (Greysen et al., 2013). Loneliness has been found to be associated with an increased risk of depression, smoking, alcohol consumption, hospitalization, morbidity, and with a poor level of health-related quality of life and physical and mental health more broadly (Elovainio et al., 2017; Finlay & Kobayashi, 2018; Greene et al., 2018; Savikko et al., 2005). It is not surprising that LGBT elders experience more loneliness than someone who is either not a SM or not an elder (Harley et al., 2016; Wilkens, 2015). A study in the Philippines with 10 older and single MSM (61 years old and above) found that aging was associated with more discrimination, oppression, and experiences of abuse (de Guzman et al., 2017). In addition, loneliness forced them to overcome life challenges by themselves, and they desired to seek acceptance and belongingness (de Guzman et al., 2017).

In the United States there are several LGBTQ-friendly and LGBTQ-focused senior retirement communities in cities such as Palmetto (Florida), Palm Springs (California), Gresham (Oregon), Pecos (New Mexico), and Boone (North Carolina) (Feltman, 2021). These types of senior housing may not only help combat loneliness for LGBTQ+ older adults but may also provide much-needed material and social support resources. Examples may include information and access to affordable food, health, community, and social activity resources. Studies from several global regions found that social support was associated with positive physical health outcomes among older adults (Dai et al., 2016; Smith et al., 2017). Thus, social support may be especially important for older adults who may be encountering a myriad of health issues due to the aging process.

There is also LGBTQ-friendly senior housing for those who are at risk for homelessness and/or living with HIV/AIDS in Hollywood (California) and Chicago (Illinois) in the United States (Larson, 2016; Weherville.com, 2021). These types of senior housing may be especially important for vulnerable LGBTQ+ older adults to receive material and social support for their housing and health care, as well as their other needs.

## **6.5 *LGBTQ Communities***

### **6.5.1 *Same-Sex Male Communities***

In the past, a same-sex male community usually meant a gay village, enclave, or ghetto within a geographical area containing gay bars, restaurants, or bookstores as well as gay residents. Examples of such communities are in Chelsea in New York City, USA; Castro in San Francisco, USA; and Davie Street in Vancouver, Canada. Wow Travel (2021) listed the following cities as the most gay-friendly cities in the

world: Toronto, Canada; São Paulo, Brazil; London, UK; Madrid, Spain; Miami, USA; Amsterdam, Netherlands; Barcelona, Spain; San Francisco, USA; New York City, USA; Berlin, Germany; and Tel Aviv, Israel. It should be noted that only 2 out of 11 cities were outside of the Global North. Due to the longer history of development and wealth, Global North countries are generally more accepting of LGBTQ people compared to many Global South countries. Ironically, however, it is the colonization by Global North countries that often introduced homo- and transphobic laws and norms in many Global South countries (see *Victimization and Intentional Injury* chapter, Chap. 9). It is also important to observe that gay cis-gender men are usually the population that is most visible and active in these gay-friendly cities.

There are gay-friendly places in the Global South, but these might not be as visible compared to those in the Global North. For example, Rio de Janeiro, São Paulo, Recife, Salvador, Porto Alegre, Florianópolis, and Brasília are the most LGBTQ-friendly cities in Brazil (Alface, 2018). Chapinero, Bogotá is a popular and inclusive place in Colombia for local and international LGBTQ tourists to visit its bars, clubs, and bathhouses (Lifeafar, 2019). The most LGBTQ-friendly district in Cuba is the tangle of streets around the Malecón, Av de Infanta, and La Rampa on the cusp of Centro Habana and Vedado (Lonely Planet, 2021). Cape Town, South Africa, is the undisputed queer capital of Africa with an inclusive culture and community that grows stronger each year (Matador Network, 2020). Silom Soi 4 and Silom Soi 2 are the major gay areas in Bangkok, Thailand, which is one of the most popular gay destinations in Asia (Nomadic Boys, 2021a, b).

In the Chinese gay communities, such as those in Taiwan, Hong Kong, mainland China, Malaysia, and Singapore, due to the severe level of societal homophobia, Chinese gay men tend to engage with their own gay groups in order to obtain a sense of acceptance and belongingness and to buffer the rejections and prejudices from their families, schools, or workplaces (Lin, 2016). However, the Chinese gay community is not always cohesive; instead, it is divided into different categories: gay bear (heavy, hairy, and masculine), gay wolf or hamadryad (muscular, fit, and hypermasculine), and gay twink (who is also called gay monkey in the Chinese societies and has an effeminate manner, thin build, and no bodily or facial hair, all of which contributes to a youthful look) (Lin, 2014, 2018). Research has shown that Chinese gay men sometimes feel secondarily excluded from the gay community because they might not meet the physical standards of the gay groups they wish to engage in (Lin, 2016). This causes some men to feel excluded from heterosexual society because of their sexual orientation and gay society because of their physical appearance (Lin, 2016). Moreover, Chinese gay men living with HIV, mental or physical disabilities, and aging issues tend to experience more exclusions than those without these additional challenges (Lin, 2016).

Although there exist hierarchies and prejudices for men in this example of a singly ethnic gay community (e.g., the Chinese gay community), gay men living in ethnically diverse gay communities may also experience challenges. For example, in Canada, gay Black Canadian men not only experience racism in the greater Canadian society but also in the gay Canadian community (George et al., 2012). In one study, some gay Canadian men directly stated “No Asians” in their dating

profiles or email responses when they were seeking potential dating partners (Nakamura et al., 2013). In sum, gay communities may provide belongingness and support to gay men but, sadly, can also create challenges through various types of exclusions of certain groups of gay men.

### 6.5.2 *Same-Sex Female Communities*

Compared to the gay male community, the lesbian community may be less visible globally. For example, lesbians in the United States experience higher rates of poverty compared to gay cis-gendered men (17.9% vs. 12.1%, respectively, Badgett et al., 2019). It also appears to be more of a trend over the last few decades for younger people in the LGBTQ spectrum who are assigned female at birth (AFAB) in the United States to take on other types of sexual and gender identities instead of the identity of lesbian (Schmidt, 2021). Thus, the lesbian community may be diminishing in numbers since younger AFAB people may not be identifying as lesbian in equal or higher rates compared to older lesbians passing away.

Jones (2020) mentioned that lesbian groups have historically been marginalized from women's and gay men's movements as well as were excluded from LGBTQ spaces. In South Korea, although gay and lesbian organizations collaboratively hosted the first pride parade in 1999, the lesbians had much fewer physical spaces for gatherings, especially outside Seoul and outside college campuses (Jones, 2020). In South Korea, the oldest LGBTQ neighborhood is located in the Jongno District of Seoul but only provides services for cisgender gay men; also, the second oldest LGBTQ neighborhood, located in the Yongsan District of Seoul, mainly hosts cisgender gay men through the provision of several gay male establishments. Conversely, only two lesbian-only bars exist in this district (Jones, 2020). Lesbian bars were a common meeting ground for South Korean sexual minority women to congregate and build community. The owners of lesbian bars therefore developed multiple strategies to protect their lesbian patrons. First, the lesbian bar signboards were often rendered in English to avoid garnering attention from the South Korean public. Second, while the gay men's bars were often located on the first floor, the lesbian bars were more commonly located on the basement or top floor of a building to avoid attention. Some lesbian bars coordinated their schedules to remain open until public transportation resumed in the morning for security reasons (Jones, 2020). It thus appears that owners and employees from different lesbian bars worked together to ensure the safety of their women patrons from potential harassment and victimization by cisgender men.

Thailand has a long history of sexual and gender diversity including female spirit mediums who would adopt masculine identities or make explicit claims to masculinity (Morgan, 1999; Sinnott, 2004). Another tradition is *toms* and *dees*, who traditionally enter into same-sex female romantic relationships with each other. *Toms* are transmasculine individuals who do not identify as either women or men, whereas *dees* are their feminine partners who do identify as "normal" women (Sinnott, 2004).

Because heteronormative Thai society does not consider sexual activity between two anatomically female-bodied people as actual sex, *toms* have traditionally been “utilized” to safeguard the virginity of *dees*. That is, within mainstream Thai culture, young *dees* may be encouraged to partner with young *toms* until the *dees* reach marriageable age. The *dees* are then “released” by the *toms* so that the *dees* can enter into “proper” marriage and sexual unions with cisgendered men (Sinnott, 2004). The *dees* are considered virgins until marriage because *tom/dee* unions are considered asexual, even if these unions include female same-sex activity.

*Tom/dee* communities are most prevalent in large cities like Bangkok but can also be found in more rural areas as well. These communities have been found among various social classes including factory workers, students, urban professionals, and even media celebrities (Sinnott, 2004). Anjaree was established in 1986 and was the oldest advocacy and activist organization for *toms*, *dees*, lesbians, and other sexual minority women. This organization launched a public information campaign, sponsored workshops and seminars to educate academics and the public on sexual rights, held social events, and promoted the terms “women who love women” and “same-sex love” in Thailand (Sinnott, 2004).

Lesla was established in 2000 and seems to be currently still viable focusing on urban middle-class female-bodied people and, in particular, on young *toms* and *dees*. It was first founded as an online club but also organizes parties at bars and discos in Bangkok. The focus of this organization is social and does not sponsor educational or political events or initiatives. When Anjaree was still viable, many people were members of both Anjaree and Lesla and both organizations provided open forums on the gender roles of *toms* and *dees* (Sinnott, 2004). There have also been nationwide social events, such as Mr. Tom Act, which was a talent show that attracted *tom* participants—and their *dee* admirers—across the country (Coconuts, 2015). It is probable that the gender forums that Anjaree and Lesla provided allowed for members to explore departures from and derivations of the traditional *tom/dee* gender roles. New roles and identities such as one-way, two-way, *tom gay*, *les king*, and *les queen* are currently in use among sexual and gender minority anatomically-female communities in Thailand (Coconuts, 2015).

Mitini Nepal (2021) is a Nepalese NGO focused on women with lesbian, bisexual, and transgender identities. According to Mitini Nepal (2021), several programs and services are offered including lobbying and advocacy, awareness and sensitization, provision of skill development and income-generating training, leadership development and human rights training, and psychological and legal counseling. Some of these initiatives focus on various sectors of Nepalese society such as utilizing street dramas, cultural programs, posters, and pamphlets to educate the public as well as impacting institutions such as schools, colleges, government stakeholders, and police. Increasing awareness in schools and colleges, among governmental officials, and throughout the general public could greatly augment access to resources and support for sexual minority women and transgender people throughout various sectors of Nepalese society.

In the United States, a study of butch/femme lesbian participants suggested that femme lesbians might be afraid of not being desired by women and not being

recognized as lesbians, whereas butch lesbians might be afraid of being rejected by potential partners and mistaken for males (Hiestand & Levitt, 2005). Butch/femme identities have a relatively long history in the United States and can be traced from the early twentieth century (Kennedy & Davis, 1993; Faderman, 1992). In one pivotal study based on 45 oral histories, the evolution of a working-class community of both Black and White butch/femme lesbians in upstate New York in the United States was examined from the 1930s to the 1960s (Kennedy & Davis, 1993). In these more politically repressive times in the United States, these lesbians had to develop several ways to resist various forms of hostility and oppression, including sometimes getting involved in physical altercations with cisgendered men. These women were financially independent, working at their own jobs (instead of being financially dependent on cisgendered men). These lesbians often met other lesbians in bars, and lesbian bar culture was thus prominent during these decades. The public spaces of bars, however, could not be taken for granted, and these lesbians often had to assertively claim and maintain these public spaces for the continual existence of these meeting grounds. Women in this community also supported and encouraged each other to actively resist heteronormative coercive forces. It is thus believed that this community was one of the roots of the more recent US gay and lesbian liberation social movement (Kennedy & Davis, 1993).

In one US-based sexual minority women's online magazine, Kim (2019) listed the best lesbian-friendly cities. The cities were evaluated based on the Municipal Equality Index, calculated from the quality of non-discrimination laws, services, and leadership, and the LGBTQ population density, based on the Gallup survey. What can be inferred is that a mixture of equality laws, ample service provision, and prominent LGBTQ+ communities can comprise a supportive matrix in which lesbians can thrive. The highest-ranked cities included the following: Austin, Texas; New Orleans, Louisiana; Portland, Oregon; Tampa, Florida; Louisville, Kentucky; Columbus, Ohio; Atlanta, Georgia; and Denver, Colorado.

Senior retirement communities also exist for older sexual minority women, including lesbians. Discovery Bay Resort in Washington State is a recreational vehicle (RV) community located on the North Olympic Peninsula (Feltman, 2021). The Resort in Fort Myers, Florida, encompasses 50 acres with over 250 homes and RV lots and offers many activities for its residents (Covelloin, 2021). As noted above, it is important for older adults, including older sexual minority women, to access crucial material and social support resources. Access to these resources may become even more dire due to the health effects of aging. These retirement communities may thus provide a "safety net" for older sexual minority women by providing companionship, information, and access to resources.

### **6.5.3 Bisexual Communities**

Bisexual groups include those who identify as bisexual, men who have sex with men and women (MSMW), women who have sex with men and women (WSMW), pansexual, omnisexual, biromantic, polysexual, and sexually fluid. Bisexuals seem

to be divided into two groups—those who are “out” with regard to being bisexual and those who are not.

Numerous “out” bisexual communities exist globally, including many that organize communities online. For example, Bi-Sides (2021) hosts a cyberspace for bisexual people in Brazil and is actively working against biphobia in the Brazilian society. Toronto Bi+ Network (2021) offers peer support, social networks, information, and resources to support the community of bisexuals, pansexuals, omnisexual, two-spirit, fluid, and people questioning their sexuality and is committed to operating within an anti-oppression framework, such as biphobia, transphobia, homophobia, ableism, racism. There also exist some bisexual groups on social media such as the Bi Collective Delhi (2021) on Twitter for Indian bisexual people and BiQuPan (2021) on Facebook for Swedish bisexual people.

In contrast, men who are not “out” about their bisexual activities are often termed “non-disclosing” in research studies. Arena and Jones (2017) explained that bisexual persons were less likely to disclose their sexual orientation publicly as compared to gay and lesbian persons because of the potential negative views toward bisexuality from heterosexual, gay, and lesbian groups. Non-disclosing bisexual MSM are often characterized as a hard-to-reach population with no discernable SGM community affiliations. Some of these men will identify as heterosexual or will have no sexual orientation identification and have been identified as a potentially high-risk HIV population (Millett et al., 2005; Siegel et al., 2008; Siegel & Meunier, 2019).

### ***6.5.4 Transgender and Non-binary Gender Communities***

Although in the Global North, it may appear that trans and non-binary gender communities are relatively new, there are several cultures in Mexico, Thailand, India, South Africa, the Middle East, and Polynesia in which trans and non-binary gender identities have existed for hundreds or even thousands of years (Gannon, 2007; Gibson, 2002; Herdt, 2020; Mirandé, 2017; Morris, 1994; Mujtaba et al., 1997; Reddy, 2005). In some countries and regions such as Thailand, South Africa, Mexico, and North America, both transfeminine and transmasculine people existed as part of the historical traditional cultures (Gibson, 2002; Gosling & Osborne, 2000; Lang, 1998; Morris, 1994; Roscoe, 1998). These identities that come from historical traditions in the Global South often have non-binary gender characteristics and these identities are often considered a third or fourth sex rather than transitioning from one side of a gender binary to the other (Herdt, 2020; Hwang, 2011; Morris, 1994; Sinnott, 2004). Despite this history, transfeminine communities in the Global South, in particular, are highly marginalized, and a large number of transfeminine people live in poverty and engage in survival sex work (Gannon, 2007; Kulick, 1998; La Fountain-Stokes, 1998; Nuttbrock, 2018).

One exception to the extreme forms of marginalization and coerced sex work that many transfeminine people encounter in the Global South is the transfeminine *muxes* in the Oaxaca district of Mexico (Finkler, 2008; Gosling & Osborne, 2000;

Mirandé, 2017). *Muxes* are considered part of traditional indigenous Mexican society but do not have to engage in survival sex work because of their relatively higher societal acceptance and integration into the larger Zapotec society. They are thus able to engage in other types of occupations within the legal work economy including working as beauty salon owners, NGO staff, local politicians, and lawyers. *Muxes* also host large traditional festivals (*velas*) that are well attended by the general community and consecrated by the local Catholic church as well as engaging in *muxe*-specific support groups (Mirandé, 2017).

There is also an active global transgender or “trans\*” community presence online. For example, TransWorldView is comprised of blog posts written by Kayley Whalen, a transfemale activist who actively travels in Asia and writes about the diversity of transgender communities she encounters (Whalen, 2021). She was also selected in 2020 to represent Miss USA in the Miss International Queen pageant in Thailand, which is the world’s most prestigious transgender beauty pageant. In general, transfeminine communities appear to be more visible globally compared to transmasculine communities. Although speculative, it is interesting to note that there may be some parallels between the greater visibility of gay men among the cis-gendered sexual minority communities and the greater visibility of transfeminine people among the gender minority communities. Over the last few decades, there has been a marked increase in trans visibility, resulting in legislative changes, marches, and media visibility (Flores & Sutterman, 2020).

### ***6.5.5 Biphobia and Transphobia in Lesbian/Gay Communities***

Socially and politically, LGBTQ groups work together to protest anti-LGBTQ policies and confront anti-LGBTQ groups. However, bisexual and transgender/gender non-binary individuals are usually marginalized in the merged community composed of all sexual and gender minorities. Moreover, studies related to the bisexual and transgender/gender non-binary communities are lacking. A study with 69 cisgender bisexual men and 21 cisgender bisexual women in France reported the existence of biphobia in either gay or lesbian communities; moreover, the bisexual participants reported they were stereotyped as disloyal partners in same-sex relationships because they have interest in more than one gender (Welzer-Lang & Tomolillo, 2008). The lack of inclusion of MSM and non-cisgender individuals in gay communities has also been documented in Taiwan, Hong Kong, mainland China, Malaysia, and Singapore (Lin, 2016). A study with 112 male-to-female (MtF) individuals in Thailand found that the participants were excluded from the heterosexual society and lesbian/gay groups because of their job types (most were sex workers) and the high rate of HIV within the transgender population in Thailand (Nemoto et al., 2012). A US study with six cisgender gay males and five cisgender lesbian female participants found that the inexperience of some gay and lesbian participants led them to feel uncomfortable being around transgender people because of the lack of familiarity (Nagoshi et al., 2017).

### **6.5.6 *Intersex Communities***

Compared to other sexual and gender minority groups, the intersex community is much less invisible and has less access to relevant information and resources. Organization Intersex International (2021) is a decentralized global network of intersex organizations from various countries and regions of the world. For instance, Organization Intersex International Austria (2021) provides counseling services for intersex people in Austria and training for people who work for this population, and Organization Intersex International Chinese (2021) advocates for human rights for intersex people in Taiwan and promotes education to raise awareness about this population. There are also some cyberspaces for intersex people in the Philippines (OII InterSex Philippines Inc, 2021) and Latin America (Organización Internacional Intersexual – Hispanoparlante, 2021). Intersex Asia (2021) on Facebook is the first regional network established by Asian intersex activists and organizations advocating intersex human rights.

### **6.5.7 *Asexual/Aromantic Communities***

Asexual (ace) and aromantic (aro; and derivations including greysexual/romantic and demisexual/romantic) communities are the most recently visible communities within the LGBTQ spectrum (Aces and Aros, 2021). There is still debate whether ace/aro communities should be included in the LGBTQ spectrum (Kelsey, 2017). A good introduction to ace and aro identities is provided by the Asexual Visibility and Education Network's website (2020), which hosts the world's largest online asexual community as well as an archive of asexuality and aromantic resources. An international network of asexuality organizers has also been organizing "Ace Week" since 2010 as an awareness campaign to encourage LGBTQ orgs to support the ace community (Ace Week, 2021). One major campaign run by this network is to change the Diagnostic and Statistical Manual so that asexual and aromantic identities are completely depathologized. This group was able to advocate for partial depathologization in the DSM-5, however, this group is still advocating for complete depathologization. The Ace Week site also lists community events from Australia, India, and various regions of the US Indian Aces (2021) is a collective of, for, and by ace and aspec (asexual spectrum) people from/in India. This organization offers a series of workshops and events on gender and sexual diversity including asexuality and LGBTQIA+ identities. The collective is also involved in research and advocacy.

### **6.5.8 *Online Communities and Social Media***

In most LGBTQ communities within LMICs, members tend to hide their sexual and gender identity in public and, thus, would tend not to live in an LGBTQ village, enclave, or ghetto. Instead, LGBTQ online communities offer opportunities for



connection and social support, such as those on Facebook, Twitter, and Instagram as well as dating apps (e.g., Grindr (for gay men), Scruff (for gay men), GROWLr (for gay men, especially bears), Her (for lesbians), Bumble (for lesbians), TS Dates (for transgender individuals)). These online communities allow LGBTQ individuals to meet their interpersonal, intimate, and sexual needs quickly and conveniently.

In general, there do not seem to be active online lesbian communities in the Global South that are separate from larger LGBTQ organizations and communities tied to specific geographic locations. One network that stands out is the Eurocentralasian Lesbian Community (ELC) (2021), which is an NGO advocating for lesbian rights in Europe and Central Asia. In early 2021, ELC disseminated a survey about the impact of COVID-19 on lesbians in Europe and Central Asia as a way to assess the state of these lesbian communities in these specific regions of the world. ELC also offers emergency grants for lesbian-led and focused groups and promotes lesbian politicians.

A recent study also found a fairly large and fast-growing gay Mandarin-language cybercommunity on Facebook in Asia (Lin, 2018). For some LGBTQ individuals, however, having an online presence requires them to mask their true identity in one profile and to be “out” in another profile. This approach was documented in a study of Taiwanese gay men (Lin, 2018).

### ***6.5.9 Religious and Spiritual Groups***

Religious and spiritual groups can also offer support to LGBTQ individuals. For example, the Reformation Project is a Bible-based ecumenical organization inclusive of Protestant, Catholic, and Orthodox Christians. Its mission is to advance LGBTQ inclusion in the Church (The Reformation Project, 2022). Another example is the Good Hope Metropolitan Community Church (GHMCC) in South Africa, which stands in solidarity with LGBTQ individuals to fight for human rights and be a voice for social justice (Potgieter & Reygan, 2011). Comunidad San Elredo is a gay Catholic youth group started in Mexico in 2007 to support such youth (Agren, 2007). The conservative Christian denomination Seventh Day Adventists (SDAs) are considered the most racially diverse religious group in the United States (Lipka, 2015). Although officially the SDA Church does not accept LGBTQ+ behaviors and lifestyles, there is an international network of current and former SDAs who have organized as Seventh-Day Adventist Kinship International (2021). This organization has branches in South America, Europe, and other international sites and offers alternative faith-based programming and resources that are inclusive of and supportive to LGBTQ+ people (Seventh-Day Adventist, 2021).

In Judaism, the Reform Movement (the largest Jewish denomination in the United States) has been leading the inclusiveness of LGBTQ individuals in synagogues and Jewish communities more broadly, including the acceptance of LGBTQ-identifying rabbis and acknowledgment of same-sex Jewish marriages (Human Rights Campaign Foundation, 2022b). Keshet is an LGBTQ Jewish organization

based in the United States that works for the full equality of all LGBTQ Jews and families in Jewish life (Keshet, 2022).

While many religions enact rules about sexual behavior, Buddhist attitudes toward LGBTQ people are often a reflection of culture rather than Buddhist philosophy, and Buddhism is generally socially liberal and welcoming to LGBTQ members (Atwood, 2019). For example, Ven. Shih Chao-Hwei, a Taiwanese Buddhist master, was awarded the 38th Niwano Peace Prize in 2021 and has been a vocal supporter of same-sex marriage and officiated the first Buddhist same-sex wedding for a lesbian couple in Taiwan in 2012 (Lewis, 2021; Lieblich, 2020).

Paganism was originally a polytheistic religion from ancient Europe that has been adopted by many LGBTQ+ people globally in contemporary times. The contemporary form is sometimes viewed as modern/post-modern paganism, may involve witchcraft, and has attracted people across the LGBTQ+ spectrum (Gay in the CLE, 2021; “Gay Pagan Men,” 2021). Informed by paganism as well as New Age spirituality, the Radical Faeries originated in the 1970s as a gay male movement combining queer liberation and secular spirituality that has since grown into a worldwide network encompassing a variety of genders and sexual identities. The Radical Faeries often organize gatherings and environmentally sustainable rural-based sanctuaries (Baume, 2021).

### ***6.5.10 BDSM/Leather and Polyamory Communities***

Finally, within the LGBTQ community exist subcultures that are considered the radical fringe. One such subculture is the BDSM community, which stands for bondage, discipline, and sado/masochism play. BDSM emphasizes power exchange between consenting adults in which role-playing and physical and/or psychological stimulation or manipulation is often involved (Ullmann, 2015). In 2013, the American Psychiatric Association depathologized BDSM as a mental disorder in the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (National Coalition for Sexual Freedom, 2021). While individuals interested in BDSM come from all genders and sexualities, many BDSM community members identify as LGBTQ.

Despite its depathologization, organized BDSM communities seem to only exist in the Global North. For example, there are annual International Ms./Mr. Leather and International Ms./Mr. Bootblack contests held in the United States that have attracted thousands of people, many of whom identify within the LGBTQ+ spectrum (IMSLBB, 2021; International Mr. Leather, 2021). Another organization is Women of Drummer, which hosts several regional parties all over the United States (Women of Drummer, 2021) as well as an annual camping weekend in Maryland, USA. SISC is located on a farm in Denmark and hosts international BDSM weeks for the LGBTQ+ community (SISC, 2021). One week is set aside specifically for queer, women, lesbian, trans, and intersex people, and a few weeks are reserved for gay men.

Although there do not appear to be specific LGBTQ+ polyamory communities, many polyamory communities include members who identify within the LGBTQ+ spectrum, BDSM/Leather communities, and/or have fluid gender identities or sexual orientations (The Polyamory Society, 2021). An annual retreat for members of polyamory communities is held in the United States (Loving More, 2021).

### **6.5.11 Other Support Groups**

Besides the other categories of social support delineated in this chapter, there are also a variety of groups that offer support and resources for other types of LGBTQ subpopulations such as those living with HIV, youth, seniors, and people with disabilities. For an example regarding people living with HIV (PLWHIV), the Taiwan Lourdes Association works on HIV prevention and human rights and quality of life among PLWHIV, provides group and individual counseling services for PLWHIV, and helps build up support groups for PLWHIV (Taiwan Lourdes Association, 2019). For an example about the youth group, CamASEAN Youth's Future in Cambodia aims to combat societal discrimination on LGBTQ youth and to build up support groups for them (CamASEAN Youth's Future, 2019). For an example regarding LGBTQ seniors, Indiapink provides the customized and leisure travels for LGBTQ seniors in India in order to improve their social interaction and well-being (Indiapink, 2019). For an example about disabilities, the Disabled+Queer in Taiwan works on the human rights and well-being of LGBTQ individuals living with (Disabled+Queer, 2019).

### **6.5.12 LGBTQ-Related Organizations**

LGBTQ-focused organizations also play important roles for LGBTQ individuals. They aim to provide social support, hold local LGBTQ pride events, collect health-related resources including counseling services and medical care, build up Parents, Families and Friends of LGBTQ+ (PFLAG) groups, and improve the LGBTQ-related policies (e.g., anti-discrimination, marriage equality, and gender change). PFLAG was founded in 1973 and has over 400 chapters and 200,000 members in both urban and rural areas of the United States (PFLAG, "About PFLAG," 2021a). Although the "official" PFLAG is only affiliated with the United States, also known as "PFLAG National," they have granted permission to some international organizations and activists to also utilize the PFLAG name. Thus, organizations in Australia, Belgium, Canada, China, France, Israel, Italy, Japan, Jamaica, Mexico, New Zealand, Portugal, South Africa, Spain, Switzerland, the United Kingdom, and Vietnam also utilize the PFLAG moniker (PFLAG, "International Focus," 2021b).

Human rights are a large focus of many global LGBTQ+ human rights organizations. The International Lesbian, Gay, Bisexual, Trans, and Intersex Association

(ILGA) (2021) is a leading organization and global voice for the rights of those who face discrimination on the grounds of sexual orientation, gender identity, gender expression, and/or sex characteristics.

Outright Action International (OAI; formerly International Gay and Lesbian Human Rights Commission) focuses on advocacy, movement resourcing, and research. OAI has spearheaded a number of important international cases resulting in legal and policy wins for LGBTQ+ rights around the world. OAI has also incubated several LGBTQ+ organizations in the Global South as well as provides training and support to Global South and BIPOC activists. OAI has also produced hundreds of reports and briefing papers, sponsored a webinar, video, and podcast series, and in December 2020 hosted the OutSummit LGBTIQ human rights conference, bringing together 1600 people from 100+ countries (Outright Action International, 2021).

Astraea: Lesbian Foundation for Justice is a public foundation based in New York City in the United States that raises and distributes funds to programs and initiatives, prioritizing those led by lesbians, queer women, transgender and gender non-conforming people, intersex people, and people of color. Aside from philanthropic ventures, Astraea is also involved in media and communications awareness campaigns, capacity building, and leadership development (Astraea, 2021).

There are also a variety of locally-focused LGBTQ organizations based in the Global South: Nouakchott Solidarité Association in Mauritania (aims to improve human rights for LGB communities, people living with HIV, and women); the Iranian Lesbian and Transgender Network (aims to improve human rights for lesbian and transgender people); and Bedayaa in the Nile Valley Area (works to promote the acceptance of homosexuality in Egypt and Sudan and helps LGBTIQI people to live a life free of discrimination or stigma) (The International Lesbian, Gay, Bisexual, Trans and Intersex Association, 2021). Other Global South-based organizations include Comunidad Homosexual Argentina (2021), ADESPROC Libertad GLBT (2021) in Bolivia, Quality of Citizenship Jamaica (2021), Guyana RainBow Foundation (2021), and AZAD LGBT (2021) in Azerbaijan. It is important that local, regional, and global LGBTQ-focused organizations continue to flourish to provide much-needed information, support, guidance, and resources to LGBTQ+ people and communities throughout the world.

## 6.6 Conclusion

LGBTQ populations experience minority stress, especially those who live in LMICs or the Global South. Their stress may be amplified by inadequate access to health services, financial challenges, few educational resources, and the limited capacity of their governments to solve social problems. Therefore, it is important for LGBTQ individuals to receive social support from their families (biological or chosen) and communities. In this chapter, we discussed support from parents, siblings, teachers, partners, and colleagues. We also discussed support provided during other life

stages, such as parenthood and elderhood, and by religious and spiritual connections. We explored worldwide LGBTQ+ communities, including those in physical spaces and those online. We discussed the impact of biphobia and transphobia in lesbian and gay communities. Lastly, we provided rich information about global, regional, and local LGBTQ-related organizations throughout the world, including organizations focused on specific LGBTQ subpopulations. As demonstrated in this chapter, there is seemingly an abundance of LGBTQ community and social support institutions, organizations, networks, and resources. The challenge is not only to augment access to the already existing institutions, organizations, and resources, but to continue building additional community and social support institutions, organizations, networks, and resources so that all sectors of the LGBTQ population can be well-served.

## 6.7 Case Study: South African LGBTQ Communities and Social Supports

South Africa has been a democracy since the end of apartheid in 1994 and has continually worked on addressing the legal rights of lesbian, gay, and bisexual people (Nel, 2014). Act No. 108 of 1996 in the South African Constitution enshrines the right to non-discrimination on the basis of sexual orientation. South Africa was the first country in the world to include this ban on discrimination based on sexual orientation in their constitution (Outright International, 2022). Since then, South Africa legalized same-sex marriage in 2006 (Brouard & Pieterse, 2012).

However, this progression in legislation has not eliminated the societal discrimination toward sexual and gender minority populations in the country. Lesbian, gay, bisexual, transgender, and queer (LGBTQ) people in South Africa continue to experience high levels of violence, abuse, homophobia, and discrimination in their families and certain public social spaces and challenges accessing basic services including education, health care, and legal justice (Francis & Msibi, 2011; Haffejee & Wiebesiek, 2021; Olney & Musabayana, 2016; Reygan & Lynette, 2014; Smuts, 2011; Van Zyl, 2015). For example, in a nationally representative study conducted in 2015, 72% of those surveyed indicated they believed that same-sex relationships are morally wrong, and only one in ten participants said they believed someone's sexual orientation was something they acquired from birth (Brouard et al., 2016).

Sexism and racism also often exist within LGBTQ communities in South Africa. In 1995, gay identity in South Africa was used to refer almost exclusively to White middle-class urban men (Gevisser & Cameron, 1995). Williams (2008) indicated that racial segregation continued to exist in queer social spaces in Cape Town and noted that the gay areas in the city were most frequented by White gay men, while Black gay men and Black lesbian women were situated in the townships on the periphery of central Cape Town. Also, gendered boundaries served to exclude lesbian women from male-dominated gay social spaces, leading to the invisibility of



South Africa map showing major cities as well as parts of surrounding countries and the Indian and South Atlantic Oceans (Source: Central Intelligence Agency, 2021)

Black lesbian women in queer social spaces in South Africa at large (Stephens & Boonzaier, 2020). Interestingly, Black LGBTQ organizations were understood to have political agendas that were rooted in their experiences of class and race oppression, while White LGBTQ organizations were described as having social agendas rooted in classism and material privilege (Stephens & Boonzaier, 2020).

While White LGBTQ people may experience privilege compared to their Black counterparts, they are still marginalized in South African society as a whole. As a result of prejudice, stigma, and discrimination from both outside and within queer spaces, LGBTQ people in South Africa experience a range of mental health challenges such as depression, anxiety, post-traumatic stress disorder, substance use disorder, and suicidal ideation (Polders et al., 2008; Theuninck, 2000; Wells, 2006). However, despite experiencing continued societal discrimination, resilience also exists in LGBTQ populations (Haffejee & Wiebesiek, 2021). One example comes from understanding that despite the challenges they face, the LGBTQ community in South Africa continues to explore and welcome gender and sexual fluidity. Fixed gender roles are being challenged, and gender fluidity is welcomed in the gay male community (Henderson, 2018). Additionally, cisgender gay men also purportedly have relationships and engage in sexual practices with transgender men as well as intersex men, demonstrating their expanding understanding and celebration of various gender identities (Henderson, 2018).

Because of the continued hardships LGBTQ people face in South Africa, as well as to foster their resilience and build a sense of community, LGBTQ-focused social support organizations have been created. Their overall goal, as in many countries, is to support this population through education, service provision, health care, strengths-building practices, and more. One example of such an organization is Triangle Project. Triangle Project is one of the largest LGBTQI (“I” being intersex) organizations in the country, offering a wide range of services to a diverse and growing community. Triangle Project provides mental health services, a medical clinic, a mobile clinic, home-based care, solidarity spaces, and support groups. Triangle Project seeks to foster community engagement and empowerment, explorations of sex, attraction, and gender through solidarity and support groups, and political leadership and activism, while addressing intimate partner violence, hate crimes, and alcohol and drug use. Clientele includes people living with HIV, refugees, migrants, LGBTQI youth and adults, and parents of LGBTQI children (Triangle Project, 2022).

Triangle Project has a long history of supporting LGBTQ communities in South Africa. Its origins are in an organization called the Gay Association of South Africa (GASA) 6010, which was established in 1981. GASA 6010 provided counseling and medical services and a telephone hotline starting in 1982. It was one of the first organizations in South Africa to respond to the HIV/AIDS crisis, assisting with prevention initiatives in gay bars and clubs in 1984. AIDS Support and Education Trust (ASET) was established as part of GASA 6010 in 1989, and ASET and the counseling service became independent from the parent organization in 1994. In 1996, GASA 6010 changed its name to Triangle Project to reflect the multi-faceted nature of its services. Triangle Project then established the first gay and lesbian health project in a Black African township in Cape Town.

Another organization doing important work to support the LGBTQ community in South Africa is OUT LGBT Well-Being, the second-oldest LGBT organization in the country (OUT LGBT Well-Being, 2022). It began in 1994 and is a professional services organization and a member organization of the International Lesbian and Gay Association (ILGA). OUT LGBT Well-Being's work takes place on local, provincial, national, continental, and international levels, and its focus areas are direct health and mental health services, research, training, advocacy, and other forms of support. Since 2006, OUT LGBT Well-Being has been particularly active in advocacy, and past efforts include same-sex marriage, victim empowerment, hate crimes mitigation, and advocating for the Sexual Offenses Act. Current advocacy work by OUT LGBT Well-Being focuses on HIV and hate crime legislation. The organization has played a major role in securing an LGBT Sector within the South African National AIDS Council. As a member of African Men for Sexual Health and Rights (AMSHer), this organization actively promotes the interest of men who have sex with men on the continent.

In summary, while South Africa has multiple legal protections for LGBTQ people, there are still societal barriers to equality and equity for these populations. Organizations like Triangle Project and OUT LGBT Well-Being work tirelessly to improve the lives of LGBTQ people in South Africa. Support for these organizations and continued research into ways to encourage LGBTQ people to thrive are key to continuing to positively impact LGBTQ people in South Africa.

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# Chapter 7

## HIV/AIDS Among Sexual and Gender Minority Communities Globally



S. Wilson Beckham, Jennifer Glick, Jowanna Malone, Ashleigh J. Rich, Andrea Wirtz, and Stefan Baral

### 7.1 Introduction

This chapter describes the impact HIV/AIDS has had on sexual and gender minority (SGM) communities globally. Research challenges specific to SGM communities related to HIV/AIDS are discussed, including research ethics; strategies for enumeration, recruitment, and sampling; and cross-cultural issues. We discuss the disproportionate risks and vulnerabilities facing certain SGM groups, focusing on intersecting structural, interpersonal, and individual-level risk factors, and highlighting some differences in regional contexts. We include promising HIV/AIDS interventions for SGM populations at structural, interpersonal, and individual levels. We also discuss chronic disease among SGM people living with HIV. Finally,

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S. W. Beckham (✉) · J. Glick  
Department of Health, Behavior and Society, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, USA  
e-mail: [s.wilson.beckham@jhu.edu](mailto:s.wilson.beckham@jhu.edu); [jglick5@jhu.edu](mailto:jglick5@jhu.edu)

J. Malone  
Exponent, Inc., Washington, DC, USA  
e-mail: [jmalon@whitman-walker.org](mailto:jmalon@whitman-walker.org)

A. J. Rich  
Center for Health Equity Research, University of North Carolina, Chapel Hill, NC, USA  
e-mail: [ajrich@med.unc.edu](mailto:ajrich@med.unc.edu)

A. Wirtz  
Department of Epidemiology, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, USA  
e-mail: [awirtz1@jhu.edu](mailto:awirtz1@jhu.edu)

S. Baral  
Department of Epidemiology, Division of Infectious Disease Epidemiology, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, USA  
e-mail: [sbaral@jhu.edu](mailto:sbaral@jhu.edu)

we point out major gaps in knowledge about SGM communities and explore future directions for HIV research and practice for SGM people globally.

The key assumption underlying this chapter is that there are diverse sexual orientations and gender identities among populations everywhere; there is no evidence of regional or geographic absence of such diversity. We also know of no methodologically sound data that suggests that there are regional differences in why people choose to have or not have consensual sex in terms of procreation, pleasure, and or needs (e.g., transactional sex to meet material needs). However, there are regional differences in the nomenclature used to describe SGM people as well as how sexual orientations and gender identities are expressed outwardly (Reisner et al., 2016b). Moreover, there are regional differences in the existence of punitive and protective laws, general social acceptance, and celebration or condemnation of sexual and gender diversity. Further, what does vary is the level of need, access to education and commodities, and the prevalence of HIV or community viral load in sexual networks. Taken together, drivers of HIV epidemics have little to do with individual behaviors. That is, globally, individual sexual behaviors do not vastly vary, while HIV incidence does; therefore, the differing HIV rates cannot be explained by individual sexual behaviors alone. Rather, these health outcomes are the result of intersecting structural, social, and network-level determinants.

### ***7.1.1 Subpopulations***

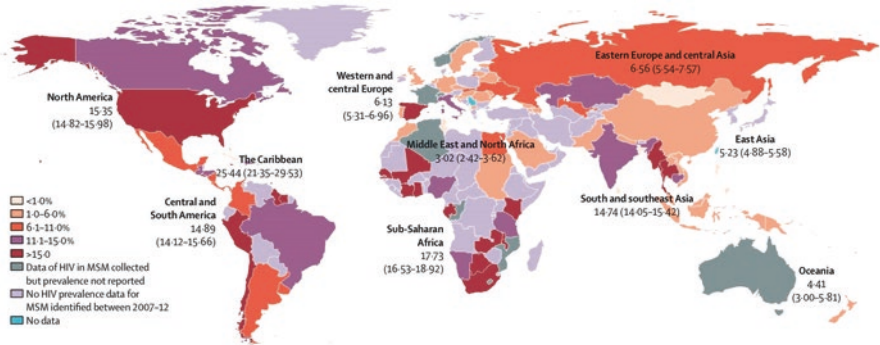
When considering HIV among SGM people, the sub-populations with the highest HIV risks are gay, bisexual, and other cisgender men who have sex with men (MSM), and transgender women who have sex with cisgender men.<sup>1</sup> In turn, most available data are about those two groups, as is most of the discussion in this chapter, but other SGM people are also at risk in certain circumstances.

#### **7.1.1.1 Sexual Minority Men**

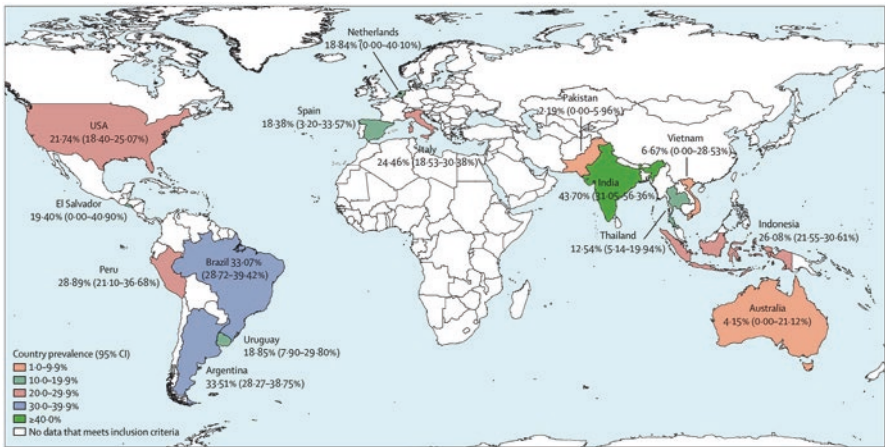
Gay, bisexual, and other cisgender MSM (many of whom do not identify as gay or bisexual) face substantial risk for HIV due to a variety of biological and socio-structural factors. A meta-analysis from 2012 found pooled prevalence ranging from 3.0% in the Middle East to 25% in the Caribbean, with vastly increased odds of living with HIV compared to other men of reproductive age, even in countries where the HIV prevalence is high in the general population (see Fig. 7.1) (Beyrer et al., 2012a). Subsequent meta-analyses demonstrated persistently high HIV incidence among MSM (Beyrer et al., 2016).

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<sup>1</sup>Some transgender women only have sex with cisgender women, or are not sexually active at all, and are thus at low risk for sexually transmitted infections, including HIV. Sexual orientation may also be race-stratified, see Hwahng & Nuttbrock, 2007, for more information.



**Fig. 7.1** Global HIV prevalence in MSM (2007–2011). (Beyrer et al. 2012a, b). (Reprinted from *The Lancet*, Vol 380, Beyrer, C., Baral, S.D., van Griensven, F., Goodreau, S.M., Chariyalertsak, S., Wirtz, A.L., and Brookmeyer, R. Global epidemiology of HIV infection in men who have sex with men; Figure 2, Page 370, Copyright 2012, with permission from Elsevier)



**Fig. 7.2** Global prevalence of HIV in transgender women (2000–2011). (Baral et al. 2013a, b). (Reprinted from *Lancet Infectious Diseases*, Vol 13, Issue 3; Baral, S.D., Poteat, T., Strömdahl, S., Wirtz, A.L., Guadamuz, T.E., Beyrer, C. Worldwide burden of HIV in transgender women: A systematic review and meta-analysis; Figure 3, Page 219; Copyright 2013, with permission from Elsevier)

### 7.1.1.2 Transgender Women and Other Transfeminine People

Transgender women and other transfeminine people (e.g., nonbinary and other people who were assigned male at birth but do not identify as men) who have sex with men are consistently more greatly affected by the HIV epidemic than any other population, including cisgender MSM (Reisner et al., 2016b). In a 2013 meta-analysis, the pooled prevalence of HIV among over 11,000 transgender women was 19.1% worldwide, and 17.7% in low- and middle-income countries (LMIC). Transgender women had 49 times higher odds of having HIV than the general population (see Fig. 7.2) (Baral et al.,

2013b). However, data were limited and restricted largely to the USA and Asia-Pacific countries; few studies were in Latin America and Europe, and no studies in that review were in Africa or the Middle East. A more recent global systematic review found HIV prevalence varied by geography but reported a consistently higher prevalence among transfeminine people worldwide, ranging from 4% to 40% (Poteat et al., 2016). Again, there were geographic gaps in the systematic review, with no studies from sub-Saharan Africa nor the Eastern Europe/Central Asian region. A more recent study that included cross-sectional data from eight countries in Africa found a 25% HIV prevalence among transgender women, which was a 2.2 times greater odds ratio in adjusted analysis compared to their cisgender MSM counterparts (Poteat et al. 2017a, b).

### 7.1.1.3 Transgender Men and Other Transmasculine People

Other SGM people, such as transmasculine people and sexual minority women (SMW) who have sex with cisgender men or transgender women,<sup>2</sup> while not as affected by the HIV epidemic as MSM and transgender women, can also face risk of HIV, given structural factors such as violence, stigma, and discrimination. There has been little attention to transgender men and other people on the transmasculine spectrum (e.g., nonbinary and other people who were assigned female at birth and do not identify as women), but transmasculine men who have sex with cisgender men may be at risk for HIV. What little data there are (all from the United States and Canada) show elevated rates of HIV and HIV-related risk behaviors (Appenroth et al., 2021; Becasen et al., 2019; Poteat et al., 2017a; Reisner et al., 2016b; Scheim et al., 2017). In the absence of data from other locations, trans and gender-diverse advocates and activists from “Cape Town to Cologne” called for more funding and attention to transgender people at risk for HIV (Appenroth et al., 2021). Outside of North America, at the time of writing, a supplemental qualitative study of transgender men’s health was recently completed in Uganda, and one was underway in India (Mujugira, 2020; Scheim, 2021).

#### 7.1.1.4 Sexual Minority Women

Sexual minority women (SMW, e.g., lesbians, bisexual, queer women) face increased structural and interpersonal factors that can put them at risk of HIV, such as stigma, homelessness, financial insecurity, discrimination, substance use, and violence (German & Latkin, 2015; Marshall et al., 2010; McCabe et al., 2009; Pyra et al., 2014; Weber et al., 2004). In particular, SMW who engage in sex work and transactional sex and/or inject drugs can be at increased risk for HIV and other

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<sup>2</sup>Note that transgender men and other transmasculine people, like transgender women, can have any sexual orientation (gay, straight, bisexual, pansexual, asexual, etc.). Transmasculine people can be at risk of HIV, depending on their sexual practices. Some sexual minority women (lesbians, bisexuals, etc.) can also be at risk for HIV in certain circumstances.

negative health outcomes (Bell et al., 2006; German & Latkin, 2015; Glick et al., 2020; Ompad et al., 2011; Pyra et al., 2014; Tat et al., 2015; Weber et al., 2004). This speaks to the importance of examining behaviors (sexual minority women having sex with men or transgender women) in addition to identity (e.g., lesbian), as SMW are often not considered at risk and therefore overlooked in HIV interventions (German & Latkin, 2015; Glick et al., 2020). In fact, some studies show that WSW may actually be at higher HIV risk compared to heterosexual women (Bell et al., 2006; Ompad et al., 2011). While much of these data are from the US and Canada, the stigma and discrimination faced by SWM, like other SGM, is a global phenomenon. Tat, et al., conducted a systematic review on the sexual health and behaviors of SMW in low- and middle-income countries, finding HIV prevalence ranging from 0 to 2.9% (East Asia, Latin America) to 7.7% to 9.6% (sub-Saharan Africa).

## 7.2 Ethical and Methodological Challenges in Global HIV Research Among SGM

There are particular challenges in conducting research about HIV/AIDS among SGM populations globally. Challenges are ethical and methodological, and span the research process from enumeration and recruitment to terminology used in survey questions and how the data are presented and used. Historically, most health-related funding for SGM populations has been HIV-focused; thus, many of the methodological challenges and innovations for SGM research were developed in the context of HIV/AIDS research. Further, there are overlapping and synergistic stigmas with SGM status and HIV. For example, breaches of data confidentiality and privacy can result in unintentional disclosure of sensitive information to others, including but not limited to HIV status and sexual or gender identity, which can also lead to social harms in certain contexts. SGM people and people living with HIV are understandably cautious about sharing private information with outsiders, which may lead to research avoidance.

Importantly, too, is that the level of investment in SGM research around the world has been very limited in comparison to that focused on household-based, general population surveys. There are an increasing number of countries that regularly conduct national integrated bio-behavioral surveys inclusive of MSM, and some for transfeminine people as well, such as in Cambodia (Yi et al., 2017). However, other SGM populations remain understudied. Consequently, knowledge about SGM communities in most settings worldwide is limited, with limited investment in dedicated health services, which in turn results in limited interest in completing SGM-specific surveys. Thus, the cycle will continue until the global community comes together to break the cycle and stop assuming that there are only SGM people in some parts of the world and not others.

### 7.2.1 *Ethical Issues*

There are ethical concerns to consider when conducting HIV research globally among SGM groups, especially given the social stigma (AmfAR et al., 2015). Furthermore, in 71 countries SGM identities and/or homosexual practices are illegal (76 Crimes, 2021), and in several countries, homosexuality is even punishable by death<sup>3</sup> (76 Crimes, 2019 #1283). Researchers must take extra precautions in researching in all settings, as the very act of participating in research may reveal one's SGM status, putting participants at social and/or legal risk (Baral et al., 2014a), especially in locations where SGM populations' rights are violated by the state (Amon et al., 2012); see the F&M Global Barometers (Dicklitch-Nelson et al., 2021) and the International Lesbian, Gay, Bisexual, Trans and Intersex Association (ILGA)'s reports (ILGA World, 2020) for information on specific countries. Thus, in some cases, research may be ethically impossible, and efforts would be better put toward providing safe, friendly health and social services.

Another challenge is the noted mistrust toward the medical research community, as members of some SGM groups feel extensively over-approached to join research studies, especially in urban areas. Additionally, if they join research, there is not much benefit from their participation afterward, as findings from said research are seldomly accessible to them, and subsequent programming is often not implemented (Poteat et al., 2019; Reisner et al., 2019). For example, transgender women have contributed to pre-exposure prophylaxis (PrEP) research, but still much less is known about optimal provision, acceptability, and how to sustain long-term use in this population.

Given that HIV is largely sexually transmitted, researching sexual practices and behaviors is an element of HIV research. However, sexual behavior is not usually something researchers can ethically observe. Thus, research about HIV-related sexual behaviors is often reliant on self-report of participants, and therefore subject to social desirability bias and recall bias, which can either over- or underestimate certain behaviors. This may be particularly exacerbated for SGM populations, particularly in locations where same-sex behavior is criminalized and stigmatized. Indeed, in many places in low- and middle-income countries (LMIC; and even the high-income countries), sexual and gender minorities may be so keen on repressing and/or hiding their behaviors and identities that they lead seemingly cis-heteronormative lives. That is, they compartmentalize their sexual and/or gender expressions, behaviors, and desires and live in socially acceptable, gender-conforming, opposite-sex marriages, produce children, and express their SGM behaviors and desires in only hidden, clandestine situations. These situations make them nearly invisible to

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<sup>3</sup>Countries with the death penalty for homosexual acts include Yemen, Iran, Brunei, Mauritania, Nigeria, and Saudi Arabia. In Afghanistan, Somalia, Qatar, Sudan, the United Arab Emirates, and Pakistan, the courts could interpret law to impose the death penalty ILGA World, Lucas Ramon Mendos, Kellyn Botha, Rafael Carrano Lelis, Enrique López de la Peña, Iliia Savelev, and Daron Tan (2020). State-Sponsored Homophobia 2020: Global Legislation Overview Update. Geneva, ILGA.



researchers. In situations where researchers may be able to find them—such as at underground bars that cater to SGM people—they may be suspicious and too cautious to engage. Every effort should be paid to understanding the full context of these situations and not put any potential participant at risk of being outed in the name of research.

## **7.2.2 Methodological Issues**

Lack of enumeration of SGM communities arises as a key challenge to sampling and recruitment, and thus, measuring HIV incidence and prevalence among them. With no enumeration, there is no denominator; thus, the affected proportion is unknown. When studying the overall population, strategies for enumeration include using households, professional societies, and general health facilities to develop sampling frames. With such sampling frames, population-level impacts of key interventions can be evaluated, and the coverage of key interventions can be determined. Moreover, these sampling frames can provide opportunities for enrollment and recruitment. In the absence of sampling frames, it is challenging to accurately enumerate populations, probability sampling cannot be conducted, and recruitment for epidemiologic and interventional studies is also challenging. Accruing stable sample sizes for HIV research among SGM groups has thus been difficult.

### **7.2.2.1 Recruitment and Enrollment Issues**

Given intersecting challenges, including multiple stigmas, SGM communities can be particularly hard to enumerate, recruit, and enroll. Compared to other SGM groups, there has been more success for MSM in achieving sufficient sample sizes (e.g., iPrEx study which included cisgender men and transgender women in Peru, Ecuador, South Africa, Brazil, Thailand, and the US (Grant et al., 2010)) and estimating HIV prevalence (as seen in this review of data from multiple LMICs across four continents) (Baral et al., 2014b). However, the ability to enroll populations is related to differential economic and social marginalization, which means less data on already-marginalized minority groups. In LMIC especially, population size estimates have been difficult, but not impossible to estimate. Baral, et al., used social media platforms, for example, to estimate MSM population sizes in 13 countries (South Africa, Ghana, Nigeria, Senegal, Cote d'Ivoire, Mauritania, The Gambia, Lebanon, Thailand, Malaysia, Brazil, Ukraine, and the United States) (Baral et al., 2018). In regions such as sub-Saharan Africa, estimates in the past often only represented male sex workers but not the rest of the MSM population, leading to biased estimates of HIV risk (Muraguri et al., 2012), though more recent work has shown high HIV prevalence in the region (Poteat et al., 2017a).

### 7.2.2.2 Sampling Issues

In the absence of sampling frames that permit probability sampling methods, three primary non-probability sampling strategies have evolved to enroll SGM populations in HIV research. These can be classified as network-based, place-based, and online strategies. Some hybrid approaches combine these strategies to maximize reach. Network-based approaches leverage existing social networks to enroll others generally using a chain-referral strategy. The level of complexity varies greatly from ungoverned chain-referral such as snowball sampling to approaches such as peer-referrals and respondent-driven sampling (RDS). An HIV study among transfeminine people in South Africa, for example, used peer-referrals for recruitment (Poteat et al., 2017a). RDS limits the number of enrollments at each wave of recruitment, thus pushing recruitment further into networks and ultimately reducing bias associated with initial seeds. This method allows an approximation of population prevalence of key indicators, such as HIV infection (Heckathorn, 1997; Salganik & Heckathorn, 2004).

Place-based approaches focus on building an understanding of different venues from which SGM can be recruited. Specifically, time-location or venue-day time sampling includes building a universe of venues, days, and times of day as a de facto sampling frame from which SGM can be recruited. This methodology is more applicable to populations that may not be well networked, but who may frequent venues, and has been used in HIV-related studies to recruit SGM in places as disparate as the US (Hwahng, 2018; Hwahng & Nuttbrock, 2007; Wei et al., 2012), Guatemala (Paz-Bailey et al., 2014), Kenya (Geibel et al., 2012), and Thailand (Toledo et al., 2010). However, in some places, the closure of such spaces may impact the effectiveness of such approaches (Mattson, 2019).

Finally, online sampling is being increasingly used with recruitment from general social media as well as mobile applications more specifically focused on SGM. Unlike RDS and time-location or venue-day time sampling, which approximate probability samples, online recruitment methods more closely represent convenience samples. They can be nevertheless useful for reaching SGM, but their limitations need to be considered. There are selection biases associated with this method (Green et al., 2015). In the United States and Europe, online samples tend to oversample people who are white, younger, and have higher income, and marginalized groups may be less able or willing to engage in online methods. Online methods have also been combined with other recruitment and sampling methods in innovative ways, which come with their own strategies and biases to consider (Groves et al., 2019, 2020). In the LITE Study of transgender women in the U.S., online and site-based sampling were both employed. The online sample reached people who were earlier in their transition, had lower access to or use of gender-affirming services, and were more isolated than people recruited at site-based locations (Wirtz et al., 2019). Online recruitment in lower-income countries may not be as effective, depending on the context. For example, internet access in some places is less common and financially unobtainable, especially outside of cities. Internet-based research done in such contexts should take into account such biases and limits to generalizability.

Each of these sampling methods are associated with advantages and challenges in terms of implementation and analyses (Magnani et al., 2005; Malekinejad et al., 2008; Wei et al., 2012). Choosing the appropriate method necessitates characterizing the specific question, such as what population or subpopulation you want to be able to make statements about. For example, identifying if the research question is about specific groups of SGM based on overall HIV rates in those groups, or individual or network-level HIV risk behaviors. It also necessitates knowing some characteristics of the target population, such as if they are well networked, or if they are likely to be accessible in venues. Some methods that work well in some settings may not work as well in others. RDS, for example, has worked well for reaching MSM for HIV studies in many countries, but less effective in the United States, particularly for SGM youth and Black MSM, who tend to be less well-networked to other SGMs (Wei et al., 2012; Wirtz et al., 2021). Steps in the decision process include appropriate formative research, assessment of the level of resources (time and financial), and capacity of research partners (Glick & Adrinopoulous, 2019).

### **7.2.2.3 Cultural Conceptualizations of Gender Identity and Sexual Orientation**

Should the context be safe enough to conduct research among SGM populations in a given locale, there are additional issues to consider. There are a variety of labels used among sexual and gender minority groups even within one country and culture. There are culturally specific words for various behaviors and identities that may mean slightly different things to people who use the labels to describe themselves. Additionally, these terms do not necessarily map on exactly to academic categories of “homosexual” or “transgender” and can have different nuances and historical meanings that may be lost in translation (Glick & Adrinopoulous, 2019; Hwahng, 2009, 2011). These labels are also time-bound and sometimes rapidly changing; words that were appropriate to describe SGM 20 or even 5 years ago in one context may become quickly dated and offensive but still considered appropriate in another (likely including words used in this book).

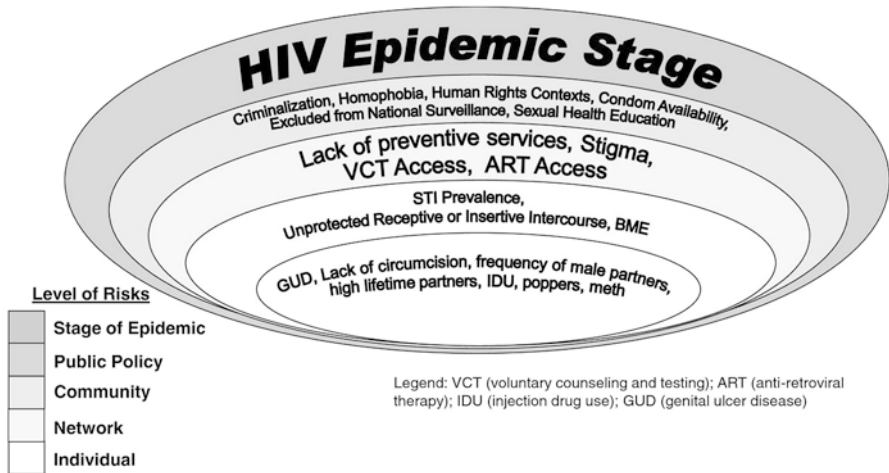
Furthermore, while some communities take pains to separate gender identity and sexual orientation as distinct concepts, many people and cultures conceptualize the two in a variety of ways. Indeed, the categories of “homosexual” and “transgender” are created and reified as social constructs (Singh et al., 2017; Valentine, 2007) and are constantly being contested and changed. This is not to call these categories unreal, but to point out that one society’s categories are not more or less “right” than another’s, and to forcibly map Western categories onto other communities’ is inappropriate and counterproductive (Glick & Adrinopoulous, 2019). For example, a list of gender identities in Thailand lists 18 genders, described as various combinations of gender expressions and sexual attractions that cannot and should not be mapped onto Western categories (Morris, 1994; Sinnott, 2004; Wilson, 2017). Effort should

be made to understand and work within these local categories, rather than to colonize them with Western concepts. Even in the United States, and especially in communities of color, there are a variety of terms used. For example, people who might be categorized as transgender for research purposes may not identify as such, and many research studies have grouped transgender women with MSM, subsuming their identities under their behaviors (e.g., receptive anal sex with men) (Baral et al., 2011; Glick et al., 2018). Care should be taken to respect local conceptualizations, labels, and meanings. All this can impact recruitment and validity of data (misclassification bias) and using terms incorrectly may further stigmatize or offend the populations being studied.

Researchers should be aware of these issues in order to thoughtfully conduct HIV research in these populations, takings pains to be gender-affirming and culturally competent (Glick & Adrinopoulous, 2019; Hwahng & Nuttbrock, 2007; Poteat et al., 2019; Reisner et al., 2016a). These challenges also mean that there remain many gaps in understanding about HIV among SGM populations across the globe. Not only are there gaps in the epidemiology of HIV in most areas of the world, but also in the knowledge base about best practices for implementing prevention and treatment programming. Furthermore, programming that may be effective in one population (e.g., white MSM in the UK) cannot be assumed to work well in other populations within that same country (e.g., Black MSM in the UK) nor in other locations (e.g., MSM in Russia, Vietnam, or South Africa), let alone among different SGM groups (e.g., transgender women of color in the United States, transgender men in Indonesia). Interventions should be adapted or created to best address the needs of the SGM in their respective local context. As an example of an appropriate adaptation, a team of local and international researchers and implementers adapted a participatory theater intervention to reduce stigma for SGM in Eswatini and Lesotho, given the impact of stigma on the HIV epidemic. They first conducted qualitative, formative research to better understand local stigma dynamics, then worked with a local SGM and theater groups to develop skits. They followed these skits with focus group discussions with audience members (nursing students, health care providers, educators, and general community members) to assess the reactions (Logie et al., 2019).

### 7.3 Multi-level Factors and Interventions

Keeping in mind ethical and methodological challenges and funding gaps that prevent a full global picture of HIV epidemiology, we now explore known factors that drive and predict HIV risk, as well as interventions that mitigate those risks. As a heuristic, we situate these factors and interventions into a modified social-ecological model (mSEM) (Baral et al., 2013a). This model (see Fig. 7.3), like other SEMs, organizes elements into multiple levels (individual, social, community, etc.) to aid understanding of an issue and focus interventions to at least one,



**Fig. 7.3** Modified social-ecological model (Baral et al. 2013a, b). (Reprinted from Baral, S., Logie, C.H., Grosso, A. et al. (2013). Modified social ecological model: a tool to guide the assessment of the risks and risk contexts of HIV epidemics. *BMC Public Health*. 13, 482, Figure 3. <https://doi.org/10.1186/1471-2458-13-482>, licensed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/2.0>))  
 Legend: *BME* Black and minority ethnic populations, *STI* sexually transmitted infections

but preferably multiple, levels. Unlike other SEMs, this modified SEM specifically acknowledges the importance of the HIV epidemic stage, that is, the prevalence and incidence of HIV in a given community, since this greatly impacts the riskiness of individual condomless sexual encounters, for example. In this chapter, we discuss factors and interventions at three levels: structural, interpersonal/community, and individual.

### 7.3.1 Structural Level Factors

Globally, SGM communities face structural-level barriers that not only increase their risks for HIV, but also constrain their abilities to access affirming, friendly healthcare services and live fully actualized lives. These structural-level factors include criminalization and pervasive stigma and discrimination, including cis- and heteronormativity, homophobia, and transphobia, as well as intersecting stigmas such as classism, racism, nationalism, and ableism. This section focuses on criminalization, stigma, and discrimination, while acknowledging that these other factors are also at play, depending on the context.

### 7.3.1.1 Criminalization

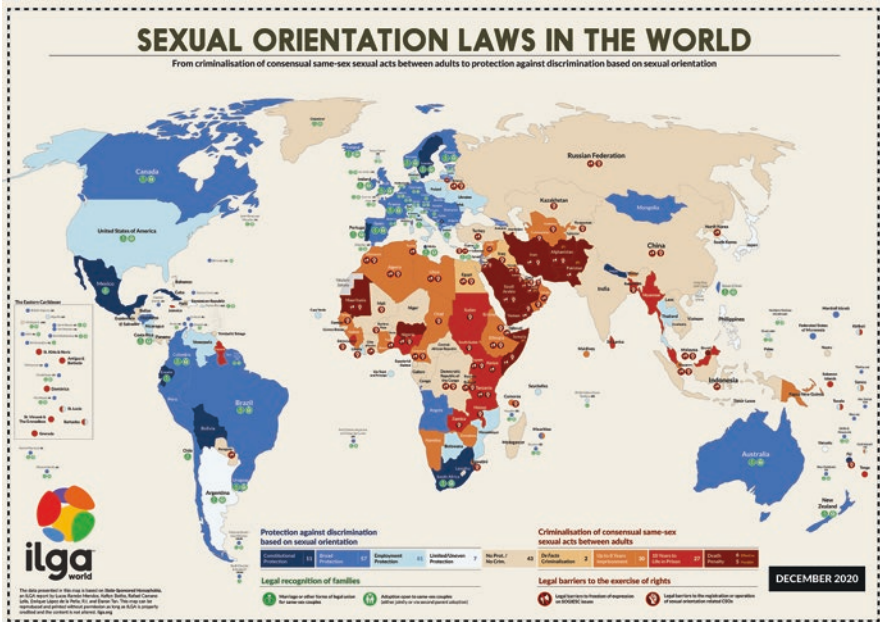
One of the strongest structural forces driving risks and vulnerabilities for HIV among sexual and gender minorities is criminalization of same-sex practices and the legal and social policing of gender non-conformity.<sup>4</sup> These forces, rather than stop SGM people from existing, drive them underground. Criminalization reduces access to HIV services and safer sex supplies such as condoms and water-based lubricants, and increases stigma and discrimination, while ensuring victims have little or no recourse to the justice system (Arreola et al., 2015; Beyrer, 2014). Criminalization is variously enforced in different countries, ranging from no protection but no criminalization (e.g., India, Paraguay, China) to 10-year-to-life prison sentences (Tanzania, Myanmar) to the death penalty (Sudan, Saudi Arabia) (Altman & Beyrer, 2014; ILGA World, 2020). (See Fig. 7.4). Russia presents an alarming case of the importance of state-sponsored structural violence against SGM people. Though same-sex behavior was officially decriminalized in 1993 with the fall of the Soviet Union, more recent draconian laws against “homosexual propaganda” led to increases in violence against SGM people in Russia. This has led to apparent increases in HIV transmission among MSM (Altman & Beyrer, 2014; Beyrer et al., 2013) as well as worse mental health outcomes (Hylton et al., 2017). There are also intersectional issues for SGM who are also ethnic minority groups and face xenophobia but came to Russia because it was “safer” than being gay in the neighboring countries where there were more severe penalties (Wirtz et al., 2014).

As of December 2021, there are 71 countries in the world that criminalize consenting same-sex behavior, particularly between males (76 Crimes, 2021), most of them middle- and low-income countries. The most recent countries to decriminalize homosexuality include Bhutan in Asia (February 2021) and Gabon in central Africa (July 2020). Many of the 71 countries that criminalize homosexuality are former British, French, and Portuguese colonies (76 Crimes, 2021). Indeed, it was the British colonial structure which mapped Euro-Western “values” of same-sex criminality onto places that had tolerated or even accepted it previously. Many nations’ penal codes are retained from their colonial codes, copied from the British-era Indian penal code, which criminalized “carnal knowledge against the order of nature” and “gross indecency” (Altman & Beyrer, 2014; Beyrer, 2014).

In direct contravention to these anti-homosexuality laws are international human rights covenants and bills, such as the International Bill of Human Rights, which has been signed by 172 nations worldwide, including 95% of sub-Saharan African

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<sup>4</sup>Note that while this volume differentiates between sexual orientation and gender identity and treats them as separate constructs, this differentiation is not commonly recognized worldwide. Often, sexual orientation and gender identity are collapsed, and certain gender expressions are sometimes interpreted as homosexuality, while some gay people may be seen as crossing society’s gender boundaries. Thus, some countries that criminalize homosexuality might arrest a feminine-presenting male or transgender woman with “gross indecency” and accuse the person of homosexuality, regardless of actual sexual behavior. While sexual and gender minorities’ risks and needs overlap in many ways, there are distinct issues that need addressing legally, socially, and culturally.



**Fig. 7.4** Sexual orientation laws in the world – 2020 (ILGA World, 2020). (Reprinted from ILGA World: Lucas Ramon Mendos, Kellyn Botha, Rafael Carrano Lelis, Enrique López de la Peña, Iliia Savelev and Daron Tan. (2020 December). State-Sponsored Homophobia 2020: Global Legislation Overview Update. <https://ilga.org/maps-sexual-orientation-laws>)

countries (Abara & Garba, 2015). The International Covenant on Civil and Political Rights (ICCPR), signed in 1966, guarantees rights “without distinction of any kind, such as race, color, sex...” (United Nations, 1966). In 1994, the Human Rights Committee held that sexual orientation was a status protected from discrimination under the ICCPR, with reference to “sex,” including “sexual orientation” (Baral et al., 2011). In signing human rights conventions, countries commit to upholding the principles therein, including non-discrimination. However, as Abara and Garba (2015), stated, “it is evident that these rights are neither enforced nor protected among MSM in SSA,” and this statement applies just as well to other SGM communities and countries outside of SSA.

**7.3.1.2 Stigma and Discrimination**

Even in countries that permit same-sex behavior, stigma, and discrimination remain as barriers to HIV prevention and care. In South Africa, for example, where sexual orientation is constitutionally protected, MSM were more likely to disclose their sexual orientation than their counterparts in other southern African countries without protections but were just as likely to report human rights abuses (Zahn et al., 2016). Furthermore, in the United States, where SGM people have limited legal

protections, MSM bear a disproportionate burden of HIV incidence and prevalence, accounting for 67% of all new diagnoses (Centers for Disease Control and Prevention (CDC), 2018). This burden is borne particularly by men of color, who are more likely than non-Hispanic white MSM to face stigma, discrimination, lower socioeconomic status, and thus higher rates of STIs, lower rates of HIV testing, and constrained access to treatment services. In some places, up to one in two Black MSM is already living with HIV, making condomless sex within these networks particularly risky (Latkin et al., 2012).

Like same-sex behavior, alternative gender expressions and gender identities are not new nor Western, but are heavily stigmatized, resulting in many negative health outcomes, including high prevalence of HIV (Reisner et al., 2016b; White Hughto & Reisner, 2016). Cultures around the world have long traditions of recognizing more than two genders, as seen in the variety of words to describe various gender minorities, especially, but not limited to, male-to-female expressions. These include terms such as *kathoei*, *hijra*, *mahuvine*, *berdache*, *waria*, *mahu*, *bantut*, *nadleehi*, two-spirit, and *xanith* (Baral et al., 2011). While there is a lack of data on such SGM identities throughout Africa and the Middle East, this is not to say they do not exist there. Rather, the research is just beginning, and as trans-related research is moving into those locations, findings show increasing numbers of people who identify as transgender (Reisner et al., 2016b).

Like same-sex behaviors, alternative expressions of gender are often policed by the state and/or society and stigmatized. Transgender people and other gender non-conforming people, particularly transfeminine people, are actively discriminated against and their human rights violated in ways that reduce their access to services and increase their risks for HIV. For example, lack of access to correct identification and gender marker changes impacts access to employment, housing, and health care, which in turn impact access to HIV testing, prevention, and treatment services (Anderson & Kanters, 2015; Baral et al., 2011; Reisner et al., 2016b). In Thailand, where various gender identities are socially recognized and accepted, and where some of the leading surgeons for gender-affirming care are located, gender markers on national identity documents cannot be legally changed. These identity documents also grant access to healthcare in Thailand, and thus create a stigmatizing barrier for transgender people who are forced to access care under the wrong name and gender marker (Samuel, 2021).

High rates of incarceration, homelessness, racism, and low socioeconomic status also remain persistent in populations of transgender women, as many women are isolated from the workforce due to their gender minority status (Reisner et al., 2016b). Thus, transgender women who engage in sex work have much higher odds of living with HIV (Poteat et al., 2016; Reisner et al., 2016b). Gender-related stigma and discrimination in clinical settings have also hindered transgender women from utilizing the healthcare system, creating a barrier for accessing HIV prevention resources (testing, condoms, PrEP, treatment if already infected, etc.) (Poteat et al., 2019; Reisner et al., 2016b).



### **7.3.2 Structural Interventions**

Decriminalization of homosexuality and gender non-conformity, while worthwhile and necessary for the safety, human rights, and dignity of all SGM people, also have positive impacts on HIV prevention and treatment. Thus, anti-homosexuality laws continue to be challenged in various countries, sometimes with an argument that it serves an HIV prevention purpose. Recent countries to decriminalize homosexuality span the globe and include Trinidad, India, and Angola. Not all challenges to the law have been successful, however; in 2019, Kenya's courts upheld an anti-gay law (76 Crimes, 2019). Other countries, while not decriminalizing homosexuality, have recognized the HIV prevention benefit of allowing prevention efforts to reach SGM communities without fear of legal or social repercussions.

International human rights principles can and have been interpreted to extend to gender minorities, in language that calls for non-discrimination on the basis of sex, the right to health, and the right to control one's own body (Baral et al., 2011). Courts have made legal judgments that protect gender minorities in several countries in Asia such as Pakistan, Nepal, Philippines, and Hong Kong (Baral et al., 2011). Non-discrimination of transgender people is even written in Nepal's constitution as a "third type of gender identity" (Baral et al., 2011). As more countries decriminalize, and we see more acceptance of SGM people globally, SGM communities will be able to live more fully, without fear of legal repercussions.

Racial marginalization, racism, and xenophobia have also been documented as structural factors for increased HIV risk. There is a small body of literature examining interventions addressing these structural oppressions among SGM people (see Introduction to book).

### **7.3.3 Interpersonal and Community-Level Factors**

Sexual and gender minorities face many community- and interpersonal-level challenges that increase HIV risk. These factors are exacerbated by intersectional identities (Bowleg, 2012) that may also be stigmatized, such as racial, ethnic, and religious minorities in the United States (Hwahng & Nuttbrock, 2014; Nuttbrock & Hwahng, 2017, 2018), or other circumstances that increase vulnerabilities, such as poverty (also see Stigma chapter, Chap. 2). It is also necessary to recognize the role of syndemics (multiple epidemics that co-occur) (Singer, 2009), such as substance use (see Substance Use chapter, Chap. 8), violence victimization and abuse (see Victimization and Intentional Injury chapter, Chap. 9), and poor mental health (see Mental Health chapter, Chap. 3) in global HIV epidemics (Poteat et al., 2017b; Reisner et al., 2016b). Additionally, SGM people globally experience higher rates of physical and sexual assault, workplace discrimination, healthcare discrimination, and family rejection (Patel et al., 2020; Sekoni et al., 2020; Yi et al., 2017).

Network-level determinants have been shown to be profoundly important in explaining the disproportionate burdens of HIV and STIs among MSM and transgender women. The burden of HIV among MSM in North Africa and the Middle East, for example, is attributed to high levels of risk behaviors among them, such as having multiple partners, low condom use, high HSV-2 rates, male sex work, intersections with drug use, and bisexual practices (Abara & Garba, 2015; Mumtaz et al., 2010). However, do we know that there is more inherent HIV-related risk among MSM, or that the biology of HIV and STIs, combined with sexual networks, explains these disparities in outcomes? There are some key elements specific to networks among MSM and transgender women, including the potential dual roles of being both insertive and receptive partners during penile-anal sex, which differs from that of cisgender women. Moreover, there tends to be higher density in these networks than general heterosexual networks since the latter networks are much bigger and not stigmatized in society. For example, the increased size and lower density sexual networks among MSM have been linked to HIV in places as diverse as Australia, China, and the United Kingdom (Beyrer et al., 2012a).

There are also those individuals, including those reporting transactional sex, that create multiple points of contact within networks and have higher odds of HIV infection compared to those who do not (Oldenburg et al., 2016). Stigma against SGM can cause the size of sexual networks to increase, as individuals may have multiple concurrent or serial, short-term encounters in order to keep them secret. When there is acute infection within these networks, transmission may happen rapidly to all within the network in the absence of PrEP and early diagnosis and treatment (see below). The finding that incidence occurs in these short blips (Lewis et al., 2008) only reinforces the importance of networks in driving HIV among MSM and transgender women.

Unlike MSM, sex workers (including cisgender and transgender men, transgender women, and cisgender women who are sexual minorities) do not acquire or transmit HIV from other sex workers. It is the male partners and clients who represent key members of the sexual networks in driving risks among sex workers for transmission, yet the cisgender male partners and clients of sex workers are very rarely the focus of interventions. Moreover, sex workers have commonly reported tremendous challenges in effective condom negotiation with male clients in the absence of laws protecting sex workers either in the context of occupational health or criminal law (Baral et al. 2013a). Consequently, the overlaps between structural stigmas, network-level determinants, and individual risks become increasingly clear as fundamental drivers of ongoing HIV epidemics (Baral et al., 2013a; Beyrer et al., 2012a).

### ***7.3.4 Interpersonal/Community-Level Interventions***

Given the critical role networks and other interpersonal and community-level factors play in HIV transmission, interventions that address these factors are essential. That said, globally, network and community-level interventions are also

challenging, expensive, and less researched than individual-level interventions (Poteat et al., 2017b). Nevertheless, we discuss some examples of interventions here, though this is not an exhaustive list. For example, partner, family, and group support are potentially powerful interventions at this level (Poteat et al., 2019), especially given higher rates of family rejection and intimate-partner and non-partner violence among SGM people, as evidenced by data from Peru (Murphy et al., 2019), the United States (Brooks et al., 2021; Wirtz et al., 2020), and multiple other high- and middle-income settings in a systematic review (Peitzmeier et al., 2020). In the United States there have also been studies on couples-based intervention for transgender women and their cisgender male partners, given that cisgender male partners are often a major vector of HIV transmission to transgender women (Gamarel et al., 2016, 2020a, b; Operario et al., 2017).

Culturally competent interventions grounded in the community and that employ peer-based outreach, education, navigation, and community mobilization are promising. In all cases, community involvement or, better yet, community leadership, are keys to success (Poteat et al., 2019). By employing existing social and sexual network connections, peer-led, community-based interventions can also operate in locations with high homophobia and transphobia, and even criminalization. These can not only increase individual-level health promotion behaviors, but also decrease stigma, encourage collective activism, and empower groups to demand change that addresses their felt needs (Poteat et al., 2017b, 2019). The participatory theater intervention in Eswatini and Lesotho, mentioned above, is one good example (Logie et al., 2019). In Senegal, an integrated stigma mitigation intervention showed reductions in stigma in SGM both living with and at risk of HIV (Lyons et al., 2020). Multiple demonstration projects for transgender women of color that involved peer-led community outreach, case management, and small group sessions to improve HIV outcomes were conducted in the United States and may provide lessons learned for similar projects in other locations (Reisner et al., 2016b). Another study in a different region of the United States examined peer-led transgender support groups that were part of harm reduction programs that also resulted in improved health outcomes and decreased HIV risk for transgender women of color (Hwahng et al., 2019, 2021).

Examples outside the United States are hard to find (Poteat et al., 2017b), but one is the pilot study TransPrEP in Peru (Poteat et al., 2017b). This was a social network-based PrEP (see below) adherence intervention study for transgender women that included individual counseling, group workshop, and social media-based network interactions. Results showed a positive trend toward the intervention objectively increasing adherence to PrEP, as evidenced by drug levels in blood and hair samples. The use of technology and social media such as this is a key component of future interventions. SGM communities are already widely connected through popular apps such as Facebook and Twitter, as well as MSM-targeted apps such as Hornet and Grindr. These networks can be leveraged as strategies to support community development, estimate population sizes, and disseminate information.

Healthcare that is gender-affirming and sensitive to the needs of all SGM communities is essential not only for HIV prevention and care, but also for all health

needs. Unfortunately, this is too rare globally. Healthcare providers need sensitivity training and cultural and clinical competency in order to welcome and serve SGM people (Poteat et al., 2019) and overcome understandable medical mistrust. Furthermore, health recordkeeping systems, whether paper or electronic, should allow for specifying and changing gender markers and chosen names, even if legal changes are not allowed in a given country. Patients who cannot safely disclose their sexual orientations and/or practices and their gender identities cannot access HIV prevention and care that is appropriate to their needs. For transgender women, especially, care that does not also address housing and food insecurity, violence, racism, misogyny, transphobia, etc., will fail at meeting their individual HIV prevention and treatment needs. The Tangerine Clinic in Thailand is a great example of a community-led organization that is responsive to the needs of the SGM people it serves (amfAR, 2017). For example, they include gender-affirming care such as hormone provision as well as case management into their HIV programming. In Australia, the community health organization, Acon, started as an HIV clinic, and has expanded to serve all SGM for a variety of health needs in the HIV syndemic. This includes sexual health, substance use, violence, mental health, etc. Acon also strives to be responsive to the needs of Aboriginal and other minoritized communities (2021). Both Tangerine and Acon are examples of locally led and developed interventions that are contextually and culturally appropriate to meet the particular needs of their local communities.

Condoms and water-based lubricants, when used consistently and correctly, are highly effective at preventing HIV and a highly cost-effective intervention (Beyrer et al., 2012b), and thus should be considered essential components of HIV prevention programming. While often considered at the individual level, condoms are by their nature an interpersonal intervention, requiring discussion and negotiation between sexual partners. These negotiations often take place in contexts of power imbalances between partners, while condom promotion interventions too often target those holding the least power in sexual encounters (transgender women, cisgender, and transgender sex workers). There is a dearth of research and programming targeting cisgender men who have sex with transgender women (Poteat et al., 2021), though they are key transmission nodes in high-risk sexual networks. Condomless receptive anal sex is an especially important driver in MSM and transgender women who have sex with cisgender men, since HIV transmission through anal intercourse is a more efficient means of infection compared to vaginal intercourse, as the rectal tissue is more susceptible to tears and thus to the virus (Beyrer et al., 2012b). However, access to condoms and especially water-based lubricants is poor in some locations. In 2016 in Tanzania, for example, the Magufuli administration banned lubricants, ordered extant supplies to be destroyed, and closed drop-in-centers that served “key populations” such as MSM and female sex workers (Tanzania Ministry of Health, & Gender, Elderly and Children, 2017). Lubricants had been promoted as an HIV prevention intervention for MSM in particular, and thus were seen as “promoting homosexuality,” while homosexuality is criminalized in the country (ILGA World, 2020).

### ***7.3.5 Individual- and Biomedical-Level Factors***

Major HIV-related risk factors SGM people face at the individual level include condomless sex, untreated STIs, substance use, and lack of HIV testing and knowing one's status. Broader structural and interpersonal factors play out at and influence the individual level, driving internalized stigma, for example, and increasing substance use as a maladaptive coping mechanism. Internalized stigma (homophobia, transphobia) can increase individual risk behaviors among SGM individuals, such as not seeking healthcare and/or not disclosing important information to providers; substance use during sex; a higher number of partners; transactional sex; condomless sex, etc. However, as mentioned above, individual risk behaviors are insufficient to explain disparities in HIV rates, and structural, community, interpersonal, and network-level factors must be taken into account (Latkin et al., 2012).

Higher burdens of childhood trauma and ongoing minority stress have, in part, resulted in higher burdens of injection and non-injecting substance use among SGM people. In part, this substance use may be driven by undiagnosed and untreated mental health stressors. Some substance use is recreational in nature, and there has been an emergence of “chemsex,” which is the use of multiple amphetamine-like substances during sex to heighten the experience (see Substance Use chapter, Chap. 8) (Bourne et al., 2015). Interventions in this space often end up being punitive or risk-based in their framing. Peer-based substance use interventions likely represent a critical path forward; a trial in Thailand and the United States showed reduction in HIV-related drug use behaviors (sharing equipment) (Latkin et al., 2009).

### ***7.3.6 Individual-Level and Biomedical Interventions***

PrEP is a medication taken by HIV-negative people to prevent HIV acquisition. It is recommended by the World Health Organization for anyone at substantial risk for HIV (World Health Organization (WHO), 2017). The high efficacy of PrEP in preventing HIV acquisition and transmission among MSM has been shown through several studies. The first, which was conducted in Peru, Ecuador, Brazil, Thailand, the United States, and South Africa, showed a 44% reduction in the risk of HIV acquisition (Grant et al., 2010). In 2015, intermittent PrEP use or “on demand” use in which patients take PrEP only before and after sexual activity was shown to reduce the incidence of HIV acquisition by 97% in the IPERGAY trial in MSM in France and Canada (Molina et al., 2015, 2017). Other PrEP efficacy trials have been conducted in MSM and transgender women, including in the US, Kenya, England (Fonner et al., 2016) and Argentina, Brazil, Peru, Vietnam, Thailand, and South Africa (Landovitz et al., 2021). For PrEP, effectiveness is highly correlated with adherence (Fonner et al., 2016) so particular attention must be given to supporting uptake and sustained, correct use to see the prevention benefit. As of writing, there were multiple formulations of PrEP in various stages of the research pipeline,

including a bimonthly injectable form shown to be highly efficacious in multinational trials among cisgender MSM, transgender women, and cisgender women (HIV Prevention Trials Network (HPTN), 2020; Landovitz et al., 2021). There is hope that longer-acting formulations will overcome some of the barriers to adherence, thus ultimately reducing HIV acquisition.

Research gaps and concerns remain for PrEP for other at-risk SGM populations, however, including transgender women and transgender men who have sex with cisgender men (TMSM), as well as sexual minority women who sell sex and/or use injection drugs. Most of the research on PrEP has been focused on cisgender MSM, with the inclusion of a small minority of transgender women (Fonner et al., 2016). The recent long-acting injectable PrEP study included 12.5% transgender women (Landovitz et al., 2021). Few studies have specifically examined PrEP use among TMSM (Reisner et al., 2019, 2021), and none among SMW who are at risk, though several were conducted among cisgender women (Fonner et al., 2016). One primary concern for transgender people at risk is possible drug-drug interactions between PrEP (and other ART) and gender-affirming hormones. While there is currently no evidence that indicates clinically significant drug-drug interactions (Radix et al., 2016), there is evidence that some transgender women may avoid PrEP anyway because of these fears (Hiransuthikul et al., 2019). Similar issues and fears may also be present among TMSM, though there are limited data to date (and only from the US) on TMSM taking PrEP and potential contraindications with masculinizing hormones (testosterone), which many transgender men and other transmasculine individuals use (Reisner et al., 2019, 2021). As of writing, a small, exploratory study of PrEP for Ugandan transgender men was recently completed, but results are pending (Mujugira, 2020).

Special attention must be paid to the intersection of SGM status and various racial, ethnic, religious, and other minoritized groups, including migrants and prisoners. For example, PrEP uptake and implementation has been low in Black and Latinx communities in the US (Cahill et al., 2017; Eaton et al., 2015; Rolle et al., 2017). As PrEP availability continues to expand beyond high-income countries, careful attention must be paid to the most vulnerable sub-groups among SGM people in various country contexts. In addition, SGM members of migrant, immigrant, prison, and ethnic minority populations may be at heightened risk of being excluded from HIV prevention services, and this is likely to be replicated in PrEP programming if not given carefully tailored attention.

Another key biomedical intervention is the use of antiretroviral therapies (ART) as both treatment and prevention. While ART cannot yet cure HIV completely, people living with HIV can live long, healthy lives on treatment. Furthermore, multiple studies have shown that sufficient treatment that leads to sustained viral suppression (an undetectable viral load) stops transmission to their partners (untransmissible virus), often called treatment-as-prevention (TasP) (Cohen, 2011; Rodger et al., 2019). The US Centers for Disease Control and Prevention affirmed that “undetectable equals untransmissible” (“U=U”) after results of the PARTNER2 study in which there was no transmission among male couples where one was living with HIV and the other HIV-uninfected (Rodger et al., 2019).

Given the network-driven transmission dynamics among MSM and transgender women with multiple partners, where HIV is transmitted often before people know they are infected, TasP strategies are likely to be insufficient to control the epidemics (Van Griensven et al., 2017). Taken together, though, PrEP and TasP (U=U) hold significant promise. This is especially hopeful given alternative formulations on the horizon, such as long-acting forms of ART and PrEP, including injectables, implants, patches, and suppositories, making the future of ART and PrEP look much like family planning, with many choices for consumers to use what best fits their preferences. These have the potential to reduce some barriers to uptake and adherence (Landovitz et al., 2016). Other biomedical interventions such as HIV vaccines and broadly neutralizing antibodies to prevent HIV continue to be tested, and investment in these is essential.

However, for interventions like PrEP and U=U to reduce new HIV infections, it remains important to tailor prevention and treatment support to the specific communities at highest risk of both acquiring and transmitting HIV, including SGM communities (Baral et al., 2019; Mishra & Baral, 2019). Universal treatment and prevention programs that do not consider intersectional identities and stigmas will reinforce pre-existing power dynamics, including cis- and heteronormativity, misogyny, ableism, white supremacy, classism, etc., even within SGM communities, and further widen disparities in HIV outcomes. This reinforces the necessity of multi-level interventions that situate the individual and biomedical interventions within broader interventions that also address social, community, and structural levels.

## 7.4 Chronic Disease and Sexual and Gender Minorities Living with HIV

HIV chronic comorbidities are an important concern for people living with HIV, including SGM. Most of the literature on this topic, however, is from the Global North, and further work needs to be conducted to understand the needs of SGM in other locales. Though use of combination antiretroviral therapy has led to better prognosis, improved survival, and reduced HIV-related illness and death for people living with HIV (Hogg et al., 1998; Palella et al., 1998), non-HIV related comorbidities such as cardiovascular disease, non-AIDS-related cancers, and liver disease are becoming more prevalent (Goulet et al., 2007; Wong et al., 2018). In the general population, development of age-related chronic disease is associated with physiological stress (Epel et al., 2004), while HIV disease processes and some antiretroviral therapy regimens are linked to chronic inflammation and can exacerbate age-related chronic conditions for people living with HIV (Drozd et al., 2017; Onen & Turner Overton, 2011; Pathai et al., 2014). Minority stress (Brooks, 1981; Hendricks & Testa, 2012; Meyer, 2003), stigma, and discrimination may also shape chronic disease disparities for SGM (Hatzenbuehler et al., 2014), as is the case for racialized minorities (Busse et al., 2017; Gallo et al., 2014; Jackson et al., 2010;

Lucas et al., 2017). People living with HIV as well as SGM are also more likely to engage in risk behaviors (i.e., smoking) (Akhtar-Khaleel et al., 2016; Gruskin et al., 2007), and experience other socio-structural risk factors for chronic disease (see Non-Communicable Diseases chapters, Chaps. 4 and 5).

Increased chronic disease risk for people living with HIV includes non-AIDS-defining cancers, such as anal cancer. This elevated anal cancer burden is highest for MSM, with one HIV and cancer registry-linked study of 447,953 people with HIV in the United States estimating a 39-fold increased risk compared with the general population (Colón-López et al., 2018). Evidence of other chronic illness disparities for men who have sex with men living with HIV include diabetes and kidney disease, as well as higher likelihood of having multiple chronic conditions, compared to men who have sex with men living without HIV (Althoff et al., 2014). For many transgender people, gender-affirming hormone therapy is an important part of clinical care, serving as a protective factor for HIV clinical outcomes—facilitating care engagement, antiretroviral therapy adherence, and viral suppression (Wilson et al., 2015). However, exogenous hormone use may also potentiate increased chronic disease risk for transgender women in particular, both independently and through potential drug-drug interactions with antiretrovirals. Exogenous hormones use has been linked to elevated cardiovascular disease risk factors among transgender adults, with excess cardiovascular disease incidence, prevalence, and mortality for transgender women compared to cisgender counterparts, though not consistently for transgender men (Gosiker et al., 2020; Streed et al., 2017). For SGM populations, stress, antiretroviral therapy, and exogenous hormone use may also contribute to heightened risk of other HIV co-morbidities, particularly inflammation-related diseases such as cancer, diabetes, and arthritis. These risks are likely exacerbated with older age, racialization, and the multi-level determinants of health discussed elsewhere in this chapter.

While the limited previous research in this area has demonstrated evidence of HIV chronic comorbidity disparities for sexual and gender minorities, particularly for men who have sex with men and transgender women, gaps remain in our understanding. A systematic review of the global literature on transgender health published between 2008 and 2014 found less than 10% of included data comprised general health—including chronic disease (Reisner et al., 2016b). A more recent review of global transgender populations and their chronic disease burden showed a persistent focus on mental health, demonstrating an evidence gap in chronic physical health morbidity, particularly around age-related conditions and inflammation-related disease (Rich et al., 2020). As noted for the larger HIV literature, research gaps remain in understanding HIV chronic comorbidities, particularly for sexual minority women. Much of the research in HIV and chronic illness among sexual and gender minorities is from large administrative data studies in the US, and to some extent Europe, leaving global sexual and gender minority populations largely understudied. There is a need for high-quality evidence in this area. Particularly, longitudinal research studies designed to look at the development of chronic conditions over time is needed, as well as consistent measurement of sexual and gender minority status and chronic conditions, validated measures of chronic disease for these populations, and inclusion of appropriate comparison groups (Rich et al., 2020).



## 7.5 Conclusions

With the widespread criminalization, stigma, and discrimination to which SGM are exposed around the world, the epidemiology of HIV among SGM communities, as well as provision of culturally and clinically competent and affirming HIV prevention and care, remains elusive in much of the world. Where state-sponsored homophobia and transphobia exist, and where sexual and gender minorities face multiple, intersecting stigmas, achieving HIV prevention and treatment goals, let alone allowing people to live fully actualized lives with dignity, is challenging. Nevertheless, there has been progress, especially in the past decade, in decriminalization, reducing stigma, reaching vulnerable populations with HIV and other health care needs, as well as in enumerating SGM populations and more accurately estimating HIV across the globe.

In summary, while this chapter provides the most data on MSM, this is a reflection of the research that has been conducted, and not a statement of importance of one group over others. As shown above, it is transgender women who have sex with cisgender men who face the greatest odds of becoming infected with HIV, followed by men who have sex with men. Transgender men and sexual minority women who have sex with cisgender men are a small minority, but nevertheless face HIV risks and vulnerabilities as well. However, little research has been conducted among these groups, so their HIV risks and prevalence are not well known. Additionally, it is important to note that absence of data about HIV among SGM communities in certain locales does not equate absence of risk or of SGM people, but rather may be a reflection of state-sponsored repression related to homophobia and transphobia.

## 7.6 Future Directions

While there is still a lot of work to do to eliminate HIV, the future holds promise. At a basic level, we require more data about SGM people and HIV epidemiology among them, globally. Data on sexual orientation/practices and gender identity needs to be collected and disaggregated in national, demographic, and health surveys and censuses (Poteat et al., 2017b) in order to implement data-driven, evidence-based interventions tailored to SGM populations, and to implement them at scale (Schwartz et al., 2019). We have interventions that we know work at multiple social-ecological levels, including PrEP and U=U, community mobilization, and decriminalization and legal protections. These interventions need to be tailored to specific SGM populations and locations, and implementation research needs to be conducted to understand best practices. For the greatest impact, these interventions must be concentrated on hyper-epidemics where most HIV transmission occurs rapidly (Tanser et al., 2014).



Thailand map showing major cities as well as parts of surrounding countries and the Gulf of Thailand. (Source: Central Intelligence Agency, 2021)

## 7.7 Case Study: Thailand's HIV Epidemic

The presence of HIV in Thailand was first reported in 1984; the epidemic accelerated first among persons who inject drugs (PWID) and then among female sex workers (FSW) (Siraprapasiri et al., 2016). The country experienced its highest rates of HIV incidence in 1991 and 1992, around 150,000 new infections, and by 1993, there were about 600,000–800,000 persons living with HIV (PLWH) in the country (Analysis and Advocacy Project & Thai Working Group on HIV/AIDS Projections, 2008; Siraprapasiri et al., 2016). According to UNAIDS, in 2020, about 500,000 individuals in Thailand were living with HIV, and HIV incidence in adults per 1000 population was 0.19. The HIV epidemic in Thailand is currently a generalized epidemic, with an estimated 1% of the total population living with HIV/AIDS (UNAIDS, 2020).

Thailand has made a concerted and admirable effort to control its HIV epidemic. Early prevention efforts, like the promotion of condom use, particularly in the context of sex work, are credited with averting over two million new infections (Siraprapasiri et al., 2016; Visrutaratna et al., 1995). Because of a focus on prevention of mother-to-child transmission and providing free testing and anti-retroviral medications for HIV treatment (ARTs), incidence of HIV among Thailand's heterosexual populations has significantly declined (Seekaew et al., 2018; Siraprapasiri et al., 2016).

However, Thailand's LGBTQ community bears the burden of its HIV epidemic. In 2018, HIV prevalence among gay, bisexual, and other men who have sex with men (MSM) was 11.9%, while HIV prevalence in transgender individuals was 11% (UNAIDS, 2018). Currently, half of all new HIV infections occur in MSM, transgender women (TGW), and male sex workers (Seekaew et al., 2019). HIV incidence in MSM in Bangkok is particularly high at about 29% (Seekaew et al., 2018).

Consequently, these populations are priority populations for prevention interventions in the country's plan to end its HIV epidemic. In 2017, Thailand launched this plan, with goals to drastically reduce HIV incidence, AIDS-related deaths, and HIV-specific discrimination in healthcare settings by 2030 (UNAIDS, 2017). Furthermore, this 13-year plan accelerates the country's efforts to meet the international 90-90-90 targets – ensuring that 90% of PLWH know their status, 90% of those who know their status are on ARTs, and 90% of those on ARTs are virally suppressed (UNAIDS, 2017). By 2018, Thailand had reached 94-75-73; however, that success is not equitably distributed (Seekaew et al., 2019).

Indeed, knowledge of one's status is at about 43% and 42% for MSM and TGW, respectively (Seekaew et al., 2019). A recent sub-analysis of a prospective cohort of MSM in Thailand found that 66% had a false perception of low HIV risk, and about 59% declined an offer for HIV testing and counseling because they had been tested in the past 6 months (47%), were not ready for testing (16%), or thought they were not at risk (13%) (Khawcharoenporn et al., 2019). Furthermore, a sub-study of the MSM and TGW-led Test and Treat study in Thailand found that about 49% of individuals self-identified as having a low HIV risk, while about 81% of MSM and 82% of TGW had what researchers asserted were “actual HIV-risk characteristics” (Seekaew et al., 2019). Additional Thailand-specific barriers to HIV testing and care include a lack of

awareness about HIV, the benefits of HIV care, and where to access care; fear of unintentional HIV status disclosure; and perceptions of antagonism from healthcare providers (Sapsirisavat et al., 2016; Tam et al., 2014; UNESCO, 2012; Zhang et al., 2015). Stigma and discrimination against one's HIV status, sexual orientation, or gender identity, are also significant barriers to testing and care (Anand et al., 2017).

In its "Operational Plan Accelerating Ending AIDS by 2030," the government of Thailand acknowledges that reducing inequality and addressing key populations, including MSM and TGW, is vital to the plan's success (Thailand National AIDS Committee, 2014). The comprehensive plan implements, in collaboration with local community and health service providers, a "reach, recruit, test, treat, and retain" (RRTTTR) strategy utilizing innovative methods, along with specialized services at different levels of intensity for specific key populations. *Reaching* consists of using social media and social networks for outreach, while *recruiting* involves the appropriate branding of services, peer-led interventions, and efforts to increase ease of access. Rapid, culturally appropriate *testing* occurs at community-based organizations (CBOs), healthcare settings, and mobile sites, and innovations in *treatment* are focused on the decentralization of care and the integration of services. *Retention* utilizes mobile technology and community case management. Crucial aspects of this plan are health systems strengthening, stigma and discrimination reduction, and the empowerment of key populations to have ownership of and involvement in their health, as well as building these communities' capacity for HIV prevention and care service delivery (Thailand National AIDS Committee, 2014).

The empowerment of key populations to deliver services in partnership with community-based organizations (CBOs) and healthcare organizations is referred to as the Key Population-Led Health Services (KPLHS) model, which was developed by the Thai Red Cross Research Centre (TRCARC), funded by the U.S Agency for International Development (USAID) and the President's Emergency Plan for AIDS Relief (PEPFAR), and then locally adapted and tailored to key population's needs (Seekaew et al., 2018; TRCARC & FHI 360, 2018). The services were designed in conjunction with the key populations that they serve, and as such are client-centered (TRCARC & FHI 360, 2018).

CBOs doing this work with MSM and/or TGW are Service Workers in Group Foundation (SWING), Rainbow Sky Association of Thailand (RSAT), Sisters, Caremat, and Mplus (Seekaew et al., 2018; TRCARC & FHI 360, 2018). The increased involvement of MSM and TGW in their own HIV prevention and care, and their collaboration with Thai aid organizations, is changing the landscape of the country's HIV-related services. With this collaborative KPLHS model and its innovative service delivery, implemented from January 2015 to January 2018, coverage of these key populations increased by 319%, with referrals by peers increasing by 178% (TRCARC & FHI 360, 2018). These organizations have provided over 2000 individuals with access to PrEP, diagnosed over 3000 PLWH, and initiated almost 70% of those on ARTs (TRCARC & FHI 360, 2018). ART maintenance at these CBOs was determined to be preferable (TRCARC & FHI 360, 2018).

Thailand's prioritization of MSM and TGW in its plan to end its HIV epidemic, and the centering of MSM and TGW in their own care and service delivery, directly

addresses these key populations' substantial barriers to HIV prevention and care. The strategies employed by TRCARC and local CBOs and healthcare settings have the potential to significantly impact these individuals' rates of uptake and access to these life-saving services, and they should be scaled up accordingly. Thus, these approaches, coupled with efforts to decrease stigma and discrimination, are necessary and vital for the future of Thailand's HIV epidemic, as well as the general health and well-being of its LGBTQ community. Thailand's population-specific efforts and deliberate integration of these populations into their own care is a model that can and should be replicated and localized elsewhere.

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# Chapter 8

## Global Epidemiology and Social-Ecological Determinants of Substance Use Disparities, Consequences of Use, and Treatment Options Among Sexual and Gender Minority Populations



Matthew J. Mimiaga, Lynn Klasko-Foster, Christopher Santostefano, Harry Jin, Taryn Wyron, Jackie White Hughto, and Katie Biello

### 8.1 Introduction

Substance use is entwined with individuals' overall well-being, and with mental health in particular. Comorbid mental health conditions are common among individuals who misuse substances. In the United States, 60% of adults with substance use disorders (SUDs) also suffer from another mental illness; rates of mental illness are similar among users of tobacco and alcohol (NIDA, 2018a, b). Sexual minority stress in addition to substance use can negatively impact self-care, lead to

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M. J. Mimiaga (✉)

UCLA Center for LGBTQ+ Advocacy, Research & Health and Department of Epidemiology, UCLA Fielding School of Public Health, Los Angeles, CA, USA  
e-mail: [mmimiaga@ph.ucla.edu](mailto:mmimiaga@ph.ucla.edu)

L. Klasko-Foster

Department of Psychiatry and Human Behavior, Warren Alpert Medical School, Brown University, Providence, RI, USA  
e-mail: [lynne\\_klasko-foster@brown.edu](mailto:lynne_klasko-foster@brown.edu)

C. Santostefano

Center for Gerontology and Healthcare Research, School of Public Health, Brown University, Providence, RI, USA  
e-mail: [christopher\\_santostefano@brown.edu](mailto:christopher_santostefano@brown.edu)

H. Jin

Department of Epidemiology, School of Public Health, Brown University, Providence, RI, USA  
e-mail: [Harryjin10@gmail.com](mailto:Harryjin10@gmail.com)

T. Wyron

Department of Behavioral and Social Sciences, School of Public Health, Brown University, Providence, PA, USA  
e-mail: [twyron@reconstructingjudaism.org](mailto:twyron@reconstructingjudaism.org)

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internalized stigma, and increase sexual risk behavior (Brown & Pantalone, 2011; Johnson et al., 2008; Lehavot & Simoni, 2011; Scheer & Antebi-Gruszka, 2019; Stall et al., 2003).

In order to understand the impact of substance use and misuse, health services research, jointly funded by the US National Institutes of Health (NIH) and the US Department of State, addresses a range of addiction service development questions in low- and middle-income countries. Additionally, research on a variety of substance use disorders has been funded by the World Health Organization (WHO), and the US Substance Abuse and Mental Health Services Administration (SAMHSA) administers an annual survey of adolescents and adults in the United States with respect to substance use and misuse and health. Each category of substances generates a particular cluster of effects of the drug on the central nervous system and limbic system (NIDA, 2012). The long-term effects of misuse of the various categories of substances are outlined below.

**Legal Substances** Across the globe, many countries regulate the legal use of alcohol and tobacco by adults (ages vary by country). Effects of long-term alcohol use can include heart and liver disease, as well as fetal damage for pregnant women (NIDA, 2012). Tobacco use is associated with many cancers, along with lung and cardiovascular disease (NIDA, 2012).

**Cannabinoids** The legal status of marijuana is mixed according to country-specific and state laws, with patchwork legalization of medical marijuana use and recreational use (NASEM, 2017). Among all drugs, marijuana is used most commonly; 20.6 million people aged 12 or older in the United States used it in the past month (SAMHSA, 2018). In clinical research, cannabis has been noted to have therapeutic effects as a pain reliever but is also linked to cancers and respiratory disease (when smoked) (NASEM, 2017).

**Tranquilizers** It is not uncommon for individuals to misuse prescribed tranquilizers such as benzodiazepines. In 2017, 1.7 million people in the United States over the age of 12 reported illicit tranquilizer use in the past month (SAMSHA, 2018). These prescription sedatives work to calm or sedate a person by raising levels of the neurotransmitter GABA found in the brain (NIDA, 2018c).

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J. W. Hughto

Department of Epidemiology, School of Public Health, Brown University, Providence, RI, USA

Department of Behavioral and Social Sciences, School of Public Health, Brown University, Providence, RI, USA

e-mail: [jaclyn\\_hughto@brown.edu](mailto:jaclyn_hughto@brown.edu)

K. Biello

Department of Behavioral and Social Sciences, School of Public Health, Brown University, Providence, RI, USA

e-mail: [katie\\_biello@brown.edu](mailto:katie_biello@brown.edu)

**Narcotics** The misuse of opioids, including prescription pain medication and illicit heroin use, has reached large-scale crisis in the United States, with more than 100 deaths daily due to opioid overdose. According to the National Survey on Drug Use and Health (NSDUH), “In 2017, an estimated 11.4 million people misused opioids in the past year, including 11.1 million pain reliever misusers and 886,000 heroin users” (SAMHSA, 2018, p. 18). Because opioid intoxication affects the brain stem, which controls heart rate, breathing, and sleeping, overdose carries a high risk of lethality (NIDA, 2018b).

**Stimulants** Cocaine, amphetamines, and methamphetamines are highly addictive and raise the risk of stroke, cardiac conditions, or seizures (NIDA, 2012). Over time, cocaine use depletes the levels of dopamine D2 receptors in the brain, which may affect users’ ability to exercise self-control (NIDA, 2018b).

**Hallucinogens** Lysergic acid diethylamide (LSD) is classified as a hallucinogen (inducing altered states of sensory perception), while phencyclidine (PCP) and Ketamine are identified primarily by their dissociative effects (causing users to feel separate from their bodies and/or the surrounding environment) (NIDA, 2012). Methylendioxyamphetamine (MDMA), more commonly known as ecstasy, affects the body’s processing of the neurotransmitter serotonin, which induces empathic feelings. It is classified as a club drug alongside Rohypnol and Gamma-hydroxybutyrate (GHB), which have strong sedative effects (NIDA, 2012).

**Anabolic-Androgenic-Steroids** The misuse of anabolic-androgenic steroids by adolescent boys and adult men with body image concerns—with higher rates of use among gay and bisexual men—has been found to cause cardiovascular and endocrine damage over the long term (Blashill & Safren, 2014; NIDA, 2017).

This chapter identifies current research findings on substance use and misuse for sexual and gender minority populations across the globe. It explicates some of the multi-dimensional health and social consequences that follow from substance misuse and that must be considered in the development of effective treatment for sexual and gender minority individuals (NIDA, 2018a). Given the members of sexual and gender minority communities embody tremendous heterogeneity, it is not possible to generalize all experiences of members of these varied groups. Rather, this summary will review current and emerging research trends focused on risk and protective factors for substance misuse and associated health concerns for sexual and gender minority individuals, with specific attention to the “social discrimination, personal and community social and behavioral risk factors, and certain unique medical conditions” that may emerge from individuals’ specific gender identities or sexual practices (Johnson et al., 2008, pp. 214–215).

## 8.2 Epidemiology

In 2017, 5.5% of the world’s population (ages 15–64) engaged in some form of substance use (UNODC, 2019). Estimates over the past 10 years show increasing use of opioids in Asia, Africa, Europe, and North America and increasing

use of cannabis in Asia, North America, and South America (UNODC, 2019). While cannabis use is the most widespread (188 million people reported using cannabis in 2017), global opioid use is rapidly increasing. In 2017, 53 million people reported use of opioids, an increase of over 50% from 2016 data (UNODC, 2019).

Sexual and gender minorities experience significantly elevated rates of substance use and substance use disorders compared to cisgender heterosexuals (Marshal et al., 2008; Schuler et al., 2018). Global research shows a pattern of higher rates of alcohol-related problems, alcohol-use disorders, and marijuana and illicit drug use among SMW compared to heterosexual women (Hughes et al., 2020).

And global surveillance suggests that non-binary individuals and transgender women (TGW) have greater odds of substance use than other gender groups (Connolly et al., 2020). In the United States, national survey findings show that compared to heterosexuals, sexual and gender minority individuals are more likely to be heavy tobacco smokers, smoke marijuana, use illicit drugs, and be heavy drinkers (Cochran et al., 2013; Gonzales et al., 2016; Roxburgh et al., 2016). There is also an indication that sexual minority individuals in the United States are more likely to misuse opioids compared to heterosexuals (Anderson-Carpenter & Rutledge, 2020; Capistrant & Nakash, 2019; Duncan et al., 2019; Girouard, 2018; Morgan et al., 2020) and are prescribed opioids at higher rates (Girouard et al., 2019; Robinson et al., 2020). This disparity in lifetime opioid misuse is consistent across population subgroups including military veterans (Anderson-Carpenter & Rutledge, 2020) and youth (Wilson et al., 2020). However, these results are likely underestimated as some national data systems, such as the NSDUH, have only begun collecting data on sexual orientation within the last 5 years. As increasing representativeness of data to include sexual and gender minority Americans is a national priority, the scope of drug and alcohol-related disparities will likely become clearer over the next decade.

There is generally a lack of sexual and gender minority population-level, country-specific data on the prevalence of substance use and misuse. Internationally, measurement issues exist in determining the incidence and prevalence of substance use among LGBT-GNC populations, as 70 countries criminalize same-sex behavior, which is a major deterrent to data capture (ILGA, 2019). For transgender population health research, survey items are not standardized and consistently operationalized, which limits both accurate surveillance and generalizability (Reisner et al., 2016a). Additionally, much of the focus of empirical research does not include sexual minority women (SMW), and the majority of research on SMW and substance use has been conducted in the United States (Hughes et al., 2020). In this section, we report on the epidemiology of substance use across Africa, Asia, the Americas, and Europe. We then provide an overview of the epidemiology of substance use and addiction by sexual and gender minority groups.

## ***8.2.1 Epidemiology of Substance Use Among Sexual and Gender Minorities: Africa and the Middle East***

Substance use data among sexual and gender minorities in Africa are very limited, with differences in availability of surveillance based on sexual orientation or gender identity. For some countries, such as Nigeria and Mozambique, more data are available for urban areas. For example, in Lagos, 15.4% of men who have sex with men (MSM) were reported to be current smokers (Odukoya et al. 2013). In terms of alcohol consumption, 34.1% of MSM in Lagos were current drinkers, and half of the current drinkers were described to have a drinking problem (Odukoya et al., 2017). Furthermore, 43.8% of MSM in Maputo were classified as problem drinkers (Sandfort et al., 2017). Cannabis use in the 12 months preceding the survey was reported by 11.8% of MSM in Maputo; less than 3% of MSM used other drugs (Sandfort et al., 2017). There has been a rapid increase in the number of studies on substance use as a risk factor for HIV/AIDS in sub-Saharan Africa; however, the majority of these studies have focused on heterosexuals (Hahn et al., 2011; Kalichman et al., 2007; Woolf-King & Maisto, 2011).

### **8.2.1.1 Sexual Minority Men**

A systematic review of research focused on substance use and HIV among MSM in Africa found that, compared to African heterosexual men, MSM report more frequent alcohol consumption (Sandfort et al., 2017). The prevalence of alcohol use varies greatly by country among MSM – 50% in South Africa (McAdams-Mahmoud et al., 2014) to 100% in Kenya (King et al., 2013). Alcoholism is also prevalent in certain African countries. For example, one study found that 44.4% of Black MSM in South Africa were classified as hazardous drinkers based on the AUDIT scale (Sandfort et al., 2015), a simple and effective method of screening for unhealthy alcohol use, defined as risky or hazardous consumption or any alcohol use disorder. Additionally, the proportion of MSM categorized as hazardous drinkers ranged from 32.3% to 43.8% in Mozambique (Nala et al., 2015), and 22.7% of MSM in Kenya are estimated to be alcohol dependent (Muraguri et al., 2015). Cannabis is the most commonly used drug among MSM across the African continent (Sandfort et al., 2017). Approximately 8.2% of MSM used cannabis in the past 12 months (Chapman et al., 2011), and 29% reported ever using cannabis (Nyoni & Ross, 2013). The review also identified a study conducted in a health clinic in South Africa, which reported that 37% of their MSM patients reported having ever used crystal methamphetamine (Sandfort et al., 2017). Injection drug use (IDU) is a public health concern in certain African countries (Sandfort et al., 2017). The 3-month prevalence of injection drug use ranged from 1.4% of MSM in Kenya (Sanders et al., 2007) to 13.9% in Tanzania (Johnston et al., 2010).

### 8.2.1.2 Sexual Minority Women

Studies in southern Africa also indicate high prevalence of drug and alcohol use among SMW, but there is a lack of research focusing specifically on substance use among lesbian women compared to other groups (Muller & Hughes, 2016).

### 8.2.1.3 Transgender Populations

Studies enrolling gender minority participants in Middle Eastern countries had small sample sizes and use non-probability sampling techniques. Additionally, gender dysphoria diagnosis is often part of inclusion criteria; however, being transgender is not a medical condition, and many transgender individuals do not experience mental health distress associated with differences between their sex at birth and gender identity. As such, findings likely do not describe substance use among transgender individuals across the region. One study in Iran that included both transmen and transwomen with gender dysphoria ( $n = 97$ ) recruited from outpatient sexual health clinics reported lower rates of substance use than the general population (Mazaheri Meybodi et al., 2014). A Turkish study similarly recruiting transgender individuals with gender dysphoria from psychiatric clinics ( $n = 94$ ) indicated that transmen were more likely than transwomen to use tobacco (35% vs. 5%) and alcohol (27% vs. 11%; Başar et al., 2016).

## 8.2.2 *Epidemiology of Substance Use Among Sexual and Gender Minorities: Asia and Australia*

Alcohol and drug use is a serious problem in Asia and Australia among sexual and gender minorities, and more efforts need to be made to address this issue. However, for Asia, it is difficult to make country and city-specific comparisons when it comes to alcohol and drug use due to a lack of population-level data and varying ways of measuring data among sexual and gender minority populations. Data from Melbourne, Australia, shows that 22.0% of sexual minorities reported drinking that exceeds lifetime risk guidelines, and 38.0% reported drinking that exceeds single-occasion risk guidelines (Tantirattanakulchai & Hounnakklang, 2021). Additionally, 16% of lesbian, gay, and bisexual individuals in Melbourne reported smoking tobacco daily (Australian Institute of Health and Welfare, 2021). On average, the prevalence of any substance use over the prior year in Melbourne among this population is 40.0% (Tantirattanakulchai & Hounnakklang, 2021).

### 8.2.2.1 Sexual Minority Men

In terms of meeting diagnostic criteria for alcohol use disorder, the highest was seen in the Philippines with a prevalence of 24.7% among MSM whereas gay and bisexual men in the Philippines have a 71.3% prevalence of smoking (Manalastas, 2012). The body of research describing substance use among MSM in Asia is also growing. Illicit substances, particularly amphetamine-type stimulants (e.g., ecstasy, methamphetamine), have become more common in Asia and Southeast Asia (McKetin et al., 2008). A study in Indonesia found that approximately 15% of MSM reported using methamphetamine before having sex; however, the proportion of MSM who have done so is higher in major cities, such as Jakarta (31%) and Medan (25%) (Morineau et al., 2011). Similarly, a study in Thailand reported that of the 19.2% of their sample who used illicit drugs, 32.0% used methamphetamine, 50.0% used club drugs (e.g., ketamine, ecstasy), and 42.0% used sedatives/hypnotics in the past 3 months (Newman et al., 2012). Studies conducted in China reported that 40–77% of MSM used synthetic drugs (e.g., methamphetamine, mephedrone, poppers) (Luo et al., 2018).

An online cross-sectional study of 10,861 MSM across Asia reported that 16.7% of participants reported recreational drug use in the past 6 months, with ecstasy (8.1%) and Viagra (7.9%) being the most common recreational drugs (Wei et al., 2012). Another study of MSM in China found that 28.0% of 3830 participants reported recreational drug use in the past 6 months (Xu et al., 2014a, b). The most common recreational drug used was poppers, used by 26.5% of the sample in the past 6 months. Substance use among MSM in Japan is also common with approximately 65% self-reporting lifetime substance use (Hidaka et al., 2006). This study also found that substance use primarily involves poppers, with 63.2% of their sample reporting lifetime use.

### 8.2.2.2 Sexual Minority Women

Lesbian and bisexual women in the Philippines have a startlingly high prevalence of smoking, at 24.3%. This statistic is mirrored in Australian research, which has found that among lesbian and bisexual women, 30% percent were current smokers, including 48% of 16- to 24-year-olds (Deacon & Mooney-Somers, 2017). Also in this setting, lesbian and bisexual women, are more likely to partake in high-risk drinking and daily drinking, and to report ever having attended treatment than heterosexual women (Roxburgh et al., 2016). The Australian Longitudinal Study on Women's Health (ALSWH) further supports this finding (Hughes et al., 2010). From these data, we see that there is a need to address the issue of smoking and alcohol use among lesbian and bisexual women.

### 8.2.2.3 Transgender Populations

There are limited data available among transgender individuals at the population level. The data that are available reveal that 79.1% of transgender women and 75.1% of transgender men in Bangkok, Thailand reported using alcohol in the previous year (Wichaidit et al., 2021). In that same region, the data specific to smoking (i.e., using tobacco products) shows that 67.0% of transgender women and 56.9% of transgender men report having smoked in the previous year (Hiransuthikul et al., 2019). Specifically among transgender women in this same region, the prevalence of sexualized drug use was high, with 52.7% reporting this behavior in the prior 12 months (Newland & Kelly-Hanku, 2021); with respect to specific drugs, marijuana prevalence was 6.2% (versus 2.9% among their cisgender peers), kratom was 4.9%, and 1.9% reported crystal methamphetamine use (Hyde et al., 2013).

## 8.2.3 *Epidemiology of Substance Use Among Sexual and Gender Minorities: Central and South America*

### 8.2.3.1 Sexual Minority Men

Among an online sample of MSM covering all Latin American countries, 16% percent reported hazardous alcohol use, and 5.3% reported any hard drug use (e.g., methamphetamine, GHB, cocaine, etc.) in the past 30 days (Mimiaga et al., 2008a, b, c). In Chile, the prevalence of sexualized drug use is 24%, with cannabis, poppers, and Viagra most often used (Donoso & Ávila, 2020). In Peru, 58% of MSM reported problematic drinking in one study, which was significantly associated with risky sexual behavior (Deiss et al., 2013). Research conducted across Latin American countries concludes that MSM with histories of childhood trauma are more likely to engage in hazardous alcohol use (Wang et al., 2017),

### 8.2.3.2 Sexual Minority Women

SMW in Latin America and the Caribbean also report higher rates of tobacco and alcohol use than heterosexual women (Caceres et al., 2019). SMW in Mexico reported significantly more alcohol and tobacco use and more experiences of discrimination and violence than same-age heterosexual women, (Ortiz-Hernandez et al., 2009). In another study only sampling sexual minority Mexican women, 21% met the criteria for alcohol dependence (Ortiz-Hernández & García Torres, 2005). In Colombia, sexual minority adolescent girls reported sixfold greater illicit drug use compared to heterosexual youth (Díaz et al., 2005). Of 145 women recruited during Pride activities in Sao Paulo, Brazil, 62% reported frequent use of alcohol, 50% reported frequent use of tobacco, and 77% reported past year drug use, with 45% of these women reporting marijuana use and 16% reporting cocaine use (Pinto et al., 2005).



### 8.2.3.3 Transgender Populations

Findings from an online survey of over 200 Brazilian transgender youth indicated that cannabis and pain medication are frequently used by this population (Fontanari et al., 2019). A study assessing factors associated with viral suppression in 50 transwomen living with HIV in Peru reported high rates of problematic alcohol and drug use and associations between moderate to severe drug use and decreased likelihood of viral suppression (Rich et al., 2018).

## 8.2.4 *Epidemiology of Substance Use Among Sexual and Gender Minorities: North America*

Across the Americas, research indicates that alcohol and drug use is prevalent among gay, bisexual, and other MSM, and transgender women. According to Pakula et al., 26.2% of gay, bisexual, and other MSM reported drinking alcohol at least 3 days per week, and 10.6% were heavy drinkers. Meanwhile, marijuana was the drug most likely to be used (across New York, Chicago, San Francisco, and Denver, on average, 46.3% used), followed by 36.6% poppers (amyl nitrates), 24% hallucinogens, 19.3% cocaine and 12.9% crystal methamphetamine (Koblin et al., 2003). In addition, 10% of these MSM had recent injection drug use. In terms of transgender women, drug use did not vary much by US. city, with 11.2%, on average, having alcohol dependence and 15.2%, on average, having substance use dependence (Reisner et al., 2016b). Lastly, a study describing substance use among LGBTQ+ individuals in Mexico revealed that 94% reported current alcohol use, and 58% reported tobacco use (Zavala-Arciniega et al., 2020; Hoetger et al., 2020).

### 8.2.4.1 Sexual Minority Men

Alcohol use and binge drinking among gay men is a serious public health concern in both the United States and abroad (Bux, 1996; Irwin et al., 2006; Liu et al., 2016; Mimiaga et al., 2011, 2015). In the United States, the National HIV Behavioral Surveillance system, which recruits study participants from 20 US cities, estimates that approximately 85% of MSM are current drinkers and 59% binge drank at least once in the past month (Hess et al., 2015). Recent data from the National Health Interview Survey shows that MSM had increased odds of binge drinking and smoking tobacco compared to heterosexual men (Gonzales et al., 2016). A study conducted among MSM in San Francisco found that 67% reported binge drinking at least once in the past year compared to only 23.2% of heterosexual men (Center for Disease Control & Prevention, 2012). In comparing within the MSM category, one study found that bisexual men had higher rates of cigar use compared to gay men (Schuler & Collins, 2020).

### 8.2.4.2 Sexual Minority Women

Substance use among SMW does not closely resemble the behaviors of MSM since illicit drug use is uncommon. Among lesbian communities, heavy alcohol and tobacco use are the most pervasive health issues (Hughes, 2003). National Health Interview Survey data from the United States shows that compared to heterosexual women, sexual minority women have increased odds of heavy drinking (OR, 2.63; 95% CI, 1.54–4.50) and heavy smoking (OR, 2.29; 95% CI, 1.36–3.88) (Gonzales et al., 2016). In a primarily Black and Latina sample in the United States, SMW were more likely to have developed cocaine and/or crack dependency compared to heterosexual women (Ompad et al., 2011). These results have been confirmed by epidemiologic surveys at the state level (Aaron et al., 2001; Gruskin & Gordon, 2006). A meta-analysis of studies conducted in seven countries in North America, Europe, and Australasia found that the risk of past-year alcohol and other drug dependence was 4 times higher among SMW than heterosexual women for alcohol dependence and 3.5 times higher for drug dependence (King et al., 2008).

One study examining illicit drug use among SMW found that marijuana was the only commonly used illicit drug, with 33% of their sample having used marijuana in the past year (Corliss et al., 2006). Study participants also reported using other illicit drugs, such as stimulants (6.0%), methamphetamine (2.1%), tranquilizers (11.6%), and sedatives/hypnotics (8.0%).

Bisexual women may be at greater risk for substance use and substance use disorders compared to women who only have sex with women or who only have sex with men (Ford & Jasinski, 2006; Halkitis & Palamar, 2008; Tucker et al., 2008; Wilsnack et al., 2008), even when controlling for openness about sexual orientation (Thiede et al., 2003). Bisexual women are more likely to be heavy drinkers and smoke tobacco (Gonzales et al., 2016) and use illicit drugs (Paschen-Wolff et al., 2019) compared to heterosexual women. Among sexual minorities, bisexual women also had higher rates of substance use compared to lesbian/gay women (Schuler & Collins, 2020). One possible explanation for these disparities is lack of social capital and minority stress, as bisexuals experience prejudice and discrimination from homosexuals and heterosexuals (Balsam & Mohr, 2007; Fox, 2013).

### 8.2.4.3 Transgender Women

Although the body of research examining substance use disorders among transgender communities is still limited (Flentje et al., 2015), existing studies report that transgender women exhibit high rates of alcohol, marijuana, illicit drug, and non-medical prescription drug use (Benotsch et al., 2013; Cochran & Cauce, 2006; Garofalo et al., 2006; Hughes & Eliason, 2002; Peacock et al., 2015; Reisner & Murchison, 2016; Santos et al., 2014). In the United States, the majority of studies that focus on the health of transgender women have relied on convenience sampling since national surveys only recently began including gender identity-related questions that allow respondents to indicate they are transgender (Flentje et al., 2015).

A prospective cohort study of transgender women in New York City reported that 76.2% of their sample used any substances (e.g., alcohol, cannabis, cocaine, heroin, amphetamines, methamphetamines, LSD, etc.) within 6 months prior to enrolling in the study (Nuttbrock et al., 2014). When examining substance use at all study assessments (6, 12, 24, and 36 months), the range of period prevalence estimates were high for any substance use (72.8–78.2%), heavy alcohol use (48.4–60.4%), cannabis use (29.1–40.0%), and cocaine use (20.7–25.3%).

A respondent-driven sampling study examining the health of 314 transgender women in San Francisco reported similarly elevated rates of substance use (Santos et al., 2014). This study found that in the past 6 months, 58.0% of transwomen drank alcohol. Additionally, they found that in the past 12 months, 29.0% used marijuana, 20.1% used methamphetamine, 13.4% used crack cocaine, and 13.1% used club drugs (i.e., ecstasy, GHB, ketamine, poppers).

There is a lack on research of non-medical use of prescription drugs among transgender women; however, one study found that 24% of 104 transgender women sampled reported lifetime non-medical use of prescription drugs (i.e., analgesics, anxiolytics, stimulants, and sedatives) (Benotsch et al., 2016).

Substance use among adolescents in the general population of the United States has declined over the past decade; however, disparities with respect to substance use are widening between sexual and gender minority youth and their cisgender heterosexual counterparts (Homma et al., 2016; Hughes & Eliason, 2002). Transgender youth are more likely to begin using substances earlier than cisgender youth (Day et al., 2017), and there is growing evidence that transgender adolescents have greater odds of using alcohol, marijuana, and other illicit drugs compared to cisgender peers (Reisner et al., 2015). These results were consistent with other studies of adolescent transgender populations. A study reported that US transgender students had 2.5 times the odds of using cocaine or methamphetamine during their lifetime and more than 3 times the odds of using cigarettes at school compared to cisgender students (De Pedro et al., 2017). Another study of ethnic minority MTF transgender youth found that within the past year, 71% of their cohort used marijuana, 65% used alcohol, 23% used ecstasy, and 21% used cocaine (Garofalo et al., 2006).

Despite many studies reporting high rates of substance use among transgender women, there is a lack of evidence-based interventions and programming specifically designed to meet the healthcare and welfare needs of this population, further exacerbating the health disparities between the transgender and cisgender communities (Glynn & van den Berg, 2017).

#### **8.2.4.4 Transgender Men**

There has been a recent shift in the field of public health to prioritize research to better understand the health of transgender men and women; however, very few empirical, peer-reviewed studies focusing on the health of transgender men have been published (MacCarthy et al., 2015). One US-based study found that in the past 3 months, approximately 10% of the sample of 468 transgender men engaged in

regular heavy alcohol use, 10% binge drank, 31% used marijuana, and 11.5% used another illicit drug (Horvath et al., 2014). A study conducted among transgender men who were patients at a community health center in Boston, Massachusetts also found high rates of current substance use (Reisner, White, et al., 2014b). The authors reported that 65.2% of their sample of 23 transgender men drank 5+ alcoholic beverages a week, 17.4% were current marijuana users, 13.0% were current tobacco smokers, and 69.6% used any substance.

#### **8.2.4.5 Racial and Ethnic Disparities**

Social acceptability of drinking and drug use can be tied to both culture and gender, impacting use patterns (Hughes et al., 2016). As such, in countries that value traditional gender roles, whereby it is more acceptable for men to drink alcohol than women, alcohol use rates may diverge more for sexual minority women than men (Talley et al., 2014). National Youth Survey data from Mexico reports greater alcohol use among sexual minority women as compared to heterosexual women, but no difference between men based on sexual orientation (Ortiz-Hernández, 2005). An analysis of BRFSS data in the US state of Washington shows similar patterns for Hispanic sexual minority women compared to their Hispanic heterosexual counterparts (Kim & Fredriksen-Goldsen, 2012).

#### **8.2.5 *Epidemiology of Substance Use Among Sexual and Gender Minorities: Europe***

Comparisons regarding alcohol and drug use across cities in Europe are challenging because not every city has disaggregated data among sexual and gender minorities, and the data that are measured and reported vary in terms of quantity, frequency, and severity of use versus a diagnosis of substance use disorder. Data that were available at the population level revealed that 35.4% of MSM in Dublin report current smoking, and in Copenhagen, 1 in 5 LGBT individuals smoke daily, and 25.0% of bisexual women smoke cannabis in this setting (Barrett et al., 2019; Hansen et al., 2018). In Glasgow and London, 15.0% of LGBT individuals report smoking every day; whereas 43.1% of MSM in Paris report using cigarettes or e-cigarettes daily (Bachmann & Gooch, 2018; Bridger et al., 2019; Park et al., 2018).

In Copenhagen, 16.0% of gay men exceed the high-risk limit (21 units of alcohol/week), and 17% of transgender individuals drink more than 17.5 units/week (Hansen et al., 2018). Among LGBT individuals in London and Glasgow, 16% and 14% report daily drinking, respectively (Bachmann & Gooch, 2018; Bridger et al., 2019). Among MSM in Dublin, 58% report binge-drinking in the last 12 months, whereas 46.7% of MSM in Paris report alcohol use (five or more drinks in one sitting) (Barrett et al., 2019; Park et al., 2018).

### 8.2.5.1 Sexual Minority Men

In terms of meeting diagnostic criteria for potential alcohol dependency, the highest was seen in Kyiv with a prevalence of 30.6% among MSM, followed by Berlin (22.1%), Vienna (21.8%), Brussels (18.0%), Lisbon (14.8%), Madrid (14.9%), Prague (14.4%), Amsterdam (13.5%), Milan (10.8%), and Athens (10.1%). In a study of over 1300 MSM in Moscow utilizing respondent-driven sampling, 32.4% endorsed hazardous drinking, and 20.3% endorsed alcohol dependence (Wirtz et al., 2016). Multivariate logistic regression analysis showed that the odds of inconsistent condom use, selling or buying sex, and recreational drug use were twofold for hazardous and dependent alcohol users relative to low-level drinkers. Alcohol dependence was also associated with fourfold odds of injection drug use (Wirtz et al., 2016).

While alcohol is among the most commonly used substances by MSM, illicit stimulant drugs have become more ubiquitous in gay communities. Researchers in England and Wales found that, compared to heterosexual men, gay and bisexual men were three times more likely to have used an illicit drug in the past 12 months and seven times more likely to have used illicit stimulants drugs (e.g., cocaine and ecstasy; Hunter et al., 2014). Among MSM in Paris and Dublin, 54.5% and 36.0%, respectively, have a prevalence of any current illicit substance use (Barrett et al., 2019; Park et al., 2018). Importantly, in terms of active use, 11% and 13% of LGBT individuals (18–24 years old) in Glasgow and London, respectively, report using drugs at least once a month (Bachmann & Gooch, 2018; Bridger et al., 2019). Among over 1500 sex workers in Amsterdam, MSM were more likely to use illicit drugs, including cocaine, nitrites, and erectile performance drugs, only during sex work compared to male sex workers with strictly female clients (40.5% of MSM compared to 20.0% MSW; Drückler et al., 2020). The most cited reasons for drug use during sex were “sex work becomes physically easier,” and “the client asked for it” (Drückler et al., 2020, p. 120).

### 8.2.5.2 Sexual Minority Women

There are no available studies that provide disaggregated data examining the substance use of sexual minority women in Europe nor comparing their substance use to that of their heterosexual counterparts.

### 8.2.5.3 Transgender Populations

In the same study of drug use behavior among sex workers in Amsterdam, trans-feminine sex workers were more likely to use drugs only during sex work compared to men who only had sex with female clients (40.0% compared to 20.0%, Drückler et al., 2020).

### 8.3 Social-Ecological Determinants

The root causes of increased substance use and substance use disorders among sexual and gender minorities are complex. As such, examination of factors beginning at the individual level and extending to social and structural factors is important to understanding the breadth of the problem and designing effective interventions to increase health equity. Below, we compile evidence-based explanations for sexual and gender minority substance use/abuse disparities, including minority stress and related mental health issues; social, interpersonal, and cultural factors; and structural/environmental factors.

#### 8.3.1 *Sexual and Gender Minority Stress Model: A Framework for Understanding Disparities*

The minority stress model posits that sexual and gender minority populations experience stressors unique to their sexual orientation or gender identity. These stressors can be related to external experiences (e.g., discrimination), anticipated social stigma (e.g., hiding identity), or internalized/enacted homophobia/transphobia. Each of these experiences can create hostile and stressful social environments that increase the risk of poor mental health outcomes (Meyer, 2003). Minority stress compounded on top of stressors experienced by the general population is thought to put minorities at elevated risk for poor health outcomes (McCabe et al., 2010). Minority stress experienced by sexual and gender minority individuals is associated with an increase in the risk of substance use (Amadio, 2006; McCabe et al., 2010), which has been found to serve as a coping mechanism to mollify the effects of discrimination (Goldbach et al., 2014; Green & Halkitis, 2006; Mereish et al., 2014).

#### 8.3.2 *Psychosocial Factors that Potentiate Substance Use*

Sexual and gender minority populations are more likely than cisgender heterosexuals to experience poor mental health (see Mental Health chapter, Chap. 3) (Lea et al., 2014). A recent meta-analysis found that compared to cisgender heterosexuals, sexual and gender minorities experienced more severe depressive symptoms, greater likelihood of reporting a suicide attempt, and greater odds of substance use (Marshall et al., 2008, 2011). Both mental health and substance use disparities between sexual and gender minorities and cisgender heterosexuals emerge early in adolescence and continue through adulthood (Bränström et al., 2016; Dermody et al., 2014; Marshall et al., 2008). A national longitudinal study of substance use and mental health among sexual minorities in the United States found that while these disparities manifest early in life, evidence suggests the disparities do not increase over time (Needham,

2012). Other studies also suggest that the severity of mental health issues and substance use can be elevated by minority stress and often co-occur among sexual and gender minorities (Pachankis, 2015; Pakula et al., 2016a; Rosario et al., 2009); however, research evaluating how substance use exacerbates mental health issues or vice versa among sexual and gender minorities is limited.

A compelling body of global research shows that sexual and gender minorities are more likely to experience victimization (see *Victimization and Intentional Injury* chapter, Chap. 9; Balsam et al., 2005; D'Augelli, 2003; Hughes et al., 2007) and substance use (Drabble et al., 2005; Omoto & Kurtzman, 2006) compared to cisgender heterosexuals. There is also research suggesting that sexual and gender minority populations who experience victimization are more likely to engage in substance use, possibly to temporarily cope with negative feelings elicited by sexual and gender minority-related victimization (Cooper et al., 1995; Holl et al., 2017; Mereish et al., 2014).

### ***8.3.3 Social, Interpersonal, and Cultural Factors that Drive Use Among Sexual and Gender Minorities***

It is hypothesized that the increased risk in substance use among sexual and gender minorities is due in part to a combination of social, interpersonal, and cultural factors (Demant et al., 2018; Green & Halkitis, 2006; Mereish et al., 2014; Meyer, 2003). Across the globe, affiliation with “gay culture” has been suggested to elevate substance use among sexual and gender minority communities (Green & Feinstein, 2012). Countries in the Global South, including Brazil, South Africa, and Thailand, have active cultural institutions for sexual and gender minorities, such as bars, saunas, bathhouses, massage parlors, etc. (see *Community and Social Support* chapter, Chap. 6; Shrestha et al., 2020; Hattingh & Bruwer, 2020). Researchers have hypothesized that the increase in the number of gay bars in particular may have increased substance use among sexual and gender minorities, especially gay men (Green & Feinstein, 2012). Several studies have found that frequent attendance at gay social venues (e.g., gay bars, bath houses) is associated with higher rates of substance use (Halkitis & Parsons, 2002; Kipke et al., 2007).

### ***8.3.4 The Role of Contextual, Environmental, and Structural Factors in Substance Use Among Sexual and Gender Minorities***

There are several documented barriers to accessing treatment services by sexual and gender minorities (Flentje et al., 2016). Sexual and gender minorities may encounter biases from providers within substance use programs that may result in poor

attendance or discontinuation of treatment (Cochran et al., 2007). Additionally, disparities in health insurance coverage also exist between sexual and gender minorities and cisgender heterosexuals, and as a result, sexual and gender minorities may be less likely to be able to afford substance use treatment (Buchmueller & Carpenter, 2010). Despite these barriers, sexual and gender minorities are more likely to seek substance use treatment compared to cisgender heterosexuals (McCabe et al., 2013).

## 8.4 Consequences of Use

Over time, substance use can cause harm to mental and physical well-being, have legal consequences, and injure or cause severance of social connections. These effects, however, are not standard. While many people experience negative social or health effects as a result of their substance use, some do not. The sequelae of substance misuse often further compound the effects of structural oppression, with negative social consequences of substance use – ranging from stigma to incarceration - carrying a larger impact for individuals who experience marginalization on multiple axes of identity (by both race and gender/sexual minority status, for instance) (McCauley & Brinkley-Rubinstein, 2017).

### 8.4.1 *HIV, Hepatitis C Virus, and Other Sexually Transmitted Infections*

Much of the literature on infectious disease within sexual and gender minority populations addresses the risk for HIV and other sexually transmitted infections (STIs) (see HIV chapter, Chap. 7), but no consensus exists on the specific causal link between substance use and HIV/STI transmission (Abdulrahim et al., 2016). Both non-injection and injection drug use (IDU) have been identified as factors that may increase lifetime risk for acquiring HIV, due in part to the correlation between substance use and unprotected anal intercourse (UAI), more casual sex partners, and other high-risk behaviors, such as transactional sex (Beyrer et al., 2007; Rosenberg et al., 2011). Among gay and bisexual men and other MSM in the United States, using multiple substances immediately before or during sex has demonstrated significantly increased likelihood for UAI (Mimiaga, Mayer, et al., 2008a). In southeast Asia, MSM who reported illicit drug use in the past 3 months had almost six times the odds of inconsistent condom use and nearly three times the odds of exchanging sex with other men for money (Yi et al., 2015). For sexual and gender minority people of color (POC) in the United States, recreational drug use in the context of sex was shown to be correlated with serodiscordant UAI (Mimiaga et al., 2010) and, in one epidemiological model, predictive of positive HIV serostatus (Wilton, 2008). Although stimulant abuse is typically responsive to targeted



psychosocial interventions, in the United States increased risk for HIV/STIs has been observed with the use of hallucinogens and inhalants as well (Koblin et al., 2003; Lambert et al., 2011; Ostrow et al., 2009). Excessive alcohol use is another correlate of hard drug use and high-risk sexual activity among MSM in the United States (Reisner et al., 2010), Latin America (Mimiaga et al., 2015), China (Liao et al., 2014), India (Mimiaga et al., 2011), and Russia (Wirtz et al., 2016).

Substance use may also increase sexual risk-taking by other LGBT and gender non-binary individuals. In the United States, illicit drug use in the past 3 months was identified as a statistically significant mediator of the association between life stress and sexual risk among transgender women (TGW), the majority of whom were POC (Hotton et al., 2013). For Asian/Pacific Islander TGW in the United States, recent use of alcohol or other recreational drugs was associated with greater odds of engagement in transactional sex (Operario & Nemoto, 2005), and further analyses among TGW have suggested that concurrent drug use during commercial sex work may be predictive of HIV incidence (Hoffman, 2014). Because STIs are perceived to be less commonly transmitted among SMW, this group often utilizes sexual health prophylaxis and screening at lower rates, leading to potential missed diagnoses (Estrich et al., 2014). However, in a large sample of Asian Americans, lesbian and bisexual women were about twice as likely as their heterosexual counterparts to have had sex under the influence or had more than one sex partner who may have engaged in transactional sex or IDU in the past 6 months, placing them at increased risk for HIV and other STIs (Lee & Hahm, 2012). Similarly, a national survey in Australia revealed that from 2004 to 2013, over half of SMW surveyed had been exposed to hepatitis C (Iversen et al., 2015). Bisexual women in this study, followed by lesbian women, had significantly greater odds than heterosexual women of transactional sex or needle sharing during IDU.

Several studies have identified women who have sex with women and men (WSWM) who use drugs to be at high risk for HIV. Among drug users in New York, one study found a higher prevalence of HIV in WSW, compared to both heterosexual women and heterosexual men. However, they attributed higher HIV prevalence to high-risk sexual behaviors rather than drug-using risk behaviors (Absalon et al., 2006). Similarly, a study of young Latinx people who inject drugs in Harlem found higher rates of HIV among WSW than heterosexual men (Diaz et al., 2001). A population-based survey in Northern California also found that WSWM were more likely to report high-risk sexual behavior, injection drug use, and serological markers for the hepatitis B and C viruses than women who had sex exclusively with men (Scheer et al., 2002). Poor health outcomes, including increased HIV risk, among drug-using WSWM are theorized to be the result of multiple marginalization due to their gender, sexuality, race, class, and status as illicit drug users (Ompad et al., 2011; Young et al., 2005). For example, compared to other young women, WSW were found to be more likely to have been institutionalized or homeless (Friedman et al., 2003; Ompad et al., 2011). WSW also report higher rates of violence victimization and lower rates of health care utilization (Ompad et al., 2011). Research has shown that many heroin-, crack-, and cocaine-using WSWM prefer women as their relational and sexual partners, but often trade sex with men out of economic

necessity (Bell et al., 2006; Friedman et al., 2003; Ompad et al., 2011; Scheer et al., 2002; Young et al., 2005).

In a qualitative interview study in the United States, many LGBT and gender non-conforming (GNC) people living with HIV (PLWH) reported stimulant or opioid use as a form of avoidance or self-medication to cope with the combined stigma of their disease status with their sexual identity/gender expression (Gonzalez et al., 2013; Semple et al., 2002). Those individuals who also used substances during sex experienced impaired memory and judgment as well as schedule disruptions, leading to missed therapeutic antiretroviral doses and suboptimal treatment, increasing potential HIV transmissibility to their sexual partners (Gonzalez et al., 2013; White et al., 2014). Likewise, over half (60%) of PLWH who sought drug and alcohol support services at a community-based organization in the United Kingdom reported decreased medication adherence while under the influence, and nearly all (90%) believed they had acquired HIV in a drug-using encounter (Stuart, 2013).

Co-infection of HIV with hepatitis C virus (HCV) is frequently seen in PWID, although few studies specific to the LGBT community analyze the determinants of HCV co-infection. Apparent correlates of increased infection risk include duration of drug use, needle sharing, and lack of awareness (Abadie et al., 2017). Even in more developed nations, knowledge and understanding of HCV, compared to other STIs, is fairly low (De Ryck et al., 2011; Iversen et al., 2015), which further isolates minority members. Australian individuals living with HCV described feeling marginalized from the LGBT community due to shared drug use but also ostracized from the PWID community due to their sexual orientation/gender identity, leaving them without support or resources (Deacon et al., 2013).

#### **8.4.2 Chronic Disease**

Variations in data collection and substance availability across countries create challenges in measuring the global burden of disease secondary to drug use; there is a notable scarcity of evidence evaluating newer synthetic drugs and prescription medication abuse. Conversely, non-illicit substances like tobacco and alcohol are known to contribute significantly to chronic disease prevalence, with health complications ranging from liver cirrhosis to cardiovascular disease and cancer, especially in high-income countries (see Non-Communicable Diseases chapters, Chaps. 4 and 5; Degenhardt & Hall, 2012; Rehm et al., 2009). Excessive drinking in the United States is more common in SMW and gay and bisexual men (GBM) than their heterosexual counterparts, with the highest rates observed among lesbian women (Fredriksen-Goldsen et al., 2013). Similarly, elevated smoking rates have been noted within the United States LGBT community (60–70% higher than national averages), with the highest among self-identified gay men of color (Greenwood & Gruskin, 2007; Tang et al., 2004) but with greater incidence and severity of lung disease in women (Pinkerton et al., 2015).

Research in the United States has suggested that tobacco use within minority communities may be due to an absence of cessation programs tailored to address sexual and gender minority-specific barriers, such as minority stress and a lack of engagement with health services (Gruskin et al., 2007; Matthews et al., 2013). This places LGBT and GNC people at increased risk for respiratory diseases, including lung cancer. Compared to other chronic conditions exacerbated by tobacco, the odds for asthma among SMW and GBM appear to differ more strongly by socioeconomic status than by sexuality (Dilley et al., 2010; Fredriksen-Goldsen et al., 2013), and a review of data on the incidence of chronic obstructive pulmonary disease in marginalized individuals was inconclusive (Clausen & Morris, 2017). Given that smoking and alcohol abuse are reciprocal risk factors, there is also overlap in the pathophysiology of their disease sequelae. Frequent tobacco and alcohol consumption predispose users to cardiovascular disease regardless of sexual orientation or gender identity, but there are noteworthy differences among minority subgroups: multiple US studies have identified an above-average prevalence of obesity among lesbian women, followed by bisexual and TGW (Boehmer et al., 2007; Fredriksen-Goldsen et al., 2013; Lim et al., 2014; Roberts et al., 2003). As such, SMW who drink heavily and smoke face increased odds for cardiac morbidity and early mortality over other LGBT persons (Conron et al., 2010; Dilley et al., 2010).

Substance use by sexual and gender minority individuals also has the potential to aggravate certain cancers. Most anal cancer tumors are secondary to human papillomavirus, which is more widespread among MSM who engage in receptive anal intercourse (Daling et al., 2004; Machalek et al., 2012). In an American Cancer Society study, smoking was observed to increase the odds of anal cancer development in MSM nearly fourfold (Daling et al., 2004); additionally, sexual risks under the influence, HIV co-infection (Frisch et al., 2003), and having multiple sex partners (Lim et al., 2014) appear to be associated with anal cancer incidence. Data on breast cancer in sexual minority women are inconclusive, but obesity and substance abuse have been cited as precursors to breast cancer among SMW (Fredriksen-Goldsen et al., 2013; Graham et al., 2011) – however, the risk for breast cancer mortality does not appear to differ by sexuality (Cochran & Mays, 2012; Lim et al., 2014).

Though there is a general lack of chronic health information focusing on bisexual individuals of any gender, population-based surveys in the United States revealed significantly elevated substance-related risk behaviors, including binge drinking, daily tobacco use, and recent illegal drug use among bisexual persons (Conron et al., 2010). Such chronic drug abuse practices have been correlated with increased odds for asthma, diabetes, and hypertension compared to exclusively lesbian women or gay men (Dilley et al., 2010). Bisexual adults in North America also use statistically fewer protective and preventive health services, compounding their likelihood of early mortality (Lim et al., 2014; Smalley et al., 2016). Along those lines, transgender individuals in the United States are 1.5 times as likely as the general population to smoke, even though nearly three-quarters of them want to quit (Grant et al., 2010). The National Transgender Discrimination Survey report in the United States estimated that, as of 2010, over a quarter (28%) of transgender persons avoided

medical care or rehabilitation due to experiences of discrimination, for which they used alcohol and drugs to cope, creating a vicious cycle of health inequity with “catastrophic consequences” (Grant et al., 2010; Lim et al., 2014).

### **8.4.3 Incarceration**

Despite jail time serving as a punishment for illicit drug use, a 2007 European review observed prisons to be risk environments where many individuals may continue to use or even take drugs for the first time (Dolan et al., 2007). Additionally, in the United States, incident HIV cases tend to be disproportionately clustered in prisons where viral transmission is fostered by both drug-seeking and sexual-risk behaviors (Wohl et al., 2006). The intersection of substance abuse and infectious disease in the prison environment is particularly burdensome for LGBT and GNC individuals, most notably POC, who already face disparate social and legal hurdles placing them at greater lifetime risk for incarceration (McCauley & Brinkley-Rubinstein, 2017). Although there is a general lack of applied inquiry in the field of justice involvement, the dearth of social services tailored toward sexual and gender minority members with a substance use disorder may be a contributing factor to their overrepresentation in the prison environment (Reisner et al., 2014a).

Stimulants, like methamphetamine and cocaine, (Rawstorne et al., 2007) and IDU (Operario et al., 2011) are all correlates of unprotected sexual risk behaviors that are also common within prisons and among individuals with a history of incarceration for substance use (Cochran & Cauce, 2006). Past qualitative interviews with MSM and TGW inmates have revealed that, aside from drug intoxication, an absence of harm reduction resources (i.e., clean needles, condoms, counseling) in United States jails is a primary contributor to continued “unsafe” behaviors (Harawa et al., 2010). Meanwhile, countries such as Germany, Spain, and Switzerland have piloted needle exchange programs for prisoners without observing any increase in illicit drug use (Jürgens et al., 2009; Okie, 2007). Barriers to self-care and health maintenance in jail can also be particularly disruptive for PLWH who rely on daily antiretroviral therapy; in the absence of focused discharge planning and linkage to care upon release, these people may be at risk for an increased viral load subsequent to medication non-adherence and IDU dependence fostered during incarceration (Jürgens et al., 2009; Khan et al., 2019; Palepu et al., 2004).

Few studies have explored the nature of legal consequences associated with high-risk drug exchanges in sexual and gender minority populations. In 2018, a history of transactional sex, as a form of survival or to sustain an addiction in the absence of supportive therapy, showed an independent correlation with incarceration among both MSM (Philbin et al., 2018) and TGW in the United States (Hughto et al., 2018). Although data specific to transgender persons are fairly limited, in the United States, tobacco use and polysubstance use have been identified as comorbidities of criminal justice involvement in addition to negative consequences like sexual victimization while in jail and HIV infection (Brennan et al., 2012; Brown &

Jones, 2015; Reisner et al., 2014a, b). LGBT and non-binary POC in the United States are generally more likely to be imprisoned in relation to substance possession or dependence, compared to white LGBTQ people. In a large sample of Black MSM in the northeast United States, crack use during sex and IDU both increased the probability of a prior incarceration lasting longer than 90 days (Bland et al., 2012). Among a primarily Black and Latina female sample in the United States, WSW were more likely to have an illegal income source, sell drugs, trade sex for money or drugs, and have a history of incarceration compared to heterosexual women (Ompad et al., 2011). Another study demonstrated that the odds of incarceration were greatest among Black TGW compared to MSM when controlling for alcohol and drug use, which were both independently associated with jail time in the United States (Brewer et al., 2014). The phenomenon in the United States where high numbers of Hispanic and African American LGBT youth with drug problems also report criminal justice involvement is described as the “school-to-prison pipeline” (Knight & Wilson, 2016; Snapp et al., 2015). In these instances, young adult POC are either excessively disciplined for the outward expression of their sexuality/gender identity or are punished for defending themselves against their own victimization. Once introduced to the justice system at an early age, these adolescents face an increased risk for both substance abuse and re-incarceration (Hughto et al., 2018; McCarthy et al., 2016).

#### **8.4.4 Social Isolation**

A key consideration of substance use among sexual and gender minority individuals is that many use recreational drugs without experiencing any negative social consequences. This has fostered a communal culture in which illicit drug use may be highly visible, accessible, and acceptable in certain contexts (Abdulrahim et al., 2016; Bourne et al., 2014). Particularly among gay and bisexual males, “club drug” stimulants and inhalants are sometimes perceived to enhance sociability (Fazio et al., 2011; Race, 2015) and sexual pleasure (Hurley & Prestage, 2009; Palamar et al., 2014; Van Hout & Brennan, 2011) as well as are used to alleviate pain and fatigue (Semple et al., 2002). However, other individuals may find that using such drugs can take a serious toll not only physically but also on their interpersonal well-being; and there are well-established associations between illicit drug use, cognition, and certain adverse psychosocial outcomes (Homer et al., 2008).

Substance use is often driven by a “desire for socialization,” but prolonged consumption or injection can paradoxically lead to social isolation due to chemically impaired judgment and decreased mood (Homer et al., 2008). Similarly, hazardous drinking is both a precursor to and product of minority stress, particularly among SMW (Lewis et al., 2016) and TGW (Arayasirikul et al., 2018). Social isolation secondary to drug and alcohol abuse subsequently increases the risk for mental health problems (Chou et al., 2011; Frederick, 2014), and for many marginalized individuals this cycle is perpetuated by further experimentation with substances to

“numb the pain” (Weber, 2008). Alcohol and drugs are even hypothesized to deepen the internalized homophobia that gay men and lesbian women struggle to dissociate from in the public expression of their sexual orientation (Cabaj, 2000; Emslie et al., 2017; McDermott et al., 2008).

As mentioned, injection and stimulant drug use often take place in shared settings or in the context of sexual hook-ups (i.e., “Party and Play”). Although some LGBT individuals partake in recreational substances to facilitate intimacy (Race, 2015), others report feeling marginalized and increasingly unwelcome by both non-drug-using friends and drug-using peers. In a small sample of MSM living with HIV in the United States, nearly all (90%) said their relationships had been strained by their abuse of crystal methamphetamine (Mimiaga, Fair, et al., 2008c). These findings were similar among female and transgender individuals in Australia who reported facing a “loss of identity and chosen community” secondary to drug abuse (Deacon et al., 2013). The experience of being ostracized, at its most extreme, has been connected to high rates of suicidality within this population (Lea et al., 2014; Mereish et al., 2014). However, the specific mediating role of substance abuse varies depending on the sexual/gender subpopulation in question (Lea et al., 2014): SMW, TGW, and PLWH in particular tend to become most isolated and estranged, putting them at risk for healthcare avoidance (i.e., addiction treatment) (Lyons et al., 2015) and intimate partner violence (Andrasik et al., 2013; Lewis et al., 2012). Conversely, evidence from analyses of LGBT adolescents in the United States who use substances have demonstrated the protective effect of parental connection and acceptance against the social derogation of drug addiction (Goldbach et al., 2014; Padilla et al., 2010; Ryan et al., 2010). This suggests that sexual and gender minority adults not raised in an accepting family environment or who lack a home support base may be at greatest risk for the negative health sequelae of stress and depression.

## 8.5 Intervention and Treatment Options

While much of the research on the prevalence of substance use and misuse among sexual and gender minority populations is nascent, particularly in the Global South, some interventions have been tested with these populations with varying degrees of success.

### 8.5.1 Alcohol Use

A systematic review of interventions to reduce problematic alcohol use among MSM in the United States showed support for the use of motivational interviewing/motivational enhancement-based interventions (MI) and hybrid MI and cognitive-behavioral therapy (CBT) treatments for heavy drinking compared to no treatment (Wray et al., 2016). The authors concluded the most important finding from this

review, however, is that rigorously designed efficacy trials of treatment interventions guided by behavior change theories and specific to MSM and other sexual and gender minority groups are scant.

### **8.5.2 Smoking**

Community-based smoking cessation treatment programs culturally tailored for LGBT smokers have yielded promising results. These programs are based on a more generalized intervention, the American Lung Association's Freedom from Smoking (ALA-FFS) program but utilize LGBT-specific innovative activities and smoking information (Eliason et al., 2012; Matthews et al., 2013). Compared to traditional smoking cessation programs, an LGBT community-based program was better at enrolling and retaining LGBT smokers, and quit rates were consistent with outcomes associated with general population results from the ALA-FFS program (Matthews et al., 2013). However, more rigorous testing through randomized clinical trials is recommended to determine the efficacy of a culturally tailored ALA-FFS program. In addition, evaluation of individual and group interventions, cessation messaging, and policy is necessary to understand if outcomes are moderated by sexual orientation and gender identity (Lee et al., 2014).

### **8.5.3 Stimulant Use Disorder**

There is limited evidence to support the effectiveness of behavioral interventions for reducing crystal meth use among MSM (Carrico et al., 2014, 2015; Ling et al., 2014a; Phillips et al., 2014; Rajasingham et al., 2012). Cognitive behavioral therapy (CBT) and contingency management (CM) have been studied the most (Ling et al., 2014b; Phillips et al., 2014; Rajasingham et al., 2012) and co-occurring sexual risk-taking (Carrico et al., 2014; Carrico et al., 2015), but the results have been mixed (Hellem et al., 2015; Ling et al., 2014b; Rajasingham et al., 2012). While CM has been found to produce short-term reductions in stimulant use (McDonnell et al., 2013; Phillips et al., 2014; Shoptaw et al., 2005), it does not appear to be consistently maintained and dropout rates are high (Benishek et al., 2014; Ling et al., 2014b; Nyamathi et al., 2015). Carrico et al. (2015) did not observe any benefits of CM on crystal meth use or sexual risk-taking at the 6-month follow-up assessment, which has led to questioning the efficacy of CM as a long-term approach to treatment for MSM. Additionally, ideological differences among providers and financial considerations may prevent the implementation of CM in substance use treatment centers (Carroll, 2014). Therefore, more research needs to be done on developing evidence-based behavioral interventions to reduce crystal meth use among gay, bisexual, and other MSM.

Pharmacotherapies for stimulants use disorders are under study, which are designed to alter the effects of the drugs on the brain's appetitive systems, including assessments of antidepressants, antipsychotics, dopamine agonists, and anticonvulsants. Currently, there are no FDA-approved medications for the management of stimulant craving and use reductions or withdrawal symptoms. Findings from clinical trials evaluating the use of antidepressants, dopamine agonists, and antagonists to reduce stimulant use have been mixed; thus, more research is needed to develop effective pharmacotherapies for stimulant abuse in MSM. In a recent clinical trial to determine the efficacy of mirtazapine for treatment of methamphetamine use disorder and reduction in HIV risk behaviors, mirtazapine reduced the use of methamphetamine over 24 weeks of treatment and 12 weeks of follow-up after treatment was concluded. Mirtazapine also reduced several sexual HIV risk behaviors; both findings were consistent with a previous pilot study. As such, Mirtazapine is the first medication to demonstrate efficacy in treating methamphetamine use disorder, and this has been documented in two independent randomized clinical trials (Coffin et al., 2020).

Research has shown that gay, bisexual, and other MSM who use crystal meth report a decrease in their capacity to enjoy activities that do not involve drug use (Mimiaga et al., 2008a). This has led them to rely on crystal meth as the only source of pleasure and enjoyment. Further, problematic crystal meth use is a complex and difficult-to-treat issue. A likely reason for this may be that existing treatments lack adequate attention to replacement activities or to the role of depressed mood/anhedonia relapse trigger (Mimiaga et al., 2008a). To address this, researchers have developed Project IMPACT (Intervention with MSM to Prevent Acquisition of HIV through Crystal methamphetamine Treatment). This intervention combines sexual risk reduction counseling with behavioral activation, a cognitive behavior therapy for improving mood by emphasizing the importance of goal-oriented activities. In a pilot randomized controlled trial, participants who received the Project IMPACT intervention reported fewer condomless anal sex acts with men who were HIV living with HIV or of unknown HIV serostatus, as well as longer periods of continuous abstinence from crystal meth compared to those in the control group (Mimiaga et al., 2019). The efficacy of this promising intervention is currently being assessed through a larger randomized controlled trial in the US (Mimiaga et al., 2018) among adult gay, bisexual, and other MSM. This work is also being extended via a hybrid type 2 effectiveness-implementation trial among sexually active young gay, bisexual, and other men who have sex with men via the Adolescent Medicine Trials Network for HIV Interventions (ATN170).

### **8.5.4 Opioid Use Disorder**

As with all individuals suffering from opioid addiction, globally, medication-assisted therapy (MAT), in combination with behavioral therapy, is the mainstay of treatment for LGBT people with opioid use disorder. Medications, including



buprenorphine (Suboxone<sup>®</sup>, Subutex<sup>®</sup>), methadone, and extended-release naltrexone (Vivitrol<sup>®</sup>), are effective for the treatment of opioid use disorders. However, only licensed addiction-treatment programs (both office-based and inpatient treatments) and physicians who have completed specialized training in the area of opioid drugs and addiction medicine can administer opioids to treat opioid-use disorders. In addition, CBT has been shown to improve treatment outcomes for patients receiving MAT for opioid use disorder (Moore et al., 2016). In Canada, Australia, and the United Kingdom, MAT is available without a co-pay or at a subsidized price directly from a pharmacist, decreasing barriers to treatment (Calcaterra et al., 2019).

### 8.5.5 *Need for Integrated Services*

Substance use among sexual and gender minority individuals is of global concern and access to substance abuse treatment services is limited (Flores et al., 2017). For example, only 11% of a transcontinental survey of MSM reported high availability of treatment programs and only 5% reported utilizing them (Flores et al., 2017). Best practices for sexual and gender minority-affirming addiction treatment are being promulgated by health institutions specific to this populations overall care needs. Studies surveying LGBTQ+ alumni of substance use treatment have found that patients value an LGBTQ+-affirming culture among staff and in clinical spaces, as well as the absence of homophobia and transphobia (Lyons et al., 2015; Rowan et al., 2013). In the general population, inclusion practices such as LGBTQ+-affirming intake forms, restrooms, signs, and outreach materials can make a significant impact (Johnson et al., 2008). Institutions offering a specific sexual and gender minority focus are vital in addressing the need for Individualized interventions that uniquely address each person's drug-related medical, mental health, and social problems (NIDA, 2018b, p. 24).

Research has demonstrated that sexual and gender minorities are more likely to suffer from substance use disorders (SUDs) in combination with other mental health issues, such as depression and anxiety, and co-occurring health problems, like chronic pain. To effectively address the complexity of these cases, integrated models of behavioral health and primary care services must be developed. Integrated care models range from simple coordination among different medical facilities to fully merged practices. By utilizing these models, comprehensive programs can be created to address addiction and its associated health issues.

Fenway Health is a renowned LGBTQ+-focused health center, research institute, and advocacy organization located in Boston, Massachusetts. It offers a two-pronged approach to treating opioid use disorder that integrates addiction treatment with behavioral health and primary care services (Fenway Health, 2022). The Addictions and Wellness Program is a key component of this approach, providing individual and group therapy work that uses a minority stress framework. Additionally, the program combines with the Behavioral Health Department's Violence Recovery Program to leverage LGBTQ+ community solidarity as a source of resilience and

self-efficacy for partaking in addiction treatment. Finally, the Addictions and Wellness Program offers buprenorphine treatment in a weekly clinic staffed by a psychiatrist, with group therapy specifically for patients with trauma history and active addiction (Fenway Health, 2022). Given this, Fenway Health exemplifies an innovative, comprehensive model for treating opioid use disorder.

The second part of Fenway's model is conducted within Fenway's Primary Care Services. This program follows a harm-reduction model and is led by trained medical staff with years of experience; it requires few behavioral contingencies for ongoing buprenorphine management. Hence, patients at Fenway may seek whichever of the two buprenorphine treatment programs supports their sobriety from opioids the best, while taking advantage of real integration of behavioral health services into primary care. Notably, the integration of behavioral health services with primary care for LGBTQ+ patients with stimulant and/or opioid use disorder and other SUDs may offer many benefits, including bolstering patient acceptability of care, improving public health, and reducing costs to the patient and enhancing overall economic prosperity.

## 8.6 Conclusion

This chapter has documented that sexual and gender minority populations experience disparities in substance use across all geographical contexts. Globally, these disparities are exacerbated by sexual and gender minority-specific stressors (e.g., stigma, discrimination, harassment) at the individual, interpersonal, and environmental levels that may heighten one's vulnerability to substance use and substance use disorders compared to individuals not experiencing these stressors (Demant et al., 2016; McCabe et al., 2013; Medley et al., 2016). The chapter also details the research showing a disproportionate burden of substance use and resultant disease in sexual and gender minority individuals compared to both sexual majority groups and the general populations across geographic areas. In addition, there are individual (e.g., mental health), interpersonal (e.g., intimate partner violence), and contextual (e.g., health policy and the political climate) risk and protective factors that are unique to sexual and gender minority groups and should be considered when developing intervention approaches to curb use among these groups. For sexual and gender minority groups, treatment of substance use disorder must remain a priority among health care providers. By reducing substance use, we can have an impact on individual health outcomes, and subsequently reduce the burden of disease on a population level. We must continue with research efforts that develop and test novel strategies that are culturally tailored and address the specific factors driving their use. Furthermore, among providers, it is critical that we continue to assess our sexual and gender minority patients' substance use. Even though there are few effective treatments available for some substance use disorders, linkage to care should remain an important focus in caring for this vulnerable population.



China map showing major cities as well as the many bordering East Asian countries and neighboring seas. (Source: Central Intelligence Agency, 2021)

## 8.7 Case Study: Substance Use Among Men Who Have Sex with Men in China

In China, despite most studies being conducted in small regions or cities, literature has consistently demonstrated a high rate of substance use among men who have sex with men (MSM) compared to other population subgroups. Research on common substances used in China, such as alcohol and tobacco (Nehl et al., 2012; Yu et al., 2013), and more modern psychoactive/recreational drugs such as poppers/rush poppers, tryptamine, methamphetamine, and ecstasy (Li et al., 2021; Zhao et al., 2017), has highlighted use among MSM. For a variety of reported time frames (e.g., in the past 1 month, in the past 12 months), rates of alcohol use among Chinese MSM range from 56% to 62% (Liu et al., 2016; Lu et al., 2013; Xu et al., 2019). Nearly 44% of MSM in China report recent binge drinking (Xu et al., 2019), which is much higher than the 32% prevalence found in the general male population (Li et al., 2011). Young Chinese sexual minority males are significantly more likely to report moderate or heavy smoking when compared with general youth (Lian et al., 2015). The reported use of recreational drugs among MSM ranges from 21.3% to 31.2%, regardless of timeframe (during the past 3–12 months) (Chen et al., 2015; Wang et al., 2015; Xu et al., 2014a, b; Zhang et al., 2016).

### 8.7.1 *Social and Behavioral Aspects of Substance Use*

Previous research has documented how some MSM social environments and peer networks promote substance use (Duan et al., 2017; Egan et al., 2011). Along with the rapid economic development in China and the encouragement of social smoking and drinking in Chinese cultural norms (Xu et al., 2020), gay bars and nightclubs are expanding and rising in popularity in Chinese cities. While these venues allow sexual minority individuals to socialize in a safe public space, they often facilitate tobacco and alcohol use and may promote the emergence, use, and even popularity of modern club drugs (Chen et al., 2015; Liu et al., 2016).

Methamphetamine is the most commonly used addictive stimulant drug among MSM in China (Ding et al., 2013). Methamphetamines can increase sexual excitement, enable individuals to engage in sex longer, and impair judgment resulting in high-risk sexual practices (Anglin et al., 2000; Ding et al., 2013). Curiosity about methamphetamines and a lack of understanding that they are potentially addictive contribute to use initiation in China (Liu et al., 2018a).

Poppers, another fashionable recreational drug in China, has risen in popularity and use among MSM in recent years (Chen et al., 2015; Xu et al., 2014a, b). Poppers are cheap and easily accessible and, to date, are not defined as illicit or regulated by the Chinese government. The relaxing effect of poppers often facilitates anal sex, making them highly desirable among MSM in this context (Li et al., 2021; Xu et al., 2014a, b).

Attitudes towards sexual minorities in China also play a role in the prevalence of substance use; social attitudes toward homosexuality have become considerably more open but cannot yet be described as tolerant, with same-sex marriage not legally recognized. The prevalence of internalized homophobia among Chinese sexual minority men is also high (Xu et al., 2017). The minority stress model theorizes that substance use is sometimes used as a coping strategy for sexual minorities in stressful social contexts (Meyer, 2003); substance users understand that the specific effects of certain drugs relieve distress. In line with this theory, Chinese MSM who have sex with women out of perceived social obligations have been found to also sometimes engage in frequent excessive alcohol and other illicit drug use (Liao et al., 2011; Xu et al., 2019). This suggests substance use may be a coping response to the internal conflict between one's public identity as a heterosexual and one's private desires for same-sex encounters and/or relationships.

### ***8.7.2 Substance Use Intervention Programs***

To our knowledge, there are currently no substance use services specifically targeting MSM in China. The struggle to control the growing drug problem in this population is further compounded by social stress that surrounds homosexuality in the Chinese context. Such environments may lead MSM to hide their sexual orientation and perhaps turn to substances to cope with the secrecy.

Despite the lack of intervention programs targeting the MSM community, in 2003 China piloted a national harm reduction program for illicit drug users in the general population, which included methadone treatment for those using heroin. This program has shown some benefits, including for MSM, such as a significant decrease in injection drug use, overcoming addiction, and an increase in healthy physical outcomes (Liu et al., 2018a). Furthermore, comprehensive psychological and behavioral treatment interventions in conjunction with methadone maintenance treatment (MMT), such as psychotherapy, counseling, and social and family support, have improved patient retention to address substance use dependence (Chen et al., 2010; Pan et al., 2015; Zhang et al., 2009). In addition to MMT, buprenorphine, naloxone, and Chinese herbal medicines have also been applied in some cases (Sun et al., 2014). All of these intervention efforts, despite having a universal focus, have been beneficial for MSM populations.

### ***8.7.3 Substance Use Policy***

On the policy side, laws and regulations have been enacted or modified to reduce the supply and demand of drugs in China (Sun et al., 2014). While these policies are not specific to MSM, they have resulted in reduced substance use in some MSM communities as well as in the broader population (Duan et al., 2017; Liu et al., 2018a).

For instance, the Chinese government has made significant advancements from an old system of mandatory incarceration and punishment as treatment in recent years (Li et al., 2010; Wu et al., 2007). Currently, compulsory isolation treatment is commonly used for drug abuse treatment in China. Chinese drug law mandates that people with substance use disorders who refuse to receive community rehabilitation or fail to maintain sobriety, or those found by police as having a severe addiction to illicit drugs are sent for 2 years of compulsory isolation treatment managed by justice departments (State Council of the People's Republic of China, 2011). Treatments in these settings include detoxification, physical medical care, behavioral and psychological therapy, HIV treatment as indicated, and relapse prevention education (Yang et al., 2018). Central and local governments have also organized a variety of health education activities, especially for younger people, through manifold forms including television, the internet, and community events.

To some extent, enactment and implementation of drug policy vary in different regions in China. Despite a national law greatly expanding Chinese government reach, many provinces and municipalities, such as Shanghai, Guangdong, and Tianjin, have passed Smoking Control Regulation to create smoke-free public places (Wan et al., 2013; Alcorn, 2013). Another example is Shenzhen, which in recent years has carried out regulations on drug rehabilitation and cooperative drug control interventions with Hong Kong. The strict policy resulted in a lower illicit drug supply and use in Shenzhen. In terms of the connection between drug policy and MSM's substance use, researchers have found that, since the policy was passed, 12.7% of MSM in Shenzhen recently used at least one type of drug (Duan et al., 2017), which is lower than the rates in other cities (Chen et al., 2015; Wang et al., 2015; Xu et al., 2014a, b; Zhao et al., 2017). While none of the mentioned interventions specifically target MSM communities, they do seem to be having a beneficial impact by reducing substance use in that population.

In conclusion, research has highlighted significant substance use among the Chinese MSM community, especially the use of alcohol, methamphetamine, and poppers. Although strategies and interventions for people who use drugs more broadly have been successfully evaluated and applied in the Chinese context, a national system for treatment, prevention, and intervention of substance use targeted to high-risk drug user groups like MSM is also needed.

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# Chapter 9

## Victimization and Intentional Injury in Global LGBTQI Populations



Casey D. Xavier Hall, G. Nic Rider, Nova Bradford, Eunice M. Areba,  
and Katy Miller

### 9.1 Victimization and Intentional Injury in LGBTQI Populations

Individuals who are lesbian, gay, bisexual, transgender, queer, questioning, and/or intersex (LGBTQI) historically and currently face significant inequality, violence, and discrimination based on sexual orientation, gender identity, and/or gender expression globally (Jones, 2018; Tat et al., 2015; Tobin & Delaney, 2019; Yon et al., 2017). LGBTQI individuals are often not afforded basic human rights and are ill-treated, attacked, tortured, and/or criminalized for not conforming to rigid socio-cultural gender and heteronormative ideals (Carrol & Mendos, 2019; Chiam et al., 2016). Experiences of intentional injury and victimization include but are not limited to adverse childhood experiences, violence, homicide, suicide, and bias-motivated harassment committed by a range of perpetrators such as families,

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C. D. Xavier Hall (✉)  
College of Nursing, Florida State University, Tallahassee, FL, USA  
e-mail: [CXavierHall@fsu.edu](mailto:CXavierHall@fsu.edu)

G. N. Rider  
Department of Family Medicine and Community Health, University of Minnesota,  
Minneapolis, MN, USA  
e-mail: [gnrider@umn.edu](mailto:gnrider@umn.edu)

N. Bradford  
Health Policy, School of Medicine, Stanford University, Stanford, CA, USA  
e-mail: [bradf119@umn.edu](mailto:bradf119@umn.edu)

E. M. Areba  
School of Nursing, University of Minnesota, Minneapolis, MN, USA  
e-mail: [areba002@umn.edu](mailto:areba002@umn.edu)

K. Miller  
Children's Minnesota, Minneapolis, MN, USA  
e-mail: [mill8624@umn.edu](mailto:mill8624@umn.edu)

intimate partners, other LGBTQI individuals, agents of the state, and colonial forces (Carrol & Mendos, 2019; Chiam et al., 2016; Jones, 2018; Sotero, 2006; Tat et al., 2015; Tobin & Delaney, 2019; Yon et al., 2017). While many forms of intentional injury and victimization overlap with experiences of broader populations, elevated levels of these detrimental experiences have been documented in LGBTQI populations relative to heterosexual, cisgender populations (Austin et al., 2016; Castro et al., 2019; Peitzmeier et al., 2020; Sabidó et al., 2015; Walters et al., 2011). Moreover, unique forms of victimization impact LGBTQI populations, including hate-motivated violence and criminalization of LGBTQI identities (Carrol & Mendos, 2019). While the bulk of this research has been conducted in the United States and Europe, LGBTQI research and community advocacy is growing in the Global South and spans every major region of the world. This chapter provides an introduction to this growing literature, including relevant frameworks, types of victimization, and interventions.

## **9.2 Frameworks for Understanding Intentional Injury and Victimization in LGBTQI Populations**

Scholars have employed various frameworks for understanding experiences of victimization in LGBTQI populations. Some seek to address the etiology and multi-level influences on victimization (e.g., Syndemics and Minority Stress frameworks), while others seek to situate victimization in socio-historical contexts (e.g., perspectives on colonization and human rights). In either case, these frameworks highlight that disparities in victimization are a product of complex psycho-social/structural factors and are not inherent to LGBTQI populations. Here, we present an overview of some of these frameworks.

### **9.2.1 Syndemics**

The Syndemics framework posits that two or more health conditions may mutually interface and exacerbate negative effects of one or more of the health conditions (Singer et al., 2017). Thus, Syndemic Theory situates victimization with other comorbidities including, but not limited to mental health, substance use, and HIV (Chakrapani et al., 2019; Logie et al., 2019) in dynamic, mutually reinforcing relationships that exacerbate adverse outcomes of these co-morbidities. The framework also suggests that syndemics are more likely to occur under conditions of structural violence, inequity, stigma, stress, and poverty (Singer et al., 2017). One such application examined mental health, intimate partner violence (IPV), binge drinking, and childhood sexual abuse and their deleterious effects on HIV risk among LGBTQI populations in Jamaica, finding that syndemics influenced perceived HIV risk,

number of sexual partners, and condom use self-efficacy (Logie et al., 2019). Similarly, a study in India found evidence for syndemics among men who have sex with men (MSM) and transgender women such that violent victimization, depression, and alcohol use were mutually associated, and experiencing multiple of these conditions was associated with inconsistent condom use (Chakrapani et al., 2019).

### ***9.2.2 Minority Stress and Multilevel Influences***

Virginia Brooks originally developed and applied the sexual minority stress framework among lesbian women (Brooks, 1981; Rich et al., 2020), and Meyer (2013) later popularized the framework. Since its development, the minority stress framework has been used to address a variety of LGBTQI populations and outcomes such as mental health, substance use, and violence (Balsam & Szymanski, 2005; Goldbach et al., 2014; Meyer, 1995; Testa et al., 2015). The framework posits that LGBTQI stigma (enacted, internalized, or anticipated) impacts cumulative stress and ultimately health outcomes (further described in the chapter on Mental Health, Chap. 3). The literature on minority stress has also been moving in the direction of recognizing multiple overlapping and intersectional stigmas (e.g., racism, sexual identity stigma, gender identity stigma, and HIV stigma) (for more on this see chapter on Stigma, Chap. 2).

While some applications of minority stress have focused on addressing mental health, the framework has also been used in relation to violence in global LGBTQI populations. Published literature documents associations between minority stress and perpetration and experience of violence. For example, Hershov et al. (2018) reported that gay and bisexual men in Vietnam who experienced enacted stigma were 3.5 times more likely to experience sexual violence. Stigma-motivated violence can also be conceptualized as enacted stigma and therefore a minority stressor. In another example, researchers observed that gay and lesbian women in Brazil who experienced enacted stigma (including community violence) were at higher risk for depressive symptoms (Logie et al., 2012). Ultimately, the minority stress framework has many potential applications across various types of violence and contexts.

### ***9.2.3 Colonization, Intergenerational Trauma, and Historical Trauma***

When considering LGBTQI experiences of violence, one would be remiss to neglect the role of colonization and colonizers in promoting heterosexism (Gilley, 2006; Hwang & Nuttbrock, 2014; Ristock et al., 2019). Theories have sought to explain the impacts of colonization through theoretical frameworks such as intergenerational trauma and historical trauma. Intergenerational trauma, which was originally

theorized to address trauma in families of holocaust survivors (Fossion et al., 2003; Kellerman, 2001), posits that traumatic stress (e.g., from war, genocide, colonization, slavery, or natural disasters) can be transmitted across multiple generations. When descendants of trauma survivors experience symptoms of post-traumatic stress, even though they may not have experienced a traumatic event firsthand, this is known as intergenerational (or transgenerational) trauma, which has been linked to a range of mental health symptoms in descendants of traumatized people (Sangalang & Vang, 2017). Historical Trauma Theory similarly conceptualizes colonization as a collective traumatic event, which is further exacerbated by continued collective traumatic exposures such as genocide, war, segregation, displacement, psychological violence, economic destruction, and cultural dispossession (Sotero, 2006). The ongoing effects of colonization in a “post-colonial” world have long-standing impact beyond the original act of colonization (Brave Heart, 2003; Brave Heart et al., 2011).

Research extends the phenomenon of intergenerational trauma to many other global communities, including: the experience of African American communities in relation to slavery and racism (Gump, 2010); surviving families of Jewish people who fled the Holocaust (Dashorst et al., 2019); Indigenous communities in Canada in relation to settler-colonial genocide and racism (Bombay et al., 2014); the children of refugees displaced from Southeast Asia due to war and genocide, including Chinese, Cambodian, Lao/Mien, Vietnamese, and Hmong communities (Han, 2006; Song et al., 2014; Spencer & Le, 2006); and children of those displaced by political instability and armed conflict in the Middle East, including Lebanon, Iraq, Syria, Egypt, and Morocco (Daud et al., 2005, 2008).

Scholars have also linked colonization to the experiences of LGBTQI populations. *Two-spirit* is both a specific cultural identity and a label used to indicate sexual and gender minority populations among many Indigenous peoples of North America, including specific cultural understandings of sexual and gender variation (Ristock et al., 2019). In one qualitative study of two-spirit peoples in Canada, participants described how colonization damaged cultural understandings of sexual and gender identity in their Indigenous communities, particularly through the influence of the Catholic Church (Ristock et al., 2019). Another study in the United States found that two-spirit Indigenous people experienced more colonial trauma compared to heterosexual Indigenous people from the same population (Balsam et al., 2004). Scholars have argued that the context of colonialism is relevant to the understanding of other forms of violence experienced by Indigenous populations (Lindhorst & Tajima, 2008). Colonization may have also introduced homophobia and transphobia, which were then transmitted inter-generationally through family systems of Indigenous and other people of color (Gilley, 2006; Hwahng & Nuttbrock, 2014). Thus, colonization as a form of violence in itself impacts the ways that LGBTQI identities are understood within cultural contexts, and it has been linked to continued experiences of violence in Indigenous populations. Examples of these will be discussed throughout the chapter.

### 9.2.4 LGBTQI Rights as Human Rights

LGBTQI movements have seen increasing global attention and growing acceptance throughout the world (Kollman & Waites, 2009). Pressure for LGBTQI human rights has mounted over time. In 2006, global LGBT activists released the Declaration of Montreal and the Yogyakarta Principles (Kollman & Waites, 2009). In 2008, Argentina presented a declaration to establish LGBTQI rights as human rights among the United Nations (UN), and in 2010, South Africa presented a similar proposal; however, these proposals initially languished without proper support (including from Western nations; Langlois, 2020). Later, the UN set a goal to support equal rights for LGBTQI populations globally, including a 2013 media campaign titled, “Free and Equal,” and the appointment of an independent expert for sexual and gender identity in 2016 (Langlois, 2020). This has clear implications for state-sanctioned forms of violence such as the death penalty as well as prevalent forms of stigma-motivated community violence. While there is increasing transnational interest in advancing an LGBTQI rights agenda, the initiative is complicated by varying cultural norms and practices (Kollman & Waites, 2009).

As the understanding of LGBTQI rights as human rights becomes more widely accepted, criticism has arisen from some that LGBTQI rights and identities are based on Western and colonial ideals being forced on the Global South (Kollman & Waites, 2009). This ignores the unique cultural understanding of sexuality and gender both in history and modernity, and the colonial influence of anti-LGBTQI legislation (discussed in the State-Sanctioned Violence section). A broad understanding of sexuality and gender exists across most major regions in the world. For example, a number of identities and traditions have origins that predate colonization, such as *berdache* and *two-spirit* in North America (Picq & Tikuna, 2019), *Hijra* and *Kothi* in India (Dutta, 2012), and *Ngochani* in Zimbabwe (Epprecht, 2013; Muparamoto & Moen, 2020). Some cultural understandings do not neatly align with Western ideas of sexuality and gender as separate categories; instead, both gender and sexuality may be considered as overlapping (Picq & Tikuna, 2019). Despite attempts to homogenize these concepts with Western understandings, culturally specific identities like *Hijra* and *Kothi* remain distinct (Dutta, 2012). This highlights the complex interplay of local and transnational conceptualizations of LGBTQI experiences as well as the undermining and erasure of identities that are not rooted in a Western conceptualization of sexuality and gender.

While some may critique transnational human rights agendas as cultural imperialism (Nuñez-Mietz & Iommi, 2017), it stands that many, if not most, statutes criminalizing LGBTQI identities are products of colonization (Carrol & Mendos, 2019; Thapa, 2015) and continue to be upheld through relationships established during colonization such as the global influence of Western religious groups (Carrol & Mendos, 2019; Thapa, 2015). Such is the case with Uganda, which is discussed in more depth under the section *Criminalization and the Death Penalty*. Critiques are further complicated by the presence of localized LGBTQI rights movements and organizations that are also present across the globe (e.g., HELEM in Lebanon,

Grupo Gay da Bahia in Brazil, Sexual Minorities Uganda, and Humsafar Trust in India). For instance, in a qualitative study, local advocates in Namibia and South Africa framed local LGBTQI advocacy as decolonization (Currier, 2011). To these points, Waites (2019) has recently proposed a critical framework for understanding global LGBTQI politics meant to articulate thematic elements for understanding rights through a decolonizing perspective and highlighting the interplay between local and national influences and the implications of these power dynamics. Given the complexity of historical and social contexts pertaining to LGBTQI populations, an understanding of victimization within the context of colonial legacies and human rights movements requires complex and interdisciplinary analysis.

### 9.3 Types of Intentional Injury and Victimization

Intentional injury and victimization among global LGBTQI populations have a wide range of manifestations, which have both distinct and overlapping literatures. Here we introduce a range of forms of victimization with varying actors in different global contexts that affect LGBTQI populations (See Fig. 9.1). However, this chapter is not exhaustive (for more on suicide see Mental Health chapter, Chap. 3).

#### 9.3.1 State-Sanctioned Victimization

State-sanctioned victimization may take various forms. In the following section, we emphasize the roles of governing bodies in victimization of LGBTQI people by discussing criminalization of LGBTQI identities, police violence, forced genital surgeries on infants with intersex variation, and victimization disparities among asylum seekers.

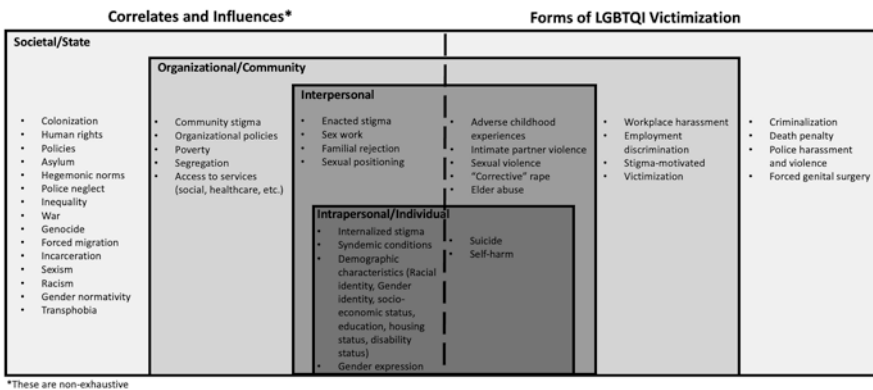


Fig. 9.1 Multilevel framework showing forms of LGBTQI victimization, correlates, and influences discussed in chapter



### 9.3.1.1 Criminalization and the Death Penalty

Unfortunately, same-sex practices and diverse gender identities and expressions remain criminalized in many parts of the globe. South Africa was the first country in the world to establish constitutional protections for LGBTQI individuals in 1996 (Carrol & Mendos, 2019), while most other countries, including many Western nations, still have not established explicit constitutional protections for LGBTQI individuals (Carrol & Mendos, 2019). As of the 2020 report by the International Lesbian and Gay Association, sexual orientation had constitutional protection in 11 UN member states and broad protection in another 57 (Carrol & Mendos, 2019). Legal gender recognition was available for transgender persons in at least 96 UN member states, with 25 allowing for legal gender recognition without any prohibitive requirements (Chiam et al., 2016). At the same time, same-sex sexual activity is criminalized in 67 UN member states and punishable by death in nine (Carrol & Mendos, 2019). Moreover, at least 13 UN member states criminalize transgender persons or non-conforming gender expression in some way (e.g., anti- “cross-dressing” laws), and few (only about 12 states) allow for non-binary gender markers (Chiam et al., 2016). Criminalization policies and the lack of protections have grave implications for the lives of LGBTQI populations through state-sanctioned violence and death. These policies also create environments that may exacerbate other health concerns including increasing social prejudice, increasing all forms of violence against LGBTQI populations, and reducing access to critical services such as healthcare (Nyato et al., 2018).

Even with growing movements toward repealing laws criminalizing LGBTQI identities, there is often continued risk for violence. One such example is Uganda, which received much international attention during the attempted repeal of the Anti-Homosexuality Act in 2015 followed by continued attacks and public murders of LGBTQI individuals through “mob violence” (Thapa, 2015, p. 3). Uganda is also an example of the influence of colonial forces on the development and codification of anti-LGBTQI hate in previously colonized countries. In Uganda, same-sex sexual acts were criminalized under British Colonial rule in Section 145 of Penal Code Act of 1950 (Thapa, 2015). External influence on these policies did not stop after Uganda’s independence, as Human Rights Campaign notes that specific conservative American Christian groups as well as Muslim religious leaders continue to advocate for anti-LGBTQI policies, which is mirrored in other parts of the world (Thapa, 2015). For many countries, criminalization of LGBTQI identities and expression is the most wide-reaching form of victimization layered on top of other forms of victimization and intentional injury.

### 9.3.1.2 Police Violence and Harassment

Police violence has a long history in LGBTQI communities, particularly among transgender and Black, Indigenous, and/or People of Color populations. Famous examples of police violence include the Queen Boat incident in Egypt, where gay

and bisexual men were subject to torture at the hands of police (Pratt, 2007). These dynamics have also been vividly documented in the film, *Call Me Kuchu*, which portrays the life and work of LGBT activists in Uganda, including the murder of David Kato (Wright & Zouhali-Worrall, 2012). Police violence is widespread and not relegated to the past or specific geographic boundaries. In some ways, this form of victimization may be amplified by the legal status of LGBTQI communities. In one study of police violence trends in Nigeria from 2014 to 2019, police violations against LGBTQI populations increased 214% following the passage of the Same-Sex Marriage Prohibition Act (Giwa et al., 2020). Moreover, a study in Kenya found that an estimated 20% of MSM experienced police violence in the preceding six months (National AIDS and STI Control Programme, 2017).

Police violence is sometimes in response to LGBTQI rights activism. For example, Ana-Maurine Lara (2018) documented accounts of police violence against protesters and LGBTQI activists in the Dominican Republic. Police sometimes neglect complaints, and in some cases, actively participate in community violence against LGBTQI individuals (Blake & Dayle, 2013) or even murders, such as in one report to Human Rights Watch in 2004 where police participated in the public murder of a gay Jamaican man (Schleifer, 2004).

Police-perpetrated violence against individuals in need of state support is a common theme across multiple studies in multiple regions and may dampen LGBTQI interest in seeking support in instances of other forms of violence. For example, in a qualitative study in Tajikistan, gay and bisexual men described police raids, harassment, police violence, sexual coercion, and sexual assault by police officers, which impacted their ability to report experiences of same-sex intimate partner violence as well as access to health and social services (Hall et al., 2020; Ibragimov & Wong, 2018). This means not only may LGBTQI populations be more at risk for intimate partner violence, but they may also face arbitrary arrests or additional violence if seeking support from police.

Police violence is widespread in contexts that are characterized by disparities in access to opportunities based on race, ethnicity, ancestry, and other identities rendering multiple sub-groups among LGBTQI populations at higher risk for police violence including racial minorities in multi-ethno racial contexts, transgender women, and people engaged in sex work. In the United States, reports of abuse or violence by police officers against non-incarcerated transgender individuals are as high as 47% (Mitchell-Brody et al., 2010; Stotzer, 2014), with transgender women of color being at higher risk relative to white transgender women (Mitchell-Brody et al., 2010; Woods et al., 2013). Similar patterns are observed in the Global South, such as in one study in Brazil, where 47.2% of transgender participants reported experiences of police violence (Magno et al., 2018), and transgender individuals recounted police violence in qualitative interviews from Brazil and India (Gomes de Jesus et al., 2020).

Moreover, growing evidence shows that risk of violence is also widespread among sex workers. For example, in a cross-sectional study in Jamaica, MSM who also engaged in sex work in the past 12 months had four times the odds of police harassment, and transgender women who were engaged in sex work in the past

12 months had twice the odds of police harassment relative to those who were not engaged in sex work (Logie et al., 2017). Similarly, in a qualitative study in India and Kenya, police were named as perpetrators of sexual coercion, sexual assault, harassment, arbitrary arrests, extortion, and physical violence against transgender and MSM individuals engaged in sex work (Ganju & Saggurti, 2017). Thus, LGBTQI sex workers may experience violence from clients and police.

### 9.3.1.3 Forced Surgeries on Children with Intersex Variations

*Intersex variation* refers to a range of traits that differ from hegemonic definitions of binary sex (e.g., male and female), including traits that may be imperceptible without in-depth medical examination (e.g., Androgen Insensitivity Syndrome). Also included are variations that may be immediately perceptible at birth, such as genital variations not easily categorized by binary definitions of sex (Davis, 2015; Reis, 2019). While there is a growing understanding of these traits as natural variations, they have been stigmatized and labeled as “disorders” in many contexts throughout time (Reis, 2019). Throughout the world, genital surgeries are often conducted on children with intersex variations to conform with normative ideas of binary genitalia before they are able to consent. Until very recently, this has unfortunately been the standard of care for children with intersex variations in the United States (Reis, 2019). A relatively decentralized global movement has been growing and spreading testimony from adults with intersex variations (Ammaturo, 2016; Carpenter, 2016; Reis, 2019). Moreover, global research on intersex variations has begun to diverge from medicalized accounts and move toward person-centered research and human rights framings (Jones, 2018), which highlight these policies as state-sanctioned violence against children with intersex variations. People with intersex variations have recounted experiences of nonconsenting disclosure of their variations and displaying their bodies for medical purposes (Jones, 2018). Yet only a handful of countries address these concerns through bodily autonomy laws (Ammaturo, 2016). In 2013, the Parliamentary Assembly of the Council of Europe adopted a resolution protecting intersex children from genital surgeries; however, it is not legally binding for member states (Ammaturo, 2016). Some countries in the Global South have begun to collect data about people with intersex variations. For instance, in 2017 Kenya’s National Commission on Human Rights (2018) formed a Taskforce on Policy, Legal, Institutional and Administrative Reforms regarding Intersex Persons in response to a mandate by the Kenyan Attorney General to compile data about persons with intersex variations and to develop recommendations for reforms to protect the interests of intersex people. Increasing intersex-focused research is crucial, because without systematic, empirical examination of global prevalence of genital surgeries on infants with intersex variations, the extent of their impact on the well-being of people with intersex variation worldwide is difficult to establish. However, mounting testimonies by people with intersex variations emphasize the urgency of this issue (Reis, 2019).

### 9.3.1.4 Forced Surgeries on Gay and Bisexual Adults

There is growing attention on forced genital surgeries on gay and bisexual men in other contexts. An example that has attracted growing media attention is Iran, where some surgeries are described as being intended to eradicate homosexuality (Carter, 2010; Hodge, 2020; Kyriacou, 2020). While homosexuality remains illegal in Iran, gender-affirming surgery was legalized in 1987 (Hodge, 2020). As of 2020, Iran reportedly carried out 4000 gender confirmation surgeries annually, and the government subsidized most of them (Hodge, 2020). Reporting suggests that these surgeries are sometimes forced with the intention to change the gender of people with same-sex attraction to eliminate homosexuality in Iran (e.g., a gay man “becoming” a heterosexual woman through surgery) (Hodge, 2020). For example, gay men report transitioning due to fear of being hanged (Hodge, 2020). There are also reports of psychiatrists attempting to convince gay men they are, in fact, transgender despite their firm identity as cisgender gay men (Terman, 2014). Sometimes in the context of a same-sex couple, societal pressure, and fear of violence lead to the decision that one partner should undergo a gender transition (Terman, 2014). Surgery does not eliminate stigma or ensure safety. Transgender people and people who are forced to have genital surgeries face family rejection, unemployment, and threats of community violence without continued medical or mental health support post-operation (Hodge, 2020; Terman, 2014). Thus, the treatment of LGBTQ individuals in Iran and forced genital surgeries in particular, remain a threat to the well-being of LGBTQ Iranians.

### 9.3.1.5 LGBTQI Asylum Seekers

Due to state-sanctioned violence, in certain circumstances, LGBTQI individuals may be eligible for asylum in some nations (e.g., South Africa and the United States). Although asylum is available to various populations, disparities are observed among LGBTQI asylum seekers relative to their heterosexual and cisgender peers. Hopkinson et al. (2017) conducted a study where LGBTQI asylum seekers reported more violence relative to non-LGBTQI asylum seekers (sexual assault: 66% vs. 24%, familial persecution: 37% vs. 0%, adverse childhood experiences: 63% vs. 37%) (Hopkinson et al., 2017). A similar qualitative study conducted by the UN described child and adolescent abuse among LGBT refugees/asylum seekers and found common themes of abuse by family members, caregivers, classmates, and teachers beginning from a young age. Family rejection and lack of protection and support at home were described by multiple participants, many of whom had high levels of depression, anxiety, traumatic stress, and suicide attempts as adults (Alessi et al., 2017).

The fact that LGBTQI asylum seekers are more likely to experience abuse by family members is significant in several ways. First, asylum seekers by definition have experienced traumatic or life-threatening events that have led to forced migration (Bhagat, 2018; Siriwardhana & Stewart, 2013); by nature of this migration,

they are at risk for experiencing symptoms of traumatic stress. However, asylum seekers who migrate with the support of their families and communities can often find safety and solace with migrants from their country of origin (Schweitzer et al., 2006). Because of embedded homophobic and transphobic beliefs in certain cultures, countries, and religions, LGBTQI asylum seekers are often left without this source of support (Hopkinson et al., 2017). Thus, in addition to likely experiencing state-sanctioned violence and childhood victimization and abuse, they are less likely to benefit from the support structures that cisgender and heterosexual asylum seekers may utilize, further compounding traumatic experiences of forced migration.

### **9.3.2 Community and Organizational Victimization**

Community and organizational victimization often exist in relation to community-level stigma (see Stigma chapter, Chap. 2). In the next section, we discuss one relevant form of community-level violence (stigma-motivated assault and homicide) and one form of organizational victimization (employment discrimination and workplace harassment).

#### **9.3.2.1 Stigma-Motivated Assault and Homicide**

Stigma-motivated community violence such as assault or homicide due to perceptions of sexual or gender identity has been documented throughout the world. In a global systematic review from 2018, stigma-motivated experiences of violence among sexual minorities were as high as 31% overall (36% among men, and 25% among women; Blondeel et al., 2018). In other studies, an estimated 31% of MSM in the Caribbean and 35% in Latin America were physically assaulted for their sexual orientation (Beck et al., 2015), and 43.4% of LGBTQI individuals in Kenya reported hate-motivated violence (Harper et al., 2021). Stigma-motivated victimization can also include verbal assault, physical abuse, sexual abuse, and even torture or so-called honor killings (United Nations General Assembly, 2011).

While all LGBTQI individuals are subject to high levels of physical abuse and assault, multiple studies have demonstrated that transgender and gender-diverse individuals are at further increased risk. In a global systematic review, up to 68% of transgender people reported hate-motivated assaults (Blondeel et al., 2018). This may be due in part to increased visibility of gender non-binary individuals, who may be more easily identified as LGBTQI, which can lead to mob violence and harassment in the street and community (Hunter-Gault, 2015; Zingsheim et al. 2017). Moreover, hate-motivated crimes against transgender individuals tend to be extreme in their violence, and perpetrators often describe a great deal of stigma toward transgender people (Kidd & Witten, 2008). In multiracial societies like the United States, these murders are particularly elevated among Black, Latina/x transgender women, and two-spirit people (Dinno, 2017; James et al., 2016; Ristock

et al., 2019). For example, the odds of a young, Black transgender woman in the United States being murdered is 1 in 2600; the odds of murder in the general population of comparable age are 1 in 12,000 (Momen & Dilks, 2020). Transphobia, racism, and hate crimes are inextricably linked, and stigma-related victimization serves to strike fear in LGBTQI community members and uphold these social systems.

### **9.3.2.2 Victimization Through Employment Discrimination and Workplace Harassment**

Workplace discrimination of LGBTQI individuals presents challenges all over the globe (see Stigma chapter, Chap. 2). Widespread job discrimination, stigma, and harassment have been reported among LGBTQI individuals worldwide (Bilgehan Ozturk, 2011; Perraudin, 2019; World Bank Group, 2018; Zurbrügg & Miner, 2016;), which can have devastating economic impact on those affected. Employment discrimination is common, such as in India (Badgett, 2014), Indonesia (Badgett et al., 2017), and in Thailand, where 77% of transgender, 52.6% of lesbian, and 49% of gay male survey respondents reported employment discrimination (World Bank Group, 2018). About 81 countries had workplace discrimination laws for LGBTQI groups in 2020 (Carrol & Mendos, 2019); however, even in countries where there are protections, harassment remains a problem. For example, 70% of LGBTQI people experience workplace harassment in the UK (Perraudin, 2019). In the United States, LGBTQI employees at the National Institutes of Health faced some of the highest levels of harassment even though US federal employees enjoyed some of the most stringent protections (Cech & Pham, 2017). Among a qualitative sample of Two Spirit Indigenous people in Canada, stories of employment discrimination at the intersection of LGBTQI stigma and race are salient (Ristock et al., 2019). In South Africa, where sexual minority women are at the highest risk for workplace incivility (Zurbrügg & Miner, 2016), LGBTQI victims of workplace harassment fear retaliation and hold a lack of confidence in legal mechanisms (Nath, 2011). Employment discrimination and workplace harassment present a formidable barrier to the advancement of LGBTQI populations globally.

### **9.3.3 *Interpersonal Victimization Across the Life Course***

From adverse childhood experiences (ACEs) to elder abuse, a growing literature highlights experiences of interpersonal victimization in LGBTQI populations across the life course. In this section, we address ACEs, intimate partner violence (IPV), sexual violence, stigma-motivated sexual violence, and elder abuse.

### 9.3.3.1 Adverse Childhood Experiences

The form of victimization that likely occurs the earliest in the life course of most LGBTQI individuals is ACEs, which can take the form of physical, sexual, or emotional violence and are often perpetrated by the family of origin (Schneeberger et al., 2014). A systematic review incorporating studies from both Global North and Global South countries indicates that LGBTQ people are at higher risk for ACEs relative to their heterosexual, cisgender counterparts (Schneeberger et al., 2014). One possible explanation for elevated ACEs is that LGBTQ children may be more likely to have non-conforming gender expressions and that perpetrators may target non-conforming gender expression (Roberts et al., 2012). It should be noted that there is not a precise unifying definition for ACEs, and these experiences may vary by cultural context (Schneeberger et al., 2014). Understandings of ACEs continue to center on Western populations. In a global systematic review, only 5.5% of the studies captured originated from the Global South (Schneeberger et al., 2014). Ranges of prevalence varied by sex, form of ACEs, and populations, with as many as 71% of MSM and 68% of women who have sex with women (WSW) reporting ACEs (Schneeberger et al., 2014).

Focusing on countries in the Global South (China, Brazil, Turkey, India, Jamaica, and Mexico), estimates of ACEs were as high as 57% (Carballo-Diéguez et al., 2012; Choudhry et al., 2018; Eskin et al., 2005; Guanzhi Chen et al., 2012; Logie et al., 2019; Semple et al., 2017). Disparities relative to heterosexual populations have been noted. For example, one study in Turkey showed that individuals who reported same-sex experiences were more likely to report ACEs compared to those who did not report same-sex sexual experiences (Eskin et al., 2005). Adult LGB persons in the United States are between twice and three times more likely to report ACEs than heterosexuals depending on the type of victimization (Austin et al., 2016).

Literature addressing ACEs in transgender populations is less common. In a 2019 systematic review of ACEs literature for transgender individuals, rates were as high as 100% in the 14 articles that were identified; however, none of the articles were from the Global South (Tobin & Delaney, 2019). One study in the United States also found that Black and Latinx trans feminine people were significantly more likely to experience ACEs during adolescence, as well as perpetration of ACEs by family members, compared to White trans feminine people (Hwahng & Nuttbrock, 2014). Although articles addressing ACEs in the Global South do exist, these articles may be left out due to the operationalization of ACEs in these reviews. It also may be that in the global literature childhood experiences of abuse are not always identified under the concept of ACEs, but rather as individual exposures. For example, in a Jamaican sample, 34% of transgender women experienced childhood sexual abuse (Logie et al., 2019), and in Brazil, 33% of transgender participants reported being sexually assaulted by someone 4+ years older at their first sexual experience (Carballo-Diéguez et al., 2012). More research is needed to understand the etiology and prevention of ACEs in LGBTQI populations worldwide.

### 9.3.3.2 Intimate Partner Violence

Intimate Partner Violence (IPV) is one of the more established topics relative to other forms of victimization in LGBTQI global literature and has been documented in many countries. Estimates of IPV among MSM in the Global South are as high as 55% (Castro et al., 2019; Harper et al., 2021; Logie et al., 2019; Ogunbajo et al., 2020). IPV can span a range of behaviors, and prevalence is dependent on how IPV is measured, such as in a sample of MSM in Nigeria who reported experiencing emotional violence (45%), physical violence (31%), sexual violence (20%), monitoring behaviors (55%), and controlling behaviors (22%) (Ogunbajo et al., 2020). Whether these behaviors are labeled as “abuse” in study instruments also may influence estimates of prevalence. According to a literature review of WSW in the Global South, prevalence ranged from 9–52% when asked about “abusive relationships,” and 12–73% when using behavioral measures (Badenes-Ribera et al., 2016).

Disparities by sexual identity have been observed. Recent studies out of the United States have identified bisexual women as being at particular risk for IPV relative to both lesbians and heterosexual women (Edwards et al., 2015; Walters et al., 2011). Disparities have also been identified between MSM and heterosexual men (Finneran & Stephenson, 2013). For example, in Brazil, 11.4% of MSM reported IPV compared to 7.5% among heterosexual men (Castro et al., 2019). Prevalence can also be higher in unique sub-populations such as MSM engaged in sex work, as was the case in one study out of China (57% of MSM engaged in sex work relative to 45% of MSM not in sex work) (Dunkle et al., 2013).

Transgender populations are also at higher risk for IPV. In a 2020 systematic review, transgender individuals were 1.7 times more likely to experience IPV overall, 2.2 times more likely to experience physical IPV, and 2.5 times more likely to experience sexual IPV relative to cisgender populations (Peitzmeier et al., 2020). Of the 74 studies identified, 73% were conducted in the United States, but additional studies were from the Global South (Peitzmeier et al., 2020). There is considerable variation; for example, in a study examining HIV risk factors in a sample from China, transgender women were nearly five times more likely to experience IPV (economic, physical, sexual, threats) compared to cisgender MSM (Zhang et al., 2016). Unlike the literature on other forms of victimization, it is possible to draw comparisons across various transgender identities. Studies included in the review covered transgender women, transgender men, and non-binary gender identities, but did not observe statistically significant differences in IPV across these identities (Peitzmeier et al., 2020).

### 9.3.3.3 Sexual Violence

Sexual violence has been observed among various LGBTQI populations and across geographic contexts (Aho et al., 2014; Braun et al., 2009; Chakrapani et al., 2019; Hall et al., 2020; Peitzmeier et al., 2015; Sabidó et al., 2015; Sleath & Bull, 2010; Walters et al., 2011). In a 2018 systematic review, estimates of sexual violence



victimization were as high as 17% for gay/bisexual men, 13% for lesbian/bisexual women, and 49% for transgender people (Blondeel et al., 2018). Sexual violence disparities have been observed, such as in one Brazilian study where gay men were 2.63 times more likely to experience sexual violence than heterosexual men (Sabidó et al., 2015). Some research in the United States has begun to document disparities among disaggregated identities such as bisexual populations relative to both gay/lesbian and heterosexual populations (Ford & Soto-Marquez, 2016; Walters et al., 2011). Disparities have also been observed for sex workers. For example, an India-based study showed MSM who participated in sex work were more than twice as likely to report sexual violence as compared to MSM not in sex work (Shaw et al., 2012).

A unique form of stigma-motivated sexual assault is often referred to as “corrective rape.” The notion of *corrective rape* has been conceptualized as when a sexual assault is motivated by the desire to punish someone for their LGBTQ+ identity or change the identity of the targeted victim (Hunter-Gault, 2015). While this has received significant press coverage, the nuances of “corrective rape” have often been misunderstood. “Corrective rape” is portrayed as sexual assault that can only happen to so-called butch (i.e., masculine presenting) women who are perceived as a threat to traditional masculine gender norms and perpetrated by people assigned male at birth (Human Rights Watch, 2011; Lock Swarr, 2012). While this is sometimes the case, Lock Swarr points out that this simplified narrative ignores the complex gender and social norms that contribute to and minimize this type of gender-based violence and crime. Bisexual and lesbian women are certainly victimized in this manner, but transgender and gender non-binary individuals are similarly victimized in an attempt to punish them for violating gender norms (Reisner & Murchison, 2016). Since the root of “corrective rape” stems from a desire to punish perceived violations of gender role and gender expression, this form of violence is experienced not only by lesbian women but also by people who hold various LGBTQI identities. Reports of “corrective rape” have been documented in countries across the world (e.g., South Africa, Jamaica, and India, to name a few) (Bowling et al., 2016; Logie et al., 2018; Logie et al., 2020; Mampane, 2020; Smith, 2018).

#### 9.3.3.4 Elder Abuse

Despite as many as 83% of individuals not disclosing their LGBTQI identity worldwide, there is an increasingly visible segment of the population that identifies as LGBT (Pachankis & Bränström, 2019). Another global trend is an aging global population in all regions of the world that is set to increase from 9% to 16% before 2050 (World Health Organization [WHO], 2020). A growing area of concern among LGBTQI populations is aging and more particularly elder abuse. While the bulk of research on elder abuse remains in Europe and the Americas, a recent systemic review documented elder abuse in at least 26 different countries across the major regions of the world, with the highest meta-analytic prevalence in the Middle East

and Asia (Yon et al., 2017). Yet, LGBTQI populations are only mentioned in the review when addressing areas for further research.

LGBTQI elder abuse research is largely nascent and incomplete; however, estimates from the United States document abuse in older adults with as much as 7% abuse overall (9% among bisexual men, 14% among bisexual women, and 15% among transgender elders) (Fredriksen-Goldsen, 2011). There is a passing reference of LGBTQI elder abuse in South African published literature, with qualitative research documenting neglect of LGBTQI elderly due to stigma and disempowerment by an unequal care dynamic based on LGBTQI status (Reygan & Henderson, 2019; Reygan & Khan, 2019). Indeed, researchers suggest that LGBTQI elder abuse is entangled with systemic stigma and LGBTQI-specific abuse tactics (Cook-Daniels, 2017). While the literature on LGBTQI elder abuse remains quite nascent, with growing populations of LGBTQI elders, this is an area of research that may see growth in the coming decades.

### 9.3.4 Polyvictimization

It should be noted that experiences of victimization for any given individual can span across various actors and forms of violence (e.g., ACEs, IPV, elder abuse, enacted stigmas, etc.). Experiencing multiple forms of victimization is sometimes called *polyvictimization*, which can be measured as a simple count of types of victimization (Sterzing et al., 2017) or as qualitatively different combinations of victimization types (Xavier Hall et al., 2022). In a United States sample, researchers observed polyvictimization as defined as having multiple experiences of violence among cisgender MSM (prevalence: 33%), cisgender WSW (35%), transgender men (48.9%), transgender women (63.4%), and gender queer populations (assigned male at birth: 71.5%, assigned female at birth: 49.5%) (Sterzing et al., 2017). The conceptualization of polyvictimization is important because experiencing multiple forms of victimization can amplify adverse outcomes. Polyvictimization has been linked to substance use (Xavier Hall et al., 2022) and adverse mental health outcomes (Sterzing et al., 2017) in LGBTQI populations in the United States. Polyvictimization has also been linked to adverse health outcomes in the Global South, such as HIV risk behaviors among transgender women engaged in sex work in Jamaica (Logie et al., 2020).

## 9.4 Risk Factors for Victimization

Observed risk factors for victimization among LGBTQI populations range from structural, communal, and individual factors. Structural factors such as criminalization and police violence put LGBTQI populations at risk for other forms of violence with limited options for recourse (Logie et al., 2016). Reviews of the literature also

highlight structural factors related to IPV among transgender populations such as homelessness, immigration status, and incarceration (Peitzmeier et al., 2020). As mentioned earlier, asylum or refugee status is also associated with various forms of violence (Hopkinson et al., 2017). The deep stigma associated with being an LGBTQI individual in countries where it is illegal and/or heavily penalized allows sexual abuse, “corrective rape”, and victimization to continue unchecked (Alessi et al., 2017).

Community factors such as stigma put LGBTQI populations at risk for a variety of victimization experiences. For example, in Brazil, MSM who experienced discrimination had 3.1 times the odds of experiencing sexual violence than those who had not experienced discrimination (Sabidó et al., 2015). Stigma is also associated with suicidal ideation (Stahlman et al., 2016), community violence (Blondeel et al., 2018), elder abuse (Cook-Daniels, 2017), and IPV (Edwards & Sylaska, 2013) in LGBTQI populations.

Individual-level factors are probably the most examined in the literature. Examples of risk factors at the individual level include disability status, race, gender identity, education, participation in sex work, sexual positioning, and substance use, to name a few (Peitzmeier et al., 2020; Shaw et al., 2012). In many cases, a single risk factor is associated across multiple forms of violence such as how participation in sex work is associated with police violence (Stotzer, 2014), IPV (Dunkle et al., 2013), and sexual violence (Shaw et al., 2012). Similarly, substance use is associated with IPV (Chong et al., 2013), suicidal ideation (Wolford-Clevenger et al., 2018), and sexual violence (Chakrapani et al., 2019). Lastly, one form of victimization can be a risk factor for others. For example, re-victimization has been a risk factor for sexual violence among lesbian and bisexual women in the United States such that those who experience sexual victimization in childhood were more likely to experience sexual violence as an adult (Morris & Balsam, 2003).

## 9.5 Health Consequences of Victimization

Victimization experiences can lead to a range of health consequences, including negative mental health outcomes (Dame et al., 2020), HIV (Logie, Wang, et al., 2020), further victimization (Morris & Balsam, 2003), substance use (Xavier Hall et al., 2022), physical injury, and death (Momen & Dilks, 2020). While these outcomes may be seen across LGBTQI populations, differences across individual identities are important to note. For instance, the risk of HIV acquisition may be less obvious to cisgender women who identify as lesbian, gay, or queer because they may not perceive themselves at risk of an infection thought to be transmitted through penis-in-vagina sex. The need for testing and treatment of HIV may not be considered a priority for lesbian, gay, or queer women, and early opportunities for treatment may be missed. Moreover, significant barriers exist for accessing supportive care among LGBTQI individuals who experience violence including stigma, police violence, criminalization of LGBTQI identities, and criminalization of sex work

(Chynoweth et al., 2020; Ibragimov & Wong, 2018; Logie et al., 2016). These barriers may further exacerbate the effect of violence on the well-being of LGBTQI individuals.

## 9.6 Prevention and Interventions

The growing evidence of violence experienced by global LGBTQI populations presented in this chapter highlights the dire need for prevention and intervention work. Given the wide array of multi-level influences of violence, these interventions may be conceptualized at multiple levels of the social ecology such as structural and policy interventions, organizational or community interventions, and individual-level interventions. Given the breadth of this field, it is impossible to address the full array of possible interventions across all forms of violence in the present chapter; however, we highlight examples of interventions at each level.

While there is no existing systematic review of interventions addressing all forms of violence faced by LGBTQI individuals, most systematic reviews point to a relative dearth of rigorous evidence for violence interventions among LGBTQI populations. Recent systematic reviews of relevant literature replicate the finding of scant to no evidence addressing interventions for LGBTQI victimization overall, but more specifically in the Global South (Coulter et al., 2019; Edwards et al., 2021; Kiss et al., 2020; Mengtong Chen & Chan, 2015; Peitzmeier et al., 2020; Tat et al., 2015). Thus, the need for rigorous LGBTQI violence prevention and intervention research is underlined by this apparent dearth, particularly in the context of the Global South.

### 9.6.1 *Decolonization*

An area of growing interest is decolonization in the study of global LGBTQI victimization. Decolonization is fundamentally rooted in the promotion of Indigenous sovereignty and the return of land to Indigenous peoples in settler colonial states (Tuck & Yang, 2021). Scholars have extended post-colonial thought such as applications of Indigenous Postcolonial Theory (Battiste, 2000), in which power dynamics between scholars and Indigenous communities are recognized and addressed through centering Indigenous voices, knowledge, and well-being (Browne et al., 2005). Integrating decolonialist and post-colonialist perspectives into LGBTQI rights discourse emphasizes the roles of local LGBTQI communities and advocates in dismantling anti-LGBTQI laws that were established by colonial powers even as these local actors interact with global transnational LGBTQI rights movements (Waites, 2019). This theoretical reorganization dispels myths that uphold Western

societies as morally superior in the case of LGBTQI rights and recognizes the Indigenous knowledge and movements of LGBTQI communities across the Global South (Currier, 2011). This is demonstrated by qualitative work highlighting the conceptualization of decolonization by local LGBTQI advocates in Namibia and South Africa, who view their work as decolonization and see leaders' decisions to uphold anti-LGBTQI laws and rhetoric as a selective embrace of colonial influence (Currier, 2011). Decolonization of knowledge production (Connell, 2014) in public health efforts to address LGBTQI victimization in the Global South is crucial, particularly in relation to developing interventions. Such efforts should center the perspectives of LGBTQI populations in relevant communities through strategic academic-community partnerships that address inherent power structures that are in part a colonial legacy (Browne et al., 2005).

### ***9.6.2 Structural/Policy Interventions***

Clear implications for policy exist, the first being decriminalization of LGBTQI identities (Carrol & Mendos, 2019; Chiam et al., 2016), as well as the decriminalization of sex work, which is associated with as much as a 30% decrease in violence against workers (Cunningham & Shah, 2018). Decriminalization is only the first step, as 68+ countries (e.g., South Africa, Angola, Australia, Mongolia, Bolivia, and Mexico) have begun to adopt protections for LGBTQI populations such as instituting employment protections, creating hate crime protections, banning incitement to hatred, establishing constitutional protections, and banning conversion therapy (see Mental Health chapter, Chap. 3; Carrol & Mendos, 2019). Other national policies may include adopting a comprehensive violence response strategy as was done in Kenya in relation to improving HIV prevention in key populations such as MSM (Bhattacharjee et al., 2018). Kenya's response included trainings for providers, awareness campaigns, building networks between service sectors, improving documentation of violence, police trainings, and advocacy meetings. These changes reached more than 60,000 MSM between 2013 and 2017 and resulted in a reduction in reports of violence among MSM (Bhattacharjee et al., 2018). Given the clear influence of policy and government actors, policy interventions are a natural starting point in preventing LGBTQI populations; however, transnational efforts should be aware of potential backlash when decriminalization efforts are perceived as a threat to the sovereignty of states that criminalize LGBTQI identities. One such example is former US president Obama's visit to Senegal in 2013, where he emphasized the need to decriminalize LGBTQI identities. His comments were met with marked criticism from some, including academics that highlighted the asymmetric power differential in the dynamic between a Western nation, such as the United States, and Global South countries (Bertolt & Masse, 2019) as well as criticism from President Macky Sall of Senegal (Nossiter, 2013).

### ***9.6.3 Organizational or Community Interventions***

Community-level interventions have been developed to address some forms of violence in broader populations. For instance, the OAK Foundation and the US Centers for Disease Control and Prevention have released a review of the global literature addressing childhood sexual abuse prevention efforts, which includes addressing broader environments (laws, norms, etc.) and parent/caregiver support, economic strengthening, and response/support services (Saul & Audage, 2007; Ligiero et al., 2019). While some strategies have promising evidence or demonstration of effectiveness such as community mobilization programs, these programs primarily target cisgender girls without consideration for sexual identity and still have limited evidence overall (Ligiero et al., 2019).

The case is similar regarding interventions that address stigma-related violence or IPV. One US-based study examined a multi-pronged approach to improving interventions for partner violence and stigma-motivated violence among lesbian and bisexual women. The approach involved partnership with police to improve responsiveness, a police liaison, the implementation of “soft reporting” where a liaison would contact possible victims and connect them with appropriate resources, partnering with social service organizations aimed at survivors of violence to improve their approach to supporting lesbian and bisexual women, and advocating for state-level hate crime legislation (Rose, 2003).

Other interventions have sought to assist with processing trauma through creative means. Saul (2013) identified the important role of storytelling in genocide survivors, indicating that both open communication and collective narration may be important components of collective healing. As such, opportunities for collective narration of collective traumas may be an important facet of community healing and resilience. Likewise, returning to cultural practices that have been lost through colonization or displacement has been identified as essential aspect of healing from historical trauma (Gone, 2013). Additionally, theater and performance art have been identified as important healing interventions for intergenerational trauma. The genre of gay theater became complexly intertwined with themes of HIV/AIDS, trauma, and identity starting in the early 1980s, which can be understood as an organic process of crafting and sharing a collective narrative (Gavrila, 2013).

### ***9.6.4 Individual Interventions***

Some evidence suggests a survivor-centered approach that is responsive to specific experiences and needs of survivors may be more effective than generic clinical interventions, such as in the case of survivors of ACEs (Qi et al., 2016). This may be particularly true of individual interventions among LGBTQI individuals who experience violence. For instance, an exploratory study examined why male refugees from Myanmar, the Democratic Republic of the Congo, and South Sudan who

experienced sexual violence did not seek support from existing services. The study found that laws criminalizing LGBTQI identity and stigma in service providers were major barriers to seeking one-on-one services (Chynoweth et al., 2020).

Some have looked to the development of electronic applications to promote safety planning among populations that face violence (Campbell & Glass, 2009); however, these tend to be in Western nations and for heterosexual women. That being said, some preliminary data on feasibility, usability, and appropriateness for an e-health intervention for WSW have been reported (Bloom et al., 2016). One known e-health intervention addressed safety planning in low- and middle-income countries, but it targeted heterosexual women in Kenya (Decker et al., 2020). Its promising results suggest that similar electronic applications may be adapted for LGBTQI populations. Researchers and practitioners may need to look to existing violence interventions among general populations and existing interventions among LGBTQI populations that address other outcomes such as stigma, HIV, or substance use for inspiration, all while working closely with communities to ensure efficacious interventions are developed.

## 9.7 Conclusions and Highlighting Gaps in the Literature

Overall, victimization among LGBTQI populations is widespread, prevalent, and interrelated. In Fig. 9.1, we depict the multi-level nature of LGBTQI victimization, including known correlates and influences. This figure highlights that LGBTQI victimization does not occur in isolation, nor is it limited to individual occurrences of interpersonal victimization. Rather, LGBTQI victimization is part of a broader network of phenomena affecting the social and material worlds of LGBTQI populations globally, which notably include colonization and widespread stigma. Violence is perpetrated by multi-level actors (intrapersonal, interpersonal, communal, societal, and international) and will require solutions at multiple levels of the social ecology. Thus, an understanding of LGBTQI victimization requires complex frameworks such as minority stress, syndemics, post-colonial, and human rights frameworks. Researchers may need to adapt or integrate frameworks to understand interrelated forms LGBTQI victimization and to create effective interventions at multiple levels of the social ecology.

Victimization impacts a range of LGBTQI identities across the lifespan as well as intersectional populations such as Indigenous groups, asylum seekers, and racial minority populations. While research pertaining to LGBTQI victimization in the Global South is growing, it remains nascent, particularly research regarding specific sub-populations (e.g., transgender, non-binary, intersex, and bisexual populations) as well as research regarding prevention and intervention development. Thus, this chapter also serves as a call to action for researchers, practitioners, and community advocates to build upon existing bodies of knowledge on LGBTQI victimization. Researchers should emphasize addressing subpopulations such as transgender, non-binary, bisexual, intersex, LGBTQI elders, and LGBTQI populations of color.

Moreover, future research and intervention development should center perspectives from the Global South and employ decolonial and post-colonial frameworks.

## **9.8 Case Study: Experiencing Violence and Victimization: Transgender Women in Brazil**

In many places worldwide, violence against transgender women is an epidemic, and Brazil's rate is among the highest. Over 375 transgender people were killed globally in 2021, and over 40 percent were in Brazil (ANTRA & IBTE, 2022). Of the documented and verified murders of transgender people in Brazil in 2021, 96 percent of them were transgender women, and suspects were identified in less than a quarter of cases (ANTRA & IBTE, 2022). An analysis conducted by the Associação Nacional De Travestis E Transexuais Do Brasil (ANTRA, The National Association of Transsexuals of Brazil) reported that the murders disproportionately affected young transgender women, with 58 percent of 2021 victims under the age of 30, with the average age of victims at 29 years old (ANTRA & IBTE, 2022).

The rates of violence against transgender women in Brazil directly connect to their self-reported feelings and experiences of victimization. According to the US National Center for Victims of a Crime, "the trauma of victimization is a direct reaction to the aftermath of a crime" (National Center for Victims of a Crime, 2008). Additionally, crime victims can "suffer a tremendous amount of physical and psychological trauma," with their primary injuries grouped into three categories: physical, financial, and emotional (National Center for Victims of a Crime, 2008). Transgender women in general, and especially in Brazil, have several risk factors that increase their risk of being victimized, including lower educational attainment, higher rates of homelessness or housing insecurity, and higher risk sexual behaviors such as survival sex work (ANTRA & IBTE, 2022). Regarding education, ANTRA & IBTE (2022) estimates that 56 percent of transgender women in Brazil have only an elementary school level of education, while 27 percent of transgender women have a high school degree. Additionally, the estimated age at which transgender girls are forced to leave their homes and find their own housing due to their gender identity is 13 years old (ANTRA & IBTE, 2022). The normalization of childhood and adolescent neglect and victimization of young transgender girls and women contributes to their involvement in sex work.

ANTRA & IBTE (2022) reports that around 90 percent of transgender women in Brazil use sex work as a source of personal income. These activities directly relate to their risk of victimization because 78 percent of transgender murder victims in 2021 were sex workers (ANTRA & IBTE, 2022). Transgender women also commonly experience other treatments that may lead to them feeling victimized. Markers of violence can be subtle, such as not being allowed to use the restroom corresponding to their gender identity, or more obvious, like being denied necessary medical care because of their gender identity (ANTRA & IBTE, 2022). While there



Brazil map showing major cities as well as parts of surrounding countries and the Atlantic Ocean. (Source: Central Intelligence Agency, 2021)



are no official suicide statistics in Brazil, one organization called Grupo Gay da Bahia estimates that approximately 100 gay and transgender people in Brazil committed suicide in 2018, which was almost four times the number in 2016 (Lopez, 2019). Suicidality and suicidal thoughts are directly related to feelings of victimization, especially when there is fear of violence involving weapons (Bouris et al., 2016).

Remedying these extremely high rates of violence and victimization of transgender women in Brazil is not a simple task. One way to begin the necessary social change is through legal regulation of certain behaviors. The Maria da Penha Law on Domestic and Family Violence, passed in 2006, was the first federal law in Brazil to regulate violence against women and punish offenders (Gattegno et al., 2016). Although it does not specifically name protections for sexual and gender minorities, in 2015 this law was successfully used to defend violence against a transgender woman that was perpetrated by her partner (Santos, 2015).

In the past two decades, several laws have been passed or adapted in Brazil more specifically to protect people based on their sexual orientation or gender identity, including transgender women in their scope. While no constitutional amendment prohibits discrimination based on sexual orientation or gender identity, several states within Brazil have local laws that prohibit such discrimination (ILGA World, 2020). Regarding the specific prohibition of discrimination in employment, similarly, no federal law protects people based on their sexual orientation or gender identity. Nevertheless, approximately 70 percent of Brazil's population lives in an area that has a local law prohibiting employment discrimination (ILGA World, 2020). Protections against employment discrimination are important because if transgender people are discriminated against, it could mean they turn to less safe income pursuits such as survival sex work. However, protection against discrimination in employment does little to protect transgender women, as only approximately four percent are in formalized career paths that would be covered under this law (ANTRA & IBTE, 2022).

Theoretically, the laws that protect transgender women from general discrimination, discrimination in employment, and intimate partner violence should serve to decrease their fears and feelings of victimization based on their gender identity. However, the laws of the country and the practices of the citizens are incongruent. Although these laws have been in place for several years, the murder rates of transgender women in Brazil remain the highest in the world, and other types of serious violence committed against these women are prevalent. In an important and promising move that has the potential to help protect transgender women, the Federal Supreme Court ruled in June 2019 that Brazil's Law No. 7,761 about crimes motivated by racial prejudice encompasses crimes motivated by sexual orientation and gender identity until a more specific law is drafted (ILGA World, 2020). This ruling would theoretically lead to criminal liability for those offenses committed against people based on their sexual orientation or gender identity, a potentially powerful consequence that could decrease transgender women's fear of victimization (ILGA World, 2020). Following the ruling, ANTRA and Associação Brasileira de Lésbicas,

Gays, Bissexuais, Travestis, Transexuais e Intersexos (ABGLT) published a guide for LGBTQ people on how to use the new ruling to their benefit to fight homophobia and transphobia (ANTRA & ABGLT, 2020). However, since the ruling went into effect over two years ago, there has been no public reporting on prosecution of discrimination based on sexual orientation or gender identity. ANTRA and ABGLT (2020) report that while the Supreme Court ruled in favor of protecting LGBTQ people, the government is ultimately against them and has thus put no additional measures into place to protect LGBTQ people after the ruling.

Many organizations in Brazil are working steadfastly to support transgender women, track the rates of violence against them, and fight for justice for this population. For example, Rede Trans Brasil, or the National Network of Brazilian Trans People, founded in 2016, represents transgender people in Brazil and supports them in their fight for equal human rights and ending discrimination (Rede Trans Brasil, 2019). They prioritize advocating for the implementation of policy measures to protect transgender people at all levels of government, as well as monitoring the enactment of existing legislation (Rede Trans Brasil, 2019).

Another organization called the Associação Nacional De Travestis E Transexuais Do Brasil (ANTRA, 2019) represents 127 different organizations that came together for the purpose of advocating for transgender people in Brazil (ANTRA & IBTE, 2022). Their major areas of work are creating positive public portrayals of transgender people; collaborating with other networks to advocate for transgender people's right to health, education, and public safety; supporting actions to improve quality of life for transgender people and decrease rates of sexually transmitted infections; and disseminating information about violence and victimization of transgender people in Brazil (ANTRA, 2022). Finally, the Instituto Brasileiro Trans De Educação (IBTE, 2019), or the Brazilian Trans Education Institute, works to combat transphobia in the educational environment. In teaching younger children about transphobia and its consequences and working to improve the acceptance of transgender people earlier in life, this organization seeks to decrease transgender women's victimization later in life (IBTE, 2019).

The work being done by these organizations, and others within Brazil and internationally, is extremely promising. However, there is much progress to be made to protect transgender women in Brazil from being victimized at the current rates. The situation for this marginalized group is dire, and it is, quite frankly, a question of life and death for them, as the life expectancy for transgender women in Brazil is only 35 years old (VMLY&R Brazil, 2019). Stronger public support and better enforcement of laws protecting transgender women will lead to a wider social and cultural shift toward acceptance of transgender individuals.

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