An Ethics and Social Justice Approach to Collecting and Using Demographic Data for Psychological Researchers

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Abstract

The collection and use of demographic data in psychological sciences has the potential to aid in transforming inequities brought about by unjust social conditions towards equity. However, many current methods surrounding demographic data do not achieve this goal. Some methods function to reduce, but not eliminate, inequities, while others may perpetuate harmful stereotypes, invalidate minoritized identities, and exclude key groups from research participation or access to disseminated findings. This paper aims to (1) review key ethical and social justice dilemmas inherent to working with demographic data in psychological research, and (2) introduce a framework positioned in ethics and social justice to help psychologists and researchers in social

science fields make thoughtful decisions about the collection and use of demographic data. Although demographic data methods vary across sub-disciplines and research topics, we assert that these core issues – and solutions – are relevant to all research within the psychological sciences, including basic and applied research. Our overarching aim is to support key stakeholders in psychology (e.g., researchers, funding agencies, journal editors, peer reviewers) in making ethical and socially just decisions about the collection, analysis, reporting, interpretation, and dissemination of demographic data.

The study of demography and collection of demographic data are quintessential aspects of human research. Demography refers to the characteristics that encapsulate communities of people such as sex, race, marital status, or socioeconomic status (Caldwell, 1996; Furler et al., 2012). Demographic data, on the other hand, describe the quantitative assessment of these characteristics (Vogt & Johnson, 2011). In research, demographic data are almost always used to characterize the sample at hand, which provides critical information for comparing findings across studies. Data are also commonly used to determine whether specific demographic groups are disproportionately associated with, or affected by, phenomena (Hughes et al., 2016). Findings from such research are used to make data-driven economic, political, and social decisions. For example, the United States (U.S.) relies on demographic data from the U.S. Census to directly shape policies and distribute federal funds based on the demographic composition of different areas of the country (Fernandez et al., 2016). Given these downstream societal impacts, the collection and use of demographic data require thoughtful decisions.

Specific to psychological science, demographic data are used in many ways including, but not limited to, understanding differences in psychological phenomena or outcomes among social groups, identifying population trends over time, or examining the relevance and generalizability of statistical findings from a research sample to specific populations (Figure 1A). Although psychology tends to focus on the study of individuals, many psychological phenomena have structural causes. Therefore, consideration of demographic characteristics can help to situate the experiences of individuals within broader social and structural contexts, especially when contending with inequities (e.g., C.S. Brown et al., 2019; Roberts et al., 2020; Trent et al., 2019). However, many demographic variables represent fundamental aspects of personhood (Fernandez et al., 2016), may be considered protected (e.g., collection of sexual orientation in healthcare settings; Sanders et al., 2013), and are intricately tied to structural forces of inequity (e.g., distribution of services) that may cause harm. The harms that may arise from demographic data disproportionately impact minoritized[1] communities and may, in turn, contribute to structural inequities.

Recent efforts across fields of research (e.g., the QuantCrit framework in education; Castillo & Gillborn, 2022) are challenging long held assumptions about data objectivity by characterizing ways in which demographic data may cause harm. While there is obvious benefit to the intentional use of demographic data to identify inequities and

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[1]We use the term "minoritized" throughout to refer to groups, communities, or individuals who experience historic and ongoing oppression due social and structural inequities that create and systematically privilege "majoritized" groups. We acknowledge that other terms, such as "marginalized," also capture this sentiment and may be preferred by some readers.

disproportionalities, the potential harms from processes of demographic data collection, analysis, interpretation, and dissemination necessitate an ethical approach to demographic data use. Further, if one value of using demographic data is to identify disparities or disproportionalities and reduce inequities, the collection and use of demographics must be situated within contexts that aim to address the forces perpetuating inequities (e.g., social injustice). A framework that addresses the ethical and social justice imperatives of demographic data collection in psychology research is particularly critical at a time when large-scale data collection efforts are increasingly called upon for reproducible science (Taylor, 2017). An ethical, social justice framework for demographic data collection and use could lead to more accurate scientific conclusions, reduce "deficit-driven" research that positions minoritized groups as disadvantaged compared to majoritized groups, and support the development of evidence- and equity-based solutions (e.g., Cogua et al., 2019).

Not all researchers who examine psychological processes do so with human participants, which for some may call into question the role of demographic data collection in such studies. Still, this research is often performed with an ultimate goal of providing a lens into human experiences. Thus, it is important for psychological researchers to understand the implications of their research in translation to humans. Experimental and basic research, whether conducted in humans or non-human animals, is often intended to create an empirical basis to test theories. In these cases, research likely prioritizes internal validity without goals of achieving ecological validity, and thus generalizability to all populations may not be a priority (Mook, 1983). However, regulatory bodies do recommend collection of some variables that are relevant to human demographics. For example, the National Institutes of Health (NIH) recommends the inclusion of sex into research design, including in non-human research (NIH, 2015a), because the inclusion of sex can support equity in pre-clinical to clinical translation (Waltz et al., 2021). Consistent with these guidelines, preclinical researchers should also be able to discuss what demographic variables, such as sex, are relevant to their research and consider how such variables can support preclinical to clinical translation. It is true that there is not a 'one-size fits all' approach to demographic data collection; the appropriate scope and depth of demographic characteristics measured within a study may vary across sub-disciplines and projects depending on the research question (Figure 1). However, as a field, psychological researchers of all kinds should be willing to examine assumptions about what identity information is, or is not, important in order to avoid furthering or creating new inequities in the research translation process (Snell-Rood et al., 2021). Indeed, in order for researchers to build on existing research with *eventual* goals of generalizability, it is critical that they have access to a suitable demographic characterization of the initial research – even if that research did not have goals of generalizability – to inform their approach. By collecting and reporting on demographic data (or animal data that is related to human demographic data) experimental and basic researchers can facilitate the translation of their findings more efficiently, which is likely to increase the impact of their work and the field of psychology as a whole.

Through an ethics and social justice lens that includes acknowledgment of the inequities within research, this paper (1) provides a review of the ethical and social justice challenges that arise when using demographic data in psychological research and (2) proposes a framework to aid psychologists and allied social science fields in responsibly collecting

and using demographic data. The overarching goal of this manuscript is to support key stakeholders in psychology (e.g., researchers, funding agencies, journal editors, peer reviewers) in making ethical and socially just decisions related to demographic data. The discussion largely focuses on U.S.-based research although aspects may be relevant to research globally. We acknowledge that there are likely important considerations for other geographical regions that warrant discussion that are outside the scope of this paper.

Review of Ethical and Social Justice Challenges Related to the Use of Demographic Data

Researchers regularly face dilemmas in navigating the collection, analysis, reporting, and dissemination of demographic data. Additional challenges arise during the peer review process, as reviewers consider demographic data in grant applications or submitted manuscripts. Before deciding *how* to navigate these challenges, it is first critical that researchers become aware of these dilemmas, which may not be obvious at the outset, particularly if a researcher, lab, or institution is accustomed to handling demographic data in certain ways. Below, we highlight key challenges or dilemmas that arise when working with demographic data at each step of the research process (data collection, analysis, reporting, dissemination, and peer review) and review scholarship related to these issues.

Collection of Demographic Data

Recruitment: The Implicit Exclusion of Minoritized Groups from Research Samples

Before demographic data can be collected, researchers must recruit participants, a critical step in the research process that impacts the examination of demographic data. Historically, "basic science" methods that prioritize internal validity at the expense of heterogeneous samples have been conferred disproportionate legitimacy compared to "applied science" methods where context is inherent (Lewis Jr., 2021). This is harmful when findings from "basic science" are assumed to generalize to populations and contexts that were not considered in the research, including in the absence of data demonstrating generalizability (Lewis Jr., 2021). Bias in research sampling is an increasingly recognized problem and is sometimes formally referred to as the "WEIRD", or White, Educated, Industrialized, Rich, and Democratic, problem. Although WEIRD samples are common, including in psychological science, only about 12% of the world's population are actually WEIRD, suggesting a major gap in generalizability to non-WEIRD communities for whom such research could benefit (see Arnett, 2008 for a discussion). For example, White samples are *over*represented in therapeutic research proportional to their representation in the population while racially and ethnically minoritized samples are *under*represented in therapeutic research (George et al., 2014; Miranda et al., 2003; Scharff et al., 2010; Walsh & Ross, 2003). The lack of inclusion of minoritized groups from research samples limits the confidence by which research can be applied to minoritized communities, raising ethical and social justice issues and impacting scientific integrity.

Underrepresentation of minoritized groups in research samples may be due to recruitment challenges as well as consequence of historical maltreatment of minoritized groups in

clinical and psychological research (e.g., Auguste et al., 2022). Mistrust of psychological research and lack of access to information are commonly reported barriers to research participation by minoritized communities (George et al., 2014; Rowley & Camacho, 2015; Scharff et al., 2010). These barriers can be exacerbated by recruitment methods that rely on research participants to seek out studies as opposed to methods that build trust with minoritized communities that researchers can then recruit from. The latter approach is necessary to right historical wrongs and conduct research with respect and care for minoritized communities to ensure a positive experience and maximize the benefits of research within these communities.

Underrepresentation in psychological research may also contribute to growing health inequities if findings are selectively validated among homogenous, majoritized groups. White, heterosexual norms are often equated with objectivity and impartiality, an assumption that can harm minoritized communities (Lewis Jr., 2021). For example, neuropsychology relies on normed tests to aid in diagnosis. These norms are influenced by sociocultural factors (e.g., acculturation), for which demographic variables often serve as proxies. When research is conducted in relatively homogenous samples and without adequate assessment of sociocultural factors known to impact test performance, norms fail to account for diverse sociocultural experiences, which in turn has downstream consequences for diagnosis and treatment (Byrd & Rivera-Mindht, 2022).

Assessment: Balancing Respect for Participants with Generalizability

When considering how to assess demographic data, researchers face decisions about using inclusive approaches sensitive to participants' identities versus methods that allow for aggregating data. The former emphasizes respect for participants while the latter can facilitate the comparison across studies and scientific growth. The spectra of demographic collection methods can range from most inclusive and least prescriptive (e.g., open-text responses for all demographic questions; Strunk & Hoover, 2019; Hughes et al., 2016; Moody et al., 2013) to least inclusive and most prescriptive (e.g., forced, single-answer choice to a limited list of demographic categories). Choosing an approach presents ethical and social justice dilemmas.

There are numerous reasons to take a more inclusive approach, which typically means less prescriptive or constrained assessment of identity. Forcing participants to incorrectly select an identity from a list of identities that do not apply to them is an act of oppression (Strunk & Hoover, 2019) and can reinforce the sense that psychological research does not recognize or accept their identity. It can also lead to uncertainty about how to respond or frustration with the research, which may contribute to participants from minoritized groups opting out of research, thus exacerbating existing inequities (Hughes et al., 2016) or potentially causing emotional harm. On the other hand, giving participants more freedom to report their identities can validate their lived experiences, convey respect, and build trust in the research process.

Despite the clear drawbacks to less inclusive approaches, there are certain ethical and social justice reasons for being more prescriptive in the assessment of demographic data. To promote the wellbeing of minoritized groups, it is crucial that we can identify, aggregate,

and compare data from these groups. It is clear that minoritized groups are underrepresented in research, limiting the ability to draw inferences from existing studies, create policies, and develop interventions that serve minoritized groups. Less prescriptive approaches can make it challenging to aggregate or compare data about minoritized groups across studies (e.g., for a meta-analysis or review). These challenges also arise if the categories reported on are not actually representative of the participants' identities, either because the questions were not sufficiently inclusive to adequately capture identity or because data were collapsed into categories that are not representative of participants' identities. Still, there may be benefits to collecting demographic data in ways that are more confined and therefore more easily and accurately compared across studies.

Researchers have proposed practices that may provide balance between less versus more prescriptive approaches in the interest of furthering science while supporting inclusivity. For example, Moody and colleagues (2013) propose a two-step process involving asking participants for free-text responses to demographic questions, and then applying a standardized coding scheme for those responses. Hughes and colleagues (2016) build on and modify the questionnaire and coding scheme provided by Moody and colleagues (2013). Strunk and Hoover (2019) propose a similar concept in the field of education research. Still, there is not a one-size-fits all answer to how best to handle this tension.

In secondary data analyses, researchers may be faced with using demographic data that they did not initially collect. In these cases, the challenge becomes how to responsibly analyze and report on the data. This challenge is particularly pronounced when the researcher conducting the secondary analysis believes that demographic data were assessed in a way that compromises ethics or perpetuates injustices in the field. Given the dramatic rise in data sharing and open-science, this dilemma is likely to be of increasing relevance.

Analysis of Demographic Data

Both ethical and social justice dilemmas arise during statistical analysis. Perhaps because there is ambiguity in if, when, and how to examine demographic data, researchers may not pre-specify a plan for analyzing such data in the same way that they would for a primary outcome variable. Ad hoc statistical approaches (e.g., multiple analyses) may increase the risk of false positives, particularly when analyzing associations between demographic characteristics and phenomena (Simmons et al., 2011). False positives related to demographic data have implications for research integrity and reproducibility, as well as equity and social justice in that they may reinforce inaccurate biases or divert attention away from true inequities.

Prior to conducting statistical analyses, aggregating or collapsing subsets of socially-defined communities (e.g., gay, lesbian, bisexual, transgender, queer) into larger, less descriptive categories (e.g., LGBTQ+) for analyses conceals variation between groups that may be important (Strunk & Hoover, 2019). Such practices also falsely imply that the collapsed categories share key similarities when their differences may be clinically important to acknowledge. The practice of collapsing across categories is often done when the number of individuals in a given category is too small to conduct valid inferential statistical

analyses. Collapsing within minoritized identities while majoritized groups (e.g., straight or heterosexual participants) are rarely collapsed conveys that psychological science perceives identities to be variables which can be arranged at the discretion of the researchers, or that altering identity data may be acceptable under circumstances deemed "appropriate" by researchers but without permission of those whose identities are being permuted. Keeping categories more descriptive and nuanced rather than collapsing categories may provide a more accurate representation of who was included in the research and, thus, which populations the research can be generalized to (Hughes et al., 2016).

During statistical analyses, attempts to account for confounding variables can be problematic when significant effects related to minoritized communities are obscured through statistical correction or aggregation (Kauh et al., 2021). For example, race, ethnicity, and other demographic variables that are not outcomes of interest but are related to dependent variables are often seen as adjustable (Kaufman & Cooper, 2001). If a demographic variable is not an outcome of interest but is related to outcomes, it is common to statistically control for the demographic variable (Kaufman & Cooper, 2001). However, as is discussed in more detail later, this adjustment is done at the expense of other social determinants (e.g., systemic racism) and often without thoughtful explanation of where demographics and social determinants intersect and why (Noroña-Zhou & Bush, 2021; Ross et al., 2020). Finally, when analyzing demographic variables, it is common practice to set the most privileged group as the comparison (e.g., including White vs. "other" racial identities), which can reinforce societal hierarchies of how social groups are compared and erase heterogeneity within reference or "other" categories (Noroña-Zhou & Bush, 2021).

Reporting and Interpreting Demographic Data

After demographic data have been collected and analyzed, researchers are faced with decisions about how to report and interpret these data in publications and elsewhere. It is common for publications in psychology and related fields to omit demographic data during reporting (Buchanan & Wiklund, 2020). For example, in a review of all studies published in the *American Journal of Psychiatry* between 2019-2020 (*N*=125), Pedersen and colleagues (2022) found that data on age were omitted in 10% of studies, gender/sex in 16% of studies, race and ethnicity in 57% of studies, and sexual orientation identity in 99% of studies. Although there have been many calls for psychological researchers to shift from conceptualizing identity as one-dimensional to intersectional, reporting intersectional identities in published psychology articles remains rare (Cole, 2009; McCormick-Huhn et al., 2019; Sabik et al., 2021).

The presentation of analyses involving demographic data is also important to consider. When research has focused on experiences of minoritized individuals, the conclusions drawn have focused largely on negative consequences and deleterious effects of being a minoritized person (i.e., "deficit" models). This can include, for example, increased symptoms of psychopathology and experiences of stereotype threat, in minoritized communities (Barnett et al., 2019). Both the framing of "negative" demographic-related effects and saturation of research articles reporting "deficit" model understandings of being a minoritized person contribute to perceptions of minoritized groups as inherently flawed

or struggling psychologically. This practice risks perpetuating trauma through stigmatization and stereotypes and impacts communities' trust in research participation.

Reporting of demographic data in publications, when presented without certain context or appropriate elaboration, can facilitate spurious misinterpretations of key findings (Okazaki & Sue, 1995; Helms et al., 2005). Misattributions of effects that arise from systemic or contextual influences related to demographics can lead to the furtherance of biases and stereotypes in science and wider society, harming minoritized populations and creating deterministic pathways for populations (Lett et al., 2022). For example, much research in the history of psychological science attempted to elucidate biological predispositions for violence among male youths with minoritized racial and ethnic identities (Washington, 2006, Chapter 11). These studies often use overly broad demographic criteria for inclusion in their studies and leave many other collinear variables, such as low socioeconomic status, lack of access to resources, and other systemic variables, unmeasured, facilitating the erroneous conclusion that violence among males is primarily related to minoritized racial and ethnic identities. Presenting associations between violence and minoritized racial and ethnic identities without the context of broader systemic considerations limits the ability to target addressable socio-political and environmental factors that may improve outcomes among these populations. Beyond erroneous conclusions, these studies reify stereotypes about minoritized groups that lead to serious consequences for members of these groups. For example, misperceptions of Black men as larger and more intimidating are informed by racial stereotypes and contribute to justifications for the use of physical force in police alterations (Wilson et al., 2017). Using methodological and statistical approaches that position demographic variables as proxies for social conditions, rather than biological differences, shifts the focus from disparities to inequities, thus allowing for system-level change to occur (Lett et al., 2022).

Misinterpretations are also facilitated when psychological research conflates distinct demographic variables. For example, sex and gender are often used interchangeably, sometimes even within the same publication. The National Academies of Science, Engineering, and Medicine (NASEM) defines sex as a multidimensonal construct of anatomical and physical traits including internal and external reproductive organs, secondary sex characteristics, chromosomes and hormones whereas gender unites gender identity, gender expression, and sociocultural expectations associated with sex traits (National Academies of Science, Engineering, and Medicine, 2022; Rubin et al., 2020), where variations exist across cultures, societies, and eras. Research that does not parse sex/gender in meaningful ways limits interpretations of effects and generalizability to populations, perhaps among communities who may benefit from specificity in research (Lindqvist et al., 2021). Omission of gender/sex during research often occurs due to limited consensus on how and when, to assess sex and gender in research. The absence of tools for assessing gender and sex has led to research where gender/sex was collected with binary categorical labels (e.g., "male/female" or "boy/girl"), which precludes gender- and sex-diverse individuals being able to identify themselves within categories that reflect their experiences (Cameron & Stinson, 2019). NASEM specifically recommends that researchers use terminology that is specific to the construct of interest, report which components of sex

and/or gender are collected, and collect sex and gender when there is a clear, well-defined goal for collection.

Dissemination of Findings Related to Demographic Data

Research that is inclusive of minoritized groups, or which seeks to examine psychological phenomena related to experiences of minoritized identities, is only beneficial insofar as it is effectively and widely disseminated to communities that participated in the research, the larger scientific community, and society at large. Researchers and institutions rarely create methods for disseminating findings to minoritized communities that have participated in research and those that are supporting these communities, which further exploits minoritized communities (K.S. Brown et al., 2019; Lewis Jr. & Wai, 2021). The exclusion of studies on these topics from higher impact journals that reach broader audiences implicitly dismisses the validity of these topics of study. Recent evidence shows that a disproportionate majority of psychological science articles are authored by White individuals, and that most (83%) editors-in-chief of psychology journals are White (Roberts et al., 2020). Having disproportionately White authors and editors results in majoritized communities determining which topics are worth studying, how findings are interpreted, and which findings should be published and disseminated (Lewis Jr. & Wai, 2021). This is consequential because White scientists and editors are less likely to study and publish research centering experiences of racially diverse populations (Roberts et al., 2020). In a study by Roberts and colleagues (2020) examining over 26,000 publications in cognitive, developmental, and social psychology over the last five decades, only 5% of publications highlighted race explicitly. White editors published significantly fewer articles highlighting race (4%) compared with editors who are people of color (11%) and selected significantly fewer editorial board members who are people of color (6%) than editors-in-chief who are people of color (17%). Finally, White participants were more common in papers authored by White scientists whereas participants of color were more common in papers authored by scientists of color.

The Peer Review Process: A Note for Funding Agencies, Journal Editors, and Peer Reviewers

The use of demographic data also presents challenges during peer review. Important data can be dismissed based on reviewers' critiques of how demographic data were handled; alternatively, research in which demographic data are handled in unethical ways may make its way through the review process. Investigators of trials funded by the NIH are currently required to report on certain demographic characteristics of their samples (e.g., race and ethnicity) using language that is predetermined by the funding agency and mirrors U.S. Census categories (NIH, 2015b). This is meant to provide a "common language" that allows for comparison across or aggregation of research from various studies to facilitate scientific growth, to promote generalizability of findings to the broader population, and ensure that certain groups are not excluded from research. While this may increase equity and facilitate science, the execution can introduce new dilemmas. The language of identity is constantly evolving, often at a faster pace than funding agencies or the U.S. Census are updated,

creating a mismatch between demographic data and individuals' identities. For example, before 2000, Americans could only select one racial identity on the U.S. census, leaving those identifying as multiracial without the option of selecting multiple racial identities, a practice that both yielded inaccurate data and undermined multiracial identities (A. Brown, 2020). Further, individuals who identify as Middle Eastern or North African (MENA) are categorized as White in the U.S. Census despite most MENA individuals self-identifying and being perceived by others as MENA rather than White (Maghbouleh et al.2022).

These challenges have led to calls for NIH and other funding agencies to modify demographic reporting requirements in ways that promotes equity, fund research focused on minoritized groups and structural inequities, and fund research conducted by minoritized researchers. Journal editors can similarly help grow the amount of research on minoritized groups and topics related to marginalization (e.g., racism) by establishing which demographic information is required of all published articles, explicitly encouraging submissions on topics related to these issues, and providing guidance for editors and reviewers to check the cited literature for adequate representation of topics and authors (Galán et al., 2021; Schwabish & Feng, 2021).

An Ethical and Social Justice Framework for Thinking Critically in Regard to Demographic Data Collection and Use

The discussed challenges and harms with demographic data in psychology, and their consequent impact on individuals and communities who could benefit from psychological research, highlight the ethical and social justice conflicts arising from the current dominant practices of demographic data collection and use in psychological science. Given the importance of demographic data for the recognition of inequities and redistribution of resources, it is imperative that researchers in psychology have a framework through which to consider responsible demographic data collection and use. To build such a framework, we call on three foundational models for ethics and social justice. We describe each model and its application to demographic data in psychological science separately and then integrate the three into a proposed framework.

Applying the APA Code of Ethics to Demographic Data

First, we recognize the American Psychological Association's (APA) Code of Ethics (APA, 2016) that applies broadly across the profession of psychology, including research. The APA Code of Ethics provides "a common set of principles and standards upon which psychologists build their professional and scientific work," underscoring the commitment of psychology in "[improving] the condition of individuals, organizations, and society" while also supporting freedom of inquiry. The APA Code of Ethics is comprised of five ethical principles: (1) Beneficence and Nonmaleficence, seeking to do work that has benefit, without harm; (2) Fidelity and Responsibility to professional standards of conduct in psychology; (3) Integrity to the accuracy, honesty, and truthfulness of scientific conduct; (4) Justice in ensuring that all persons can access and benefit from psychological contributions; and (5) Respect for People's Rights and Dignity, including self-determination and respect for cultural, individual, and role differences across individuals. Ethical decisions about

data use are inherent to research (e.g., confidentiality, storage), however the application of ethical decision-making in research is context-dependent (Birnbacher, 1999) and may evolve as understanding regarding the challenges of demographic data emerges. Specifically, demographic methods that met a prior ethical standard may not meet the same standard in the future if such methodology, in a new context, violates one or more ethical principles. For example, as language around identity evolves, ethical assessment of demographic characteristics requires researchers to use the most current, bias-free, and affirming language (see the APA's guide to bias-free language; APA, 2019). This may mean changing the word choice on a demographic questionnaire if a term is now considered pejorative or adding additional response options given that the omission of a response option can invalidate and "other" participants' identities.

Consider a questionnaire that asks for a participant's "sex" and provides the possible responses of "male" and "female." Consistent with NASEM recommendations, we would recommend (1) changing "sex" to "sex assigned at birth" or "sex listed on birth certificate" to reduce bias and (2) include a second question on current gender, as this allows participants to have their identity respected during data collection and to be counted in research with the identities they hold in order to support translation of research within their communities[2]. When researchers proactively adapt their demographic questionnaires to use affirming, bias-free language, they exemplify the APA Code of Ethics in the following ways: (1) Beneficence and Nonmaleficence by conducting research that aims to benefit *all* individuals and groups (whereas using biased, stigmatized, or oppressive language may do harm to participants, consumers of the research, and society as a whole); (2) Fidelity and Responsibility by striving to remain up-to-date on research and guidelines surrounding affirming language for identity; (3) Integrity by ensuring their research *accurately* captures the identities of participants; (4) Justice by building trust with minoritized communities, thus encouraging research participation by those who are often underrepresented in research; and (5) Respect for People's Rights and Dignity, by affirming individuals' identity or culture. This is just one example of how the APA Code of Ethics can be applied by researchers when working with demographic data; below, we suggest additional points in the research process that necessitate consideration of the APA Code of Ethics with regard to demographic data.

Applying Sen's Capability Approach to Demographic Data

Second, and consistent with the commitment of psychology to improving the health condition of individuals, organizations, and society, we recognize Sen's Capability Approach (Sen, 1985) and its relationship to human health (Nussbaum, 2011; Sen, 1989). Briefly, the Capability Approach focuses on the moral importance of individual abilities to realize the life they value. In contrast to objective metrics of a successful or valued life, this approach focuses on subjective well-being and the "capability sets" one has to achieve it. In this context, capability sets are combinations of real "functionings" (e.g., wealth or health) to which one has access to and uses to realize their valued life. Societal deficiencies

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[2]A recent experience by one of our authors offers another example of a failure to validate an individual's identity with demographic items. When collecting ethnic identity data, the author unintentionally omitted "Arab" from a prescriptive list of options and in a text entry field, a participant responded: "Arab for the love of god why is there never Araaaaaaaaab".

arise when individuals, or collectives of people, lack necessary capability sets or can only achieve capabilities that are incompatible with human dignity (Nussbaum, 2011). Social, institutional, and environmental conditions can function as conversion factors, supporting an individual in converting resources into capability sets, suggesting that such systems have a moral obligation to reduce capability shortfalls (Drydyk, 2012). In the context of psychology research, notably few in society have the capability to enact and produce research that influences their own well-being. However, as an institution, psychology's use of demographic data could serve as a conversion factor that supports individuals or collectives to guide research that facilitates the achievement of a valuable life (Taylor, 2016, 2017).

Researchers can draw on Sen's Capability Approach to identify the inequities related to their research that arise from social deficiencies and impact capability sets. These inequities might be evident in representation in research (i.e., the exclusion of certain demographic groups from research), in inaccuracies or misrepresentations in characterizing demographic groups in research, or in the outcome the researcher is studying (e.g., health inequities faced by certain demographic groups). Each of these inequities hinders the capability sets needed to achieve a valued life. Once these inequities are identified, researchers can rework their approach to demographic data to serve as a conversion factor, for example by including underrepresented groups in their research, ensuring that those groups are accurately described, and analyzing demographic data in such a way that helps elucidate inequities.

Applying Fraser's Theory of Social Justice to Demographic Data

Lastly, because the Capability Approach focuses on the means to individual outcomes of value, we recognize Fraser's Theory of Social Justice to describe an outcome of justice (Fraser, 2009). Fraser's model includes three dimensions critical for justice: (1) recognition vs. misrecognition, which highlights status inequality between groups of people, leading to unfair biases and attributions; (2) redistribution vs. maldistribution, which acknowledges the unequal distribution of resources that limits equal participation in society; and (3) representation vs. misrepresentation, which considers who is included in a system, thus influencing who has the right to frame discourse and policies within a system. This model considers these dimensions from two perspectives. The affirmative perspective considers these dimensions from within a defined state, wherein addressing injustice does not change the state itself and instead produces reforms meant to ameliorate injustice. From this perspective, injustice may be reduced, but the structures producing the injustice are affirmed, thus maintaining a state in which future injustice may arise. In contrast, the transformative perspective seeks to restructure the boundaries of a defined state, rather than redistribute resources within the state, to address the root causes of injustice to promote multiculturalism and parity. As detailed above, demographic data collection and use has historically limited accurate recognition within research, which consequently impacts on resource distribution and societal representation and affirms existing structures that perpetuate inequities. Researchers can draw from Fraser's model to work towards a transformative approach to demographic data.

Proposed Ethical and Social Justice Framework for Working with Demographic Data

With these models in mind, we propose an ethical and social justice framework for demographic data collection and use (Figure 1B). Table 1 provides questions that researchers can ask themselves and procedures they might use at each stage of the research process as they apply this framework. Our framework acknowledges, per the APA Code of Ethics, that researchers have the ability to maintain freedom of inquiry in their research question and process; however, this framework highlights pivotal points at which ethical and socially just demographic data practices could be applied throughout the research process. After selection of the research question, researchers should seek input on - rather than assume - who may benefit from the research in building a valued life, and how the research should be conducted to enhance that value. The capability set to make such decisions places functional value in the knowledge and perspectives of communities the research is meant to support, both in determining whether the research question is one that is valued by the community and, if so, how to best collect demographic data to ensure accurate representation.

Ethical and socially just choices may vary considerably based on the research project and other contextual factors, so we emphasize the importance of justifying and clearly reporting on each choice using our framework and Table 1 as guides. To this end, prior to collecting data, researchers should consider utilizing pre-registration options to share how they plan to analyze certain variables, including how they will define and utilize demographic data and how decisions were made regarding the use of demographic data in their analyses. This step would greatly improve the extent of forethought and consideration given to possible roles and repercussions of demographic data use in psychological research.

Once demographic data are collected, researchers should articulate the ethical use or non-use of demographic data in analyses in the write-up of their findings, with a focus on APA principles of benefit without harm, research integrity and fidelity, justice and respect for persons. Specifically, it is imperative that researchers describe the methods used to gather demographic data from participants and report how said data are operationalized to formulate the demographic variables used in their statistical analyses. Researchers should also develop competency in explaining the limits of their demographic data. Scientific journals should update publication guidelines to include recommendations such as these for the methods and results sections of empirical articles.

In addition, researchers should be attuned to how analyses benefit communities and support justice, while also minimizing inadvertent harms. This is consistent with emerging recommendations for research conduct from psychology organizations, peer reviewed journals, and select funding agencies (APA Task Force on Race and Ethnicity Guidelines in Psychology, 2019; Buchanan et al., 2021; Flanagin et al., 2021). Following completion of ethical analyses that address the research question, researchers should consider whether sharing the data publicly is an appropriate step. Sharing demographic data openly provides the maximum level of transparency and informs the generalizability of the findings, consistent with APA Ethics Principles of research integrity and fidelity. However, it is also an ethical imperative (e.g., Beneficence and Nonmaleficence) to protect the identities

of minoritized groups or groups that have been historically oppressed via research (e.g., Indigenous communities), especially in cases when research findings may easily be traced back to individuals or used to further denigrate minoritized groups (e.g., Lui et al., 2022). Thus, the decision to share data openly and the decision to *use* open data should be considered within our ethical framework.

As yet another step toward an ethical and social justice approach for utilizing demographic data in research, researchers should seek input on the functional value of the results of their research rather than assuming their application. Without such input, researchers run the risk of implicitly supporting defined states (i.e., affirmative functioning) that may not have value to impacted communities or only reduces or redirects the impact of injustice rather than addressing root causes. In contrast, supporting communities in defining the research value using their capabilities may lead to a transformative outcome that leads to a just restructuring, social equity, and parity.

As previously discussed, numerous barriers exist to the seeking of input from, recruiting, and retaining diverse perspectives in research. In this framework, we acknowledge the role of social, institutional, and environmental conversion factors that would support community-driven capabilities in the research process. One simple way to do this would be for researchers and departments to promote the use of evidence-based demographic tools that have already been developed (e.g., PhenX Toolkit; Hamilton et al., 2011). Some researchers may have access to Clinical and Translational Science Institutes (CTSIs) that can serve to enhance the capabilities of individuals from diverse backgrounds in research or support researchers in making ethical analytic choices. We also encourage research collaborations that include expertise in community-based participatory methods and for research institutions and departments to consider equitable strategies that allow for stronger community engagement (e.g., funding a research advisory board). Importantly, community engagement needs to be built on equitable, participatory principles that aim to increase trust and engagement without placing additional or unnecessary burdens on communities themselves (Collins et al., 2018; Israel et al., 2005; Smith et al., 2015). However, given the importance of transformative outcomes in research, ongoing commitments to establishing and enabling social, institutional, and environmental conversion factors is critical to the implementation of this ethical and social justice framework for demographic data.

Conclusion

Researchers in psychological science are regularly faced with critical decision points related to the incorporation of demographic data into their studies. These decisions can either reinforce practices that perpetuate inequities and bias, or can move the field towards greater diversity, inclusivity, and equity. As such, we implore researchers to proceed thoughtfully when collecting, analyzing, reporting, interpreting, and disseminating the results of demographic data, and to regularly review and update their practices given the rapid pace at which society's understanding of identity and demography shift.

While we have provided a framework to help researchers think critically about decisions related to demographic data and critical opportunities for stakeholder input, additional

research in this area is needed to provide guidelines. Qualitative and quantitative research should examine the preferences of individuals with minoritized identities regarding how demographic data are collected, analyzed, and reported. Additionally, community-based participatory research involving individuals with minoritized identities who can advise researchers on their handling of demographic data may be appropriate in many cases.[3]

Training in the ethical and socially just use of demographic data is also needed. To decrease inequities in the psychological sciences, recent calls have focused on revamping graduate curricula to ensure that it does not continue to reinforce oppressive systems (Galán et al., 2021). Graduate programs could benefit from substantively incorporating issues regarding demographic data use into various classes. For example, research methods courses could explicitly discuss ethical and socially just methods for engaging underrepresented participants in research, obtaining their input about the value and methods of a research question, accurately assessing demographic data, and disseminating findings related to demographic data. Statistical analysis courses could engage students in dialogue about how to appropriately decide how to utilize demographic data in analyses (e.g., as a covariate, predictor, or not at all). Departments could require that thesis or dissertation proposals include a section that specifically discusses decision-making around demographic data, and committee members could weigh in on this section.

We emphasize the need for continued conversations among researchers, journal editors, grant and peer reviewers, and other key stakeholders regarding the use of demographic data. To facilitate such conversations, we have created an open reader commentary page (https://osf.io/gmbpf/?view_only=c4f51c3f72fb4f49b6add6d5fd935215), where stakeholders can provide feedback on our manuscript and offer ideas for additional recommendations that can be considered in future efforts to create a valuable framework for addressing the issues identified in this publication.

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[3]For a recent review of the many benefits of community-based participatory research and an overview of several studies that have successfully used this approach see Kia-Keating & Juang (2022).

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A. Typical Approach to Demographic Data
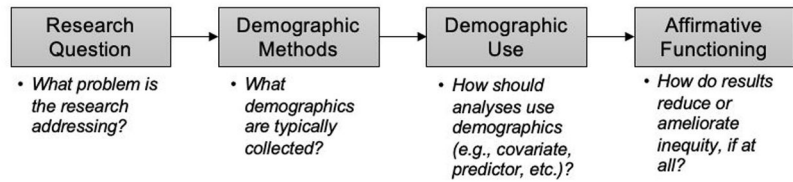
B. Ethics & Social Justice Approach to Demographic Data
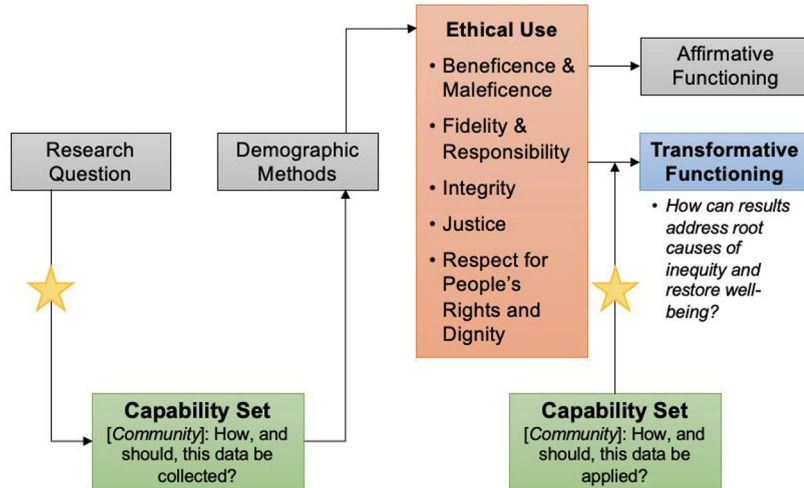
Figure 1. Ethics and Social Justice Framework for Demographic Data.
(A) Typical approach to demographic data that seeks to collect and use demographics as standard research conduct which functions to maintain or, at best, reduce inequity; (B) Ethics and social justice framework for demographic data highlighting the psychologist's role in ethical data use and critical points for giving those who could benefit from the research the capability to choose whether, and how, to engage and apply research towards transforming well-being and restoring justice.

Table 1.

Suggested questions to consider and corresponding examples for navigating demographic data use through an ethics and social justice lens

Research Stage (See Figure 1)	Questions to contemplate	Examples of practices to consider and resources to leverage
Research Question	1. What is the theoretical and empirical justification for asking this question related to demographic data? Or, what is the justification for not asking this question?	Use a diverse team science approach to ensure no one expectation is dominant, no single expertise is prioritized, and to improve the comprehensiveness of the motivating prior research and theory (Ledgerwood et al., 2022; Noroña-Zhou & Bush, 2021)
	2. Who is this research question intended to benefit? Who does it have the potential to harm?	Be intentional about the sample (e.g., avoid defaulting to "easy-to-access populations;" Roberts et al., 2020)
	3. What are the possible implications (benefits and harms) of my research question for various communities? How can I attempt to increase benefits and decrease harms?	Use a data ethics checklist to keep your team accountable throughout the research process (e.g., Lou & Yang, 2020)
***Capability Set* [Community]: How, and should, this data be collected?**	1. Has there been community input on this research question?	Review the literature to determine if prior studies have collected community input on this or related questions (Pedersen et al., 2022)
	2. Has there been community input on the methods I am considering? i. For existing measures: Has prior research utilized community-engaged methods (e.g., focus groups)? Which communities was the measure created and tested in?	Consult with community-engaged researchers at your institution or elsewhere (Pedersen et al., 2022)
		Establish a community advisory board and or partner with community members and advocacy organizations (Brown, K.S. et al., 2019; Collins et al., 2018; Rowley & Camacho, 2015)
	ii. For new measures: Have I considered community-engaged focus groups, partnering with an institutional community advisory board, or other community-engaged practices?	Hire research staff from within the target community to provide input and help develop rapport with community partners and participants (Rowley & Camacho, 2015)
		Compensate participants, staff, and community partners appropriately and generously, including forms of compensation in addition to traditional financial payments such as transportation, food, and child care (Brown, K.S. et al., 2019)
	3. Have I taken steps to recruit a representative sample from the community? How will my sample composition affect generalizability?	Use snowball sampling and community partners to help establish trust with participants (Rowley & Camacho, 2015)
		Regularly review demographic characteristics of the sample to ensure ongoing representation of groups (Pedersen et al., 2022)
Demographic Methods	1. Which demographic variables am I considering including? Which am I considering excluding? What is my justification?	Clearly document the rationale for including and excluding certain demographic variables (e.g., in a protocol)
	2. What am I trying to ask with these demographic variables? What are the limitations of these variables?	Consider including demographic variables that might be relevant for future research, even if not directly relevant to the current study aims (e.g., demographic characteristics that may be relevant for future meta-analyses)
	3. How do my choices surrounding demographic methods affect generalizability and interpretability in the context of other research, including future meta-analyses?	Recognize the sensitivity of demographic data and be explicit and clear with participants about why you need it and how you will use it (Rowley & Camacho, 2015)
	4. Who am I helping by including or excluding these variables? Who am I harming? How can I reduce the harm? If harm is possible, what is my justification for proceeding?	Consider using evidence-based demographic questionnaires (e.g., PhenX Toolkit; Hamilton et al., 2011)
		Do not use the label "other" when listing options for demographic categories as it carries a negative connotation of being abnormal (Ford et al., 2021; consider instead "not listed" or "prefer to self-describe")

Research Stage (See Figure 1)	Questions to contemplate	Examples of practices to consider and resources to leverage
		When asking questions about gender/sex, avoid only including binary male/female options (e.g., include genderqueer as an option; Hyde et al., 2019))
		When using a checklist of demographic items, allow participants to check as many as they want; do not force a single selection Moody et al., 2013; Viano & Baker, 2020)
		Use open-ended demographic questions so participants are not forced to check a box that may not accurately describe their identity (Roberts et al., 2020)
		For surveys, include demographic questions at the end so participants can choose whether and what demographic information to disclose within the informed context of the other information they've already shared (Moody et al., 2013)
		Provide an easy/accessible way for participants to express any concerns or questions about the methods (Moody et al., 2013)
		Include questions about cultural assets and strengths, do not only focus on cultural deficits or weaknesses (Castillo & Gillborn, 2022; Sablan, 2019)
Ethical Use of **Demographic Data**	1. What are the potential benefits and harms of how I plan to statistically examine demographic data? How can I maximize benefits and minimize harms? 2. Have I pre-registered my analytic plan and methods related to demographic data? If not, what is my justification?	Establish an *a priori* conceptual framework to support why each demographic factor you include in analysis is relevant to your research question (Chandran, 2021; Noroña-Zhou & Bush, 2021) When analyzing race/ethnicity, avoid defaulting to White as the reference group. This reinforces White as the standard that all other racial/ethnic groups should be normed to (Ionnidis et al., 2021; Noroña-Zhou & Bush, 2021) Examine within-group variability before collapsing groups based on a shared demographic feature for between-group comparisons (Buchanan et al., 2021; Noroña-Zhou & Bush, 2021; Rowley & Camacho, 2015) Try not to collapse different demographic groups with small sample sizes into an "other" or "minority" variable that lacks conceptual meaning (Castillo & Gillborn, 2022; Flanagin et al., 2021; Noroña-Zhou & Bush, 2021); If it is necessary to collapse some groups, justify this decision and describe its limitations
Capability Set [Community]: **How, and should, this data be applied?**	1. **Who** will these findings and corresponding interpretations benefit or harm? Has there been **community input** from those that these findings might affect? 2. Are there communities that are noticeably absent from my research sample? If so, have I reviewed and enacted suggestions for increasing representation (see Capability Set[Community]: How, and should, this data be collected?)? 2. How can I disseminate results back to the **community**? How does the community want these results to be utilized moving forward? 3. Am I planning to share the demographic data publicly? What is my justification? Have I considered the **benefits and harms** of sharing demographic data? Have I received community input about this?	Re-review the literature to understand how community input has or has not been applied to similar research before (Pedersen et al., 2022) Discuss findings, their implications, and if/how to disseminate both the original data (i.e., through public data sharing) and the findings with community partners and/or community-engaged consultants (Collins et al., 2018) Be intentional about which "broader audiences" you are trying to engage. "The audience outside of academia" is not a monolith, so strive to understand the intended audience and craft dissemination materials specifically for them (Lewis Jr. & Wai. 2021) Host community data walks (Brown, K.S. et al., 2019)
Transformative Functioning	1. How am I choosing to report demographic data? Which intersectional identities have I reported? What is my justification based on my research question, community input, and the position	Consider reporting the full sample demographics even for demographic factors not included in analyses either in text or as a supplement (Roberts et al., 2020).

Research Stage (See Figure 1)	Questions to contemplate	Examples of practices to consider and resources to leverage
	of my research within the broader context of my field (e.g., facilitating comparisons with other work)?	Report intersectional identities in text and/or as a supplement. While it may be impossible to report all intersectional identities, consider reporting those that are particularly relevant to your research question or that the community has asked you to center.
	2. How am I interpreting findings from demographic data? What theoretical or empirical justification do I have for this interpretation? Could my interpretation reinforce harmful or inaccurate biases?	Consider including a positionality statement in manuscripts to enhance transparency and to better contextualize the work (Castillo & Gillborn, 2022; Roberts et al., 2020)
	3. Have I carefully described the limitations of the data and what they cannot be used to describe?	Be clear about generalizability and limitations (e.g., include a constraints on generalizability statement in manuscripts; Castillo & Gillborn, 2022; Pedersen et al., 2022; Simons et al., 2017)
	4. How can I partner with the community to use these findings to address root causes of inequity and restore well-being?	Situate socially constructed demographic characteristics properly within historical and sociopolitical contexts (e.g. do not ascribe racial/ethnic differences to biological differences; Cole, 2009; Noroña-Zhou & Bush, 2021)
		Disseminate the research process and methods along with the findings (e.g., be explicit about who was/wasn't included; (Lewis Jr. & Wai, 2021)
		Exercise scientific humility when contributing to public discourse (Lewis Jr. & Wai, 2021)

Note. Our suggestions related to demographic data draw from theories of social justice (Fraser, 2009; Sen, 1985) and the American Psychological Association's General Principles of Ethics (APA, 2016): (1) Beneficence/maleficence: Maximizing benefits and minimizing harms to research participants and the broader community; (2) Fidelity and responsibility: Justifying decisions related to demographic data by remaining up-to-date on empirical and theoretical knowledge; (3) Integrity: Ensuring that demographic data accurately capture identities and clearly communicating the limits of the data; (4) Justice: Attending to who is included and excluded from the research, who is affected by research findings, and how we can utilize research findings to address root causes of inequity and restore wellbeing; (5) Respect for people's rights and dignity: Partnering with individuals from the community to center their voices in the research process in order to affirm identities, communicate respect, and promote wellbeing.