Evaluating the Use of Two-Step Gender Identity Measures in the 2018 General Social Survey

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Abstract

In 2018, the General Social Survey asked some respondents for their sex assigned at birth and current gender identity, in addition to the ongoing practice of having survey interviewers code respondent sex. Between 0.44% and 0.93% of the respondents who were surveyed either identified as transgender, identified with a gender that does not conventionally correspond to the sex they were assigned at birth, or identified the sex they were assigned at birth inconsistently with the interviewer’s assessment of respondent sex. These results corroborate previous estimates of the US’ transgender population size. Furthermore, these new questions’ implementations mirror the successful inclusion of other small populations represented in the GSS, such as lesbian, gay, and bisexual people, as well as Muslims, Buddhists, and Hindus. Data on transgender and gender nonconforming populations can be pooled together over time to assess these populations’ attitudes, beliefs, behaviors, and social inequality patterns. We identified some inconsistencies between interviewer-coded sex, self-reported sex, and gender identity. As with the coding of race in the GSS, interviewer-coded assessments can mismatch respondents’ self-reported identification. Our findings underscore the importance of continuing to ask respondents to self-report gender identity separately from sex assigned at birth in the GSS and other surveys.

Keywords: survey methodology, interviewer effects, sex, gender, transgender, GSS

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Introduction

Sexual and gender minorities remain understudied in nationally representative health and social research (Compton 2015; Institute of Medicine 2011). In 2008, the General Social Survey began to ask respondents about their sexual orientation in addition to existing questions on sexual experiences (Gates 2010). These methodological improvements created one of the first nationally representative sample of lesbian, gay, and bisexual (LGB) respondents, as well as heterosexual respondents who reported same-sex sexual behavior. However, data collection on gender minorities continues to be sparse, especially in survey research (Schilt and Lagos 2017). In 2018, the GSS began to ask respondents about their gender identity and sex assigned at birth at the end of its self-administered questionnaire, or SAQ (Smith and Son 2019). This has resulted in what is potentially the first nationally representative survey sample of the US that measures transgender identity. These new data have the potential to significantly expand what is known about patterns and changes in social characteristics among US gender minorities.

Since 1972, the GSS has collected data on opinions, attitudes, experiences, and behavior of the United States population in order to generate historical records of change over time (Smith et al. 2019). Across its history, the GSS has added and dropped questions in response to user requests and proposals, funding availability, and time constraints (Davis and Smith 1991). Some questions, such as the question on sexual orientation, have persisted as long-term indicators of vital demographic information that may have not been considered in earlier years (Thomeer and Reczek 2016). The questions on gender identity and sex assigned at birth in the 2018 GSS could potentially form another key demographic indicator that provides value if collected for a sustained period of time. In this study, we evaluate initial findings on gender minorities obtained from the 2018 GSS, assess the potential benefits of the future use of these questions, and make suggestions for potential data collection improvements.

The Utility of Measuring Small Populations in the GSS

When proposing or presenting greater inclusion of LGBTQ populations in the social sciences, the relatively small size of these populations can often be a source of concern, especially in terms of sampling frames and research design (Compton 2018). Because the GSS' current sample size consists of around 2,400 observations, the number of gender minorities in the sample will in all likelihood be too small to make assessments about these populations on a year-to-year basis. However, there are several questions in the GSS that produce valuable information on relatively small but important populations over a sustained multi-year data collection effort. For instance, the combined proportion of respondents who were Muslims, Buddhists, Hindus, and religious "Others" started at 0.8% of the sample from 1973-1980 (Smith 2003). In terms of proportion, this population now comprises 3.34% of the GSS' sample (Smith et al. 2019). Even if a population does not increase in terms of proportion of the population, pooling samples over a number of years can increase the number of observations in absolute terms, and eventually enable statistically significant findings (Gorman et al. 2015). Aggregated samples from multiple years have informed generalizations about these small populations, such as patterns of educational attainment by Buddhists, Muslims, and Jews (Sander 2010), as well as the and the social integration of Muslims, Buddhists, and Hindus (Wuthnow and Hackett 2003).

Sexual minority respondents are also a relatively small population whose observations in the GSS have produced informative data and valuable findings. The 2008 GSS showed that 1.8% of women identified as lesbian and 1.5% of men identified as gay, while 1.5% of women and 0.7% of men identified as bisexual. Despite the small size, these data have been used to form generalizations about sexual minority populations, ranging from the effects of being out in the workplace (Gates 2010) to overall happiness (Thomeer and Reczek 2016), and beliefs about

suicide (Blosnich et al. 2018). If the GSS continues to identify gender identity and sex assigned at birth in subsequent administrations, there will eventually be enough cases to produce high quality population-level estimates of similar social patterns among gender minority populations. Just as more US residents have come identify as lesbian, gay, and bisexual in recent cohorts (England, Mishel, and Caudillo 2016; Mishel et al. 2020), there may also be an increase in the frequency of GSS respondents who identify as transgender and gender nonconforming in coming years.

Data and Methods

This study uses data from the 2018 administration of the General Social Survey. In 2017, we, the authors, along with Kristen Schilt, submitted a formal proposal to the GSS, alongside other similar proposals related to gender identity by other researchers¹. In these proposals, we advocated for a two-step gender measure, which asks for respondent's sex as indicated on their birth certificate in one question, and then asks respondents to identify their gender identity in another question. The two-step gender identity question has shown to be a valid and cognitively feasible measure of difference between sex assigned at birth and gender identity for both cisgender and transgender respondents (Lombardi and Banik 2016; Reisner et al. 2014, 2015). Using previously published studies and other datasets, we provided evidence to the members of the GSS Board of Overseers providing evidence that the two-step question was valid and could be reliable. These proposals for the two-step gender question were accepted after peer-review by the GSS and have now yielded the first nationally representative dataset that accounts for transgender identity.

These questions were included in the self-administered questionnaire, or SAQ, which is only administered to 1,409 out of 2,348 (60%) of respondents, in a section designated for sensitive

¹ See “More Inclusive Gender Questions Added to the General Social Survey,” Stanford Clayman Institute: <https://gender.stanford.edu/news-publications/gender-news/more-inclusive-gender-questions-added-general-social-survey>

questions about sexual orientation, sexual behavior, and drug use (Smith and Son 2019). The SAQ module is introduced through following language:

There is a great deal of concern today about the AIDS epidemic and how to deal with it. Because of the grave nature of this problem, we are going to ask you some personal questions and we need your frank and honest responses. Your answers are confidential and will be used only for statistical reports.

At the end of this section, respondents were asked the following question to indicate respondent sex: “What sex were you assigned at birth? (For example, on your birth certificate.)” Respondents were asked to select from three potential answers: Male, Female, or Intersex. Out of 1,409 SAQ responses, 1,397 respondents provided answers to this question. Next, respondents were asked the following question about their gender identity at the time of the interview: “What is your current gender?” Respondents were asked to select from four potential answer categories: Woman, Man, Transgender, or A Gender Not Listed Here with a space in which to provide a more specific gender identity. Out of 1,409 total SAQ observations, 1,401 replied to this question. Both questions had response rates of over 99%, indicating that the questions were intelligible and accessible to respondents who were provided this new module.

These two new measures can be juxtaposed to the original measure of respondent sex, in which the survey interviewer designates respondents as either male or female. This third measure, which continues to be included in the 2018 alongside the new measures, is highly sensitive to interviewer effects and inconsistencies between interviewer coding and self-identification (Riley et al. 2017). This practice has also led to inconsistencies between as interviewer-coded demographic characteristics and respondent self-reports in the GSS, particularly in the case of race and ethnicity (Saperstein 2006). While the new gender identity and sex assignment questions

address the shortcomings of the original measure, inconsistencies between self-identification and interviewer-coded sex and gender can nevertheless serve as imperfect, but informative proxies for how respondents' are perceived by others when they are accompanied with self-reported demographic information (Lagos 2019).

Preliminary Findings

Table 1 displays the unweighted frequencies of responses to the GSS gender identity question broken down by gender identity, asked as “What is your current gender?” and sex assigned at birth, asked as “What sex were you assigned at birth? (For example, on your birth certificate). Of the 1,397 respondents who answered the question about sex assignment at birth, 7 respondents, or 0.50% of the sample identify as transgender or identify with a gender that does not conventionally correspond to the sex they were assigned at birth. These overall frequencies are consistent with the prevalence estimates of the U.S. transgender population, which estimate that between 0.4-0.6% of the adult population is transgender (Flores et al. 2016; Meerwijk and Sevelius 2017). While weighted estimates from these 2018 GSS data suggest a slightly higher prevalence of around 0.85%, there is some degree of uncertainty of how weights ought to be applied to prevalence estimates of transgender populations (Henderson et al. 2019). With this in mind, we note the consistency between the raw frequencies and other population estimates to simply suggest a broad correspondence between the overall frequency of transgender and gender nonconforming respondents in an otherwise nationally representative survey and prevailing population estimates.

In addition to identifying transgender respondents, this survey also identified a respondent who identified as a man but was assigned intersex at birth, as well as a respondent who identifies with ‘a gender not listed here’ who was assigned female at birth. Because intersex assignment at birth and identifying with ‘a gender not listed’ in the survey are not necessarily indicators of

transgender identity, we do not include them in our total count of transgender respondents. Furthermore, many, if not most intersex people are assigned male or female at birth, and not as intersex (Davis, Dewey, and Murphy 2015). As such, we urge caution in drawing conclusions from this category. In order to accurately include intersex members of the population in surveys like the GSS, it is likely more optimal to ask a separate question about intersex status that does not tie it to sex assignment at birth.

While gender identity and sex assigned at birth are very valuable to understanding gender, external perceptions of sex have been demonstrated to have implications for overall self-rated health (Lagos 2019). Table 2 presents the unweighted frequencies of responses to the GSS gender identity question broken down by how the survey interviewer classified the respondent's sex. GSS survey interviews are conducted in person, so this measure indicates the results of an initial judgment of respondents' sex, made in person. These judgments could be based on visual or auditory cues, or on names of respondents. Based on the contrast between self-reported gender identity and interviewer-coded assessments of respondent sex, 0.79% of respondents were classified by the survey interviewer inconsistently with respondents' current gender identities. Table 3 compares the unweighted survey interview ratings with sex assigned at birth. Here, 0.93% of respondents are classified by the survey interviewer inconsistently with the sex reported on their birth certificate. In both cases, the frequencies of discord between survey interview ratings and respondents' gender identities and sex assigned at birth are higher than the frequencies of respondents who identify as transgender, suggesting that survey interviewers also might misclassify respondents who are not transgender when making their own assessments.

Discussion

In its first implementation, the GSS' addition of questions regarding sex assigned at birth and self-reported gender has already provided valuable information useful to identifying gender minorities in the U.S. population. While the sample of transgender respondents in the 2018 survey is small on its own, the ability to pool small samples over a sustained multi-year period of data collection will increase the measures reliability and utility. Past analyses of other small groups, such as religious minority groups, suggest that this effort will prove promising. Furthermore, as demonstrated in the cases of sexual minorities and many religious minority groups, the size of gender minority populations relative to the general population could grow or change significantly over time. Continuing to use these two questions will facilitate a more accurate and nuanced accounting of gender diversity in the United States and provide an invaluable account of changes in this diversity over time.

Beyond its utility to tracking and understanding gender minority populations, the cross-validation of the interviewer ratings of respondent sex with two-step gender identity questions in the 2018 the GSS also offers a major methodological insight that can help inform data collection practices on gender and reduce the risk of survey error. The two-step gender identity questions identify instances during which the GSS interviewer classified a respondent inconsistently with respondents' own understandings of their gender identity, as well as with respondents' sex as recorded on birth certificates. Until the GSS implemented the two-step gender identity question, interviewer-rated sex was the only measure of respondent sex or gender that was available – implying the presence of survey error in past classifications of respondent sex and gender. The two-step gender identity question is a valuable check on interviewer effects for all respondents, whether they are transgender or not, since cisgender people are also susceptible to gender misclassification (Devor 1989).

With this in mind, the mismatch between interviewer appraisals of sex and respondent self-reports of gender and sex may serve as an informative proxy for the relationship between external gender perception and gender identity (Lagos 2019). In addition to self-reported sex assigned at birth and gender identity, there may be ways to involve interviewers in assessing other informative perception-based respondent characteristics related to sex and gender. In 2012, GSS interviewers began coding respondents' skin tone. While these measures are also sensitive to interviewer effects (Hannon and Defina 2016), some elements of external assessment may prove important to understanding how characteristics like sex and gender are experienced through reflected appraisal, as has become evident with race and ethnicity (Hunter 2002; Monk 2014, 2015). While measurements of interviewer perceptions are imperfect, this paradigm shift in measurement could acknowledge some degree of subjectivity in interviewer assumptions. These assessments can then be cross-validated by self-reports, and be utilized in tandem by researchers to more carefully assess the multiple dimensions of identities such as gender and race/ethnicity.

Based on these findings, we recommend that the GSS continue to field these questions to respondents in future administrations of the survey, while potentially adding an additional question to measure whether people are intersex in order to more accurately measure intersex populations. Furthermore, we recommend that the question be included as part of the core survey, separately from the Self-Administered Questionnaire (SAQ), so that it can be asked of the complete sample and yield a larger overall number of responses, decoupled from questions on HIV/AIDS risk.

Another potential modification to improve data collection on gender identity could include the recommendation made by the Federal Interagency Working Group on Improving Measurement of Sexual Orientation and Gender Identity in Federal Surveys to ask respondents to confirm their

selection of sexual and gender identity if they have given a gender identity that does not conventionally correspond to the sex they were assigned at birth, using the following language:

“Just to confirm, your sex was recorded as {male/female} at birth and you now describe yourself as {male/female/transgender/none of these}. Is that correct?”

This approach ought to address many concerns about the vulnerability of this question to survey error (Smith and Son 2019). However, we recommend asking this proposed clarifying question to all respondents, and not just those who indicate a gender that does not traditionally correspond to sex assigned at birth, in order to capture a more complete range of survey errors.

Decades of gender theory and empirical research on gender have established that everyone has a gender identity in one way or another that ought to be examined critically and with greater precision (Hart et al. 2019; Schilt and Westbrook 2009; West and Zimmerman 1987). Widespread implementation of the two-step method for measuring gender identity in future administrations of the GSS and other surveys will provide a promising way to expand the capacity of survey-based research to address the salience of sex and gender at the population level.

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Compliance with Ethical Standards:

Ethics and Consent: This study was conducted using public use data sets from the 2018 General Social Survey, and does not constitute human subjects research as defined at 45 CFR 46.102

Conflicts of Interest: Danya Lagos was an NICHD Postdoctoral Fellow at the Population Research Center at the University of Texas at Austin from September 1, 2019 to August 31, 2020.

Author’s Contributions: All authors contributed to the study conception and design. Material preparation and data analysis were performed by Danya Lagos. The first draft of the manuscript was written by Danya Lagos and D’Lane Compton and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Data Availability: The dataset analyzed during the current study is publicly available through the GSS Data Explorer, from NORC at the University of Chicago. <https://gssdataexplorer.norc.org>

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Tables

Table 1: Respondents in the 2018 General Social Survey broken down by current gender and sex assigned at birth

What is your current gender? (SEXNOW):	Woman	Man	Transgender	A Gender Not Listed Here
<i>What sex were you assigned at birth? (For example, on your birth certificate.) (SEXBIRTH):</i>				
<i>Female</i>	754 (53.97%)	3 (0.21%)	1 (0.07%)	1 (0.07%)
<i>Male</i>	2 (0.14%)	634 (45.38%)	1 (0.07%)	0 (0.00%)
<i>Intersex</i>	0 (0.00%)	1 (0.07%)	0 (0.00%)	0 (0.00%)
Total Transgender = 7 (0.50%)	2 (0.14%)	3 (0.21%)	2 (0.14%)	0 (0.00%)

Notes: Respondents who indicated they were assigned intersex at birth and do not identify as transgender, and respondents who indicated their current gender is “A Gender Not Listed Here” are excluded from “Total Transgender” calculations. Percentages are not survey weighted. n = 1,397

Table 2: Respondents in the 2018 General Social Survey broken down by current gender and sex as coded by interviewer

What is your current gender? (SEXNOW):	Woman	Man	Transgender	A Gender Not Listed Here
<i>Respondent's sex as coded by interviewer (SEX):</i>				
<i>Female</i>	752 (53.68%)	3 (0.21%)	2 (0.14%)	1 (0.07%)
<i>Male</i>	6 (0.43%)	637 (45.47%)	0 (0.00%)	0 (0.00%)
Total Classified Inconsistently = 11 (0.79%)	6 (0.43%)	3 (0.21%)	2 (0.14%)	0 (0.00%)

Notes: Respondents who indicated their current gender is “A Gender Not Listed Here” are excluded from “Total Classified Inconsistently” calculations. Percentages are not survey weighted. n = 1,401

Table 3: Respondents in the 2018 General Social Survey broken down by sex assigned at birth and sex as coded by the interviewer

What sex were you assigned at birth? (For example, on your birth certificate.) (SEXBIRTH):	Male	Female	Intersex
<i>Respondent's sex as coded by interviewer (SEX):</i>			
<i>Female</i>	751 (53.76%)	5 (0.36%)	1 (0.07%)
<i>Male</i>	8 (0.57%)	632 (45.24%)	0 (0.00%)
Total Classified Inconsistently = 13 (0.93%)	8 (0.57%)	5 (0.36%)	0 (0.00%)

Notes: Respondents who indicated they were assigned intersex at birth are excluded from “Total Classified Inconsistently” calculations. Percentages are not survey weighted. n = 1,397