FORS GUIDES
to survey methods
and data management

Measuring assigned sex, gender identity, and sexual orientation in population surveys

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Abstract:

This guide supports survey practitioners and researchers in measuring more comprehensively and accurately gender differences in general population surveys. It addresses methodological considerations, reviews current measurement practices for key concepts, and recommends one question per concept for effective use in surveys.

Keywords:

Data collection, demographic gender metrics, gender diversity, gender inclusivity, population studies.

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Reflexivity statement:

As a research team composed predominantly of cisgender, white, and socioeconomically advantaged members, we acknowledge the limitations of our lived experiences in fully capturing the diversity of gender identities we aim to measure. Throughout the research process, we remained mindful of how our institutional privilege and dominant social positions might shape our perspectives and recommendations within this report. Our approach was

informed by literature that centres the voices and experiences of gender and sexual minorities. This guide represents our current evaluation of ongoing discussions with recommendations that remain situational given the dynamic nature of this field.

Statement on the use of artificial intelligence

For this guide, the authors used Claude and ChatGPT to assist with improving the English. After using this tool/service, the authors have carefully reviewed and edited the content as necessary and take full responsibility for the final publication.

1. INTRODUCTION

Gender differences are a central focus in social science research. Quantitative surveys often rely on a single binary question — such as “What is your sex?” with response options “woman” and “man” — to categorise respondents. However, this practice conflates sex assigned at birth with gender identity (an individual’s internal sense of self), resulting in mismeasurement of both concepts and reinforcing essentialist views of gender differences. This is particularly problematic in societies that recognise assigned sex and gender identity as distinct, and that these two may not necessarily align within individuals. Over the last decade, there has been a growing recognition among researchers, institutions and professional associations of the need for more standardized, valid and inclusive measures of sex, gender identity and sexual orientation (Jäggi & Künzi, 2025).

Issues of inclusivity and validity around gender identity have become a major societal concern in recent years (Li, et al., 2024). It is more and more recognised that biological sex is not strictly binary and may change over time (Ainsworth, 2015; Garofalo & Garvin, 2020), and that gender identities are diverse and fluid. Sexual orientation adds another important layer to self-identification, where inclusivity and validation are equally crucial. Acknowledging a broader spectrum of sexual orientations challenges the dominance of heteronormative norms. Without inclusive approaches, individuals with non-normative orientations face risks of discrimination, invisibility, and stigma. Simplistic binary and/or heteronormative classifications are inadequate for this diversity. Consequently, more inclusive and comprehensive measures are needed in quantitative surveys which provide greater granularity in the analysis of gender differences.

Using more inclusive measures in surveys not only promotes greater accuracy but also ensures a more equitable representation of the diverse population in the dataset. It allows individuals to answer questions and define themselves according to their felt identity. This inclusivity is pivotal in creating a survey environment where everyone, irrespective of their sex, sexuality, and gender identity, feels recognised and accounted for. Beyond fostering inclusivity and capturing diversity, measuring different concepts specifically with more detailed categories enable more refined analyses of inequalities, both for immediate research goals and future analyses, such as analysing their evolution over time.

This guide is designed for individuals involved in the design, implementation, and analysis of quantitative surveys who may not specialise in gender issues but who seek to measure gender differences in general population surveys. It provides an overview of discussions and current measurement practices related to assigned sex, gender identity, and sexual orientation. Based on that, it offers recommendations for effectively measuring each concept in social science surveys, with the goal of increasing the inclusiveness of questionnaires and improving the accuracy and validity of the data collected.

This guide examines questions and response options to optimise the measurement of these concepts and explores how questions can be strategically linked to achieve a more comprehensive understanding of gender differences. However, it is not intended for surveys focused on analysing specific subpopulations, such as individuals who identify as lesbian, gay, bisexual, transgender, intersex, queer/questioning, or as part of another sexual and/or gender minority (LGBTIQ+), which require more refined and detailed measures. Moreover, this guide focuses solely on assigned sex, gender identity and sexual orientation measures asked to respondents answering for themselves, rather than on measures directed at respondents

providing information about another person, as such questions introduce additional complexities.

In the following sections, we first discuss the need for measuring more diverse gender indicators and the challenges involved. Then, we provide definitions, rationale, and methodological considerations for measuring assigned sex, gender identity, and sexual orientation in general population surveys. Next, we review survey practices in Switzerland and conclude by providing practical recommendations for survey practitioners. It is important to note that the recommendations are context-dependent, particularly regarding time. Based on current literature, the recommendations we provide in this guide reflect what we believe to be the most appropriate measures today, while selecting the fewest possible measures (i.e., one per concept) to answer survey constraints. As these concepts evolve, the recommendations in this guide are expected to be reviewed and updated over time to remain relevant.

2. THE NEED TO MEASURE MORE COMPLEX GENDER-RELATED CONCEPTS IN POPULATION SURVEYS

The term “gender” is a broad concept with varying meanings depending on the field of study and theoretical perspective. In this guide, we define gender as a structural system that hierarchically organises individuals into two unequal categories — female and male — based on socially constructed values and representations (Bereni et al., 2008; Delphy, 2001; Risman, 2018). Rather than treating gender as a simple variable, it should be understood as a broader system that shapes multiple aspects of social life. This gender system not only produces inequalities between the sexes but also structures sexualities. Heterosexuality is positioned as the norm, reinforcing the binary logic of the gender system and the presumed natural complementarity of the sexes (Butler, 1990; Wittig, 1992).

The position that individuals occupy in the gender system can be assessed using what are known as gender indicators (Blondé et al., 2021). These indicators denaturalise and de-essentialise the sex categories of “woman” and “man” by acknowledging the social construction of differences between women and men, such as those observed in voting patterns, political engagement, educational choices, and career paths. Following Blondé et al. (2021), gender indicators can be classified as attitudinal (such as sexist or homophobic attitudes), linked to lived experiences and social positioning (such as lived gender-based discrimination or social positioning in the gendered labour market), or linked to identity concerns (such as indicators related to assigned sex, gender identity, or sexual orientation).

In this FORS guide, we focus on indicators related to identity concerns. Gender identity is often perceived and experienced as a core aspect of one’s self (Butler 1990). Within this framework, gender identity refers to an individual’s personal relationship with this gender system, specifically how they identify — or not — with the sex they were assigned at birth. This identification process reflects how individuals position themselves within the underlying gender system. In this sense, measuring assigned sex alongside gender identity remains essential given that gender identity results from identification (or non-identification) with one’s assigned sex and the social prerogatives it entails. Additionally, measuring gender identity enhances the visibility of identities that transcend exclusive identification with masculine or feminine gender categories, notably including non-binary identities. Furthermore, within this guide we also focus on sexual identity as one dimension of sexual orientation. This is valuable because

it reflects how individuals perceive and label their own sexuality, which is central to their lived experience and often reflects a combination of their sexual attraction, behaviour, and social affiliation. In addition, in general population surveys, it provides a practical and accessible way to capture diversity without requiring detailed knowledge of behaviour or attraction.

The prevailing gender norms that underpin the gender system have led to the essentialization and naturalisation of sex categories (Guillaumin, 1992). This means that characteristics associated with women and men are often interpreted as natural and immutable traits rather than socially produced constructs. This process contributes to the stigmatisation of individuals who do not conform to gender stereotypes, due to their gender identity, or sexual orientation, and reinforces the gender system's binary structure.

2.1 DEMAND FOR ADVANCED GENDER INDICATORS IN ACADEMIA AND SOCIETY

In social sciences, it is fundamental to be able to explain the differences observed between groups of people, such as inequalities in the labour market between women and men, experiences of gender violence, or discrimination based on sexual orientation (Jaunait, 2022). By integrating gender indicators, quantitative surveys not only allow researchers to measure gender-related differences and inequalities descriptively, but also can contribute to the understanding of systemic phenomena without resorting to essentializing explanations (Blondé et al., 2021), such as "it is in the nature of women to be less ambitious, and therefore they occupy inferior positions in the labour market". As noted earlier, including assigned sex and gender identity measures in surveys would enhance their representativeness in terms of gender diversity and respondents' sense of inclusion. This reflects both an ethical and a methodological issue related to the representativeness of the sample interviewed. Measuring sexual orientation (at least the dimension of sexual identity) completes the range of information useful to have in surveys to carry out comprehensive analyses of the gender diversity that characterises our society today.

Outside the academic community, sex-disaggregated data have been crucial for evidence-based policymaking, enabling governments and organisations to address gender inequalities and promote gender equality in various sectors, including education, employment, and social welfare. To further plan services, analyse inequalities, and develop policies, recent developments in the Swiss administrative context include initiatives to collect information on both sex assigned at birth (Swiss Federal Council, 2024) and gender identity (Jäggi & Künzi, 2025) in administrative statistics. Until now, there have generally been very few official figures for people who identify as other than their assigned sex. Continued collection of both types of information is necessary to monitor equality between women and men; while also monitoring equality between cisgender individuals (those whose gender identity corresponds to the sex assigned at birth) and non-cisgender individuals. Sexual orientation is also a critical consideration. In Switzerland, to ensure equal health opportunities for all residents, including sexual and gender minorities (Swiss Federal Council, 2022), efforts are being made to introduce questions on sexual orientation and gender identity, in addition to assigned sex, in relevant national surveys conducted by the Swiss Federal Statistical Office (see e.g., the Swiss Health Survey 2022, Swiss Federal Statistical Office, 2024b).

2.2 CHALLENGES IN IMPLEMENTING GENDER INDICATORS

While there is growing interest in measuring assigned sex, gender identity, and sexual orientation in general population surveys, survey practitioners and researchers perceive

several risks that have hindered the adoption of these measures. Key concerns include the interpretation and acceptability of gender identity concepts among the general population, which could lead to increased drop-out rates if questions are perceived as confusing or intrusive. There is also the challenge of balancing the level of detail with the risk of disclosing sensitive information. Additionally, ensuring comparability with previous surveys, which have often limited gender-related questions to simply asking “What is your sex?”, presents another difficulty. Lastly, surveys face time and space limitations, as well as cost considerations, which further constrain the ability to collect comprehensive data (Jäggi & Künzi, 2025). This section provides an overview of these broad methodological concerns, while specific issues are addressed in later sections.

Conceptual clarity and respondents’ understanding

A particular issue related to the sex and gender concepts is that most individuals fail to recognise the conceptual distinction between sex-related and gender-related terminology (Schudson et al., 2019). This lack of differentiation likely contributes to, and is influenced by, ongoing confusion and inconsistent use of these terminologies in both data collection and everyday interactions (Stuhlsatz et al., 2020). Consequently, simply using correct terminology may not convey the intended meaning to respondents, potentially impacting data quality. To address this, it is essential that sex- and gender-related questions be precise and clearly explained, ensuring respondents understand the information they are being asked to provide.

Appropriateness of terminology in general population surveys

When surveying the general population, the use and understanding of terms present a challenge. While precise and specific terminology have been developed in surveys targeting LGBTIQ+ populations, these terms are often not suitable for use in general population surveys. For example, “cisgender” individuals generally do not define themselves as such and may not be familiar with the term (Richard, 2019). As a result, it is currently unadvised to measure gender identity by asking “Are you cisgender, transgender, or outside of the binary?”. However, it is possible to overcome this difficulty, as the advantages of introducing such questions are substantial, as will be discussed in the following sections.

Acceptability and sensitivity of gender indicators

Research on the inclusion of assigned sex, gender identity, and sexual orientation questions in surveys suggests these indicators do not significantly affect respondent dropout rates. For example, studies in Germany and Switzerland show that adding gender identity measures has minimal impact on survey completion (Mordasini & Felder, 2024; Pöge et al., 2022). Additionally, respondents are generally willing to answer questions on sexual orientation, with non-response rates comparable to other sensitive sociodemographic variables, such as income (Bates et al., 2019; Ellis et al., 2017; Lee et al., 2018; National Academies of Sciences, Engineering, and Medicine [NASEM], 2022; Rullo et al., 2018).

Voluntary responses for sensitive questions

Respondents should be explicitly given the option to decline to answer sensitive questions, such as those related to assigned sex, gender identity, and sexual orientation. Offering a “Prefer not to answer” category or a clear note that the question is voluntary respects

respondent's privacy. Such an approach can improve response quality by reducing pressure on those who may find these questions intrusive.

The small sample-size concern

One of the challenges in measuring gender identity and sexual orientation in general population surveys is the limited size of these demographic groups. Despite concerns about insufficient sample sizes for robust statistical analysis of gender and/or sexual minorities[1] in general population surveys, the inclusion of these measures remains essential. First, without general population surveys, the actual size and characteristics of these groups remain unknown. While targeted surveys provide valuable insights into specific populations, they do not allow comparisons with majority groups or longitudinal tracking of demographic trends. By including gender identity and sexual orientation questions in general population surveys, researchers can better understand group trajectories, experiences, and potential discrimination impacts over time. It is therefore important that these are measured in a wide range of topics and not only included in sexual behaviour and health surveys. Furthermore, researchers have a responsibility to offer exhaustive response categories that accurately reflect the full scope of social reality. This principle cannot be disregarded simply because a response category may concern a group too small for separate analysis. Just as surveys would never omit a country-of-origin option, such as Monaco, due to low expected response rates, all demographic categories — including minority groups — should be represented to support comprehensive and inclusive research. In some statistical analysis, researchers may recode and aggregate minority groups to ensure their inclusion in the analysis. An example of such grouping is provided in this guide with reference to gender identity.

3. ASSIGNED SEX

3.1 DEFINITIONS

To fully understand the concepts related to sex, it is important to distinguish between biological sex, sex assigned at birth, and administrative sex, as these terms capture distinct but interconnected aspects of classification.

Biological sex

Biological sex refers to the different physical and physiological characteristics, including reproductive organs, chromosomes, and hormones, that usually classify humans as female or male (World Health Organisation, 2019). However, these characteristics exist on a continuum and do not always fit neatly into binary categories. Individuals with intersex traits, for example, have combinations of chromosomal, anatomical, or hormonal features that challenge this

[1] *Gender minorities* refer to individuals whose gender identities differ from those typically associated with the sex assigned to them at birth, including transgender individuals and individuals whose sex characteristics do not align with those typically expected of women and men (i.e., intersex individuals) (Suen et al., 2020; Swiss LGBTIQ+ Panel, n.d.).

Sexual minorities refer to individuals whose sexual identities, attractions, or behaviours are not strictly heterosexual, including individuals who identify as lesbian, gay, bisexual, asexual, or pansexual (Suen et al., 2020; Swiss LGBTIQ+ Panel, n.d.).

binary classification (European Institute for Gender Equality, 2024). Importantly, social science surveys do not measure biological sex directly, as this would require complex medical testing (e.g., chromosomal analysis or hormone profiling). Instead, they typically rely on self-reported sex assigned at birth.

Sex assigned at birth

Sex assigned at birth refers to the classification of individuals into a sex category at the time of birth. This assignment is usually done by healthcare professionals based on a combination of external genitalia observed at birth and information from prenatal observation of internal reproductive organs and, when available, chromosomal analyses. In Switzerland, newborns are assigned to either the female or male sex category in accordance with medical definitions of male and female bodies (Jäggi & Künzi, 2025).

In other contexts, such as Germany since 2013 (Müller, 2023), individuals may also be classified as *intersex* (or given alternative labels, such as indeterminate) which refers to individuals born with biological characteristics that do not fit the typical medical definitions of female or male. It involves variations in organs, chromosomes, and/or hormones to varying degrees. Intersex variations can be detected early on or later in life, for example during puberty (European Institute for Gender Equality, 2024).

The term “assigned” underscores that the sex assignment is done without the agency of the individual (The Gender and Sexuality Campus Center, n.d.). The sex assigned at birth may therefore not correspond to the individual’s gender identity (see the definition of gender identity in sections 2 and 4.1).

Administrative sex

The sex assigned at birth is recorded on official documents such as birth certificates, while passports and identity documents can also reflect the sex category to which individuals identify. Sex on official documents can be referred to as the *administrative sex*. This measure can be used to measure sex-based discriminations, notably in the context of public administrations and laws (e.g., civic rights).

Switzerland currently recognises two administrative sex categories: female and male. While intersex individuals challenge this binary categorisation, they are still officially registered as either female or male. Furthermore, individuals who do not identify with their sex assigned at birth can change their administrative sex within this binary framework. Consequently, a person’s sex assigned at birth may differ from the administrative sex listed on their identity documents.

It is important to note that the sex categories on identity papers, as well as the options, rules and procedures for changing them, vary by country. Some countries offer a third option, available not only for intersex individuals but also to those with non-binary, indeterminate, unspecified, or other gender identities. This third category may be labelled differently, such as “Divers” in Germany or “X” in Australia. As a result, administrative “sex” can, in some cases, reflect a person’s gender identity.

Such considerations have also taken place in Switzerland. The Swiss National Advisory Commission on Biomedical Ethics (NCE) presented a position paper in 2020 on ethical considerations in reviewing administrative sex/gender classification. Possible options range from the abolition of any official recording of sex/gender to the introduction of one or more new

categories, along with the option of opting out of recording sex at birth or later. The NCE concluded that each of these options would be preferable to current practice, but each would present its own difficulties (NCE, 2020).

3.2 WHY MEASURE SEX AS SEX ASSIGNED AT BIRTH

Historically, sex — rather than gender — has been used in social sciences to analyse differences between women and men. Measuring sex in surveys has been essential for gaining a comprehensive understanding of various social phenomena like highlight the violence experienced by women or the wage discrimination, for informing policies and interventions, and for promoting gender equality and social justice. It has helped researchers understand the composition of a population and the distribution of characteristics and behaviours within different sex categories, thereby enabling the identification of sex differences, likely reflecting gender-based social processes rather than biological distinctions. Despite measuring gender identity, we argue that the continued collection of sex-related information remains necessary for the four reasons developed below, and that this is best captured through the measure of sex assigned at birth.

First and foremost, measuring assigned sex is essential to our approach to measure gender identity as it relies on a two-step approach (De Vries et al., 2024), which operationalises gender identity through identification (or non-identification) with assigned sex at birth. Therefore, measuring assigned sex at birth is the first step to measure gender identity. This method provides measures that are accessible and comprehensible to both cisgender and non-cisgender respondents. Moreover, some socialisation trajectories, particularly those of non-binary individuals, can only be understood with knowledge of assigned sex.

Second, beyond its methodological necessity for the two-step measurement of gender identity, sex differences can have important implications for health outcomes. Biological sex differences can influence prevalence, symptoms, and treatment responses of various conditions, for example, heart attacks often occur later and present differently in women, partly due to hormonal differences (e.g., Ciaroni, 2013; Lieberherr et al., 2020). Collecting accurate data on sex assigned at birth enables researchers to better understand these differences and develop more effective and tailored health interventions.

Third, social science surveys measure the birth-assigned sex because this categorisation influences their socialisation processes and impacts their life trajectories, such as their career choices (e.g., Guilley et al., 2019) and their likelihood of being victims of gender discrimination and violence (e.g., Bornatici, 2022; Fuchs et al., 2018; Golder et al., 2019; Swiss Federal Statistical Office, 2024a). Surveys that include sex assigned at birth as a variable allow researchers to explore such issues and their implications for society. However, research shows that transgender individuals' socialisation experiences cannot be reduced to their assigned sex (Dietert & Dentice, 2012; Barron & Capous-Desyllas, 2017; Ekins & King, 2006; Hines, 2007). Transgender people may experience distinct socialization processes from early on, which differ from those of cisgender individuals sharing the same assigned sex (Beaubatie, 2021a; Clochec, 2021). Thus, to assess transgender socialisation process, assigned sex should be used together with gender identity.

Fourth, measuring sex assigned at birth captures the initial institutional categorisation of individuals. This is important for monitoring changes over time in relation to differences across sex groups and shifts in the demographic composition of populations. As gender identities are

shaped within specific social and cultural contexts — such as norms associated with femininities and masculinities — they may change over time. In this context, examining outcomes in relation to assigned sex at birth provides a consistent reference point for understanding how social patterns and differences develop. It should however be noted that while it allows comparison with older data points for longitudinal analyses, it does not in itself offer insight into the situation and evolution of gender minorities. Therefore, measuring gender identity alongside assigned sex is necessary for a comprehensive and inclusive analysis of inequalities, as discussed in section 4.

3.3 QUESTIONS, ANSWERS, AND METHODOLOGICAL CONSIDERATIONS

This section provides an overview of key conceptual and methodological considerations for measuring sex assigned at birth in surveys. Section 3.4 gives practical recommendations for question wording and implementation, including translations into German, French, and Italian.

Sex assigned at birth question and answer categories

When formulating questions, precision is critical to ensuring that respondents understand what is being measured. Imprecise survey questions, such as “What is your sex?” or “Sex:”, blur the distinction between assigned sex and gender identity, leading to inaccurate responses, especially from non-cisgender individuals (Bittner & Goodyear-Grant, 2017). Moreover, imprecise questions also conflate assigned sex at birth with current administrative sex, which individuals may update on identity documents over time. Since sex assigned at birth and current administrative sex can differ, some surveys measure both concepts to capture these changes.

Following the example used in the Household Pulse Survey since 2021, the question on sex assigned at birth can be phrased as: “What sex were you assigned at birth, as stated on your original birth certificate?” (US Census Bureau, 2024, p. 4). A similar question was used in the Swiss Health Survey 2022 (Swiss Federal Statistical Office, 2024b), translated into English as: “What sex were you assigned at birth?”. While the term “assigned” may resonate more with non-cisgender respondents, it may be less familiar to cisgender individuals. Alternatively, terms like “registered” or “recorded” could be considered to improve clarity and acceptability across respondent groups.

As an administrative or demographic concept, the sex question (whether assigned at birth or administrative) remains categorical and is currently considered a dichotomous variable in most countries, including Switzerland: “Female” and “Male”. We suggest using the labels “Female sex” and “Male sex” to clearly distinguish them from gender identity labels “Woman” and “Man”.

Methodological considerations on a third option labelling

A third category has been tested in several surveys regarding the question “What is your sex?”. The findings from these studies offer valuable insights to choose a label for the third option for assigned sex. The tests have shown that the label “Other” should be avoided, as it may confuse trans respondents about whether the question refers to sex or gender identity (UK Office for National Statistics, 2024b). The label “Other” also reinforces the notion of deviance from the norm (NCE, 2020). In response to legal changes in Germany, some German surveys started to use the label “Divers” (e.g., Kolbet al., 2022). However, this label could face the same problems as “Other”, in particular when used in a non-German context (Steinmetz and Ortmans, 2023). An alternative solution is to include a write-in option to the “Other” response

allowing respondents to provide a specific answer. While this offers flexibility, it also carries the risk of respondents mistakenly reporting their gender identity rather than their assigned sex (UK Office for National Statistics, 2024c). If a third option is used, we recommend specifying the measured construct, e.g., “Birth certificate recorded a different sex (please specify): _____”.

Guidance notes and placement of the question

Regarding the question on sex assigned at birth, tests conducted for the UK Census 2021 showed the importance of including a guidance note indicating that a question on gender identity will follow (UK Office for National Statistics, 2024b). This informs individuals whose gender identity differs from their assigned sex at birth that they can specify their gender identity in a later question, helping them to answer the assigned sex question and reducing the risk of biased or activist responses (UK Office for National Statistics, 2024c). This is notably important for transgender individuals, for whom such a question can be sensitive and potentially perceived as discriminatory. The inclusion of this guidance note only slightly increased response time but significantly reduced non-response to the assigned sex question, thereby improving data quality (UK Office for National Statistics, 2024c). We therefore recommend adding a similar guidance note irrespective whether the birth-assigned sex question or the administrative sex question is used.

For telephone interviews, this guidance note informing respondents about the upcoming gender identity question is especially important because respondents cannot see the sequence of questions. In paper and online surveys, presenting the gender identity question immediately after the sex assigned at birth (or administrative sex) question, and placing both on the same page can reduce the need for a guidance note (Bauer et al., 2017).

Measuring intersex status

In discussing assigned sex measurement, special consideration must be given to intersex issues. Intersex status cannot be adequately captured through the “sex assigned at birth” question. In Switzerland, intersex is not listed as an assigned sex category on birth certificates, and globally, the recognition of non-binary sex categories is relatively recent. Even in jurisdictions that acknowledge a “third sex”, these categories are not necessarily linked to intersex status; they typically refer to a gender category for non-binary individuals in identity documentation (see section 3.1 on administrative sex). Moreover, intersex status may only become known at puberty or later in life, making a question about "assigned sex at birth" insufficient to capture intersex status accurately. Given these factors, including intersex in questions about assigned sex – specifically those referencing birth certificate designations — lacks methodological validity in the current context.

To ensure accurate assessment, intersex status should be measured with a dedicated question such as “Were you born with a variation in sex characteristics (this is sometimes called intersex or an intersex variation)? Yes/No” (Ballering et al., 2023, p. 2166). In the current version of this guide, we chose to focus on assigned sex, gender identity, and sexual orientation, recognizing that this already represents a substantial shift in research practices for many general researchers. Nevertheless, we encourage researchers to also include a measure to assess intersex status, as this would contribute to more inclusive and comprehensive data collection practices in social science research and help fill the lack of data

on people living with intersex variations. Including a measure of intersex variations is especially important in health-related surveys (Jäggi & Künzi, 2025).

3.4 RECOMMENDATION FOR MEASURING SEX ASSIGNED AT BIRTH IN GENERAL POPULATION SURVEYS

Overall, we recommend the use of the wordings that explicitly specify “sex” and refer to a specific point in time (i.e., “at birth”), along with a guidance note for clarity (Table 1). The suggested question is based on the US Household Pulse Survey (US Census Bureau, 2024). For answer categories, we recommend using “female sex” and “male sex” for the birth-assigned sex question. Further recommendation on how to use this measure within the two-step approach is further described in section 4.5.

Table 1. Recommended questions regarding the assigned sex and their translations into French, German and Italian

	Question	**Guidance note**	**Answer categories**
English	What sex were you assigned at birth, as stated on your birth certificate?	A question on gender identity will follow later on in the questionnaire. — This question is voluntary.	Female sex Male sex
French	Quel sexe vous a été assigné à la naissance, tel qu’indiqué sur votre certificat de naissance ?	Une question sur l’identité de genre suivra plus tard dans le questionnaire. — Cette question est facultative.	Sexe féminin Sexe masculin
German	Welches Geschlecht wurde Ihnen bei der Geburt zugewiesen, wie es in Ihrer Geburtsurkunde angegeben ist?	Später im Fragebogen folgt eine Frage zur Geschlechtsidentität. — Diese Frage ist freiwillig.	Weibliches Geschlecht Männliches Geschlecht
Italian	Quale sesso le è stato assegnato alla nascita, come indicato sul suo certificato di nascita?	Una domanda sull'identità di genere seguirà più tardi nel questionario. — Questa domanda è volontaria.	Sesso femminile Sesso maschile

4. GENDER IDENTITY

4.1 DEFINITION

Broadly, gender identity refers to the socially constructed expectations, behaviours, activities, and attributes that a given society considers appropriate for women and men (Veldhuis et al., 2024). This leads to the concept of *gender identity* as an individual's personal sense of their own gender (Morrow, 2006). A person's gender identity may differ from the assigned sex at birth and may evolve over time. Gender identity is generally shaped by the cultural meanings ascribed to female and male categories within a society (Veldhuis et al., 2024). As individuals internalise these cultural meanings, gender becomes an integral part of their identity (Veldhuis et al., 2024). Through these gender identities, individuals understand themselves in relation to culturally defined feminine and masculine expectations and they may align their thoughts and actions with these gendered aspects of their identity (Wood & Eagly, 2015).

However, gender identity cannot be understood as a single dimension limited to a female and male gender identity, even when non-binary options are considered (Beaubatie, 2021b). Since gender functions as a social structure (Risman, 2018), gender identity should be viewed as relational — specifically, the degree to which an individual perceives their identity as aligned or misaligned with the gendered expectations associated with their sex assigned at birth. While inherently multidimensional, gender identity can be broadly grouped under umbrella terms such as cisgender, transgender, and non-binary (Thorne et al., 2019).

In this context, *cisgender* refers to a person whose gender identity corresponds to the sex assigned at birth within the binary categories of female or male. *Transgender* refers to a person whose gender identity is different from the sex assigned at birth. *Non-binary* refers to a person whose gender identity lies outside the traditional female-male binary. Non-binary individuals include those who identify to some degree as both female and male, or those who identify as neither, sometimes referred to as *agender.* Agender describes the experience of having no gender identity, though some consider agender itself as their gender identity (LGBTQIA Resource Center, n.d.)[2]. For some, transgender identities include non-binary identities, while for others, non-binary identities are considered distinct from transgender identities (Cusack et al., 2022). It is important to note that this terminology is evolving and may have different meanings in different national, linguistic, and social contexts. Moreover, they might not always be seen as mutually exclusive, but in this guide, we treat them as distinct identities. For an extensive list of definitions regarding gender identities, see Swiss LGBTIQ+ Panel's (n.d.) Glossary[3].

While for birth-assigned women and men, the relationship between sex assigned at birth and gender identity typically falls within these three broad groups, the situation is more complex for intersex individuals. While *intersex* primarily refers to physical sex characteristics rather than gender identity (Monro et al., 2021), the relationship between intersex status and gender identity is complex. Some intersex individuals may identify with the sex assigned to them at birth (i.e., cisgender), while others may identify with a gender different from their assigned sex (i.e., transgender) or may reject the binary altogether, identifying as non-binary (Carpenter, 2021). However, since the gender system is operationalised through sex assigned at birth,

[2] https://lgbtqia.ucdavis.edu/educated/glossary/
[3] https://swiss-lgbtiq-panel.ch/reports/glossary/

intersex status can itself be experienced as an identity. As discussed above (see section 3 on intersex), intersex status cannot be adequately captured through questions about sex assigned at birth (as recorded on birth certificates) and a dedicated question would be the most appropriate approach to measure intersex status. However, regarding gender identity, participants identifying as intersex can indicate it in the open-text field of the follow-up question provided to those who do not identify with their assigned sex (see recommended formulation in section 4.4).

4.2 WHY MEASURE GENDER IDENTITY

Research indicates that using sex as a proxy for gender identity is insufficient (Bittner & Goodyear-Grant, 2017; Fausto-Sterling, 2012; Lindqvist et al., 2021; Westbrook & Saperstein, 2015). Moreover, assuming a person's gender identity based on their assigned sex reinforces biases against transgender and non-binary respondents (American Psychological Association, 2015; McLemore, 2015; Westbrook & Saperstein, 2015). Consequently, it is important to measure gender identity specifically and to move beyond binary categorisations.

In section 3, we emphasised the importance of maintaining a question on sex in surveys, measured specifically as sex assigned at birth. In this section, we argue for the inclusion of at least one specific question that measures gender identity, supporting a two-step approach. This two-step approach, which combines questions about assigned sex and gender identity, is widely considered appropriate for population-based surveys and is understood by both cisgender and transgender respondents (Cameron & Stinson, 2019; Saperstein & Westbrook, 2021). This approach allows respondents to disclose any discrepancies between their gender identity and assigned sex allowing for a more accurate analysis of societal issues, inequalities and their evolving dynamics based on sex and gender identity. Tests conducted for the 2021 UK Census support the effectiveness of the two-step approach, with one question for assigned sex and another for gender identity, in meeting the diverse needs of respondents (UK Office for National Statistics, 2024c).

4.3 QUESTIONS, ANSWERS, AND METHODOLOGICAL CONSIDERATIONS

Unlike questions on assigned or administrative sex, which are relatively straightforward, measuring gender identity presents greater complexity. Approaches vary from direct questions with open-ended or categorical responses to indirect questions assessing the degree of identification with one's assigned sex using continuous scales or yes/no responses. In addition, gender identity measures may include dimensions of temporality and fluidity, acknowledging that gender identities can change over time and may not fit into a single, fixed category. Before exploring these possibilities in detail, we first explain why moving beyond a binary framework is essential.

Beyond the binary

When considering definitions of gender identity, it is evident that current conceptions go beyond a binary construct. As already indicated, using a dichotomous measure to capture gender identity — such as "Are you a woman or a man?" — not only increases the risk of measurement error by failing to capture the diversity of gender identities (Fraser, 2018; Lindqvist et al., 2021), but also excludes respondents who define themselves outside of the categories of "woman" and "man" (Cameron & Stinson, 2019; Lindqvist et al., 2021; Westbrook & Saperstein, 2015).

Moving beyond a binary framework allows for the inclusion of a broader range of gender identities and promotes a more inclusive environment for all respondents (Bittner & Goodyear-Grant, 2017). However, this does not justify the continued use of non-exhaustive, dichotomous gender identity measures. Limiting gender identity to “Woman” and “Man” not only risks misclassifying transgender and non-binary respondents, but also renders them invisible (Cameron & Stinson, 2019). Indeed, transgender and non-binary respondents may be unable to accurately respond to dichotomous measures and may skip the question or even withdraw from the survey altogether, leading to misclassification, missing data, and underrepresentation of these groups (Cameron & Stinson, 2019; Fraser, 2018).

While introducing inclusive gender identity questions raises methodological considerations, such as concerns about initial confusion among cisgender respondents, research indicates that most are not opposed to answering these questions (Fraser, 2018). For example, evidence from the Swiss context shows no effect on questionnaire completion (Mordasini & Felder, 2024; Steinmetz & Ortmanns, 2023).

Questions and answers: the direct approach

One approach is to directly ask respondents to disclose their gender identity. Questions such as “What is your gender identity?” in the Swiss LGBTIQ+ Panel (Eisner & Hässler, 2024), or “Do you identify as...?” in the Swiss Health Survey 2022 (Swiss Federal Statistical Office, 2024b) have been used in the Swiss context. In the case of the Swiss Health Survey, the gender identity question included a list of categorical responses, such as “Man”, “Woman”, “Non-binary”, “Other” and “I don’t know”. A definition of “non-binary” was also provided to help guide respondents. The Swiss LGBTIQ+ Panel also included a category “Other” and an opt-out option “I don’t know” as well as the categories “Ciswoman”, “Cisman”, “Transwoman”, “Transman” and “Non-binary”.

While this practice addresses the limitations of dichotomous measures of gender identity, researchers have highlighted several challenges to categorical responses. First, framing gender identity through predefined categories reinforces the misconception that gender identity is a fixed concept consisting of universal, mutually exclusive, and homogenous groups (Butler, 1990; Fraser, 2018; Hart et al., 2019; Lindqvist et al., 2021). Second, proposing exhaustive categories and thus capturing the multitude of possible gender identities is impossible because the language surrounding gender identity is continuously changing, and researchers cannot keep up with these changes (Fraser, 2018). Third, using categorical terms for gender identity requires selecting terms that are contextually relevant across different times and cultures (Bauer et al., 2017; Fraser, 2018). These terms can vary significantly depending on the region and language, meaning that categorical gender measures must be adapted to be relevant in different contexts (Cameron & Stinson, 2019). Some languages (like German) do not distinguish between sex and gender, or conflate them with sexual orientation, further complicating the use of standardised categories (Saperstein & Westbrook, 2021). Fourth, it is important to note that the category “woman” combines cis and trans women, and the category “man” combines cis and trans men, thus preventing separate analysis of these groups.

It is also important to consider the use of the “Other” category alongside binary or multiple answer categories. While offering such an option allows respondents to identify outside of the dichotomy and improve exhaustivity, it has significant drawbacks. Without a write-in option, researchers lose accuracy and detail about respondents’ specific gender identity. Moreover, the term “Other” can contribute to feelings of exclusion and stigmatisation by reinforcing a

sense of otherness and marginalisation (Cameron & Stinson, 2019; Lindqvist et al., 2021; see also section 3.3 on administrative sex).

Open-ended measures can be an effective way to avoid pre-defining gender identity categories. These measures allow respondents to self-identify their gender in their own words and to list multiple terms simultaneously (Fraser, 2018; Lindqvist et al., 2021; Pao et al., 2025). This approach is particularly useful for capturing the diverse ways in which non-binary and transgender individuals describe their gender identity. However, open-ended questions may not be ideal for researchers specifically focused on analysing gender identity effects, as they not only increase the complexity of the data but are also at risk of not correctly identifying all individuals (Fraser, 2018). Additionally, there is a risk of "meme responses", or purposefully absurd responses that reflect cis-sexist attitudes, which may skew results (Fraser, 2018; Lindqvist et al., 2021). Finally, coding and recoding open-ended responses can be time-consuming, especially for large datasets (Bauer et al., 2017; Fraser, 2018). Given these considerations, open-ended measures may not be the best choice for general population surveys where efficiency and clarity are priorities.

Question and answers: the indirect approach

An alternative approach to direct questioning is to measure identification with one's assigned sex — an approach inspired by widely used identification measures in social psychology, derived from Tajfel's (1974) social identity theory. It respects the concept of gender identity as relational rather than as fixed, homogeneous categories. By assessing how individuals relate to the system of sex assignment at birth, it offers a more nuanced, de-essentialised view of gender identity. For example, the question "Is the gender you identify with the same as your sex registered at birth?" was adopted in the 2021 UK Census after extensive testing (UK Office for National Statistics, 2024c). Similar questions have been tested in Switzerland, for example in the MOSAiCH 2022 survey (Ernst Stähli et al., 2023). Gianettoni et al. (2023) also used a related formulation to administrative sex in their question: "To what extent do you identify with the sex indicated on your identity documents?".

Answers can be provided using either graded response scales (e.g., ranging from "not at all" to "completely") or a dichotomous "yes/no" response. Graded scales offer a nuanced way to capture both the diversity of gender identities and the subtleties of gender identity effects that other measures may overlook (Bittner & Goodyear-Grant, 2017; Hart et al., 2019; Magliozzi et al., 2016). However, a recent experience in the Swiss context indicates that respondents tend to report high levels of identification with their assigned sex when presented with a continuous scale, leading to ceiling effects and limiting the discriminatory power of such scales (Mordasini & Felder, 2024). Therefore, a "yes/no" response appears to be more efficient currently in this context.

Despite its simplicity, a dichotomous measure of gender identity combined with the assigned sex measure allows for the creation of three important categories — cisgender women, cisgender men, and non-cisgender individuals — which, in our experience, are crucial for capturing gender identity differences and inequalities. Research indicates that operationalising gender identity based on cisgender status can reveal significant differences, as demonstrated in studies on mental health (McQuillan et al., 2024), emotional control and self-reliance (Anzani et al., 2023), global health (Scheim et al., 2024), and, in the Swiss context, on mental and physical welfare at work or at university (Felder et al., 2022).

However, UK Census tests indicate that acceptability for transgender and non-binary individuals increases when they can declare their specific gender identity (UK Office for National Statistics, 2024a). A write-in option can be added to the “No” answer category, requiring some recoding before analysis. This option was adopted by the UK Census, which found that the gender identity question ensured public acceptability and was easy to understand and answer (UK Office for National Statistics, 2024a).

Since detailed gender identity information is primarily needed for respondents who do not identify with their sex assigned at birth, a conditional follow-up question is necessary to specifically measure their gender identity. Non-cisgender participants should be asked to select from, at least, main non-cisgender categories such as “woman/trans woman”, “man/trans man” or “non-binary person”. Additionally, an open-ended text field (e.g., "I define my gender identity as...") should be provided to capture more nuanced or emerging gender identities that may not be represented in predetermined categories. This question constitutes a necessary third step to compute a gender variable that classifies trans participants in the right group (i.e. trans women in the women group and trans men in the men group) (see also section 4.5 for analytical considerations).

Methodological considerations: temporal reference, placement of the question, and voluntary participation

Regarding the placement — that is, its position in the survey and order relative to other questions — of the gender identity question(s), based on extensive qualitative and quantitative testing conducted for the UK Census 2021, it is recommended that gender identity question(s) be asked after the assigned sex question (UK Office for National Statistics, 2024c). This is especially important when the identification of assigned sex is asked. Moreover, in paper and online surveys, the gender identity should be presented on the same page as the assigned sex question.

Finally, it is important that responding to gender identity questions remains voluntary, as disclosing transgender status may not be safe or comfortable for all individuals. This concern varies significantly depending on the survey context and the respondent’s social environment. A brief note can remind respondents that answering is optional (UK Office for National Statistics, 2024c). As with any survey, clear and accessible information should be provided about how data will be collected, processed, stored and shared. Overall, these methodological considerations should help to foster a more inclusive and respectful survey environment, encouraging respondents to share accurate information safely.

4.4 RECOMMENDATION FOR MEASURING GENDER IDENTITY IN GENERAL POPULATION SURVEYS

Based on this discussion, we recommend using a gender identity measure that assesses identification with sex assigned at birth, using a dichotomous “Yes/No” response (Table 2). The suggested question, guidance note, and answer categories are adapted from the UK Census 2021. While the UK Census included a write-in option for those answering “No”, we propose a follow-up question as an example that could simplify the recoding process.

It is important to specify here that the measure we recommend below specifically concerns gender identity, that is, how individuals identify themselves. Gender identity does not encompass all dimensions that constitute an individual’s relationship to gender. For example, gender expression — how gender identity is expressed through gestures, clothing, or

behaviour in different contexts — is a distinct concept from gender identity. Within the framework of this guide, we focus specifically on gender identity.

Table 2. Recommended question and optional follow-up questions regarding gender identity and their translations into French, German and Italian

	Questions	**Guidance note**	**Answer categories**
English	Do you identify with the sex that was assigned to you at birth? — *[Follow-up question if no:]* *How do you define yourself?*	This question is voluntary. —	Yes No — *Woman/Trans woman* *Man/Trans man* *Non-binary person* *I define my gender identity as:_____*
French	Vous identifiez-vous avec le sexe qui vous a été assigné à la naissance ? — *[Question de suivi si non:]* *Comment vous définissez-vous ?*	Cette question est facultative. —	Oui Non — *Femme / Femme trans* *Homme / Homme trans* *Personne non binaire* *Je définis mon identité de genre comme : _____*
German	Identifizieren Sie sich mit dem Geschlecht, das Ihnen bei der Geburt zugewiesen wurde? — *[Folgefrage falls nein:]* *Wie definieren Sie sich?*	Diese Frage ist freiwillig. —	Ja Nein — *Frau/Trans Frau* *Mann/Trans Mann* *Nicht-binäre Person* *Ich definiere meine Geschlechtsidentität als: _____*
Italian	Si identifica con il sesso che le è stato assegnato alla nascita? — *[Domanda di follow-up se no:]* *Come si definisce?*	Questa domanda è volontaria. —	Si No — *Donna/Donna trans* *Uomo/Uomo trans* *Persona non binaria* *Definisco la mia identità di genere come: _____*

4.5 ANALYTICAL CONSIDERATIONS: ASSESSING GENDER DIFFERENCES USING ASSIGNED SEX AT BIRTH AND GENDER IDENTITY

For the reasons outlined above, while sex has historically been used to analyse differences between women and men, we recommend that the assigned sex variable (i.e. assigned sex at birth) should not be used in isolation, but rather in conjunction with the gender identity measure (i.e., identification with assigned sex), to construct a gender identity variable. This approach allows for inclusion of cisgender women and transgender women in the women's group, and cisgender men and transgender men in the men's group. For models requiring a binary variable for gender identity, one possible approach is to randomly allocate respondents who identify outside the man/woman dichotomy alternatively to the women's and men's groups to ensure their inclusion in the analyses (for an example see Girard & Ménard, 2025).

5. SEXUAL ORIENTATION

5.1 DEFINITIONS

Sexual orientation is conceptually related to sex assigned at birth and gender identity, as "individuals are classified on the basis of the relationship between their own sex or gender [identity] and that of their actual or preferred partners" (NASEM, 2022, p.17). As a multidimensional concept, sexual orientation encompasses three common interrelated dimensions: identity, attraction, and behaviour (Geary at al., 2018; Li et al., 2024; Tolman et al., 2016; van Anders, 2015; Veldhuis et al., 2024).

Sexual identity

Sexual identity refers to how individuals label and understand their sexual orientation based on self-identification. Shaped by personal experiences and cultural influences (D'Augelli, 1994), it differs from sexual behaviour or attraction, which involve specific actions or feelings. Sexual identity focuses on personal perception and social belonging. For example, a person may identify as bisexual even if currently in a relationship with someone of one gender (Fu et al., 2019; Phillips et al., 2019).

Sexual attraction

Sexual attraction is defined as an interest in, or desire for sexual, erotic, or romantic contact with one or more persons. It is often characterised by feelings of excitement, interest, or affinity toward individuals of one or more genders (LeVay, 2017; Patterson et al., 2017).

Sexual behaviour

Sexual behaviour includes both physical and nonphysical expressions of sexuality, i.e., not only sexually active behaviours, but also abstinence, celibacy, as well as other forms of expression that are independent of one's sexual identity. For example, a person may identify as gay but choose celibacy, or someone may identify as lesbian without having had physical sexual contact with a woman. This broad definition emphasises that sexual behaviour is defined not only by physical acts, but also by personal choices and identities (Wolff et al., 2017).

5.2 WHY MEASURE SEXUAL ORIENTATION

Including questions about sexual orientation in general population surveys is essential as LGBTIQ+ individuals often experience stigma, marginalisation, and exclusion (e.g. Badgett, 2020; Bayrakdar & King, 2023; Boertien & Vignoli, 2019; Drydakis, 2022; De Vries and Steinmetz, 2024; Reczek, 2020; OECD, 2020). Heteronormativity and heterosexism, which privilege heterosexuality while marginalising non-heterosexual orientations, exacerbate the challenges faced by the LGBTIQ+ community by influencing social structures, cultural norms, and personal interactions (Allen & Mendez, 2018; Ayoub et al., 2020). These biases manifest through institutional policies that favour heterosexual relationships, cultural stereotypes that exclude or negatively portray non-heterosexual identities, and everyday microaggressions that assume universal heterosexuality (Dayer, 2013).

Such heterosexism has serious consequences. Studies show that LGBTIQ+ people are more prone to depression, anxiety, and suicidal ideation than their heterosexual counterparts (Marchi et al., 2022; Williams et al., 2023). Socially and economically, it can lead to isolation and limited opportunities, as LGBTIQ+ individuals may hide their sexual orientation to avoid discrimination, leading to social withdrawal and lack of support networks. This marginalisation often results in economic disadvantages, including lower wages and fewer job opportunities due to workplace discrimination (Badgett, 2020; Parini & Lloren, 2017). In addition, LGBTIQ+ individuals are more likely to experience disrupted educational pathways (Chamberland et al., 2013) or drop out of vocational training because of heterosexist discrimination (Gianettoni et al., 2023; Gianettoni et al. 2025). In health care, heterosexism impedes access and exacerbates health risks, with LGBTIQ+ individuals often facing discrimination from healthcare providers and lacking culturally competent care (Stadelmann et al., 2024; Udrisard et al., 2022). Legally and politically, heterosexism results in inadequate legal protection and political marginalisation. Many regions lack adequate anti-discrimination laws for LGBTIQ+ people, and political structures can further marginalise these communities, limiting their ability to influence policy changes that affect their rights and well-being (European Union Agency for Fundamental Rights (FRA), 2024; United Nations Development Programme & Parliamentarians for Global Action, 2022).

Despite a growing recognition of these realities, a persistent lack of adequate measurement in surveys continues to hinder progress. A recent study by Li et al. (2024) found that fewer than half of the countries examined included questions on sexual orientation in their national mental well-being surveys. Even where such questions were present, they were often poorly formulated or offered limited response options, failing to capture the full spectrum of sexual orientations. This lack of measurement reinforces the invisibility of LGBTIQ+ populations in official statistics and undermines efforts to design effective, evidence-based policy interventions. One reason many survey providers and national statistical offices hesitate to include measures of sexual orientation is concern that the topic's perceived sensitivity might increase non-response and dropout rates. However, while such concerns are not unique to sexual orientation (e.g., topics like race and income can also be perceived as sensitive), research has consistently shown that including sexual orientation questions, particularly on sexual identity, is both feasible and acceptable in population-based surveys. Respondents generally demonstrate willingness and ability to answer these questions, with non-response rates comparable to other standard sociodemographic variables (Bates et al., 2019; Ellis et al., 2017; Lee et al., 2018; National Academies of Sciences, 2022; Rullo et al., 2018).

Consequently, including at least one question about sexual orientation in general population surveys is essential for accurately representing the LGBTIQ+ community. It allows for a deeper understanding of the unique challenges faced by these communities and provides critical insights that can contribute to the development of laws and policies that promote equality and protect the rights of all individuals.

Why measure sexual orientation as sexual identity

When choosing a sexual orientation question, it is important to recognize that the three dimensions capture overlapping but distinct groups (Baker et al., 2021). Measures of attraction generally identify more individuals as sexual minorities than behavioural measures, which in turn identify more than self-identification (i.e., sexual identity) measures. For example, individuals are often more likely to report same-sex attraction or behaviour than to self-identify as LGBTIQ+, underscoring the need for context-sensitive questions (Geary et al., 2018). Sexual identity measures tend to be the most specific and exclusive, as they are shaped by complex cultural and social norms. Varying levels of acceptance and stigma across contexts influences how individuals choose to self-identify, making identity deeply personal and culturally contingent (National Research Council, 2011). While sexual identity is the most exclusive of the three measures, it remains a valuable tool for identifying sexual minorities in general population surveys (Tabor et al., 2024; Wolff et al., 2017). As aforementioned, it encapsulates how individuals self-label their sexuality, which often reflects a combination of their sexual attraction, behaviour, and social affiliation. Unlike measures of behaviour or attraction alone, identity captures the personal and social meaning individuals assign to their sexuality.

Moreover, sexual identity is generally more stable and easier to measure in surveys, making it a practical and accessible way to capture diversity — especially in general population surveys where detailed questions on behaviour or attraction may be too sensitive or contextually inappropriate. In contrast, in targeted surveys attraction and behaviour measures require more nuanced phrasing and a deeper understanding of sexual diversity. Terms like “woman” and “man”, commonly used in such questions, often fail to reflect the full spectrum of sexual identities. For instance, when someone says they are “only attracted to women,” it may refer to all women or only cisgender women — highlighting how the cis/non-cis dimension can shape sexual orientation as much as the male/female binary (Blair & Hoskin, 2019; Griffiths & Armstrong, 2023). Acknowledging this complexity is essential for developing a more nuanced understanding of sexual orientation beyond the binary framework. Identity-based measures, by contrast, allow individuals to express their sexual orientation in terms that are personally and socially meaningful, without imposing restrictive binary assumptions.

5.3 QUESTIONS, ANSWERS AND METHODOLOGICAL CONSIDERATIONS

However, there is still an ongoing debate within the academic community about the best way to ask about sexual orientation in surveys (Young & Bond, 2023). Some researchers argue that a single, clearly worded self-identifying question about sexual identity is sufficient because respondents can accurately select a label that reflects their identity (Cahill et al., 2014, 2016; Haseldon & Joloza, 2009). Others advocate using multiple questions to address the complexity and the three different dimensions of sexual orientation to ensure clarity and provide more comprehensive data (Currier et al., 2015; Geary et al., 2018; Temkin et al., 2017). In addition, some studies also recommend measuring the different dimensions of sexual orientation at

various points in a person's life to capture changes over time (Baldwin et al., 2017; Ruberg & Ruelos, 2020). Additionally, they highlight that the context and purpose of data collection significantly impact how individuals respond (Baldwin et al., 2017; Geary et al., 2018). Overall, the findings reinforce the need for nuanced, well-designed survey instruments that clearly distinguish which dimension is being measured. Without this clarity, ambiguity can result in inconsistent and incomplete data, limiting the reliability and usefulness of the data (Korchmaros et al., 2013; Suen et al., 2022).

Focusing on sexual identity measures

As indicated above, as sexual identity offers a practical, less intrusive way to capture how individuals self-define with respect to their sexual orientation, it is particularly suitable for large-scale, general population surveys.[4] In this context, the report of the National Academies of Sciences, Engineering, and Medicine (NASEM, 2022) provides the most comprehensive overview of measuring sexual identity through self-identification. While it focuses mainly on the Anglo-American context, it offers valuable insights into survey approaches that can also be applied to the European and Swiss contexts. According to the report (p. 75), over the past three decades, three main approaches have been used to measure sexual identity: (1) asking respondents if they identify as a sexual minority or LGBTIQ+ with a dichotomous "yes/no" response; (2) offering a set of options that combine sexual orientation identity and attraction terminologies (e.g., mostly homosexual [gay], but somewhat attracted to the opposite sex); and (3) allowing respondents to choose one option from a list of sexual orientation identity labels (e.g., lesbian, straight, bisexual). According to the report, however, most 'general' surveys today assess sexual identity by using the third approach, enabling individuals to select label(s) that best describe themselves, with slight variations in wording and answer categories (NASEM, 2022).

In that regard, survey questions about sexual identity often vary in wording, such as "do you consider yourself", "describe your sexual orientation", or "think about yourself". Some debate whether including the term "sexual orientation" in the question stem improves accuracy or introduces confusion. Many scholars have cautioned that technical language may be too complex for general population surveys (Badgett, 2009; Ellis et al., 2017; Holzberg et al., 2019) and respondents understanding of "sexual orientation" varies widely, even among those who prefer conceptual clarity (Suen et al., 2022). Thus, including technical terms does not necessarily enhance data quality and may even obscure which dimension is being measured. When it comes to the survey answer categories, they differ in whether they include an "other" or "none of the above" option, allow for free-text response, or offer a broad range of identities. Several studies propose strategies for creating answer categories that are clear, reliable, and that encompass a wider array of sexual identities. Researchers commonly suggest expanding response options to better reflect the diversity of sexual identities (Holzberg et al., 2018; Pinto et al., 2019; Suen et al., 2020). While terms like "gay", "lesbian", and "bisexual" have been used since the early to mid-20th century (Morris, 2023), others, such as "pansexual" and "queer", have emerged in response to perceived Eurocentric biases. Some studies also recommend gradational measures, offering options like "mostly homosexual" or "mostly heterosexual" to capture greater nuance (Austin et al., 2007). However, recoding these

[4] It should be noted that whenever feasible – given survey length and scope – we strongly recommend measuring all three dimensions of sexual orientation (identity, attraction, behaviour) using clearly worded, separate questions.

responses into fewer categories can obscure variation, particularly undercounting bisexual individuals or misinterpreting the data (McCabe et al., 2020; McInnis et al., 2022). Despite the recognition that measures should capture a broader spectrum of sexual identities; there is no consensus on a 'best practice'. Instead, there is broad agreement that there is no perfect set of answer categories for sexual identity questions suitable for all contexts. Sexual minorities are shaped by complex historical, cultural, and political factors, making it difficult to represent every possible identity in a concise list (Suen et al., 2020). This highlights an ongoing tension between the desire for detailed, meaningful data and the practical demands of standardised survey instruments that allow researchers to document the needs and inequities of these populations. The challenge lies in designing response options that strike a balance, capturing the richness of lived identities while remaining usable for large-scale data collections.

5.4 RECOMMENDATION FOR MEASURING SEXUAL IDENTITY IN GENERAL POPULATION SURVEYS

Based on the previous discussion, Table 3 presents a recommended question for assessing sexual identity as one dimension of sexual orientation. This question is adapted from the Swiss Health Survey 2022 conducted by the Swiss Federal Statistical Office (2024b), which uses the phrasing: "Do you consider yourself…?" In the English version, we have included the response option "straight," commonly used in English-speaking contexts, alongside "heterosexual," which is more prevalent in the Swiss context. Consistent with recommendations for gender identity questions, we advise against using an "Other" answer category or an open-ended prompt like "I define myself as…" to ensure clarity. Instead, we suggest explicitly reminding respondents in the answer category that the question pertains to sexual identity, thereby enhancing the specificity of the data collected.

Table 3. Recommended questions regarding sexual identity and translations into French, German and Italian

	Question	**Answer categories**
English	Do you consider yourself to be ...	Heterosexual/Straight Lesbian/Gay Bisexual I define my sexual identity as: _____ Don't know Prefer not to answer
French	Vous considérez-vous comme une personne…	Hétérosexuelle Lesbienne/Gay Bisexuelle Je définis mon identité sexuelle comme : _____ Je ne sais pas Je préfère ne pas répondre
German	Betrachten Sie sich als…	Heterosexuell/Straight Lesbisch/Schwul Bisexuell Ich bezeichne meine sexuelle Identität als: _____ Ich weiss es nicht Ich möchte nicht antworten

Italian	Si considera come…	Eterosessuale Lesbica/Gay Bisessuale Definisco la mia identità sessuale come: _____ Non lo so Preferisco non rispondere

6. IMPLEMENTATION OF GENDER INDICATORS IN THE SWISS CONTEXT

As a comprehensive overview of the use of gender indicators in general population surveys in the Swiss context would be too extensive for this guide, this section provides an overview of FORS's practices, along with current discussions and feedback from testing new gender indicators. In this section, we rely on interviews conducted with our colleagues directly involved in the questionnaire and data collection of FORS surveys, as well as results from our own analyses, notably presented at recent conferences.

6.1 PAST AND PRESENT PRACTICE

Practices among core FORS surveys

FORS collects data for six national surveys of the general population, with some variations in the samples:

- **Swiss Household Panel (SHP)**: An annual panel survey including Swiss residents aged 14 and older;
- **Swiss Electoral Study (Selects)**: A survey of Swiss citizens aged 18 and older, conducted every four year;
- **Measurement and Observation of Social Attitudes in Switzerland (MOSAiCH)**: An annual survey of respondents aged 18 and older, including the Swiss section of the International Social Survey Programme (ISSP) — combining a repeated sociodemographic core and rotating thematic modules — along with additional questions proposed by Swiss researchers;
- The Swiss section of the **European Social Survey (ESS)**: A biennial survey including respondents aged 15 and older, with a repeated sociodemographic core and rotating thematic modules;
- The Swiss section of the **Survey of Health, Ageing and Retirement in Europe (SHARE)**: A biennial panel survey of Swiss residents aged 50 and older.

In these surveys, assigned sex and gender identity are rarely well-defined and adequately measured. Until recently, most surveys either used a single dichotomous question that conflates sex with gender identity or had the interviewers assess and code the sex of the respondent. Despite recent movement away from these practices, the implementation of gender and sexual identity measures differs across surveys. Improvements have been made in measuring sex (Table 4). Gender identity is typically measured in modules focused specifically on gender-related topics or tested in interviewer questionnaires. FORS surveys generally do not yet include measures of sexual orientation, which prevents researchers from

studying more comprehensively gender and sexual diversity. We now review the practice at each survey.

Table 4. Practices among core FORS surveys

Survey	Sex	Gender identity	Sexual orientation
ESS	Sex/gender (binary) in the core questionnaire	Gender identity (indirect approach)[5] included in the 2023 module	Not included
MOSAiCH	Administrative sex (binary) since 2022 in the core questionnaire of the ISSP Sex assigned at birth included in the Swiss additional part in 2022	Gender identity (direct and indirect approaches)[5] included in the Swiss additional part in 2022	Sexual identity included in the Swiss additional part in 2022
Selects	Administrative sex (binary) since 2023	Not included	Not included
SHARE	Sex assigned at birth (binary) in the Swiss questionnaire in 2024	Gender identity (direct approach)[5] in the Swiss questionnaire in 2024	Not included
SHP	Indirect confirmation of the "sex/gender" by the interviewer (with three possible categories: male, female, other) Sex assigned at birth included in the interviewers' questionnaire in 2024	Gender identity (direct approach)[5] included in the interviewers' questionnaire in 2024	Not included

The core questionnaires of the Selects and MOSAiCH surveys now ask for the respondent's current sex as indicated on identity documents, providing a clear measure of administrative sex. These surveys prioritise the use of administrative sex over sex assigned at birth, as administrative sex, along with age, is used to verify the respondent's identity. Both surveys draw probabilistic samples from the Swiss Federal Statistical Office (SFSO). The drawn samples contain notably information about the administrative sex and age of the sampled persons. If the SFSO begins reporting sex assigned at birth in addition to administrative sex, these surveys may revise their practices for measuring sex in their core questionnaires.

Since the 2022 ISSP survey focused on family and changing gender roles, the additional Swiss questionnaire — together forming the 2022 MOSAiCH survey — included a specific question

[5] *The direct approach* to measuring gender identity asks respondents explicitly about their gender identity, while the *indirect approach* assesses the degree of identification with one's sex assigned at birth (and hence aligns with the two-step measurement of gender identity). See Section 4 for more information.

measuring sex assigned at birth. It also contained questions regarding gender identity and sexual orientation. The Swiss survey team did not notice specific drop-outs after these questions, nor significant differences with other years. However, as these questions were part of the thematic Swiss questionnaire rather than the core sociodemographic questionnaire, they are unlikely to be repeated in future surveys on different topics.

Regarding the ESS, the 2023 module on “Gender in Contemporary Europe: Rethinking Equality and the Backlash” included a specific question on gender identity. The face-to-face interviews revealed no significant challenges during pre-tests or fieldwork, with interviewers reporting no issues regarding respondents’ understanding of or willingness to answer the question. The 2023 module also incorporates additional gender indicators, including measures of femininity and masculinity. The ESS international coordination team is now discussing the inclusion of questions on assigned sex and/or gender identity in the standard set of demographic indicators for future modules, which will be conducted in self-completion-only mode.

In 2024, the Swiss team of the SHARE panel survey introduced a gender identity question positioned after a question on the sex assigned at birth in the Swiss-specific paper-and-pencil questionnaire that is distributed to the Swiss participants after their regular SHARE interview. The gender identity question included “women”, “men”, “non-binary”, “other” and “I don’t know” response options. To provide context, the question also included a brief explanation emphasising the study’s commitment to evolving and adapting its questions to reflect better and respect the diverse identities and lived experiences of all respondents. For acceptability concerns, these two questions were added at the very end of the questionnaire. Results will be presented to SHARE’s international coordination to inform the potential introduction of such questions in SHARE’s cross-national interview.

In the SHP, the process differs from other surveys. The SHP currently does not include a direct question on sex or gender identity. Instead, at the first interview, the household reference person indicates all household members' most relevant socio-demographic characteristics. Since 2019, the interviewer has the option to select the category “other” if the respondent requests it (e.g., asking not to be addressed as a woman or a man, or specifying that a cohabitant is non-binary). While reflections are ongoing regarding this practice, the SHP is using new and specific questions regarding assigned sex and gender identity in their interviewer questionnaire.

Other FORS surveys and beyond

In addition to its core surveys, FORS collaborates on data collection and analysis for various external research projects and institutions. These collaborations foster methodological advancements and support the development of innovative indicators, including those related to gender. Such surveys and their associated pre-tests have enabled the inclusion of measures of sex assigned at birth and gender identity, using both direct and indirect approaches as well as categorical and continuous scales. While sections 7.2 and 7.3 specifically target the results of these tests, the following example illustrates these practices.

A survey conducted by FORS for a research group at the University of Zurich, involving a large sample of residents in Switzerland, included a measure of sex assigned at birth along with a continuous measure of identification with the assigned sex. Although no results have been published to date, preliminary fieldwork suggests that neither of these questions has triggered

a notably higher rate of "drop-out" or non-response compared to other traditional socio-demographic questions, such as year of birth, education level, or income.

It is also noteworthy to examine the practices of the SFSO. Among its general population surveys, the Swiss Health Survey has led the way in implementing changes. In 2017 it relied on a single question conflating sex and gender identity: “Who are you: Man/Woman”. In 2022, it introduced specific questions on sex assigned at birth, gender identity (direct approach and categorical answers), sexual identity, and sexual attraction. This updated approach allows for a more nuanced and precise analysis of gender differences in health outcomes.

More recently, Jäggi and Künzi (2025) in their report on Data Situation on Gender Identity and Sexual Orientation in National Surveys for the SFSO reported that International Studies and ESS analyses show questions on gender identity and sexual orientation are not particularly sensitive in surveys and do not generate significantly increased non-response rates compared to other sensitive data questions. Moreover, qualitative interviews with survey managers, federal administration specialists, researchers, and LGBTIQ+ organisations in Switzerland revealed that due to gaps in the data collected for all social and societal issues the majority of interviewees advocated for systematic collection of gender identity and sexual orientation data as part of national surveys.

6.2 ACCEPTABILITY OF GENDER INDICATORS BASED ON EMPIRICAL EVIDENCE

The most common reasons for not including any type of gender indicators are most often related to issues of questionnaire length, potential dropouts, lack of clear guidelines and consensus on what measures to include, and fear of offending respondents. There is also concern that conservative respondents may be dissuaded from participating in surveys due to questions that distinguish between the concepts of sex and gender identity. While a growing body of research has alleviated such concerns in the international context (Bauer et al., 2017; Bates et al., 2022; Kraus et al., 2023; Medeiros et al., 2020; Pöge et al., 2022; Tate et al., 2013), recent tests based on FORS surveys indicate that gender indicators can be successfully implemented in the Swiss context without significant impact on respondent participation or data quality. The labelling of gender identity categories, when the direct approach is used, should however be selected with some caution.

Steinmetz and Ortmans (2023) conducted an experimental study within the MOSAiCH 2022 survey, testing item response and familiarity with sex (assigned at birth) and gender identity questions under four conditions. Overall, item nonresponse rates were low across all conditions. Surprisingly, the traditional binary question resulted in the highest nonresponse, while the version including a third category labelled “diverse” had the lowest. The study also found strict measurement invariance across all conditions, indicating that different question formats did not compromise data comparability. Over 97% of respondents reported no difficulty answering the questions, though perceived difficulty varied significantly by condition ($\chi^2=21.90$; $df=9$; $p < 0.05$). The inclusion of the “diverse” category appeared to influence how difficult the question felt to respondents. Familiarity with the term “diverse” was mixed: 69.6% of respondents were familiar, 24.7% unfamiliar, and 5.4% unsure. Significant differences in familiarity were found across experimental) and language groups. While over three-quarters of German- and Italian-speaking respondents were familiar with the term, only about half of French-speaking respondents were, and over 40% reported unfamiliarity (Steinmetz & Ortmanns, 2023).

A second experiment conducted by Felder et al. (2025) in a Swiss online panel of German- and French-speaking respondents also indicates that asking about sex assigned at birth and gender identity does not affect questionnaire completion nor dropout rates. They found that no participant dropped out after seeing these questions[6] at the begging of the questionnaire and item non-response was lower than for some other usual sociodemographic questions such as income (0.3% vs 2.8%). Furthermore, there was no significant difference in questionnaire completion between those who received all the questions at the beginning of the questionnaire and those who received them at the end. Moreover, the potential loss of conservative respondents was not confirmed, as no differences in political orientation were observed between groups exposed to questions about sex assigned at birth and gender identity at the beginning of the questionnaire and those exposed to those questions at the end. This suggests that conservative respondents were not more likely to drop out of the survey when exposed to these questions. Respondents also reported very low levels of difficulty in answering both the assigned sex and the gender identity questions, with no significant difference in response difficulty between the two. In the multilingual context of Switzerland, German-speaking respondents found the categorical gender identity measure slightly easier (*M*=1.06) than French-speaking respondents (*M*=1.09)[7] (Felder et al., 2025). Contrary to Steinmetz and Ortmans (2023), this time the third category was labelled “non-binary” instead of “diverse”.

6.3 CONSIDERATIONS ON THE USE OF CONTINUOUS SCALES

In another FORS experiment with Swiss German-speaking respondents, a continuous scale measuring gender identity relative to assigned sex[8] yielded ceiling effects: *M*=6.84; *SD*=.607 on a scale of 1 to 7 (Mordasini & Felder, 2024). To this day, at least in Switzerland, using continuous scales on measures of gender identity such as identification with assigned sex shows no real added value due to ceiling effects, as most respondents select the highest scale values, leaving insufficient variation for analysis.

Nonetheless, being able to approach, measure, analyse and interpret gender indicators as a continuous concept has proven to be relevant in various fields including health (Hart et al., 2019), risk aversion (Meier-Pesti & Penz, 2008), political attitudes (Bittner & Goodyear-Grant, 2017) or harassment (McLaughlin et al., 2012). These studies mostly relied on proxy measures assessing the levels of alignment to “masculinity” and “femininity”. Following evidence from other countries, the aforementioned FORS experiment conducted by Mordasini & Felder (2024) found that differences in political orientation amongst Swiss participants were greater between highly masculine men and less masculine men than between men and women (assigned sex). Participants also reported very low levels of difficulty in answering the question. While using masculinity-femininity scales allows to avoid ceiling effects, the fact that these measures are often rooted in stereotypes and hegemonic notions of femininity and masculinity, using them can inadvertently reinforce these traditional conceptions of masculinity and femininity and activate the related stereotypes. It is therefore important to seek other effective continuous measures that do not rely on stereotypes.

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[6] Assigned sex was measured through “What is your sex as listed on your birth certificate? Male/Female”. Gender identity was measured through the question “Please indicate the gender you identify with: Male; Female; Non-binary; I prefer not to answer”.

[7] “How difficult was it for you to answer the question about your gender (woman, man, non-binary)? 1 Not at all difficult - 7 Very difficult”.

[8] “How well can you identify with the sex assigned to you at birth? 1 Not at all - 7 Very well”.

An alternative approach is to measure the extent to which the respondents consider themselves to be a woman, a man, and outside the binary in three separate items addressed to all respondents and measured through a scale (e.g., from 1 “Not at all” to 6 “Totally”). Such items were proposed in MOSAiCH 2022,[9] as well as in the longitudinal survey entitled “Vocational training pathways through the prism of gender and sexual orientation” held in 2019-2023 among students in the canton of Geneva (Gianettoni et al., 2023). The advantage of continuous scales is their flexibility for creating analytically relevant groups according to theoretical approaches. For example, categorising responses into “yes” (answers 4 to 6) versus “no” (answers 1 to 3) in MOSAiCH 2022 yields groups where 1.1% of men and 0.7% of women are considered non-cisgender. However, analyses with such small sample sizes are challenging. Alternatively, if cisnormativity is theorised as non-distancing from complete identification with the assigned sex category, respondents can be grouped by contrasting those who identify completely with their assigned sex category against those who do not. Using this approach, MOSAiCH 2022 data indicate that 26.3% of men and 20.5% of women can be categorised as not completely cisgender (Gianettoni, 2024). Applying the same categorisation to the students who took part in the longitudinal survey of vocational training pathways (Gianettoni et al., 2023) reveals that belonging to the cisgender versus not completely cisgender groups explains students’ intention to stop their vocational training: non-cisgender students tend to stop their training more than other students.

7. GUIDANCE ON SHARING DATA RELATED TO ASSIGNED SEX, GENDER IDENTITY, AND SEXUAL ORIENTATION

In line with the principles of research transparency and openness, data sharing plays a crucial role in enhancing the long-term value and reusability of survey data. Some data are specifically collected with the intention of being shared and used by third parties. This is particularly true for survey data collected through FORS, which are designed to support academic reuse. Although sensitive information like assigned sex, gender identity, and sexual orientation requires careful protection, it is possible to safely share such data — even when small population groups are involved — when appropriate safeguards are implemented.

In surveys containing such information, data must be aggregated before sharing to protect respondent privacy. This principle applies not only to these specific variables but also to other strong indirect identifiers, such as postcode, profession, or exceptional characteristics (e.g., very old age), that could reveal identities when combined (Kleiner & Heers, 2024). To minimise the risk of re-identification, these indirect identifiers should be aggregated (e.g., to canton-level regions, broader professional categories, or age groups). The appropriate level of aggregation should be determined based on the purpose of the dataset and the extent of other available variables that could facilitate re-identification. Such anonymisation strategies represent standard practices when preparing personal data for sharing.[10]

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[9] “Do you consider yourself a man? 1 No, not at all - 6 Yes, absolutely”; “Do you consider yourself a woman? 1 No, not at all - 6 Yes, absolutely”; and “Do you see yourself outside the male/female categories? 1 No, not at all - 6 Yes, absolutely”.

[10] For case-by-case data sharing guidance, contact your data repository service, such as FORS data archive services. For more information on strategy and practical guidance for data anonymisation, see the FORS Guides: Data anonymisation: legal, ethical, and strategic considerations (Stam & Kleiner, 2020); Quantitative data anonymisation: practical guidance for anonymising sensitive social science data (Kleiner & Heers, 2024). For

In addition, researchers are encouraged to consider applying restricted access conditions when sharing their data. FORS data archive services, via the SWISSUbase platform, offer several levels of data access control. Access can first be limited to registered users who accept a restricted use licence. For more sensitive datasets, access can further be limited to academic research purposes and/or subject to prior approval based on the proposed research objectives.

8. CONCLUSION

Current research in the social sciences increasingly highlights the importance of analysing differences within more nuanced social groups, reflecting the complexity and diversity of human experiences. This approach enables researchers to test and refine existing theories, generating more precise and inclusive insights. Similarly, policy proposals benefit from such granularity, as they can address the needs of specific groups more effectively. To support this progress, in the realm of gender-related social groups, it is essential for population surveys to include questions that specifically and correctly address assigned sex and gender identity. Continued collection of both types of information is necessary to monitor equality between women and men, while also monitoring equality between cisgender individuals (those whose gender identity corresponds to the sex assigned at birth) and non-cisgender individuals. Moreover, measuring at least one dimension of sexual orientation should be strongly encouraged. Incorporating these dimensions ensures that surveys capture the full spectrum of gender and sexual diversity, providing the data necessary to advance both academic research and evidence-based policymaking.

9. RECOMMENDATIONS FOR SURVEY PRACTITIONERS

Based on the above discussion and in addition to the recommended questions and responses for each gender indicator available in the specific sections of this guide, we propose the following general recommendations:

Recommendation 1 – Adopt a two-step approach measuring assigned sex and gender identity separately. Surveys must continue measuring assigned sex as this is important for long-term statistics and equality monitoring. Surveys must also start measuring gender identity together with assigned sex to enable more accurate analyses of social issues, inequalities and their evolving dynamics.

Recommendation 2 – Compute gender identity variables using the two-step approach to capture more inclusive categories of women and men (e.g., including trans women and men), while also enabling comparisons between cisgender and non-cisgender individuals.

Recommendation 3 – Include at least one measure of sexual orientation — sexual identity — alongside assigned sex and gender identity, as their combined assessment enables a

details on sharing personal data, refer to the FORS guide: Data protection: legal considerations for research in Switzerland (Diaz, 2022).

comprehensive analysis of gender and sexual minorities in relation to majority groups, offering a deeper understanding of differences and outcomes.

Recommendation 4 – Include a dedicated question for measuring intersex status whenever feasible and/or relevant to the research topic (particularly in health-related studies).

Recommendation 5 – Avoid using the label "Other" when collecting data on gender identity or sexual orientation, as it implies deviation from a norm and can be unclear. To promote clarity and inclusivity, use a label that references the construct being measured and include a write-in option where possible.

10. FURTHER READINGS AND USEFUL WEB LINKS

The Swiss LGBTIQ+ Panel's Glossary provides a useful reference for consistent and up-to-date terminology in English, French, German, and Italian.

The National Academies of Sciences, Engineering, and Medicine report (NASEM, 2022) reviews current approaches and discusses the methodological challenges involved in measuring sex, gender identity, and sexual orientation. It provides guiding principles for data collection on these indicators and recommends specific measures for various contexts, such as surveys, administrative forms, and clinical settings.

For an example of implementing these different measures in an applied research report, refer to the Unisanté report (only available in French) on "Victimisation et délinquance chez les jeunes du canton de Vaud: situation des jeunes OASIEGCS en 2022" (Stadelmann et al., 2024).

For those interested in exploring data representation and methodology in relation to LGBTIQ+ identities, Guyan's (2022) "Queer Data" provides a comprehensive examination of how current data practices affect queer communities. Moreover, this book offers practical insights into the challenges and opportunities of collecting and analysing data related to gender identity and sexual orientation.

11. REFERENCES

Ainsworth, C. (2015). Sex redefined. *Nature*, *518*(7539), 288-291. https://doi.org/10.1038/518288a

Allen, S. H., & Mendez, S. N. (2018). Hegemonic heteronormativity: Toward a new era of queer family theory. *Journal of Family Theory & Review*, *10*(1), 70-86. https://doi.org/10.1111/jftr.12241

American Psychological Association. (2015). Guidelines for psychological practice with transgender and gender nonconforming people. *American Psychologist*, *70*(9), 832-864. https://doi.org/10.1037/a0039906

Anzani, A., Decaro, S. P., & Prunas, A. (2023). Trans masculinity: Comparing trans masculine individuals' and cisgender men's conformity to hegemonic masculinity. *Sexuality Research and Social Policy*, *20*(2), 539-547. https://doi.org/10.1007/s13178-021-00677-5

Austin, S.B., Conron, K., Patel, A., and Freedner, N. (2007). Making sense of sexual orientation measures: Findings from a cognitive processing study with adolescents on health survey questions. *Journal of LGBT Health Research*, *3*(1), 55-65. https://doi.org/10.1300/j463v03n01_07

Ayoub, P. M., Page, D., & Whitt, S. (2021). Pride amid prejudice: The influence of LGBT+ rights activism in a socially conservative society. *American Political Science Review*, *115*(2), 467-485. https://doi.org/10.1017/S0003055420001082

Badgett, M. V. L. (2009). *Best practices for asking questions about sexual orientation on surveys*. UCLA: The Williams Institute. https://escholarship.org/uc/item/706057d5

Badgett, M. V. L. (2020). *The economic case for LGBT equality: Why fair and equal treatment benefits us all*. University of California Press.

Baldwin, A., Schick, V. R., Dodge, B., Van Der Pol, B., Herbenick, D., Sanders, S. A., & Fortenberry, J. D. (2017). Variation in sexual identification among behaviorally bisexual women in the midwestern united states: Challenging the established methods for collecting data on sexual identity and orientation. *Archives of Sexual Behavior*, *46*(5), 1337-1348. https://doi.org/10.1007/s10508-016-0817-0

Baker, K. E., Streed, C. G., & Durso, L. E. (2021). Ensuring that LGBTQI+ people count - Collecting data on sexual orientation, gender identity, and intersex status. *New England Journal of Medicine*, *384*(13), 1184-1186. https://doi.org/10.1056/nejmp2032447

Ballering, A. V., Burke, S. M., Maeckelberghe, E. L., & Rosmalen, J. G. (2023). How to ensure inclusivity in large-scale general population cohort studies? Lessons learned with regard to including and assessing sex, gender, and sexual orientation. *Archives of Sexual Behavior, 52*(5), 2163-2172. https://doi.org/10.1007/s10508-023-02600-y

Barron, C., & Capous-Desyllas, M. (2017). Transgressing the gendered norms in childhood: Understanding transgender children and their families. *Journal of GLBT Family Studies*, *13*(5), 407-438. https://doi.org/10.1080/1550428X.2016.1273155

Bates, N., García Trejo, Y. A., & Vines, M. (2019). Are sexual minorities hard-to-survey? Insights from the 2020 Census Barriers, Attitudes, and Motivators Study (CBAMS) Survey. *Journal of Official Statistics*, *35*(4), 709-729. https://doi.org/10.2478/jos-2019-0030

Bauer, G. R., Braimoh, J., Scheim, A. I., & Dharma, C. (2017). Transgender-inclusive measures of sex/gender for population surveys: Mixed-methods evaluation and recommendations. *PLOS ONE*, *12*(5), e0178043. https://doi.org/10.1371/journal.pone.0178043

Bayrakdar, S., & King, A. (2023). LGBT discrimination, harassment and violence in Germany, Portugal and the UK: A quantitative comparative approach. *Current Sociology*, *71*(1), 152-172. https://doi.org/10.1177/00113921211039271

Beaubatie, E. (2021a). Le genre pluriel : Approches et perspectives pour complexifier le modèle femme/homme en sciences sociales. *Cahiers du Genre*, *70*(1), 51-74. https://doi.org/10.3917/cdge.070.0051

Beaubatie, E. (2021b). Le genre précède le changement de sexe. In P. Clochec & N. Grunenwald (Eds.), *Matérialismes trans* (pp. 65-80). Hystériques & AssociéEs.

Bereni, L., Chauvin, S., Jaunait, A., & Revillard, A. (2008). *Introduction aux gender studies: Manuel des études sur le genre* (1st ed.). De Boeck. https://doi.org/10.7202/039215AR

Bittner, A., & Goodyear-Grant, E. (2017). Sex isn't gender: Reforming concepts and measurements in the study of public opinion. *Political Behavior*, *39*(4), 1019-1041. https://doi.org/10.1007/s11109-017-9391-y

Blair, K. L., & Hoskin, R. A. (2019). Transgender exclusion from the world of dating: Patterns of acceptance and rejection of hypothetical trans dating partners as a function of sexual and gender identity. *Journal of Social and Personal Relationships, 36*(7), 2074-2095. https://doi.org/10.1177/0265407518779139

Blondé, J., Gianettoni, L., Gross, D., & Guilley, E. (2021). Measurement of sexism, gender identity, and perceived gender discrimination: A brief overview and suggestions for short scales. *FORS Working Papers Series,* Paper 2021-2. https://doi.org/10.24440/FWP-2021-00002

Boertien, D., Vignoli, D. (2019). Legalizing same-sex marriage matters for the subjective well-being of individuals in same-sex unions. *Demography,* 56, 2109-2121. https://doi.org/10.1007/s13524-019-00822-1

Bornatici, C. (2022). *La situation des jeunes femmes en Suisse*. Commission fédérale pour les questions féminine CFQF. https://www.ekf.admin.ch/ekf/fr/home/documentation/etudes-et-recommandations.html

Butler, J. (1990). Gender trouble: Feminism and the subversion of identity. Routlegde. https://doi.org/10.4324/9780203824979

Cahill, S., Singal, R., Grasso, C., King, D., Mayer, K., Baker, K., & Makadon, H. (2014). Do ask, do tell: High levels of acceptability by patients of routine collection of sexual orientation and gender identity data in four diverse American community health centers. *PLoS One, 9*(9), e107104. https://doi.org/10.1371/journal.pone.0107104

Cahill, S. R., Baker, K., Deutsch, M. B., Keatley, J., & Makadon, H. J. (2016). Inclusion of sexual orientation and gender identity in stage 3 meaningful use guidelines: A huge step forward for LGBT health. *LGBT Health, 3*(2), 100-102. https://doi.org/10.1089/lgbt.2015.0136

Cameron, J. J., & Stinson, D. A. (2019). Gender (mis)measurement: Guidelines for respecting gender diversity in psychological research. *Social and Personality Psychology Compass*, *13*(11), e12506. https://doi.org/10.1111/spc3.12506

Carpenter, M. (2021). Intersex human rights, sexual orientation, gender identity, sex characteristics and the Yogyakarta Principles plus 10. *Culture, Health & Sexuality*, *23*(4), 516–532. https://doi.org/10.1080/13691058.2020.1781262

Chamberland, L., Richard, G. & Bernier, M. (2013). Les violences homophobes et leurs impacts sur la persévérance scolaire des adolescents au Québec. *Recherches & Educations,* n°8, 99-114. https://doi.org/10.4000/rechercheseducations.1567

Ciaroni, S. (2013). La maladie coronaire chez la femme est-elle si différente de celle de l'homme? *Revue Médicale Suisse*, *9*(376), 494-497. https://doi.org/10.53738/REVMED.2013.9.376.0494

Clochec, P. (2021). Du spectre du matérialisme à la possibilité de matérialismes trans. In P. Clochec & N. Grunenwald (Eds.), *Matérialismes trans* (pp. 15-64). Hystériques & AssociéEs.Currier, G. W., Brown, G., Walsh, P. G., Jager-Hyman, S., Chaudhury, S., & Stanley, B. (2015). Screening for sexual orientation in psychiatric emergency departments. *The Western Journal of Emergency Medicine*, *16*(1), 80-84. https://doi.org/10.5811/westjem.2014.12.22254

Cusack, C. E., Morris, E. R., & Galupo, M. P. (2022). 'A blank slate body:' Cis individuals' descriptions of their androgynous body ideals. *Psychology & Sexuality*, 13(2), 429-445. https://doi.org/10.1080/19419899.2020.1837920

D'Augelli, A. R. (1994). Lesbian and gay male adolescents: The impact of social and environmental stressors on development. Journal of Gay & Lesbian Social Services, 1(1), 9-23. https://doi.org/10.1300/J041v01n01_02

Dayer, C. (2013). De la cour à la classe : Les violences de la matrice hétérosexiste. *Recherches & Éducations*, *8*, 155-130. https://doi.org/10.4000/recherchseducations.1568

Delphy, C. (2001). L'ennemi principal: 2. Penser le genre. Syllepse.

de Vries, L., Fischer, M., & Kasprowski, D. (2024). „Männlich", „weiblich", „divers" - Eine kritische Auseinandersetzung mit der Erhebung von Geschlecht in der quantitativ-empirischen Sozialforschung. *Zeitschrift für Soziologie, 53*(4), 364–386. https://doi.org/10.1515/zfsoz-2024-2029

de Vries, L., & Steinmetz, S. (2024). Sexual orientation, workplace authority and occupational segregation: Evidence from Germany. *Work, Employment and Society*, *38*(3), 852-870. https://doi.org/10.1177/09500170231158513

Diaz, P. (2022). Data protection: legal considerations for research in Switzerland. *FORS Guides,* 17, Version 1.1, 1-12. https://doi.org/10.24449/FG-2022-00017

Dietert, M., & Dentice, D. (2012). Growing up trans: Socialization and the gender binary. *Journal of GLBT Family Studies*, *9*(1), 24-42. https://doi.org/10.1080/1550428X.2013.746053

Drydakis, N. (2022). Sexual orientation and earnings: a meta-analysis 2012-2020, *Journal of Population Economics*, *35*(2), 409-440. https://doi.org/10.1007/s00148-021-00862-1

Eisner, L., & Hässler, T. (2024). Swiss LGBTIQ+ Panel – 2023 Summary Report. https://doi.org/10.31234/osf.io/5tz6u

Ekins, R., & King, D. (2006). *The transgender phenomenon*. SAGE Publications. https://doi.org/10.4135/9781446220917

Ellis R., Virgile M., Holzberg J., Nelson D. V., Edgar J., Phipps P., & Kaplan R. (2017). *Assessing the feasibility of asking about sexual orientation and gender identity in the Current Population Survey: Results from cognitive interviews*. U.S. Census Bureau & Bureau of Labor Statistics. https://www.bls.gov/osmr/research-papers/2017/pdf/st170210.pdf

Ernst Stähli, M., Sapin, M., Pollien, A., Ochsner, M., & Nisple, K. (2023). *MOSAiCH 2022 on family and changing gender roles and related topics. Survey Documentation*. FORS – Swiss Centre of Expertise in the Social Sciences.

European Institute for Gender Equality. (2024). *Glossary & Thesaurus*. https://eige.europa.eu/publications-resources/thesaurus/overview

European Union Agency for Fundamental Rights (FRA) (2024). *LGBTIQ equality at a crossroads: Progress and challenges*. https://fra.europa.eu/sites/default/files/fra_uploads/fra-2024-lgbtiq-equality_en.pdf

Fausto-Sterling, A. (2012). *Sex/gender: Biology in a social world*. Routledge.

Felder, M., Mordasini, R., Drussel, L., & Pekari, N. (2022). *Enquête sur le climat de travail et d'étude au sein de l'UNIL*. FORS. https://www.unil.ch/files/live/sites/unil/files/02-universite/0204-organisation/020407-commission-personnel/22-climat-travail-rapport.pdf

Felder, M., Mordasini, R. & Pekari, N. (2025, July 18). *They don't run away: The use of inclusive gender measures in an experimental study on representativity, drop-out rates and perceived difficulty to respond* [Conference presentation]. European Survey Research Association (ESRA) 2025 Conference, Utrecht, Netherlands. https://iris.unil.ch/handle/iris/272009

Fraser, G. (2018). Evaluating inclusive gender identity measures for use in quantitative psychological research. *Psychology & Sexuality*, *9*(4), 343-357. https://doi.org/10.1080/19419899.2018.1497693

Fu, T. C., Herbenick, D., Dodge, B., Owens, C., Sanders, S. A., Reece, M., & Fortenberry, J. D. (2019). Relationships among sexual identity, sexual attraction, and sexual behavior: Results from a nationally representative probability sample of adults in the United States. *Archives of Sexual Behavior*, *48*(5), 1483-1493. https://doi.org/10.1007/s10508-018-1319-z

Fuchs, G., Lanfranconi, L. M., Gebhard, O., & Frania, F. (2018). *National Barometer on Equality 2018: Focus on equal pay*. Lucerne School of Social Work. https://www.equality.ch/pdf_d/National_Barometer_on_Equality_2018.pdf

Garofalo, E. M., & Garvin, H. M. (2020). The confusion between biological sex and gender and potential implications of misinterpretations. In A. R. Klales (Ed.), *Sex estimation of the human skeleton* (pp. 35-52). Academic Press. https://doi.org/10.1016/B978-0-12-815767-1.00004-3

Geary, R. S., Tanton, C., Erens, B., Clifton, S., Prah, P., Wellings, K., Mitchell, K. R., Datta, J., Gravningen, K., Fuller, E., Johnson, A. M., Sonnenberg, P., & Mercer, C. H. (2018). Sexual identity, attraction and behaviour in Britain: The implications of using different dimensions of sexual orientation to estimate the size of sexual minority populations and inform public health interventions. *PLOS ONE*, *13*(1), e0189607. https://doi.org/10.1371/journal.pone.0189607

Gianettoni, L. (2024, September 10). *Discriminations et violences de genre en Suisse : Une analyse au prisme de l'hétérosexisme. Résultats issus des données MOSAiCH 2022* [Conference presentation]. Congress of the Swiss Sociological Association, Basel (Muttenz), Switzerland.

Gianettoni, L., Guilley, E., Blondé, J., Déjussel, M., Foretay, T., & Gross, D. (2023). *Les parcours de formation professionnelle au prisme du sexisme et de l'homophobie (Premier rapport de recherche. Novembre 2023)*. LIVES Working papers. https://doi.org/10.12682/LIVES.2296-1658.2023.99

Gianettoni, L., Blondé, J., Guilley, E., Foretay, T., & Gross, D. (2025). Vécu de discriminations homophobes et intentions d'arrêt dans la formation professionnelle. *L'orientation scolaire et professionnelle, 52(2),* 499-525. https://doi.org/10.4000/1450h

Girard, C. & Ménard F.-P. (2025, January 28). *A safe and inclusive approach to disseminating statistical information about the non-binary population in Canada* [Conference presentation]. Statistics Canada. https://infocentral.infoway-inforoute.ca/en/resources/docs/sex-gender/2025-sessions/working-group-presentations-2025/4651-sex-and-gender-january-28-2025-presentation-claude-girard-and-anne-milan-statcan-a-safe-and-inclusive-approach-to-disseminating-statistical-information-about-the-non-binary-population-in-canada

Golder, L., Jans, C., Venetz, A., Bohn, D., & Herzog, N. (2019). *Sexuelle Belästigung und sexuelle Gewalt an Frauen sind in der Schweiz verbreitet*. gfs.bern. https://cockpit.gfsbern.ch/download.php?id=2285

Griffiths, D. A., & Armstrong, H. L. (2023). "They were talking to an idea they had about me": A qualitative analysis of transgender individuals' experiences using dating apps. *The Journal of Sex Research*, *61*(1), 119-132. https://doi.org/10.1080/00224499.2023.2176422

Guillaumin, C. (1992). *Sexe, race et pratique du pouvoir : L'idée de nature*. Côté-femmes.

Guilley, E., Carvalho Arruda, C., Gauthier, J.-A., Gianettoni, L., Gross, D., Joye, D., Issaieva Moubarak Nahra, E., & Müller, K. (2019). *À l'école du genre: Projets professionnels de jeunes en Suisse*. Seismo.

Guyan, K. (2022). *Queer data: Using gender, sex and sexuality data for action*. Bloomsbury.

Hart, C. G., Saperstein, A., Magliozzi, D., & Westbrook, L. (2019). Gender and health: Beyond binary categorical measurement. *Journal of Health and Social Behavior*, *60*(1), 101-118. https://doi.org/10.1177/0022146519825749

Haseldon, L., Joloza, T., & Household, L. M. (2009). *Measuring sexual identity: A guide for researchers.* UK Office for National Statistics. https://www.osservatoriogender.it/wp-content/uploads/2016/10/sexualidentityuserguidefinal_tcm77-181188.pdf

Hines, S. (2007). *TransForming gender: Transgender practices of identity, intimacy and care*. Policy Press.

Holzberg, A. M., Rice, C., & Broughton, D. (2018). Transgender youth and their mental health: A growing body of research on support and resilience. *Transgender Health, 3*(1), 24-32. https://doi.org/10.1146/annurev-clinpsy-072220-020326

Holzberg, J., Ellis, R., Kaplan, R., Virgile, M., & Edgar, J. (2019). Can they and will they? Exploring proxy response of sexual orientation and gender identity in the Current Population Survey. *Journal of Official Statistics*, *35*(4), 885-911. https://doi.org/10.2478/jos-2019-0037

Jäggi, J., & Künzi, K. (2025). *Datenlage zu Geschlechtsidentität und sexueller Orientierung in nationalen Befragungen [Im Auftrag des BAG und des BFS]*. Büro BASS. https://www.aramis.admin.ch/Default?DocumentID=73109&Load=true

Jaunait, A. (2022). Investigating gender in a world of gender consciousness. *Bulletin of Sociological Methodology*, *153*(1), 8-45. https://doi.org/10.1177/07591063211061759

Kleiner, B., & Heers, M. (2024). Quantitative data anonymisation: Practical guidance for anonymising sensitive social science data. *FORS Guides*, *23, Version 1.0, 1-17*. https://doi.org/10.24449/FG-2024-00023

Kolb, J.-P., Bruch, C., Sand, M., Konradt, I., Weiss, B., & Weyandt, K. (2022). *GESIS Panel Data Manual related to ZA5664 and ZA5665*. GESIS – Leibniz-Institut für Sozialwissenschaften. https://www.gesis.org/fileadmin/ZA5664-65_sd_data-manual.pdf

Korchmaros, J. D., Powell, C., & Stevens, S. (2013). Chasing sexual orientation: A comparison of commonly used single-indicator measures of sexual orientation. *Journal of Homosexuality*, *60*(4), 596-614. https://doi.org/10.1080/00918369.2013.760324

Kraus, U., Jacke, K., Dandolo, L., Debiak, M., Fichter, S., Groth, K., Kolossa-Gehring, M., Hartig, C., Horstmann, S., Schneider, A., Palm, K., & Bolte, G. (2023). Operationalization of a multidimensional sex/gender concept for quantitative environmental health research and implementation in the KORA study: Results of the collaborative research project INGER. *Frontiers in Public Health*, *11*. https://doi.org/10.3389/fpubh.2023.1128918

Lee, S., Fredriksen-Goldsen, K., McClain, C., Kim, H.-J. & Suzer-Gurtekin, Z. (2018). Are sexual minorities less likely to participate in surveys? An examination of proxy nonresponse measures and associated biases with sexual orientation in a population-based health survey. *Field Methods, 30*(3), 208-224. https://doi.org/10.1177/1525822X18777736

LeVay, S. (2017). *Gay, straight, and the reason why: The science of sexual orientation*. Oxford University Press.

LGBTQIA Resource Center. (n.d.). *Glossary*. University of California, Campus Davis. Retrieved August 27, 2025, from https://lgbtqia.ucdavis.edu/educated/glossary

Li, K. C., van Berlekom, E., Atwood, S., & Wang, Y.-C. (2024). Toward inclusive and equitable LGBTIQ+ measurement: Assessing gender and sexual orientation measures and scale validity in national surveys across 21 countries. *Journal of Social Issues, 80,* 920-946. https://doi.org/10.1111/josi.12635

Lieberherr, R., Clair, C., & Schwarz, J. (2020). *Enquête suisse sur la santé 2017 : Santé et genre*. Office fédéral de la statistique (OFS). https://dam-api.bfs.admin.ch/hub/api/dam/assets/15284970/master

Lindqvist, A., Sendén, M. G., & Renström, E. A. (2021). What is gender, anyway: A review of the options for operationalising gender. *Psychology & Sexuality*, *12*(4), 332-344. https://doi.org/10.1080/19419899.2020.1729844

Magliozzi, D., Saperstein, A., & Westbrook, L. (2016). Scaling up: Representing gender diversity in survey research. *Socius: Sociological Research for a Dynamic World*, *2*. https://doi.org/10.1177/2378023116664352

Marchi, M., Arcolin, E., Fiore, G., Travascio, A., Uberti, D., Amaddeo, F., Converti, M., Fiorillo, A., Mirandola, M., Pinna, F., Ventriglio, A., Galeazzi, G. M., & Italian Working Group on LGBTIQ Mental Health (2022). Self-harm and suicidality among LGBTIQ people: a systematic review and meta-analysis. *International Review of Psychiatry*, *34*(3-4), 240-256. https://doi.org/10.1080/09540261.2022.2053070

McCabe, S. E., Hughes, T. L., West, B. T., Evans-Polce, R. J., Veliz, P. T., Dickinson, K., McCabe, V. V., & Boyd, C. J. (2020). Sexual orientation, adverse childhood experiences, and comorbid DSM-5 substance use and mental health disorders. *The Journal of Clinical Psychiatry*, *81*(6), 20m13291. https://doi.org/10.4088/JCP.20m13291

McLaughlin, H., Uggen, C., & Blackstone, A. (2012). Sexual harassment, workplace authority, and the paradox of power. *American Sociological Review*, *77*(4), 625-647. https://doi.org/10.1177/0003122412451728

McLemore, K. A. (2015). Experiences with misgendering: Identity misclassification of transgender spectrum individuals. *Self and Identity*, *14*(1), 51-74. https://doi.org/10.1080/15298868.2014.950691

McInnis, M. K., Gauvin, S. E. M., Blair, K. L., & Pukall, C. F. (2022). Where does the "B" belong?: Anti-bisexual experiences, self-stigma, and bisexual individuals' sense of belonging. *Journal of Bisexuality*, *22*(3), 355-384. https://doi.org/10.1080/15299716.2022.2031368

McQuillan, M. T., Cimpian, J. R., Lebovitz, B. A., & Gill, E. K. (2024). Transgender adolescent school climate, mental health, and adult social support. *JAMA Pediatrics*, *178*(10), 1082. https://doi.org/10.1001/jamapediatrics.2024.3079

Medeiros, M., Forest, B., & Öhberg, P. (2020). The case for non-binary gender questions in surveys. *PS: Political Science & Politics, 53*(1), 128-135. https://doi.org/10.1017/S1049096519001203

Meier-Pesti, K., & Penz, E. (2008). Sex or gender? Expanding the sex-based view by introducing masculinity and femininity as predictors of financial risk taking. *Journal of Economic Psychology*, *29*(2), 180-196. https://doi.org/10.1016/j.joep.2007.05.002

Monro, S., Carpenter, M., Crocetti, D., Davis, G., Garland, F., Griffiths, D., Hegarty, P., Travis, M., Cabral Grinspan, M., & Aggleton, P. (2021). Intersex: Cultural and social perspectives. *Culture, Health & Sexuality*, *23*(4), 431-440. https://doi.org/10.1080/13691058.2021.1899529

Mordasini, R., & Felder, M. (2024, September 10). *Outside the dichotomy: How inclusive gender measures help reshape our understanding of gender differences in attitudes* [Conference presentation]. Congress of the Swiss Sociological Association, Basel (Muttenz), Switzerland. https://iris.unil.ch/handle/iris/96123 Morris, B. J. (2023, March 16). A brief history of lesbian, gay, bisexual, and transgender social movements. *American Psychology Association*. https://www.apa.org/topics/lgbtq/history

Morrow, D. F. (2006). Sexual orientation and gender identity expression. In D. F. Morrow & L. Messinger (Eds.), *Sexual orientation and gender expression in social work practice: Working with gay, lesbian, bisexual, and transgender people* (pp. 3-17). Columbia University Press. http://www.jstor.org/stable/10.7312/morr12728.5

Müller, N. (2023). *Third sex*. Deutsche Welle. https://www.dw.com/en/third-sex-option-on-birth-certificates/a-17193869

National Academies of Sciences, Engineering, and Medicine. (2022). *Measuring sex, gender identity, and sexual orientation*. National Academies Press. https://doi.org/10.17226/26424

National Research Council. (2011). *The health of lesbian, gay, bisexual and transgender people: Building a foundation for better understanding*. The National Academies Press. https://www.ncbi.nlm.nih.gov/books/NBK64806/

OECD (2020). *Over the rainbow? The road to LGBTI inclusion*. OECD. https://doi.org/10.1787/8d2fd1a8-en

Pao, C., Donnelly Moran, K., Compton, D. L., Kaufman, G., & Dowling, J. A. (2025). The case for "Other": Measuring gender and sexual identity in survey research. *Sociology Compass, 19*(1), e70031. https://doi.org/10.1111/soc4.70031

Parini, L., & Lloren, A. (2017). Discriminations envers les homosexuel·le·s dans le monde du travail en Suisse. *Travail, Genre et Sociétés*, *38*(2), 151-169. https://doi.org/10.3917/tgs.038.0151

Patterson, J. G., Jabson, J. M., & Bowen, D. J. (2017). Measuring sexual and gender minority populations in health surveillance. *LGBT Health,* 4(2), 82-105. https://doi.org/10.1089/lgbt.2016.0026

Pinto, A. D., Aratangy, T., Abramovich, A., Devotta, K., Nisenbaum, R., Wang, R., & Kiran, T. (2019). Routine collection of sexual orientation and gender identity data: A mixed-methods study. *Canadian Medical Association Journal, 191*(3), E63. https://doi.org/10.1503/cmaj.180839

Phillips, G., Beach, L. B., Turner, B., Feinstein, B. A., Marro, R., Philbin, M. M., Salamanca, P., Felt, D., & Birkett, M. (2019). Sexual identity and behavior among US high school students, 2005-2015. *Archives of Sexual Behavior*, *48*(5), 1463-1479. https://doi.org/10.1007/s10508-019-1404-y

Pöge, K., Rommel, A., Starker, A., Prütz, F., Tolksdorf, K., Öztürk, I., Strasser, S., Born, S., & Saß, A.-C. (2022). *Erhebung geschlechtlicher Diversität in der Studie GEDA 2019/2020-EHIS – Ziele, Vorgehen und Erfahrungen*. Robert Koch-Institut. https://doi.org/10.25646/9957

Reczek, C. (2020). Sexual- and gender-minority families: A 2010 to 2020 decade in review. *Journal of Marriage and Family, 82*(1), 300-325. https://doi.org/10.1111/jomf.12607

Richard, G. (2019). *Hétéro, l'école? Plaidoyer pour une éducation anti-oppressive à la sexualité*. Les Éditions du Remue-ménage.

Risman, B. (2018). Gender as a social structure. In B. Risman, C. Froyum, & W. Scarborough (Eds.), *Handbook of the sociology of gender* (pp. 19-43). Springer. https://doi.org/10.1007/978-3-319-76333-0_2

Ruberg, B., & Ruelos, S. (2020). Data for queer lives: How LGBTQ gender and sexuality identities challenge norms of demographics. *Big Data & Society*, *7*(1), 1-12. https://doi.org/10.1177/2053951720933286

Rullo, J. E., Foxen, J. L., Griffin, J. M., Geske, J. R., Gonzalez, C. A., Faubion, S. S., & van Ryn, M. (2018). Patient acceptance of sexual orientation and gender identity questions on intake forms in outpatient clinics: A pragmatic randomized multisite trial. *Health Services Research, 53*(5), 3790-3808. https://doi.org/10.1111/1475-6773.12843

Saperstein, A., & Westbrook, L. (2021). Categorical and gradational: Alternative survey measures of sex and gender. *European Journal of Politics and Gender*, *4*(1), 11-30. https://doi.org/10.1332/251510820X15995647280686

Scheim, A. I., Rich, A. J., Zubizarreta, D., Malik, M., Baker, K. E., Restar, A. J., Van Der Merwe, L. A., Wang, J., Beebe, B., Ridgeway, K., Baral, S. D., Poteat, T., & Reisner, S. L. (2024). Health status of transgender people globally: A systematic review of research on disease burden and correlates. *PLOS ONE*, *19*(3), e0299373. https://doi.org/10.1371/journal.pone.0299373

Schudson, Z. C., Beischel, W. J., & van Anders, S. M. (2019). Individual variation in gender/sex category definitions. *Psychology of Sexual Orientation and Gender Diversity*, *6*(4), 448-460. https://doi.org/10.1037/sgd0000346

Stadelmann, S., Vonlanthen, J., Jotterand, M., Amiguet, M., & Bize, R. (2024). *Victimisation et délinquance chez les jeunes du canton de Vaud : Situation des jeunes OASIEGCS en 2022*. Unisanté – Centre universitaire de médecine générale et santé publique. https://doi.org/10.16908/ISSN.1660-7104/362

Stam, A., & Kleiner, B. (2020). Data anonymization: Legal, ethical, and strategic considerations. *FORS Guides,* 11, Version 1.1, 1-15. https://doi.org/10.24449/FG-2020-00011

Steinmetz, S., & Ortmanns, O. (2023 July 18). *Moving beyond the binary - Examining the advantages and challenges of a more complex sex and gender identity measure on a Swiss population survey* [Conference presentation]. European Survey Research Association (ESRA) 2023 Conference, Milan, Italy.

Stuhlsatz, M. A. M., Buck Bracey, Z. E., & Donovan, B. M. (2020). Investigating conflation of sex and gender language in student writing about genetics. *Science & Education*, *29*(6), 1567-1594. https://doi.org/10.1007/s11191-020-00177-9

Suen, L. W., Lunn, M. R., Katuzny, K., Finn, S., Duncan, L., Sevelius, J., Flentje, A., Capriotti, M. R., Lubensky, M. E., Hunt, C., Weber, S., Bibbins-Domingo, K., & Obedin-Maliver, J. (2020). What sexual and gender minority people want researchers to know about sexual orientation and gender identity questions: A qualitative study. *Archives of Sexual Behavior*, *49*(7), 2301-2318. https://doi.org/10.1007/s10508-020-01810-y

Suen, L. W., Lunn, M. R., Sevelius, J. M., Flentje, A., Capriotti, M. R., Lubensky, M. E., Hunt, C., Weber, S., Bahati, M., Rescate, A., Dastur, Z., & Obedin-Maliver, J. (2022). Do ask, tell, and show: Contextual factors affecting sexual orientation and gender identity disclosure for sexual and gender minority people. *LGBT Health, 9*(2), 73-80. https://doi.org/10.1089/lgbt.2021.0159

Swiss Federal Council. (2022). *La santé des personnes LGBT en Suisse: Rapport du Conseil fédéral donnant suite au postulat 19.3064 Marti Samira du 07.03.2019*. Confédération Suisse. https://www.parlament.ch/centers/eparl/curia/2019/20193064/Bericht%20BR%20F.pdf

Swiss Federal Council. (2024). *Le genre doit être mieux pris en compte dans les études et les statistiques de la Confédération*. https://www.admin.ch/gov/fr/accueil/documentation/communiques.msg-id-99892.html

Swiss Federal Statistical Office. (2024a). *Violence domestique*. https://www.bfs.admin.ch/bfs/fr/home/statistiques/criminalite-droit-penal/police/violence-domestique.html

Swiss Federal Statistical Office. (2024b). *Enquête suisse sur la santé 2022 – Questionnaire téléphonique et écrit*. https://www.bfs.admin.ch/bfs/fr/home/statistiques/sante/enquetes/sgb.assetdetail.28965077.html

Swiss LGBTIQ+ Panel. (n.d.). *Glossary*. Retrieved August 27, 2025, from https://swiss-lgbtiq-panel.ch/reports/glossary/

Swiss National Advisory Commission on Biomedical Ethics [NCE]. (2020). *Officially recorded gender. Ethical considerations on the management of the recording of gender in the civil register* (2020/36). https://www.nek-cne.admin.ch/inhalte/Themen/Stellungnahmen/en/NEK-stellungnahme_Officially_recorded_gender_Final.pdf

Tabor, E., Kneale, D., & Patalay, P. (2024). Mainly heterosexual, bisexual, or other?: The measurement of sexual minority status and its impact on analytic sample, demographic distribution and health outcomes. *PLoS One, 19*(9), e0303100. https://doi.org/10.1371/journal.pone.0303100

Tajfel, H. (1974). Social identity and intergroup behaviour. *Social Science Information*, *13*(2), 65-93. https://doi.org/10.1177/053901847401300204

Temkin, D., Belford, J., McDaniel, T., Stratford, B., & Parris, D. (2017). *Improving measurement of sexual orientation and gender identity among middle and high school students*. Arcus Foundation & the U.S. Department of Justice. https://cms.childtrends.org/wp-content/uploads/2017/06/2017-22LGBTSurveyMeasures-1.pdf

The Gender and Sexuality Campus Center. (n.d.). *Glossary*. Michigan State University. Retrieved August 27, 2025, from https://gscc.msu.edu/education/glossary.html

Thorne, N., Yip, A. K. T., Bouman, W. P., Marshall, E., & Arcelus, J. (2019). The terminology of identities between, outside and beyond the gender binary – A systematic review. *International Journal of Transgenderism*, *20*(2-3), 138-154. https://doi.org/10.1080/15532739.2019.1640654

Tolman, D. L., Davis, B. R., & Bowman, C. P. (2016). “That’s just how it is”: A gendered analysis of masculinity and femininity ideologies in adolescent girls’ and boys’ heterosexual relationships. *Journal of Adolescent Research, 31*(1), 3-31. https://doi.org/10.1177/0743558415587325

Udrisard, R., Stadelmann, S., & Bize, R. (2022). Des chiffres vaudois sur la victimisation des jeunes LGBT. *Raisons de santé, 329*. Unisanté – Centre universitaire de médecine générale et santé publique. https://www.unisante.ch/fr/formation-recherche/recherche/publications/raisons-sante/raisons-sante-329

UK Office for National Statistics. (2024a). *2021 Census topic research update: December 2018*. https://www.ons.gov.uk/census/censustransformationprogramme/questiondevelopment/2021censustopicresearchupdatedecember2018

UK Office for National Statistics. (2024b). *Guidance for questions on sex, gender identity and sexual orientation for the 2019 Census Rehearsal for the 2021 Census*. https://www.ons.gov.uk/census/censustransformationprogramme/questiondevelopment/genderidentity/guidanceforquestionsonsexgenderidentityandsexualorientationforthe2019censusrehearsalforthe2021census

UK Office for National Statistics. (2024c). *Sex and gender identity question development for Census 2021*. https://www.ons.gov.uk/census/censustransformationprogramme/questiondevelopment/sexandgenderidentityquestiondevelopmentforcensus2021#research-that-led-to-the-2018-white-paper-recommendations

United Nations Development Programme (UNDP) & Parliamentarians for Global Action (PGA). (2022). *Advancing the human rights and inclusion of LGBTI people: A handbook for parliamentarians.* https://www.undp.org/sites/g/files/zskgke326/files/2023-04/Advancing%20the%20human%20rights%20of%20LGBTI%20people%20-%20ENGLISH.pdf

US Census Bureau. (2024). Phase 4.2 Household Pulse Survey [Questionnaire]. https://www2.census.gov/programs-surveys/demo/technical-documentation/hhp/Phase_4-2_HPS_Questionnaire_ENGLISH.pdf

van Anders S. M. (2015). Beyond sexual orientation: Integrating gender/sex and diverse sexualities via sexual configurations theory. *Archives of Sexual Behavior*, *44*(5), 1177-1213. https://doi.org/10.1007/s10508-015-0490-8

Veldhuis, C. B., Cascalheira, C. J., Delucio, K., Budge, S. L., Matsuno, E., Huynh, K., Puckett, J. A., Balsam, K. F., Velez, B. L., & Galupo, M. P. (2024). Sexual orientation and gender diversity research manuscript writing guide. *Psychology of Sexual Orientation and Gender Diversity, 11*(3), 365-396. https://doi.org/10.1037/sgd0000722

Westbrook, L., & Saperstein, A. (2015). New categories are not enough: Rethinking the measurement of sex and gender in social surveys. *Gender & Society*, 29(4), 534-560. https://doi.org/10.1177/0891243215584758

Williams, D. Y., Hall, W. J., Dawes, H. C., Srivastava, A., Radtke, S. R., Ramon, M., Bouchard, D., Chen, W. T., & Goldbach, J. T. (2023). Relationships between internalized stigma and depression and suicide risk among queer youth in the United States: A systematic review and meta-analysis. *Frontiers in Psychiatry*, *14*, 1205581. https://doi.org/10.3389/fpsyt.2023.1205581

Wittig, M. (1992). The straight mind: And other essays. Beacon Press.

Wood, W., & Eagly, A. H. (2015). Two traditions of research on gender identity. *Sex Roles*, 73(11-12), 461-473. https://doi.org/10.1007/s11199-015-0480-2

Wolff, M., Wells, B., Ventura-DiPersia, C., Renson, A., Grov, C. (2017). Measuring sexual orientation: A review and critique of U.S. data collection efforts and implications for health policy. *The Journal of Sex Research*, 54(4-5), 507-531.

World Health Organisation. (2019). *Sexual health*. https://www.who.int/health-topics/sexual-health#tab=tab_2

Young, S. K., & Bond, M. A. (2023). A scoping review of the structuring of questions about sexual orientation and gender identity. *Journal of Community Psychology*, *51*(7), 2592-2617. https://doi.org/10.1002/jcop.23048