

Response to Scotland's Chief Statistician's Draft Guidance regarding Data Collection on Sex and Gender

12th February 2021

1. We are a group of 91 social scientists engaged in the statistical analysis of survey and administrative data. Our collective expertise includes the fields of social statistics, demography, sociology, economics, psychology, criminology, education, labour markets, social mobility, social measurement, survey methodology, population and public health, and epidemiology. Many of us have a research interest in social inequalities, including those due to sex, and the way this intersects with other characteristics, such as race/ethnicity and social class.
2. We are gravely concerned by the recommendation of Scotland's Chief Statistician, Roger Halliday, that public bodies should not routinely collect data on sex. Distinguishing between legal and biological/natal sex, Halliday states: *"In a small number of instances, it may be necessary to record a person's legal sex but this would be on an individual basis for a very specific purpose and it would be up to public bodies who need this data to develop the best approach to do this. Questions about a person's biology should not be asked, except potentially where there is direct relevance to a person's medical treatment."* (p.10).
3. We find the conclusion that sex-based data should rarely be collected astonishing. Sex is a fundamental demographic variable, essential for projections regarding fertility and life expectancy. We need accurate data, disaggregated by sex, in order to understand differences in the lives of women and men, and in order to tackle sexism. Sex matters from the start of life, as illustrated by international differences in the sex ratio at birth due to son preference (Chao et al. 2019). Sex is a powerful predictor of almost every dimension of social life: education (Stoet et al. 2016), the labour market (Joshi et al. 2020, Bryson et al. 2020), political attitudes and behaviour (Green and Prosser 2018), religion (Voas et al. 2013, Voas 2015), crime (Ministry of Justice 2017), physical health (Koblinsky, Campbell and Harlow 2018), mental health (Ploubidis et al. 2017), cultural tastes and consumption (Sullivan and Brown 2015) – the list goes on. It is difficult to think of an area of life where sex is not an important dimension for analysis. A lack of sex-disaggregated data often leads to the needs of women and girls being ignored (Perez 2019).
4. Halliday appears to assume that collecting data on sex would somehow undermine trans people's rights. On the contrary, accurate data on sex, in combination with data on gender identity, has the potential to improve our understanding of the discrimination faced by trans people of either sex.
5. We would point out that the importance of biological sex in medical contexts is systematic, and applies, crucially, not just to individual treatment, but to all research where health (physical and/or mental) is a variable. It is noted that *"Biological sex is increasingly recognized as a critical determinant of health and disease, particularly relevant to the topical COVID-19 pandemic caused by the SARS-CoV-2 coronavirus."* (Viveiros et al. 2020). We would further point out that the biological cannot be neatly parcelled off from the social, since human beings are both biological and social animals. The term *biosocial* describes the interaction between biological and social factors, an important focus in multidisciplinary research across the health and social sciences. In the context of the current pandemic, we

- see a health shock which has affected men and women differently, not just in terms of the impact on physical health, but also mental health and economic and social outcomes.
6. Roger Halliday's report begins by citing Caroline Criado Perez's text 'Invisible Women' to highlight *"the frequency with which data is neither collected, aggregated or used in a way that takes account of the differences between men and women, and their impact in areas such as transport, health and access to services."* (p.1) We agree with this statement of the problem. We find it impossible to follow the logic that allows Halliday to conclude that this situation will be improved by mandating that public bodies should no longer collect data on sex.
 7. The draft guidance appears confused in places regarding the terms 'gender' and 'gender identity'. We would clarify these terms in relation to sex as follows (Sullivan 2020):
 - a. Sex: In humans, sex is a binary biological category. Individuals are classified by reproductive function as male or female. Cases where such classification presents any difficulty are exceptionally rare (Sax 2002). Sex is determined at conception, and is immutable (Kashimada and Koopman 2010; Sobel, Zhu and Imperato-McGinley 2004).
 - b. Gender: The term 'gender' refers to the stereotypes and social roles that are associated with each sex (Scott 1986). Gender is a social category, rather than an individual one, and refers to how society sees girls and boys and women and men, based on their sex. Gender refers to the hierarchical power structure between men and women (Oakley 1998).
 - c. Gender identity: The term 'gender identity' refers to some people's sense that they identify psychologically as a member of the male or female sex, particularly when this identity clashes with their biological sex. It refers to how individuals see themselves, rather than how society sees them. Gender identity is not clearly defined in conceptual terms, and cannot be clearly operationalised as a single agreed variable.
 8. Halliday states that: *"A person may also suffer sex discrimination under the 2010 Act because of social constructions more generally considered to relate to "gender". For example, a woman may suffer discrimination at work because the employer makes unwarranted assumptions about a woman's role in society and what tasks a woman can carry out. Therefore, a public body may decide to collect data on a person's gender (or their gender identity) as well as on sex, according to their data needs."* (p.8).
 9. The first part of this statement is correct, but the statement beginning "therefore" does not follow. Gender is a social structure, not an individual characteristic. The social stereotypes and discrimination we call "gender" are imposed on individuals according to their sex. Individuals, properly speaking, do not have a gender, except in the sense that gender is often used as a polite euphemism for sex, or to emphasise that discrimination does not stem directly or inevitably from biology. In practice, when social scientists talk about collecting data on 'gender', we mean sex. It is notable that Halliday gives no example of a question on an individual's gender, and no explanation of how this would be worded or what this would mean. In reality, his report advocates dropping data on sex in favour of data on gender identity.
 10. The claim that gender identity should be collected in preference to sex appears to rely on an implicit assumption that gender identity is more important in determining (all) relevant outcomes than sex. But no evidence is provided to support such a proposition. In order to test the proposition that gender identity matters more than sex in any given context, we need data on both sex and gender identity. Sex and gender identity are distinct characteristics, muddling them together does not serve data accuracy or reliable analysis, and does not allow us to identify the needs of distinct groups. There is no evidence to support the validity of replacing the sex question with a gender identity question.

11. People's identities are important to their lives, and we support collecting data on identity where this is salient, but this must not be seen as a replacement for data on sex. In the context of understanding outcomes for 'gender diverse' populations, research suggests that both questions are needed (Reisner et al. 2014). In order to improve both demographic survey data and the health care provided to trans people, the recommendation has been made to ask for information on both natal sex and gender identity (Mays et al. 2018; Wylie et al. 2016). We note that precise question wording can have dramatic effects on responses, especially where subjective variables are concerned, and suggest that more conceptual and empirical work is needed to develop robust questions regarding gender identity. This should include cognitive testing (in the sense in which survey methodologists use this term, i.e. testing to ensure that survey items meet their purpose), e.g. on forward and backward translating gender identity questions into different languages.
12. Social statisticians are typically not only interested in one characteristic, but often examine the intersection between a number of characteristics, e.g. sex, ethnic group, social class, age, etc. One cannot assume that membership of one category has identical effects across subgroups. For example, being black may increase an individual's risk of contact with the police, but the increased risk may be higher for males than females. Similarly, the experiences of people who identify as trans or non-binary are likely to vary substantially according to their natal sex. We certainly cannot assume that natal males and females who identify as trans, or non-binary, or otherwise 'gender diverse' will have the same or similar experiences in any social domain where sex is a factor, e.g. education; the labour market; experiences of domestic violence or sexual assault. Thus, without accurate data on sex, we cannot adequately monitor the differing experiences of males and females who identify as gender diverse, including those who have the protected characteristic of gender reassignment.
13. Halliday's report assumes that the trans population is so small that the impact of replacing sex with gender identity on data accuracy will be negligible. However, we currently have no reliable data on the size of the trans, non-binary and 'gender diverse' population either in the population as a whole or within sub-groups, and crucially, it is impossible to predict how this may change over time. It is unlikely that the trans population will be evenly distributed, for example by age, sex and geography. This means that the effects on data reliability are likely to be greater at the sub-group level. This can have extreme consequences for particular subgroups, e.g. 1 in 50 male prisoners in England and Wales identify as transgender (HM Inspectorate of Prisons 2019). The Tavistock and Portman NHS Trust claims that between 1.2% and 2.7% of children and young people are 'gender-diverse' (NIHR 2019). The trans population is growing rapidly, particularly among young females, and the reasons for this are not well understood, and require investigation (Littman 2018).
14. We are already losing data on sex throughout the UK. Examples include police forces recording crimes committed by men as though they were committed by women at the request of the perpetrator (Burden 2019), organisational pay-gap data being collected according to gender identity rather than sex (ACAS 2019), with the option to exclude 'non-binary' employees from the data; and the replacement of actual sex with the desired sex on medical records at patients' request (MBM Policy Analysis 2020b). If adopted, Halliday's draft guidance would make it much more difficult to combat this loss of accurate sex-based data.
15. The repercussions of this recommendation for data collection in Scotland are serious, but we would also note that data collection is not a parochial affair. Cross-national analysis, including comparisons between the UK countries, are a vital tool of policy analysis.

Harmonised data collection is necessary for such analysis to be reliable. Replacing sex with gender identity in Scotland will render sex-based country comparisons unreliable. Given that sex is a variable in perhaps the majority of social scientific and policy questions, this will affect vast swathes of research. We note that Eurostat (Statistical Office of the European Communities) views sex as a core social variable and that this 'refers to the biological sex of the person' (page 57 Report on core variables). In terms of monitoring change over time and across space, it is vital that we retain biological sex as a variable, given that legal sex is subject to legislative change and variation across countries, and gender identity is a subjective and developing cultural construct.

16. The claim that information on sex is not needed is not supported by data users. The demand to drop data on sex originates with lobbyists with strong political views regarding gender identity (Murray and Hunter Blackburn 2019). We note with disappointment that Roger Halliday's working group does not contain any academic quantitative social scientists. This politicisation of decisions regarding data collection risks bringing public statistics into disrepute at a time when response rates are in decline, and the importance of public trust in statistics could hardly be more evident.
17. We make the following recommendations to Halliday's working group:
 - a. That the committee explicitly recognise the legitimacy and importance of analysing data based on biological/natal sex.
 - b. That data providers should be encouraged to collect data on respondents' biological/natal sex, as distinct from gender identity or legal sex. Where appropriate, gender identity and/or gender reassignment should be included as additional variables.
 - c. That publicly funded or mandated data (such as the census or equal pay monitoring data) should always include a biological/natal sex variable.

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