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Collecting Diverse Data on Gender and Sexuality in Demographic and Health Surveys: An Overview



DHS OCCASIONAL PAPERS NO. 15

MARCH 2024

This publication was produced for review by the United States Agency for International Development (USAID).
The report was prepared by Sarah M. Balian, Blake Zachary, and Kerry L. D. MacQuarrie.

DHS Occasional Papers No. 15

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Demographic and Health Surveys:
An Overview**

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March 2024

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Acknowledgments: The authors wish to thank the USAID DHS Program Management team for their support and funding allowing The DHS Program to thoughtfully think through diverse sexual orientation, gender identity, gender expression, and sex characteristics (SOGIESC) data needs and implications. In addition to the authors, the following DHS Program staff contributed to this report—Fred Arnold, Sabina Behague, Rathavuth Hong, Joanna Lowell, Anjushree Pradhan, Guillermo Rojas, Sabina Vadnais, and Micha van Waesberghe. The authors thank ICF staff who contributed to this work—Leo Goldsmith, Dany Kahumoku, and Leo Ryan. We would also like to thank the many experts who took time to meet with us and share their knowledge including those from the Williams Institute at the UCLA School of Law, the Gender Team at the Johns Hopkins Center for Communications Programs, the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR) office, the U.S. Census Bureau, USAID’s Agency for All Project, Outright International, the Center for Global Development, and the Society for International Development-US.

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This study was carried out with support provided by the United States Agency for International Development (USAID) through The DHS Program (#720-OAA-18C-00083). The views expressed are those of the authors and do not necessarily reflect the views of USAID or the United States Government.

The DHS Program assists countries worldwide in the collection and use of data to monitor and evaluate population, health, and nutrition programs. Additional information about The DHS Program can be obtained from ICF, 530 Gaither Road, Suite 500, Rockville, MD 20850 USA; telephone: +1 301-407-6500, fax: +1 301-407-6501, email: info@DHSprogram.com, internet: www.DHSprogram.com.

Recommended citation:

Balian, Sarah M., Blake Zachary, and Kerry L.D. MacQuarrie. 2024. *Collecting Diverse Data on Gender and Sexuality in DHS Surveys: An Overview*. DHS Occasional Papers No. 15. Rockville, Maryland, USA: ICF.

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ABSTRACT

The United States Agency for International Development (USAID) has long been a champion of gender equality and in recent years have updated their policies to recognize that sex disaggregation in a binary does not fully reflect the populations being served. In 2023, USAID released their first ever LGBTQI+ inclusive development policy which raises awareness of individuals with diverse sexual orientation, gender identity, gender expression, or sex characteristics (SOGIESC) and commits USAID toward inclusive leadership in development, expansion of precise data collection, partnership with local communities, and inclusive crisis response. Since 2015, the Sustainable Development Goals (SDGs) have set ambitious targets with the aim of leaving no one behind. To ensure that the SDGs are achieved by all, the United Nations (UN) has repeatedly recommended improvements in data disaggregation by SOGIESC status.

The USAID funded Demographic and Health Surveys (DHS) Program, begun in 1984, works closely with various UN agencies, along with other major funders, to support National Statistical Offices in the collection of demographic and health data. Governments then use these data to set policy, track programs, and monitor progress towards the SDGs. The DHS Program has collected diverse SOGIESC data through household surveys for the past twenty years.

This paper provides an overview of existing recommendations and guidance on collecting SOGIESC data, as well as how SOGIESC data are standardly collected in DHS surveys, a review of DHS surveys which have collected more diverse SOGIESC data, and key considerations for collecting diverse SOGIESC data in DHS surveys.

Key words: Sexual orientation, gender identity, gender expression, sex characteristics, lesbian, gay, bisexual, transgender, queer, Demographic and Health Survey, household surveys, data collection, quantitative data, SOGIESC, LGBTQI+, DHS

ACRONYMS AND ABBREVIATIONS

ADS	Automated Directives System
BMI	Body Mass Index
CAPI	Computer assisted personal interview
CDC	Centers for Disease Control and Prevention
CFR	Code of Federal Regulations
CPS	Contraceptive Prevalence Survey
DFID	United Kingdom Department for International Development
DHS	Demographic and Health Survey
FGC	Female genital cutting
HIV	Human immunodeficiency virus
ICF	The primary implementing agency of The Demographic and Health Surveys Program
ILGA	International Lesbian, Gay, Bisexual, Trans and Intersex Association
IRB	Institutional Review Board
LGBTQI+	Lesbian, gay, bisexual, transgender, queer, intersex, plus
NASEM	National Academies of Science, Engineering, and Medicine
NGO	Non-governmental organization
NIH	National Institutes of Health
SAGER	Sex and Gender Equity in Research
SDG	Sustainable Development Goal
SGM	Sexual and gender minority
SOGIESC	Sexual orientation, gender identity, gender expression, or sex characteristics
STI	Sexually transmitted diseases
UKAID	United Kingdom Department for International Development
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children’s Fund
USAID	United States Agency for International Development
WFS	World Fertility Survey
WHO	World Health Organization

1 INTRODUCTION

In 2011, President Obama issued a Presidential Memorandum to all heads of executive departments and agencies “... directing all agencies engaged abroad to ensure that U.S. diplomacy and foreign assistance promote and protect the human rights of LGBT persons.” (Presidential Memorandum, 2011). In response to President Obama’s memorandum, USAID released a LGBT Vision for Action statement promoting and supporting the inclusion of lesbian, gay, bisexual, and transgender (LGBT) individuals in 2014. In the Vision, USAID states that a “[r]elatively simple, inexpensive entry points for LGBT inclusion in new sectors include the collection of quantitative and qualitative data that address the experiences of LGBT persons...” (United States Agency for International Development, 2014). The first ever U.S. National Strategy on Gender Equity and Equality, released in 2021, provides direction to close gender gaps and move closer toward equal opportunity for all people. The strategy emphasizes that the collection of gender data is critical to the implementation of the strategy and states, “We will support collection and analysis of sex-disaggregated data for all programs, to the maximum extent practicable, and will promote data collection and cross-tabulation on the basis of sex, race, ethnicity, sexual orientation, gender identity, disability, and socioeconomic status, among other factors, to ensure rigorous assessment of progress and barriers for underserved communities.” (Presidential Letter, 2021).

The Federal Evidence Agenda on LGBTQI+ Equity, published in January 2023, establishes an evidence agenda to “provide a roadmap for federal agencies as they work to create their own data-driven and measurable sexual orientation and gender identity (SOGI) Data Action Plans to help assess, improve, and monitor the health and well-being of LGBTQI+ people over time.” (National Science and Technology Council, 2023). The Federal Evidence Agenda on LGBTQI+ Equity identifies three main types of SOGI data needed to inform policy decision-making: prevalence data, difference data, and assessment data. Large-scale nationally representative demographic surveys are identified as the primary place to “collect prevalence data on LGBTQI+ people” to obtain better information about the size of populations of interest, as well as allowing this information to be “examined in conjunction with other demographic factors such as age, education, income, geographic location, race, and ethnicity; [as] this would allow decision-makers to better understand differences and disparities between LGBTQI+ and non-LGBTQI+ people and within LGBTQI+ populations.” (National Science and Technology Council, 2023).

USAID’s 2023 Gender Equality and Women’s Empowerment Policy “... affirms that the promotion of the rights of gender-diverse individuals—those with a gender identity beyond the binary categories of man or woman—is integral to the advancement of gender equality.” (United States Agency for International Development, 2023a). People who do not fit within the gender binary may be perceived to be breaking gender norms and, as a result, become targets of gender-based discrimination, exclusion, and violence.” Since 2009, USAID has required a gender analysis as a part of all program planning and monitoring and evaluation reports. These reports must include sex disaggregated data. The 2023 policy states that “[r]ecognizing that sex disaggregation does not capture the range of gender identities, USAID will explore disaggregation of data that more accurately track who is being reached and who benefits from USAID programming.” (United States Agency for International Development, 2023a). In August 2023, USAID published its first LGBTQI+ Inclusive Development Policy as an update to the 2014 Vision for Action (United States Agency for International Development, 2023b). USAID’s LGBTQI+ Inclusive Development Policy has four main goals, the second of which is to “drive evidence-based policies and approaches and

strengthen responses through data.” Further, one of the policy’s recommendations is to disaggregate data. Disaggregating data allows USAID to better understand who the Agency’s programs are reaching and to tailor existing programmatic approaches to better meet the needs of LGBTQI+ individuals and communities. “...USAID should develop further guidance to safely disaggregate person-level data by gender identity and, where possible, by additional sexual orientation, gender identity, gender expression, or sex characteristics (SOGIESC) dimensions.” (United States Agency for International Development, 2023b).

In 2015, the Sustainable Development Goals (SDGs), a set of 17 goals and 169 targets, were adopted by all United Nations member states to advance sustainable development by 2030. Demographic and Health Surveys utilize standardized data collection instruments that can provide estimates for 50 indicators across 10 of the 17 SDGs (see Table 1) (United Nations 2015a). Notably, the Sustainable Development Agenda includes a “pledge that no one will be left behind” and commitments to prioritize the poorest and most marginalized (United Nations 2015b). A 2018 examination of Sexual and Gender Minorities and the Sustainable Development Goals commissioned for the United Nations Development Programme notes that “sexual and gender minorities are often the most marginalized and, as such, require specific inclusion and attention in order to drive forward the vision of the SDGs.” (O’Malley & Holzinger 2018). The report found the SDG themes most strongly associated with sexual and gender minorities are poverty, health, education, gender equality, violence, social and political inclusion, access to justice and non-discriminatory laws, data, and international cooperation (see Table 1).

Improving data collection disaggregated by sexual orientation, gender identity, gender expression, and intersex status is a recurring priority action recommended for each SDG addressed in the report. Furthermore, the report highlights SDG Target 17.8—support to countries to significantly increase the availability of high-quality, timely, and reliable data disaggregated by a variety of characteristics—and recommends supporting the United Nations Statistics Office, National Statistics Offices, and other relevant actors to build awareness of the importance of data collection and analysis of sexual and gender minorities, to develop and test methodologies and to share good practice. This recommendation is particularly germane to The Demographic and Health Surveys (DHS) Program as National Statistics Offices are the implementing agency for most DHS surveys. Moreover, the United Nations (UN) is a key institutional partner of The DHS Program, from providing financial support to the majority of DHS surveys through different UN Agencies to close collaboration with UNICEF’s Multiple Cluster Indicator Survey to harmonize indicator definitions.

Table 1 Sustainable Development Goals (SDG), Demographic and Health Surveys (DHS), and sexual and gender minorities

SDG number	SDG name	Number of SDG indicators DHS can estimate	SDG indicator themes for which DHS surveys provide estimates	Compelling evidence that sexual and gender minorities are disproportionately affected by SDG theme	Priority actions relevant to DHS surveys
1	No poverty	5	Water, Sanitation, Hygiene, Electricity, Clean Fuels and Technologies	Yes	Improve data collection (disaggregated by sexual orientation, gender identity, gender expression and intersex status) related to income, housing, access to social protection, existence and utilization of workplace protections against discrimination and associations between sexual and gender minority inclusion and economic growth.
2	Zero hunger	6	Food Insecurity, Children's Nutritional Status, Anemia in Women		
3	Good health and well-being	13	Maternal mortality, Skilled Birth Assistance, Childhood Mortality, Adult Mortality, Family Planning, Fertility, Tobacco Use, Children's Vaccination	Yes	<p>Improve collection of data (disaggregated by sexual orientation, gender identity, gender expression and intersex status) related to preferred health care providers in different settings (public vs private, clinic vs pharmacy, etc.); respect of bodily integrity of intersex people; HIV status, treatment access and treatment adherence; STIs; mental health, suicide ideation and substance abuse; and prevalence and impact of so-called conversion therapies.</p> <p>Commit to community consultation and methodological innovation to improve health-related data collection and analysis from sexual and gender minorities while protecting privacy and responding to safety and other ethical concerns.</p>
4	Quality education	2	Early Childhood Development and Organized Learning	Yes	<p>Support research to develop effective and ethical data collection and disaggregation related to sexual orientation, gender identity, gender expression and intersex status in schools, in relation to academic performance, bullying and other forms of violence and discipline/exclusion.</p> <p>Implement appropriate data collection—ideally within existing education sector measurement exercises—in relation to academic performance, bullying and other forms of violence and discipline/exclusion (disaggregated by sexual orientation, gender identity, gender expression and intersex status).</p>
5	Gender equality	10	Experience of Violence, Age at Marriage, Female Genital Mutilation, Informed Decision Making for Sexual and Reproductive Health, Mobile Telephone Ownership	Yes	Improve data collection (disaggregated by sexual orientation, gender identity, gender expression and intersex status) related to: correlations between the status of girls and women and the status of sexual and gender minorities; rates and nature of violence; satisfaction with police and other government responses to violence; and participation of lesbians, bisexual women and transgender women in programmes designed to empower women and girls.

Continues...

Table 1—Continued

SDG number	SDG name	Number of SDG indicators DHS can estimate	SDG indicator themes for which DHS surveys provide estimates	Compelling evidence that sexual and gender minorities are disproportionately affected by SDG theme		Priority actions relevant to DHS surveys
6	Clean water and sanitation	6	Water, Sanitation, Handwashing			
7	Affordable clean energy	2	Electricity, Clean Fuels and Technologies			
8	Decent work and economic growth	2	Child Labor, Access to Financial Institutions or Mobile-Money-Service Providers	Yes	See SDG 1	
9	Industry, innovation, and infrastructure	-				
10	Reduced inequalities	-		Yes		
11	Sustainable cities and communities	-		Yes	See SDG 1	
12	Responsible consumption and production	-				
13	Climate action	-				
14	Life below water	-				
15	Life on land	-				
16	Peace, justice, and strong institutions	3	Child Discipline, Sexual Violence, Birth Registration	Yes	n/a	
17	Partnerships for the goals	1	Internet Use	Yes		Invest in the development of more effective, ethical data collection and research methods. Support the United Nations Statistics Office, National Statistics Offices and other relevant actors to build awareness of the importance of data collection and analysis of sexual and gender minorities, to develop and test methodologies and to share good practice.

Finally, and most importantly, for more than two decades, local DHS survey steering and technical committees have been requesting and collecting more diverse SOGIESC data to meet their specific needs. To date, adaptations to SOGIESC data collection in DHS surveys have been conducted on an ad hoc basis and, in some instances, requests to collect more diverse SOGIESC data could not be incorporated into a DHS survey.

This paper provides an overview of existing recommendations and guidance on collecting SOGIESC data, as well as how SOGIESC data are standardly collected in DHS surveys, a review of DHS surveys which have collected more diverse SOGIESC data, and key considerations for collecting diverse SOGIESC data in DHS surveys. This paper focuses narrowly on Demographic and Health Surveys, as they are the most common type of survey implemented by The DHS Program and to date, diverse SOGIESC data have not been requested or collected in Malaria Indicator Surveys (MIS) or Service Provision Assessment (SPA) surveys.

1.1 Measuring Sexual Orientation, Gender Identity, Gender Expression, and Sex Characteristics (SOGIESC)

“Everyone, everywhere, has a sexual orientation, a gender identity, gender expression, and sex characteristics (SOGIESC).” (United States Agency for International Development, 2023b). SOGIESC, like other aspects of identity, impact how a person experiences the world, including their health and well-being. The elimination of disparities based on SOGIESC cannot be achieved without safely and accurately collecting SOGIESC data.

1.1.1 Terminology

In English, the words sex and gender are not synonyms, although they are often used as such. A clear understanding of sexual orientation, gender identity, gender expression, and sex characteristics (SOGIESC) terminology is essential to any efforts to collect SOGIESC data. As USAID’s flagship project to collect demographic and health data, this paper uses the terminology and definitions found in USAID’s Automated Directives System (ADS) Chapter 205: Integrating Gender Equality and Women’s Empowerment in USAID’s Program Cycle (United States Agency for International Development, 2023c). Table 1 displays the SOGIESC definitions from ADS Chapter 205 that are most relevant to DHS surveys. This paper does not examine intersex status as survey steering and technical committees have rarely, if ever requested to collect these data in a DHS survey.

Table 2 Sexual Orientation, Gender Identity, Gender Expression, and Sex Characteristics (SOGIESC) terminology definitions as per Automated Directives System (ADS) Chapter 205

Term	Definition from ADS Chapter 205
Gender	A socially constructed set of rules, responsibilities, entitlements, and behaviors associated with being a man, a woman, or a gender-diverse individual, and the relationships between and among people according to these constructs. These social definitions and their consequences differ among and within cultures, change over time, and intersect with other factors (e.g., age, class, disability, ethnicity, race, religion, citizenship, and sexual orientation). Though these concepts are linked, the term gender is not interchangeable with the terms women, sex, gender identity, or gender expression.
Gender diverse	Refers to a person with a gender identity beyond the binary categories of man or woman. This can include identifying along the vast diversity of gender identity (e.g., nonbinary, genderqueer, gender nonconforming, genderfluid, etc.).
Gender expression	How a person presents their gender identity outwardly, through acts, dress, behavior, voice, or other perceived characteristics. Gender expression can be described variously as feminine, masculine, both, or neither. Pronouns are also part of how people express and articulate gender identity.
Gender identity	A person's deeply held sense of self. It is how individuals perceive themselves and what they call themselves. This can include identifying as woman or man or as a gender-diverse individual along the spectrum of gender identity and gender expression. While gender is a social construct ascribed to individuals, gender identity is self-determined. A person's gender identity may or may not align with their biological sex assigned at birth. When someone's sex assigned at birth aligns with their gender identity, the person is cisgender. When someone's sex assigned at birth does not align with their gender identity, the person may identify as a transgender man, transgender woman, nonbinary, or another identity (e.g., gender nonconforming, agender, etc.).
Sex	The designation of a person as male, female, or intersex based on a cluster of anatomical and physiological traits known as sex characteristics. Sex characteristics include external genitalia, secondary sex characteristics (e.g., facial hair, distribution of fat tissue, voice pitch), gonads and internal organs, hormones, and chromosomes. At birth, infants are typically assigned a sex based on visual inspection of external genitalia.
Sexual orientation	The enduring physical, romantic, and/or emotional attraction to other people by sex or gender identity. Common sexual orientations include straight or heterosexual, gay or lesbian, bisexual, pansexual, asexual, queer, and questioning. Sexual orientation is separate from gender identity or gender expression.

1.1.2 National Academies of Sciences, Engineering, and Medicine Recommendations on SOGIESC Data Collection

In 2021, the National Institutes of Health (NIH) asked the National Academies of Sciences, Engineering, and Medicine (NASEM) to convene a committee of experts to produce a consensus report with conclusions and recommendations on 1) guiding principles for collecting data on sex, gender identity, and sexual orientation, and 2) recommend measures for these constructs in different settings such as surveys, clinical settings, and administrative forms (National Academies of Sciences, Engineering, and Medicine, 2022).

Guiding Principles

The National Academies of Sciences, Engineering, and Medicine outlines five principles for SOGIESC data collection:

1. People deserve to count and be counted (inclusiveness).
2. Use precise terminology that reflects the constructs of interest (precision).
3. Respect identity and autonomy (autonomy).
4. Collect only necessary data (parsimony).
5. Use data in a manner that benefits respondents and respects their privacy and confidentiality (privacy).

These five guiding principles (inclusiveness, precision, autonomy, parsimony, and privacy) provide an important frame of reference for the subsequent discussions in this paper.

Recommended measures for collecting data on sex, gender identity, and sexual orientation

NASEM used six criteria for selecting measures for sexual orientation identity, gender identity, and intersex status:

1. consistency with the data collection principles discussed above (e.g., precision, inclusiveness, autonomy);
2. comprehensibility to the general population as well as the LGBTQI+ populations of interest;
3. tested in both general population and LGBTQI+ populations;
4. requires that respondents select only a single response option in order to simplify enumeration, tabulation, and analysis of the resulting data;
5. provides consistent estimates when measured across data collection contexts; and
6. tested or previously administered with adequate performance using multiple administration modes (i.e., web-based, interviewer-administered, computer-assisted, and telephone administration).

Further, NASEM used seven criteria to evaluate response options:

1. comprehensibility to the general population;
2. consistency with terminology that is currently used in both the general population and LGBTQI+ populations;
3. ability to measure current trends;
4. ability to measure, assess, and incorporate changes with less well-known terminology;
5. balance in providing comprehensive options with minimizing complexity and respondent burden that arises from considering a longer list of response options;
6. produces a sufficient number of respondents per category to minimize the need to collapse categories and reclassify respondents; and
7. considers the effects of response item ordering, including relevant factors, such as:
 - a. population prevalence,
 - b. alphabetical listing,
 - c. previous testing, and
 - d. randomization.

This paper focuses on NASEM’s recommended measures for gender identity and sexual orientation and does not examine the recommended measures for intersex populations, as nearly no steering or technical committees have requested to collect information on this topic in DHS surveys.

Gender identity. NASEM’s first recommendation for NIH is that the standard “...should be to collect data on gender and report it by default. Collection of data on sex as a biological variable should be limited to circumstances where information about sex traits is relevant, as in the provision of clinical preventive screenings or for research investigating specific genetic, anatomical, or physiological processes and their connections to patterns of health disease.” (National Academies of Sciences, Engineering, and Medicine, 2022). NASEM recommends two direct questions for capturing gender identity:

Q1: What sex were you assigned at birth, on your original birth certificate?

- Female
- Male
- (Don’t know)
- (Prefer not to answer)

Q2: What is your current gender?

- Female
- Male
- Transgender
- Culturally linguistic-specific term like Two-Spirit for American Indian and Alaska Native populations
- I use a different term: [free text]
- (Don’t know)
- (Prefer not to answer)

Those whose answers agree would be classified as cisgender while those whose answers differ would be transgender. NASEM noted that there is a lack of consensus around the order in which these two questions should be presented. While the recommended order reflects a chronological order from past to present, some small-scale research has suggested that this order does not adequately convey respect for self-identification. NASEM further notes that there is also small-scale research showing that varying the question order does not significantly change the response distributions but concludes that “further research on this point is warranted.”

Sexual orientation. NASEM identifies three dimensions of sexual orientation: behavior, attraction, and identity. Of these, NASEM’s recommends focusing on measuring sexual orientation identity because it “is the dimension that is most consistently tied to material forms of discrimination” and it has “the broadest and longest use in population-based data collection settings (surveys and administrative data) to enumerate and distinguish among sexual minority and majority populations”. (National Academies of Sciences, Engineering, and Medicine, 2022). NASEM recommends a single question to capture information on sexual orientation identity:

Which of the following best represents how you think of yourself?

- Lesbian or gay
- Straight, that is, not gay or lesbian
- Bisexual
- Culturally linguistic-specific term like Two-Spirit for American Indian and Alaska Native populations
- I use a different term: [free text]
- (Don't know)
- (Prefer not to answer)

NASEM's recommended sexual orientation identity measure reflects "both the cognitive dimension of identity (i.e., how a respondent sees or thinks of themselves) and the social or political dimension of identity (i.e., provides label options that reflect a social status or community)". Recommendations for future research on this measure include evaluating the necessity of including clarification language in the heterosexual response category—"that is, not gay or lesbian"—and difficulty in accurately translating this category into other languages, as well as research on the ordering of the response categories.

NASEM notes that "collecting data on sexual behavior has served to inform public health epidemiological surveillance and intervention" and "often, measures of sexual behavior (e.g. number of partners, occasions of engaging in a given sexual act) are selected to meet a specific purpose, such as estimating the risks of pregnancy, HIV, or sexually transmitted infections.... Depending on the purpose for including such measures, it may be relevant to identify specific sexual activity or activities, the gender(s) or sex traits of a sexual partner or partners, or the frequency with which an individual engages in specific activities."

Limitations of the 2022 NASEM guidance for DHS surveys

The 2022 NASEM report on Measuring Sex, Gender Identity, and Sexual Orientation provides well-researched recommendations to guide the collection of these data throughout the activities of federal agencies. Additionally, in the absence of comparable international or agency-specific guidelines, the report provides a robust starting point for The DHS Program in considering how best to collect diverse SOGIESC data in DHS surveys. There are, however, limitations in the applicability of the NASEM report to DHS surveys.

The 2022 NASEM report was developed as guidance for NIH research conducted in the United States, based on research primarily conducted in the United States, Canada, Europe, Australia, and New Zealand. Sex, gender identity, and sexual orientation are culturally specific constructs and the NASEM recommended measures may not perform as well in Africa, Asia, and Latin America and the Caribbean where the majority of DHS surveys are conducted.

NASEM identified the relative lack of comprehension testing in languages other than Spanish as a limitation of the guidance. NASEM notes that "many languages do not have separate words for sex and gender which presents a major challenge to adapting this guidance to an international setting". (National Academies of Sciences, Engineering, and Medicine, 2022). While the DHS maintains standard questionnaires in English, French, and Portuguese, individual DHS survey questionnaires are translated into as many as 20 languages commonly spoken in each county to ensure respondents nationwide can easily understand and respond.

NASEM was asked to develop recommended measures for three different settings: surveys and research studies, administrative settings, and clinical settings. NASEM categorizes demographic surveys into ‘surveys and research settings’, while health surveys were classified with public health surveillance under the broad heading of clinical settings. DHS Program surveys are both demographic and health surveys, which would place them into two NASEM categories, though the recommendations for these categories differ.

The NASEM report advises that population surveys generally collect health-related information primarily to “...assess health and health disparities in a population and the role of interpersonal and structural determinants of health.” (National Academies of Sciences, Engineering, and Medicine, 2022). NASEM’s recommended measures for surveys and research settings include “those associated with proximal and distal minority stressors: gender identity, transgender experience and identity, intersex status, and sexual orientation. In these survey contexts, data about specific sex traits are needed only in circumstances in which knowledge of these traits is necessary to accurately direct skip patterns for survey questions, interpret responses, or calculate values for composite measures.”

In contrast, “Health surveys were classified with public health surveillance, medical records, and clinical trials under the broad heading of clinical settings to account for the role sex traits and sex assigned at birth, alongside gender, may play in all these contexts.” DHS surveys often include voluntary biomarker testing and measurement, such as hemoglobin testing for anemia and anthropometry to calculate Body Mass Index (BMI) and BMI-for-age to assess nutritional status. The interpretation and/or calculation of these routine DHS survey indicators are sex-differentiated in a binary manner.

In addition to the concerns about the general applicability of NASEM’s guidance for DHS surveys, there are limitations specific to the recommended measure for gender identity. One limitation raised by NASEM is proxy reporting for gender identity. Demographic and Health Surveys, like the U.S. Census “depend on a single household respondent to provide proxy statistics for other household members.” Given the stigma often associated with gender identities beyond the binary, it is possible that a single household respondent may not know or may not accurately report another household member’s gender identity. NASEM notes that while recent feasibility studies indicate gender identity can successfully be collected via proxy, “there is no evidence on this issue among nationally representative probability samples,” like DHS surveys (National Academies of Sciences, Engineering, and Medicine, 2022). NASEM identified studying proxy reporting as a recommended area for further research. Section 3 of this report discusses examples of how diverse SOGIESC data have been collected in DHS surveys, including accommodations and/or adaptations to proxy reporting.

A further concern about NASEM’s recommended measure of gender identity is the use of the phrase “on your original birth certificate” in the first question about sex assigned at birth. NASEM “considered the merits of including this reference and concluded it helps to clarify the question, particularly for people who may have changed the sex designation on their original birth certificate. Being explicit that the question is asking for sex assignment on a specific government record also helps to distinguish it from the second step self-identification question about current gender.” (National Academies of Sciences, Engineering, and Medicine, 2022). This question construction assumes the respondent has a birth certificate. Birth registration varies dramatically among countries that conduct DHS surveys, as does possession of a birth certificate. Just 6% of children under age 5 in Zambia have a birth certificate according to the 2018 Zambia

DHS, compared to 99% of children under age 5 in Egypt according to the 2014 Egypt DHS. (ICF 2024). Birth registration and possession of a birth certificate may be even lower for adults age 15–49 who generally comprise the eligible population for individual DHS survey interviews.

Finally, NASEM’s recommendation to focus on measuring sexual orientation identity, rather than sexual behavior may not be sufficient for DHS surveys which routinely collect information on sexual behavior to assess the risk of pregnancy, HIV, and other sexually transmitted infections. Section 2 of this report reviews the different sections of the standard DHS survey instruments in relation to the key indicators they are designed to collect, as well as potential implications for adaptation to collect diverse SOGIESC data.

1.1.3 Sex and Gender Equity in Research (SAGER) Guidelines

In 2023, the World Health Organization (WHO) adopted the Sex and Gender Equity in Research (SAGER) guidelines to combat sex and gender bias in evidence. (Heidari, Fernandez, Coates, et al 2024). The SAGER guidelines, first developed in 2016, are a tool, primarily geared toward researchers and authors, to standardize sex and gender reporting in scientific publications (Heidari, Babor, De Castro, et al 2016). The SAGER guidelines include three general principles:

1. Authors should use of the terms sex and gender carefully in order to avoid confusing both terms.
2. Where the subjects of research comprise organisms capable of differentiation by sex, the research should be designed and conducted in a way that can reveal sex-related differences in the results, even if these were not initially expected.
3. Where subjects can also be differentiated by gender (shaped by social and cultural circumstances), the research should be conducted similarly at this additional level of distinction.

The SAGER guidelines also include specific recommendations for each standard section in a research journal article or publication, which are presented in Table 3.

Table 3 Sex and Gender Equity in Research (SAGER) guidelines by journal article section

Section	SAGER recommendation
Title and abstract	If only one sex is included in the study, or if the results of the study are to be applied to only one sex or gender, the title and the abstract should specify the sex of animals or any cells, tissues and other material derived from these and the sex and gender of human participants.
Introduction	Authors should report, where relevant, whether sex and/or gender differences may be expected.
Methods	Authors should report how sex and gender were taken into account in the design of the study, whether they ensured adequate representation of males and females, and justify the reasons for any exclusion of males or females.
Results	Where appropriate, data should be routinely presented disaggregated by sex and gender. Sex- and gender-based analyses should be reported regardless of positive or negative outcome. In clinical trials, data on withdrawals and dropouts should also be reported disaggregated by sex.
Discussion	The potential implications of sex and gender on the study results and analyses should be discussed. If a sex and gender analysis was not conducted, the rationale should be given. Authors should further discuss the implications of the lack of such analysis on the interpretation of the results.

However, a major limitation outlined in the conclusion of the SAGER guidelines is that “the guidelines do not make explicit recommendations regarding gender-diverse populations.” (Heidari, Babor, De Castro, et al 2016). While the guidelines urge authors to consider the relevance of their research for gender-diverse populations, the SAGER committee states that “most research will not be powered to detect differences in effects for gender-diverse populations.”

WHO is in the formal process of developing a guideline on the health of transgender and gender diverse people which will focus on five areas: provision of gender-affirming care, including hormones relating to adults; health worker education on and training for the provision of gender-inclusive care; provision of health care for trans and gender diverse people who have suffered interpersonal violence, based on their needs; health policies that support gender-inclusive care; and legal recognition of self-determined gender identity for adults (World Health Organization 2024). These guidelines are likely to be finalized and available in 2026.

2 HOW SOGIESC DATA ARE STANDARDLY COLLECTED IN DEMOGRAPHIC AND HEALTH SURVEYS

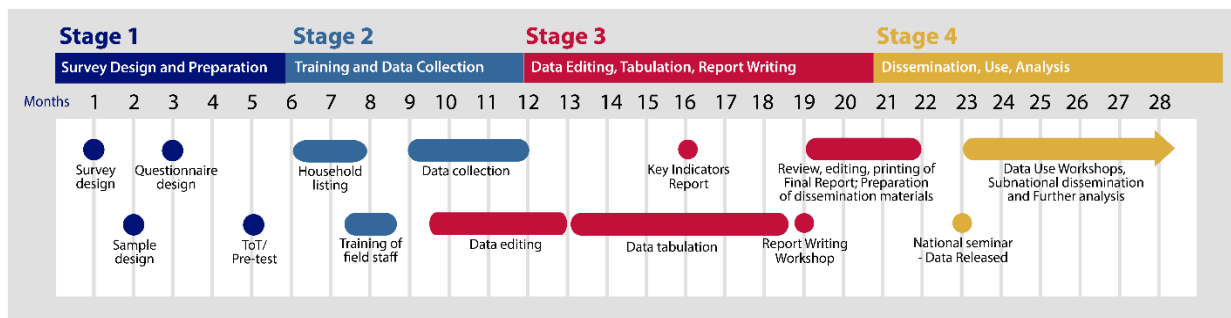
The DHS Program provides technical support for a variety of surveys including household-based surveys like the Demographic and Health Survey (DHS) and the Malaria Indicator Survey (MIS) as well as the health facility-based Service Provision Survey (SPA). This paper focuses on DHS surveys but the principles are applicable to other types of surveys. The primary aim of DHS surveys is to obtain quantitative data about the health and wellbeing of the population in a given country for use in policy formation, program planning, and monitoring and evaluation.

2.1 Standard DHS Survey Process

The Demographic and Health Surveys (DHS) Program is a USAID-funded project that has provided support and technical assistance to over 90 countries worldwide in the implementation of more than 450 population and health surveys since its inception in 1984. DHS Program surveys use standard methodology, including standard questionnaires, to be comparable across countries and over time.

Figure 1 presents the standard DHS survey process and timeline. DHS surveys are divided into four stages: survey design and preparation; training and data collection; data editing, tabulation, and report writing; and dissemination, use, and analysis. Key points from each phase are detailed below, with particular emphasis on privacy protections throughout the DHS survey process.

Figure 1 Standard demographic and health survey process timeline



2.1.1 DHS Survey Design and Preparation Stage

DHS surveys are country-led and owned. Surveys are conducted by a local implementing agency, typically the national statistical office. The survey implementing agency convenes the survey's steering and technical committees and determines their membership.

A steering and/or technical committee comprised of national government representatives, survey donors, and other survey partners assess local data needs and make decisions about the survey scope with guidance from a DHS Program survey designer.

Most DHS surveys are financed by multiple donors. As a USAID project, all DHS Program surveys receive USAID funding. Common DHS survey donors include national governments and international development agencies such as the World Bank, Global Fund, UNICEF, UNFPA, DFID/UKAID, and CDC.

DHS surveys are designed to produce indicator estimates that are representative at the national level, for urban and rural areas, and at the subnational level. DHS surveys use a two-stage cluster sampling procedure. Most DHS surveys use a sampling frame derived from the country's most recent population census, which is then stratified by geographic area. In the first stage, clusters are randomly selected from each stratum using probability proportional to size. Then a household listing is conducted in selected clusters to identify all eligible households. In the second stage, households are randomly selected from each cluster to be interviewed in the survey (ICF International 2012).

DHS surveys are typically powered to provide subnational indicator estimates, with overall sample sizes being determined in large part by the need to produce reasonably precise estimates of fertility and childhood mortality rates for each survey stratum. DHS surveys interview women of reproductive age (15–49 years) to estimate fertility and childhood mortality rates and recommend interviewing 800 to 1,000 women per stratum to produce reasonably precise estimates (ICF International 2012).

During questionnaire design, the survey technical committee adapts DHS Program standard questionnaires and survey- or country-specific questions are added to meet the country's specific data needs based on the priorities of government ministries, country programs, NGOs, and funding agencies. Questions and response options are adapted to ensure that country-specific items like healthcare facility names, school-level classifications, household assets, and food items are relevant and understandable.

Procedures and questionnaires for standard DHS surveys have been reviewed and approved by the ICF Institutional Review Board (IRB). Additionally, survey-specific DHS survey protocols are reviewed by the ICF IRB and typically by an IRB in the survey country. The ICF IRB ensures that the survey complies with the U.S. Department of Health and Human Services regulations for the protection of human subjects (45 CFR 46), while the survey country IRB ensures that the survey complies with laws and norms of the nation (The DHS Program).

Questionnaires are translated into local languages by local partners, (ranging from 2–20 local languages), pre-tested, then adapted to ensure survey questions are easily understood by respondents. The pretest provides an opportunity to evaluate all aspects of the data collection process (interviews in all languages, computer-assisted personal interview (CAPI) data capture systems, and biomarker collection) and make modifications as needed. The pretest typically does not include cognitive interviewing as the standard DHS questionnaires are piloted along with cognitive interviews at the beginning of each DHS Program phase. The pretest includes field practice, which can identify any potential issues with the questionnaire or fieldwork logistics plans. Changes are made to the questionnaires based on feedback and experiences in the classroom and from the field practice.

2.1.2 DHS Training and Data Collection Stage

DHS surveys are household-based. Household-based surveys can provide estimates for the general population, but they do not include individuals living in institutions such as long-term medical or psychiatric care facilities, imprisoned individuals, unhoused individuals, and, in most cases, do not include

individuals living in refugee settlements. Individuals with diverse SOGIESC characteristics are often marginalized and may be more likely to be unhoused or live in an institutional setting, and therefore may be excluded from a household-based survey like a DHS.

DHS surveys include a complete household listing in selected clusters. During household listing, teams of survey personnel travel to selected clusters to identify and map all households and dwellings in the selected cluster. The household listing provides a current and complete list of occupied residential households for household selection to ensure the survey represents the entire eligible population.

The survey implementing agency recruits temporary personnel to conduct data collection based on the needs of the survey. Data collection teams are typically comprised of interviewers (both women and men), biomarker technicians, supervisors, and drivers. In addition to technical skills, an important selection criterion for data collection team members is language skills to ensure there are data collection teams that can speak all the languages used in the survey.

Standard DHS training manuals for survey personnel are adapted to the survey content and context by DHS Program and survey implementing agency staff. Data collection staff participate in a four to six week-long training led by the survey implementing agency on topics ranging from building rapport with respondents, questionnaire content, computerized data collection, and reading maps to identify selected households. The training culminates in several days of field practice during which teams try out all aspects of fieldwork prior to the launch of the survey (The DHS Program YouTube).

Before each interview or biomarker test is conducted, an informed consent statement is read to the respondent, who may accept or decline to participate. A parent or guardian must provide consent prior to participation by a child or adolescent. DHS survey informed consent statements provide details regarding: the purpose of the interview/test, the expected duration of the interview, interview/test procedures, potential risks to the respondent, potential benefits to the respondent, and contact information for a person who can provide the respondent with more information about the interview/test. Most importantly, the informed consent statement emphasizes that participation is voluntary; that the respondent may refuse to answer any question, decline any biomarker test, or terminate participation at any time; and that the respondent's identity and information will be kept strictly confidential (The DHS Program).

Respondents in DHS surveys do not receive any remuneration for participating in the survey. Depending on the survey content and scope, respondents may be eligible for free biomarker testing or measurement.

Interviews and biomarker testing are performed as privately as possible. Within each household, an eligible respondent may not be interviewed in the presence of another eligible respondent. Typically, women interview women and men interview men due to the sensitive nature of many of the questions and because of cultural norms. Privacy is particularly important when respondents are husband and wife, as interview questions may involve sensitive subjects such as sexual activity or domestic violence and biomarker testing may involve HIV serostatus. Results of interviews and biomarker testing are strictly confidential. DHS data collection team members are only allowed to discuss data with other team members, and these conversations are limited to essential communications (The DHS Program).

The DHS Program uses standard CAPI applications for data collection and data management for each survey, which can run on Windows-based or Android-based tablets and are adapted for each survey. Each

respondent's interview and biomarker data files are identified only by a series of numbers, including cluster number, household number, and individual number. Encrypted data from interviewers' tablets are transferred to the team supervisor via Bluetooth and from the team supervisor to the implementing agency's central office regularly, typically daily. Regular uploads allow for tracking of progress and mean that data cannot be lost if the tablet is stolen or broken. All data are checked for completeness before being sent by the supervisor to the central office for further checking.

Data collection is monitored for adverse events and to ensure data quality. Each data collection team includes a supervisor who is responsible for the safety and well-being of team members and respondents. Data quality is monitored by field coordinators who are trained in the CAPI system and questionnaire content and visit multiple teams during data collection, performing spot checks, observing interviews, and completing a procedural checklist. They investigate any issues reported to the survey management team or issues identified by the survey management team using field check tables. Field check tables are produced using data received from teams throughout data collection. These tables allow the survey management team to examine key data quality measures and many other aspects in near real-time.

2.1.3 DHS Data Editing, Tabulation, and Report Writing Stage

Secondary editing takes place in the central office concurrently with fieldwork, allowing for certain types of errors to be identified and shared with teams. The editing process is finalized once data collection is complete. Editors use guidelines that provide examples of how to review and resolve issues in the data. After data processing, questionnaire cover sheets containing these identifier numbers are destroyed, and cluster and household numbers are randomly reassigned. This ensures that no household or individual interviewed during the survey can be identified in the datasets.

The raw datasets (which follow the structure of the questionnaires) are recoded into a standard recode format to facilitate comparisons between DHS surveys. While the questionnaires have changed considerably over time between phases of The DHS Program, and even differ from country to country within phases, the recode construction process converts a raw dataset into a recoded format where a particular variable has the same meaning across all phases of DHS (where the data were collected) and across countries. For example, hv104 is the variable for the sex of the household member and has the same coding in all DHS datasets.

DHS Program staff produce survey data tables according to a standard tabulation plan using the recoded data. Standard tabulations incorporate different aspects of SOGIESC data in different ways. In many cases, two separate tables are produced: one for women and one for men. Some tables present "sex" and/or marital status as background characteristic. Survey-specific tabulations are produced and checked against the questionnaire to verify that each question and response option was included in the recode data file and was correctly tabulated.

A two-week report writing workshop is held with contributors from the implementing agency, government ministries, and DHS Program staff. During this time, each table is reviewed, and key findings are summarized. In addition to a final report, various other dissemination materials are created to share survey results with different intended audiences like program managers, policy makers, journalists, and researchers.

2.1.4 DHS Dissemination, Data Use, and Analysis Stage

The geographic coordinates of each survey are displaced at a random distance and in a random direction prior to the public release of the datasets. The displacement distance is up to two kilometers for urban clusters and up to five kilometers for rural clusters, with one percent of randomly selected rural clusters displaced a distance up to ten kilometers. This protocol ensures that neither the individual nor the household can be identified using the location information in the datasets.

The survey steering and technical committee decide when the survey dissemination materials and datasets become public, often during a dissemination event or workshops in the capital city. Many DHS surveys also conduct subnational events and/or topic-specific workshops to further disseminate results to intended audiences.

DHS survey dissemination materials and datasets are made available to the public free of charge through DHSProgram.com, the project's main website. Further, survey data are uploaded into The DHS Program indicator database and then become available in free DHS Program digital tools like the Application Programming Interface, STATcompiler, the project's mobile application, and the Spatial Data Repository.

Anyone can conduct their own secondary analysis of DHS survey data for research purposes by requesting the data via an online form on DHSProgram.com. Some DHS survey data use plans include secondary analysis of data to answer research questions identified by survey steering or technical committee members, which are then published on DHSProgram.com.

2.2 Conceptualizing Gender for a DHS Survey: Demography as Legacy

The DHS Program, established in 1984, is a successor program following earlier demographic data collection programs like the USAID's Contraceptive Prevalence Surveys (CPS) and the International Statistical Institute's World Fertility Surveys (WFS) of the 1970s. As such, this grounding in demography and the ways in which the field conceptualized gender is very much a part of the DHS Program's origin story.

The discipline of demography had, for quite some time, grappled with what is termed "the two sex" problem as it developed standardized ways to measure demographic rates, particularly fertility rates. The "two sex" problem is basically the fact that fertility requires two people: one who produces ova and one who produces sperm (Feeney, 1972). The "two sex" problem begets the challenge of determining what is the correct denominator to use when calculating fertility rates. Because all necessary information to calculate fertility rates can be obtained from women, the "two sex" problem is averted by focusing on just one sex. Women form the denominator and only women need to be interviewed.

Although the first DHS surveys only interviewed women, this singular focus on women did not last long at The DHS Program. One of the first evolutions in considering gender was expanding the surveys to include interviewing men. Men were first interviewed in the Burundi and Mali DHS surveys administered in 1987. This expansion coincided with a broadening of health issues and outcomes included in DHS surveys and deeper examination of the social context in which health outcomes occurred. In particular, this evolution was motivated out of recognition that men's attitudes and behaviors influence women's fertility behavior and outcomes.

Although DHS surveys and questionnaires are constructed around a binary concept of gender, gender-diverse individuals are not excluded from DHS surveys. They are, however, rendered invisible in the data through misclassification and lack of detail. Similarly, non-heterosexual individuals are not excluded from DHS surveys. Their experiences are suppressed by questions about marital status and sexual relationships that presume male/female partnerships.

2.3 Standard DHS Questionnaires

The DHS Program utilizes standard questionnaires, adapted for the specific survey context. There are three types of questionnaires—household, individual, and biomarker. The household questionnaire is used to enumerate the individuals living in the selected dwelling unit and guests who slept there the prior night. For each household member or guest, interviewers record their name, gender, and current age. A household respondent provides this information for all individuals, meaning that for all but the household respondent, this information is not self-reported. This is similar to how a census is conducted. The household questionnaire is also used to collect information about household assets along with water and sanitation sources. The household questionnaire also identifies the people (children, women, and men) who are eligible for biomarker testing and measurement. Typical biomarkers include height and weight measurement, hemoglobin testing for anemia status, HIV testing, blood pressure measurement, and malaria testing. Table 4 summarizes each section of the household questionnaire, including key indicators from each section, SOGIESC-relevant content collected, along with contextual notes.

Table 4 Household questionnaire content

Section/Module	Key indicators	SOGIESC-relevant content collected	Notes
Household roster	Household size, orphanhood status, birth registration, school attendance ratios	Gender identity	Gender is almost always a binary male/female. Orphanhood is defined via biological mother and father death. School attendance ratios are presented as male/female based on proxy report of gender
Household characteristics	Water and sanitation indicators		The person who typically collects water is tabulated as either male or female based on the proxy report of gender
Mosquito nets	Possession, source, type, and use of the net(s)		Use of nets is tabulated by male/female based on proxy report of gender
Disability module	Disability status		Results are presented separate for woman and men based on proxy report of gender
Biomarkers	BMI-for-age, BMI, anemia testing		Proxy report of gender is used to identify eligible individuals. Some biomarkers include sex-differentiated calculations based on proxy report of gender

Age and gender reported in the household questionnaire is to identify eligible individuals for interview, typically women age 15–49 in all households and men age 15–54 in a subset of households. Unlike a census where proxy reporting is sufficient, DHS surveys conduct individual interviews one-on-one and in a private location. In most DHS surveys women interview women, and men interview men. The individual’s age is asked again since proxy reports are often not precise. The individual’s self-reported age is used in all tabulations. The gender reported from the household respondent is not re-asked during an individual interview. Nearly all DHS surveys conducted to-date have allowed for only two gender options—woman and man—and a respondent’s gender is assumed to align with their sex assigned at birth. The individual questionnaire covers a wide range of topics. For some sections, the questions are similar for women and

men, but the woman’s questionnaire is almost always much longer. Tables 5 and 6 summarize each section of the individual questionnaire, SOGIESC-relevant content collected, along with contextual notes.

Table 5 SOGIESC-relevant content in DHS woman’s questionnaire and select modules

Section/module	Key indicators	SOGIESC-relevant content collected	Notes
Respondent’s background	Age, educational attainment, literacy		
Reproduction	Total fertility rate, children ever born, infant and child mortality rates, menstruation	Pregnancy status and prior pregnancies, childbirth, gender identity of live births	Assumes that an interviewed woman has or had a uterus and has a lifetime risk of becoming pregnant, mothers proxy report gender identity for their live births
Contraception	Knowledge and current use of contraceptive methods	Sexual behavior	Respondent’s marital status has not yet been asked, these questions assume that sexual partners are male/female, capable of becoming pregnant, and engage in vaginal-penile intercourse
Pregnancy and postnatal care	Antenatal care, assistance during and place of delivery, postnatal care		Not included in the men’s questionnaire which therefore omits trans men’s pregnancies
Child immunizations	Vaccination coverage		
Child health and nutrition	Treatment of fever and diarrhea, dietary consumption		
Marriage and sexual activity	Marital status and duration, age at first marriage and first sexual intercourse, recent sexual activity	Sexual behavior	Marriage, cohabitation, and many sexual behavior questions only ask women about male partners. The term ‘sexual intercourse’ is not defined but is usually understood to mean vaginal-penile intercourse.
Fertility preferences	Desire to limit childbearing, ideal number of children, wanted fertility rates, contraceptive decision making		Assumes that an interviewed woman has or had a uterus and has a lifetime risk of becoming pregnant
Husband’s background and woman’s work	Employment status, decision-making, land and home ownership, beliefs about wife-beating		Assumes that unions occur between women and men and include questions about the acceptability of a husband beating his wife
HIV	Knowledge of HIV prevention, prior HIV testing, experience of stigma among people living with HIV, prevalence of other STIs	Sex characteristics	Questions are asked about the respondent’s experience of genital discharge and genital sores or ulcers and the acceptability of a wife refusing to have sex with her husband under certain conditions. Data from these questions are tabulated with sexual behavior information and marital status
Other health issues	Prevalence of smoking, alcohol consumption, cervical and breast cancer screening	Sex characteristics	Assumes that an interviewed woman has or had a uterus, cervix, and breasts. Cervical and breast cancer screening questions are excluded from the men’s questionnaire, meaning trans men for whom this information would be relevant are omitted.
Domestic violence module	Experience of physical, sexual, and emotional violence		Intimate partner violence is defined as occurring between a woman and a man only

Continues...

Table 5—Continued

Section/module	Key indicators	SOGIESC-relevant content collected	Notes
Female genital cutting (FGC) module	Prevalence of FGC, beliefs about FGC	Sex characteristics	Assumes that interviewed women have or had a vulva, clitoris, and labia. Mothers proxy report information on female genital cutting for their children age 0–14 that they identified as their daughters. Experience of FGC is excluded from the man’s questionnaire, meaning trans men for whom this information would be relevant are omitted.
Fistula module	Knowledge and prevalence of fistula	Sex characteristics	Assumes that interviewed women have a vagina. Experience of fistula is excluded from the man’s questionnaire, meaning trans men for whom this information would be relevant are omitted.

Table 6 SOGIESC-relevant content in DHS man’s questionnaire and select modules

Section/Module	Key indicators	SOGIESC-relevant content collected	Notes
Respondent’s background	Age, educational attainment, literacy		
Reproduction	Biological children	Gender identity of children	Children are classified as either sons or daughters by their father (proxy report)
Contraception	Knowledge of contraceptive methods	Sexual behavior	Respondent’s marital status has not yet been asked, these questions assume that sexual partners are male/female, capable of becoming pregnant, and engage in vaginal-penile intercourse
Marriage and sexual activity	Marital status and duration, age at first marriage and first sexual intercourse, recent sexual activity, current use of contraceptive methods	Sexual behavior	Marriage, cohabitation, and many sexual behavior questions only ask men about female partners. The term ‘sexual intercourse’ is not defined but is usually understood to mean vaginal-penile intercourse.
Fertility preferences	Desire to limit childbearing, ideal number of children		Assumes that an interviewed man is able to father a child
Employment and gender roles	Employment status, decision-making, land and home ownership, beliefs about wife-beating		Assumes that unions occur between women and men and includes questions about the acceptability of a husband beating his wife
HIV	Knowledge of HIV prevention, prior HIV testing, experience of stigma among people living with HIV, prevalence of other STIs	Sex characteristics	Questions are asked about the respondent’s experience of penile discharge and sores or ulcers on or near the penis and the acceptability of a wife refusing to have sex with her husband under certain conditions. Data from these questions are tabulated with sexual behavior information and marital status
Other health issues	Prevalence of smoking and alcohol consumption	Sex characteristics	Questions on male circumcision assumes the respondent has a penis. These questions are not included in the woman’s questionnaire, meaning trans women for whom this information would be relevant are omitted.
Female genital cutting (FGC) module	Beliefs about FGC		Men are only asked their beliefs regarding FGC. Assumes that interviewed men do not have a vulva, clitoris, and labia.

3 REVIEW OF DHS SURVEYS THAT HAVE COLLECTED DIVERSE GENDER AND SEXUALITY DATA

For more than two decades, DHS surveys have included survey-specific questions to collect more diverse data on sexual orientation, gender identity, gender expression, and sex characteristics (SOGIESC). Knowledge capture interviews were conducted with DHS Program staff involved in recent surveys. In these interviews, DHS Program staff were asked about survey partner interest in and request for this diverse SOGIESC data. Interviewed staff were asked to describe specific changes made to the questionnaire, training, and tabulations to accommodate the request. Further, DHS Program staff were also asked about the implications of these changes on data collection and what impact this had on the results of the survey.

Each of the surveys reviewed included a different collection of survey-specific questions aimed at measuring different aspects of diverse SOGIESC topics. The surveys included in the knowledge capture interview process were 2019–21 India DHS (NFHS-5), 2016 South Africa DHS, 2015 Colombia DHS, and 2022 Nepal DHS.

3.1 India

The census in India first expanded the gender options in 2011 with an ‘other’ category and in 2014, the Supreme Court of India legally recognized a third gender. The Government of India requested a change in the questionnaire in the 2015–16 DHS, but the request came after the questionnaire was finalized and fieldwork was about to begin. The 2019–21 DHS planned for the inclusion of a third gender option from the beginning by adding a third gender option, transgender, in the household roster.

The 2019–21 India DHS household roster asked, “*Is (NAME) male or female or transgender?*”

The household questionnaire respondent provided this information for each household member.

There was no individual questionnaire administered to those identified as transgender nor was there a distinction made between transgender women or transgender men. Transgender individuals were also not eligible for biomarker measurement or testing. No additional training materials were provided to interviewers regarding how to classify individuals as transgender. Fieldworkers relied solely on the household respondent’s responses to the question “*Is (NAME) male or female or transgender?*”. Transgender individuals were shown separately from females and male individuals in only one table in the final report. This table was on the prevalence of any disability among the de jure household population age 15 and older (see Table A1 in the Appendix).

3.2 South Africa

The South African parliament legalized same-gender marriages in 2006. For this reason, government stakeholders felt that the DHS must allow for this type of partnership in the questionnaire. The 2016 South Africa DHS included questions on the gender of individual women’s and men’s partners. Instead of asking the standard question which specifies the opposite gender when asking about marriage or living together as if married, the question for both women and men was “*Are you currently married or living together with someone as if married?*”. This was then followed by the question “*Is this person a woman or a man?*”. The interviewer’s manual was updated to reflect this change.

The 2016 South Africa DHS asked individuals, “*Are you currently married or living together with someone as if married?*”

If the respondent said yes, then “*Is this person a woman or a man?*”

No same-gender specific additions were made to any tables. Those in same-gender partnerships were included in the standard category of ‘married or living together as if married’. A few tables in the final report were modified to note that individuals in same-gender relationships were not asked questions on women’s empowerment nor polygyny. Additionally, only women in a relationship with a man were eligible for the domestic violence module. The reasoning behind this decision was that these questions were developed in a framework of different gender relationships. A slightly different question was included in the 2003 South Africa DHS—“*Are you currently married or living with a partner?*” with options for ‘yes, married/living with a woman’ and ‘yes, married/living with a man’. The 2003 DHS data are not publicly available, but a final report is published. There were no tabulations of same-gender marriages.

3.3 Colombia

The 2015 Colombia DHS included the largest number of survey-specific diverse SOGIESC additions. Profamilia, the implementing agency in Colombia, believed that these issues were important and so decided to incorporate them into their DHS survey. This was the first national-level survey in Latin America to include these topics. In Colombia, transgender individuals over the age of 18 were granted the right to change their legal gender in 2015 and same-gender marriage was legalized in 2016.

The 2015 Colombia DHS household roster had four options for gender: male, female, trans male, and trans female.

The first question in the individual questionnaire was, “*Since we are surveying both men and women, I need to ask you the following question to determine the type of questionnaire to administer. Are you a man or a woman or a transgender woman or a transgender man?*”

The household roster included four options for the gender of each person—‘male’, ‘female’, ‘trans male’, and ‘trans female’. The first question in the individual interview then asked the respondent to confirm their gender—“*Since we are surveying both men and women, I need to ask you the following question to determine the type of questionnaire to administer. Are you a man or a woman or a transgender woman or a transgender man?*”. There were still just two individual questionnaire types, one for women and one for men, and the questions were the same for transgender and cisgender respondents.

The individual questionnaires included a direct question on sexual orientation with response options of ‘heterosexual’, ‘homosexual’, or ‘bisexual’. A full marriage history was obtained and for each relationship, the gender of the partner was asked. Questions on recent sexual activity assumed heterosexual relationships in terms of the gendered terms used in Spanish but the type of sexual intercourse was not explicitly defined.

Finally, all respondents were asked about their opinions on the rights of LGBT individuals in Colombia. The final report included a table on the percent distribution of respondents by sexual orientation (see Table A2 in the Appendix), percent distribution of the gender of respondents’ partners (see Table A3 in the Appendix), and a table about attitudes toward the LGBT population (see Table A4 in the Appendix). No other tables split out sexual orientation, likely due to the very small sample size.

3.4 Nepal

The Supreme Court of Nepal legally recognized a third gender in 2007 and the 2011 census, along with the 2011 India census, were the first in the world to include three options for gender. Because three gender reporting was mandatory for government statistics in Nepal, government officials wanted to include a third gender option in the 2022 Nepal DHS. This option was ultimately not included due to the predicted small sample size and anticipated difficulties during data collection relating to the third gender option. A report on the 2011 Nepal census funded by the United Nations Development Programme and implemented by the Williams Institute found that “technical issues and the failure to adequately train and evaluate enumerators resulted in data that were only disaggregated by male and female gender.” The report identified three major issues, 1) lack of training among enumerators, 2) reluctance among household proxy respondents and census enumerators to record the third gender option, and 3) software tabulation problems (United Nations Development Programme, Williams Institute, 2014).

3.5 Other Surveys Including Diverse SOGIESC Content

Table 7 presents an overview of all DHS surveys that included diverse SOGIESC topics including the aforementioned surveys. These surveys only included same-gender sexual behavior questions among men. The questions included ever having had sex with a man and recent sex with a man. In Myanmar and the Philippines, DHS surveys also asked men about condom use the last time they had sex with a man. These survey-specific questions were added at the request of actors in the HIV sector to improve prevention programs. Cambodia was the only country to include these questions in multiple surveys. Figure 2 shows the percentage of men age 15–49 who have had sex in the past year and have heard about men having sex with other men.

Questions on same-gender sexual behavior asked to men include:

“Have you ever had sex with a man?”

“Have you had sex with another man in the past 6 months?”

“How long ago was the last time you had sex with a man?”

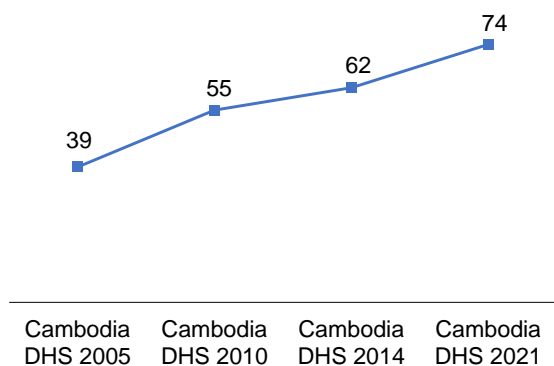
“The last time you had sex with another men, did you use a condom?”

Table 7 DHS surveys that included diverse SOGIESC-related questions

Survey	Diverse SOGIESC topics
2002 Dominican Republic DHS	Same-gender sexual behavior
2003 Philippines DHS	Same-gender sexual behavior
2003 South Africa DHS	Gender of spouse/partner
2004 Bangladesh DHS	Same-gender sexual behavior
2005 Cambodia DHS	Same-gender sexual behavior
2010 Cambodia DHS	Same-gender sexual behavior
2014 Cambodia DHS	Same-gender sexual behavior
2015 Colombia DHS	Transgender gender option, sexual orientation, same-gender sexual behavior, attitudes toward LGBT persons
2015–16 Myanmar DHS	Same-gender sexual behavior
2016 South Africa DHS	Gender of spouse/partner
2019–21 India DHS	Transgender gender option
2021 Cambodia DHS	Same-gender sexual behavior

Figure 2 Among men age 15–49 in Cambodia who have had sex in the past year, percentage who have heard of men having sex with other men

Among men age 15-49 who have had sex in the past year, percentage who have heard of men having sex with other men



The 2003 Philippines DHS was the only survey to include any tabulation of these questions in the final report: one table on the prevalence of men ever having had sex with another man and the prevalence of men having sex with another man in the past year (see Table A5 in the Appendix).

4 KEY CONSIDERATIONS FOR THE COLLECTION OF SOGIESC DATA IN DHS PROGRAM SURVEYS

4.1 Autonomy and Parsimony

Country leadership and ownership is the keystone of The DHS Program; therefore, the request to collect diverse SOGIESC data in a DHS survey must, like all other data needs, originate from survey steering and/or technical committees. As detailed in Section 3, several countries have already collected or requested diverse SOGIESC data in their DHS surveys. Such requests should be reviewed by local groups working with and inclusive of local LGBTQI+ communities to ensure the data collected represent the authentic, culturally specific experiences of local LGBTQI+ communities. Moreover, local groups can help ensure the precise SOGIESC data needs (e.g., prevalence of health disparities by gender identity or sexual orientation, prevalence of gender-based violence among LGBTQI+ communities, general attitudes toward LGBTQI+ communities, etc.) are identified, so the survey can be tailored to meet those needs, including consideration of anticipated response rates, and estimating the needed sample size to produce reliable indicator estimates. Failure to adequately plan for sample size and responses rates could inadvertently result in underestimation or erasure of LGBTQI+ individuals' experiences. Moreover, it is important to only collect the data for program and policy decision-making to minimize the burden on respondents.

4.2 Legality

An overarching concern in the collection of diverse SOGIESC data is the legality of same-gender sexual relationships and transgender and gender-diverse individuals in the country conducting a DHS survey. There is universal agreement that the safety and security of respondents comes first. Collecting information on illegal behaviors is not insurmountable, as other topics assessed in DHS surveys share this challenge, e.g., child marriage, female genital cutting, abortion, etc. However, cultural context is critically important to keeping both respondents and data collection teams safe. Even if something is not illegal, there can still be tremendous shame and stigma surrounding it. Diverse gender identities, sexual orientations, and sexual behaviors are usually viewed unfavorably by society in general, in contrast to female genital cutting or child marriage which, though illegal, may be viewed favorably. Figures 3, 4, and 5 map different indicators of the legal landscape of sexual orientation and gender identity courtesy of the International Lesbian, Gay, Bisexual, Trans and Intersex Association (ILGA).

4.3 Interviewer Training and Respondent Safety

Both the survey protocol and data collection team training need to address interviewer and respondent safety and how to respond to community or individual resistance to questions about sexuality and gender that are outside of commonly accepted social norms. Training materials for diverse SOGIESC-specific questions are critical for their inclusion in a DHS survey, as they define relevant SOGIESC terms and explain what they mean in the context of the survey. Data collection team members need to be sensitized to these topics to ensure that respondents understand what is being asked and to avoid confusion around unknown terminology. While DHS policies already exist for respondent safety and privacy, there may be additional considerations required when identifying possibly marginalized individuals. The content of these training materials will need input from local experts and will need to be carefully adapted for each survey.

Figure 3 ILGA World Map of Legal Gender Recognition, March 2023

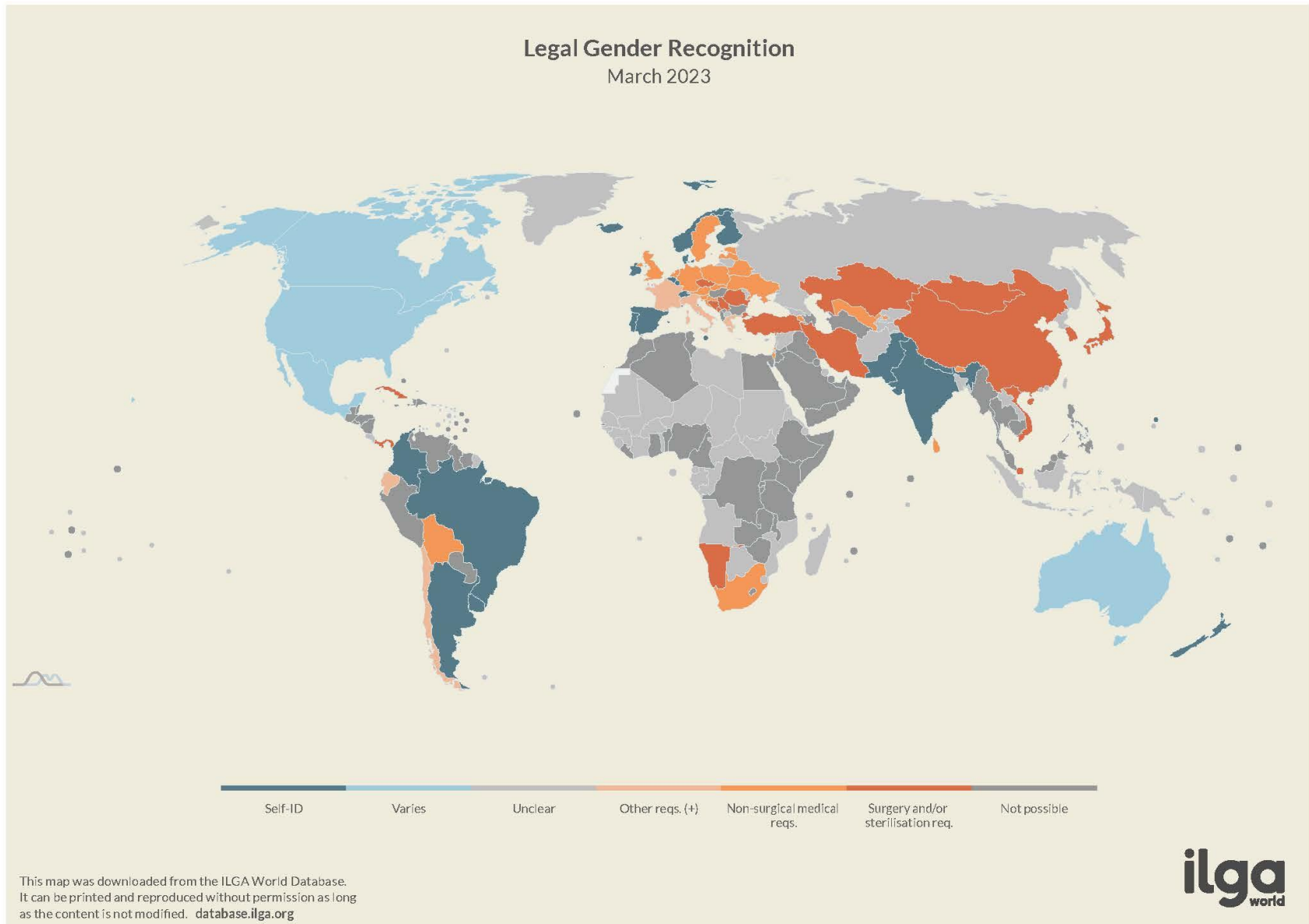


Figure 4 ILGA World Map of Criminalization of consensual same-sex sexual acts, March 2023

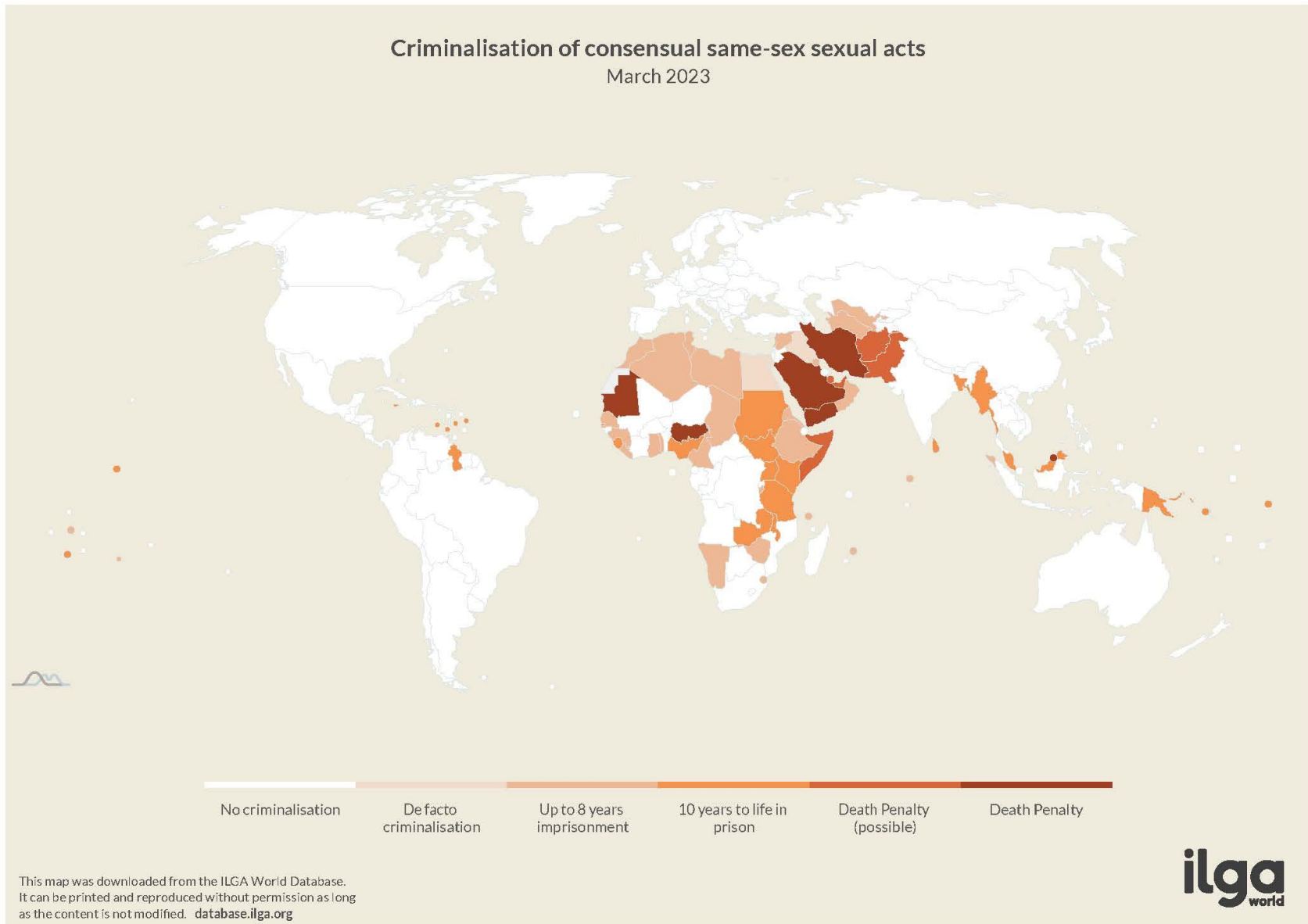
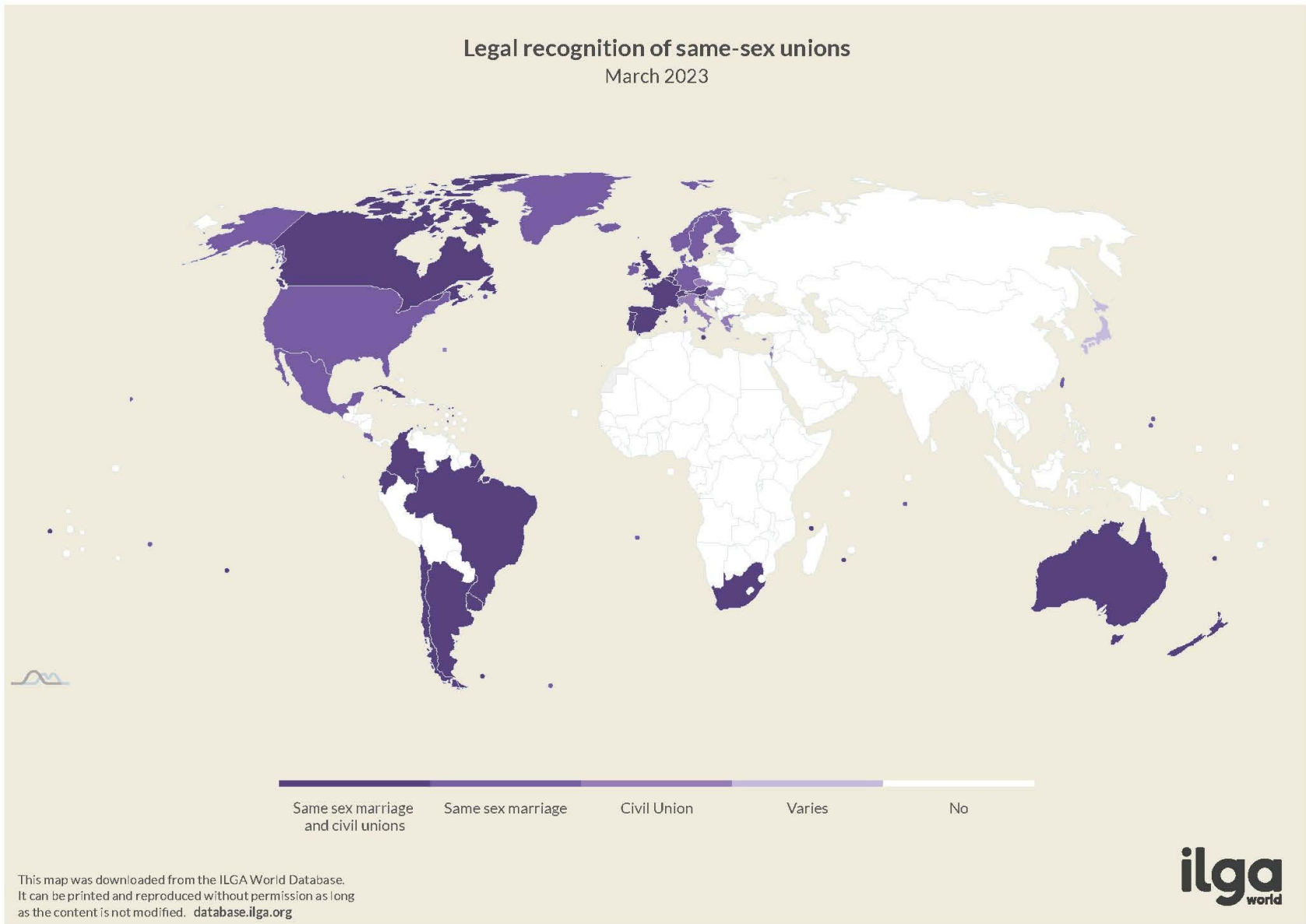


Figure 5 ILGA World Map of Legal Recognition of Same Sex, March 2023



4.4 Precise Terminology

Terminology around gender identity and sexual orientation is contextually specific. Terms used in one country may be totally different from terms used in another. Alternatively, the same term may have different meanings in different cultural contexts. The NASEM recommended response options for gender have received valid criticism for a lack of specificity and for not being mutually exhaustive categories, e.g. a transgender woman is a woman. Qualitative research may be necessary prior to fielding a DHS survey that intends to include gender-diverse individuals. Labels for sexual orientation are similarly diverse, culturally specific, and distinct from sexual behavior. Local LGBTQIA+ organizations should be consulted during questionnaire design to ensure that appropriate wording is used and in tabulation planning to provide insight into what data are relevant for the indicators being calculated. These organizations could also be involved in the pre-test and training material adaptation. The ultimate goal is to have questions and response options that are clearly understood by the diverse population being surveyed resulting in useful data.

While surveys must take into account the culturally specific context in order to accurately collect and interpret SOGIESC data, The DHS Program also has a stated goal to produce internationally comparable data. As a primary data source for a myriad of international indicators, including the Sustainable Development Goals, DHS surveys should also consider how to collect culturally specific diverse SOGIESC data in a way that facilitates international comparison while reflecting the diverse reality in each country.

4.5 Inclusiveness

Simply changing the pronouns used or rewording questions to be gender neutral is not sufficient means to ensure robust LGBTQI+ inclusion in DHS surveys. As detailed in Tables 5 and 6, the DHS woman's and man's questionnaires are intentionally different and ask about issues deeply rooted in biology, but one that is presumed to correspond to a binary gender assigned at birth. The 2015 Colombia DHS is an example of a way to overcome proxy reporting of gender identity by asking respondents to confirm their gender prior to the start of the individual interview, but there is still room for improvement. For example, if a DHS survey intends to use two individual questionnaires but allows respondents to identify as transgender, do skip patterns need to change? Does it make sense to ask a transgender woman about menstruation and prior pregnancy? On the other hand, some transgender men can become pregnant and may have given birth previously. Should each respondent be administered the questionnaire consistent with their gender identity, regardless of their sex assigned at birth? Should the woman's and man's questionnaire contain skip patterns relevant to those identified as transgender respondents? Should there be a third individual questionnaire for those who identify as neither a woman nor a man, i.e. non-binary? Should sex-differentiated biomarker tests such as hemoglobin concentration for anemia classification be calculated using sex assigned at birth? How does broadening the definition of unions impact risk of pregnancy calculations and need for family planning? Do questions about intimate partner violence need to be revised? These questions have not been fully answered and require further discussion. To ensure meaningful inclusion and representation of LGBTQI+ individuals in DHS surveys, survey steering and technical committees, along with USAID and The DHS Program staff, must consider and contend with competing data needs and priorities while managing the complexities of adapting survey instruments originally designed to measure fertility to be inclusive of individuals with diverse sexual orientations, gender identities, gender expression, and sex characteristics.

REFERENCES

- Presidential Memorandum. 2011. International Initiatives to Advance the Human Rights of Lesbian, Gay, Bisexual, and Transgender Persons. <https://obamawhitehouse.archives.gov/the-press-office/2011/12/06/presidential-memorandum-international-initiatives-advance-human-rights-l>
- United States Agency for International Development. 2014. LGBT Vision for Action. https://www.usaid.gov/sites/default/files/2022-05/LGBT_Vision.pdf
- Presidential Letter. 2021. National Strategy on Gender Equity and Equality. <https://www.whitehouse.gov/wp-content/uploads/2021/10/National-Strategy-on-Gender-Equity-and-Equality.pdf>
- United States Agency for International Development. 2023a. Gender Equality and Women’s Empowerment Policy. https://www.usaid.gov/sites/default/files/2023-03/2023_Gender_Policy_508.pdf
- United States Agency for International Development. 2023b. LGBTQI+ Inclusive Development Policy. https://www.usaid.gov/sites/default/files/2023-07/USAID_LGBTQI-Inclusive-Development-Policy_August-2023_1.pdf
- United States Agency for International Development. 2023c. ADS Chapter 205 Integrating Gender Equality and Women’s Empowerment in USAID’s Program Cycle. https://www.usaid.gov/sites/default/files/2023-04/205_1.pdf
- National Academies of Sciences, Engineering, and Medicine. 2022. *Measuring Sex, Gender Identity, and Sexual Orientation*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26424>
- United Nations Development Programme, Williams Institute. 2014. *Surveying Nepal’s Sexual and Gender Minorities: An Inclusive Approach*. Bangkok, UNDP. <https://williamsinstitute.law.ucla.edu/wp-content/uploads/Nepal-SGM-Mar-2014.pdf>
- National Science and Technology Council, Subcommittee on Equitable Data. 2023. *Federal Evidence Agenda on LGBTQI+ Equity. A Report by the Subcommittee on Sexual Orientation, Gender Identity, and Variations in Sex Characteristics (SOGI) Data*. <https://www.whitehouse.gov/wp-content/uploads/2023/01/Federal-Evidence-Agenda-on-LGBTQI-Equity.pdf>
- United Nations. 2015a. *The UN Sustainable Development Goals*. <https://sdgs.un.org/goals>
- United Nations. 2015b. *Transforming our World: The 2030 Agenda for Sustainable Development*. <https://sdgs.un.org/2030agenda>
- O’Malley, J & Holzinger, A. 2018. Sexual and Gender Minorities and the Sustainable Development Goals.

Heidari, S., Babor, T.F., De Castro, P. *et al.* 2016. Sex and Gender Equity in Research: rationale for the SAGER guidelines and recommended use. *Research Integrity and Peer Review* 1, 2. <https://doi.org/10.1186/s41073-016-0007-6>

Heidari S, Fernandez DGE, Coates A, Hosseinpoor AR, Asma S, Farrar J, Kenney EM. 2024. *WHO's adoption of SAGER guidelines and GATHER: Setting Standards for Better Science with Sex and Gender in Mind*. *Lancet*. 403(10423):226–228. doi: 10.1016/S0140-6736(23)02807-6. Epub 2023 Dec 19. PMID: 38134947

ICF, 2024. The DHS Program STATcompiler. Funded by USAID. <http://www.statcompiler.com>

World Health Organization. “Extended Deadline for Feedback on Development of a WHO Guideline on the Health of Trans and Gender Diverse People.” <https://www.who.int/news/item/15-01-2024-extended-deadline-for-feedback-on-who-development-of-a-guideline-on-the-health-of-trans-and-gender-diverse-people>

ICF International. 2012. Demographic and Health Survey Sampling and Household Listing Manual. MEASURE DHS, Calverton, Maryland, U.S.A.: ICF International

The DHS Program. “Protecting the Privacy of DHS Survey Respondents.” <https://www.dhsprogram.com/Methodology/Protecting-the-Privacy-of-DHS-Survey-Respondents.cfm>

The DHS Program YouTube. “Introduction to the DHS Survey Process.” <https://www.youtube.com/watch?v=8IYDcg0hDH8>

Feeney, G. M. 1972. Marriage rates and population growth: the two-sex problem in demography. University of California, Berkeley

APPENDICES

Appendix Table A1 Prevalence of disability among transgender individuals, Table 2.29 from India's fifth National Family and Health Survey (NFHS-5) 2019–21

Table 2.29 Disability—Continued

Percentage of *de jure* household population having disability by type of disability, according to residence, age, and sex, India, 2019-21

Background characteristic	Type of disability							Number
	Any	Hearing disability	Speech disability	Visual disability	Mental disability	Locomotor disability	Other	
TRANSGENDER								
Residence								
Urban	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68
Rural	0.1	0.0	0.1	0.0	0.0	0.1	0.0	85
Age								
0-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13
5-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30
15-24	0.8	0.0	0.8	0.0	0.0	0.8	0.0	14
25-34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14
35-49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28
50-69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16
70 and over	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27
Don't know/missing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11
Total	0.1	0.0	0.1	0.0	0.0	0.1	0.0	153

Appendix Table A2 Sexual orientation by age among women and men age 13–49, Table 15.14.1 from 2015 Colombia DHS (in Spanish)

Cuadro 15.14.1 Orientación sexual

Distribución porcentual de mujeres de 13 a 49 años y de hombres de 13 a 49 años por orientación sexual del entrevistado según características seleccionadas, Colombia 2015

Característica	MUJERES			Número de mujeres	HOMBRES			Número de hombres
	Heterosexual	Homosexual	Bisexual		Heterosexual	Homosexual	Bisexual	
Grupo de edad								
13-14	99.2	0.2	0.6	2,418	99.4	0.5	0.1	2,005
15-19	98.2	0.6	1.2	6,107	96.6	2.3	1.1	5,063
20-24	98.7	0.6	0.7	6,021	97.7	1.4	0.9	5,012
25-29	98.7	0.5	0.7	5,611	98.2	1.2	0.6	4,577
30-34	99.3	0.3	0.4	5,187	98.3	1.2	0.5	3,965
35-39	99.4	0.3	0.3	4,740	98.7	0.9	0.4	3,556
40-44	99.8	0.2	0.1	4,296	99.3	0.3	0.3	3,162
45-49	99.6	0.3	0.1	4,337	99.0	0.4	0.6	3,140

Appendix Table A3 Sex of partner among women and men age 13–49 by age, Table 15.15 from 2015 Colombia DHS (in Spanish)

Cuadro 15.15 Sexo de la pareja

Distribución porcentual de mujeres de 13 a 49 años y de hombres de 13 a 49 años actualmente unidas(os) por sexo de la pareja según características seleccionadas, Colombia 2015

Característica	MUJERES					HOMBRES				
	Hombre	Mujer	Hombre transgénero	Mujer transgénero	Número	Hombre	Mujer	Hombre transgénero	Mujer transgénero	Número
Grupo de edad										
13-14	*	*	*	*	19	*	*	*	*	0
15-19	97.5	2.3	0.0	0.1	812	3.9	96.1	0.0	0.0	144
20-24	97.6	2.3	0.2	0.0	2,524	1.4	98.6	0.0	0.1	1,261
25-29	98.2	1.8	0.0	0.0	3,445	1.2	98.8	0.1	0.0	2,238
30-34	98.3	1.5	0.2	0.0	3,447	0.7	99.2	0.0	0.1	2,575
35-39	98.5	1.4	0.1	0.0	3,236	1.2	98.6	0.2	0.0	2,588
40-44	98.1	1.8	0.0	0.1	2,900	0.9	99.0	0.1	0.0	2,375
45-49	98.4	1.6	0.0	0.0	2,848	1.1	98.8	0.1	0.0	2,427

Appendix Table A4 Attitudes toward the LGBT population among women and men age 13–49 by age, Table 15.16.1 from 2015 Colombia DHS (in Spanish)

Cuadro 15.16.1 Actitudes hacia la población LGBT

Porcentaje de mujeres de 13 a 49 años y de hombres de 13 a 49 años que cree que las personas homosexuales tienen los mismos derechos que las personas heterosexuales, que aprueba que se reconozcan los derechos a las parejas del mismo sexo y que está de acuerdo con que las parejas de homosexuales adopten niños(as) por características seleccionadas, Colombia 2015

Característica	MUJERES				Número de mujeres	HOMBRES			Número de hombres
	Las personas homosexuales tienen los mismos derechos que las personas heterosexuales	Aprueba que se reconozcan los derechos a las parejas del mismo sexo	Está de acuerdo con que las parejas de homosexuales adopten niños(as)	Número de mujeres		Las personas homosexuales tienen los mismos derechos que las personas heterosexuales	Aprueba que se reconozcan los derechos a las parejas del mismo sexo	Está de acuerdo con que las parejas de homosexuales adopten niños(as)	
Grupo de edad									
13-14	84.2	71.3	54.7	2,418	77.9	62.4	41.5	2,005	
15-19	88.1	75.6	45.7	6,107	82.8	65.0	39.1	5,063	
20-24	87.3	70.4	34.3	6,021	83.8	61.2	29.1	5,012	
25-29	89.2	67.5	27.7	5,611	84.4	60.8	25.7	4,577	
30-34	88.4	67.3	21.8	5,187	84.0	57.9	21.2	3,965	
35-39	85.9	63.7	21.7	4,740	81.7	54.8	18.1	3,556	
40-44	84.5	59.7	18.6	4,296	81.3	54.5	17.3	3,162	
45-49	83.9	59.5	18.7	4,337	81.9	50.3	15.6	3,140	

Appendix Table A5 Men having sex with men, Table 11.15 from 2003 Philippines DHS

<u>Table 11.15 Men having sex with men</u>			
Among men who have ever had sex, percentage who ever had sex with a man, and percentage who had sex with a man in the past 12 months, by background characteristics, Philippines 2003			
Background characteristic	Percentage who ever had sexual relations with a man	Percentage who had sexual relations with a man in the past year	Number of men
Age			
15-19	14.6	2.9	141
20-24	8.7	1.1	453
25-29	6.4	0.2	555
30-39	5.2	0.2	1,110
40-49	2.8	0.1	888
50-54	2.6	0.0	330
Current marital status			
Married/living together	3.9	0.3	2,746
Never married	10.9	0.8	626
Widowed/divorced/separated	11.6	0.0	106
Residence			
Urban	5.5	0.4	1,866
Rural	5.2	0.4	1,612
Education			
No education	1.2	0.0	67
Elementary	4.1	0.3	1,141
High school	7.3	0.5	1,325
College or higher	4.6	0.3	945
Wealth index quintile			
Lowest	3.3	0.3	660
Second	6.1	0.3	695
Middle	6.4	0.1	748
Fourth	6.3	0.7	668
Highest	4.6	0.6	707
Total	5.4	0.4	3,478