



How Does the Lack of Diversity in Psychological Science Research Affect Undergraduate Students?

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Abstract

Background: Psychological science has relied on samples that do not reflect the breadth of human diversity, creating challenges for instructors teaching this science to diverse students who may not see themselves reflected in the science they are supposed to be learning.

Objective: The purpose of this study was to use qualitative data to determine psychology students' awareness of research samples, how sample demographics affect them, and how they would like professors to address the lack of diversity.

Method: Focus groups were conducted with undergraduate psychology students ($N = 27$), and transcripts were analyzed thematically.

Results: Students noticed the lack of diversity in psychology research samples, which impacted their sense of belonging, motivation, and perceptions of the field. They emphasized the influential role of instructors in shaping awareness and called for more inclusive teaching practices. At the same time, a subset of students reported that this issue was not salient to their classroom experience.

Conclusion: Lack of diversity in research shapes students' experiences, including participation, sense of belonging in the classroom, and desire to continue in the field.

Teaching Implications: Instructors can enhance student engagement by transparently addressing sample diversity and integrating more representative research into their teaching.

Keywords

belongingness, diversity, open science, pedagogy, teaching of psychology

Transparency and Open Science Statement

The materials used in this study are available (Williamson, 2026). The raw qualitative data and thematic analysis files are not publicly available due to privacy restrictions imposed by the institutional ethics board. No aspects of the study were preregistered.

In recent years, a growing body of metascience research has revealed that psychological science relies heavily on samples that do not reflect the breadth of human diversity (e.g., Henrich et al., 2010). While considerable attention has been devoted to how this lack of representativeness undermines the validity, generalizability, and equity of our science (e.g., Arnett, 2008; Ledgerwood et al., 2022; Roberts et al., 2020; Simons et al., 2017), one critical dimension has been largely overlooked: how these sampling practices shape the undergraduate educational experience. Psychology courses frequently engage topics that directly relate to students' own thoughts, emotions, behaviors, and relationships, providing a context in which students can consider how research relates to their identities and experiences. When the research presented in class

consistently fails to include or reflect students' identities and experiences, it may send an implicit message about whose lives are considered central to psychological inquiry. This disconnect poses a potential threat to students' sense of belonging and engagement, particularly for those from underrepresented backgrounds, and may have lasting implications for diversity in the field. The current study uses qualitative methods to examine how undergraduate students perceive and are affected by the homogeneity of research samples taught in their courses, and to identify potential solutions that instructors can use to mitigate this issue.

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Although concerns about sampling bias in psychological research have been raised for decades (Bauserman, 1997; Bell & Hertz, 1976; Gallander Wintre et al., 2001; Graham, 1992; Sears, 1986), the recent surge in metascience prompted by the “replication crisis” has provided compelling and systematic evidence that psychological science, across nearly every subfield, continues to rely heavily on samples that fail to reflect the diversity of the broader human population. Systematic reviews have documented this trend across the field at large (Cheon et al., 2020; Rad et al., 2018; Roberts et al., 2020), as well as in various subfields such as evolutionary psychology (Pollet & Saxton, 2019), developmental psychology (Nielsen et al., 2017; Qu et al., 2020), couple and family psychology (Tseng et al., 2021; Williamson et al., 2022), teaching and school psychology (Grunewald et al., 2014; Richmond et al., 2015), and social psychology (Henry, 2008). Importantly, the lack of representativeness documented in this metascience research spans multiple dimensions of diversity, including race and ethnicity, gender and sexual identity, socioeconomic background, disability status, and national or cultural context.

In contrast to the persistent homogeneity of research samples, the population of university students is highly diverse across multiple dimensions. For example, in the United States, as many as 30% of undergraduate students identify as a sexual minority, nearly 40% come from households at or near the poverty line, and among psychology students 40% of bachelor’s degrees are awarded to students from minoritized racial or ethnic backgrounds (Digest of Education Statistics, 2023; Eisenberg et al., 2025; Fry & Cilluffo, 2019; Stamm et al., 2024). The contrast between the diversity of students and the homogeneity of research samples used in their coursework introduces unique pedagogical challenges: instructors may present theories and findings that do not connect with, or even implicitly exclude, the lived experiences of many students. Together, this body of work documents a serious and persistent lack of representativeness in psychological research samples with implications for scientific validity, equity, and inclusion; a “diversity crisis” in psychological science.

While the lack of representativeness in psychological research has been documented primarily as a field-level scientific problem, far less attention has been paid to how this gap is experienced by students within psychology training environments. To date, only a small number of studies have examined students’ perceptions of research sample representation in educational contexts. At the graduate level, racially and ethnically minoritized graduate students are significantly more likely than White peers to report either total exclusion from research samples or stereotypical portrayals (Maton et al., 2011). At the undergraduate level, racial and ethnic minority students and gender and sexual minority students are more likely to report a lack of belonging and greater academic discomfort when they perceive that course content fails to represent their identities (Snidman et al., 2024). What remains less well understood is how students experience and interpret research sample representation as they engage with course material, including when it becomes salient, how they understand it, and what meanings they attach to it.

Syed et al.’s (2018) concept of perpetuating invisibility provides a useful framework for understanding how students experience and interpret underrepresentation within academic contexts. When research examples, course materials, and scholarly voices consistently fail to reflect a range of identities and experiences, students whose identities, histories, or life experiences fall outside the populations most commonly studied in psychological research may come to feel unseen or peripheral within the academic space (Yust et al., 2021). In such environments, students may struggle to connect with course content or to view themselves as legitimate members of the discipline (Nusbaum, 2020). These experiential and interpretive responses matter because they are linked to important downstream consequences of this disconnect, extending far beyond academic discomfort. College students who feel a diminished sense of belonging in the classroom or academia more broadly report lower life satisfaction (Fan et al., 2021), and among ethnic minority college students, a lower sense of belonging is also associated with poorer academic self-perceptions (Gummadam et al., 2016).

Understanding how students experience and interpret underrepresentation in their coursework is important because these classroom encounters are often students’ primary point of contact with the discipline. Ultimately, when students feel alienated in their own classrooms, they may opt out of graduate study or academic careers, thus perpetuating both the homogeneity of psychological research and the lack of representation among future scholars. Indeed, psychology doctoral students from racially and ethnically minoritized backgrounds, as well as those with disabilities, have higher attrition rates than their counterparts (Callahan et al., 2018). Yet little research has directly examined whether students perceive a lack of representation in psychological research and how they respond to this potential threat to belongingness in psychology classrooms. To address these gaps, we conducted a qualitative study using focus groups with undergraduate social science majors to explore:

- **RQ1:** Are students aware of the samples used in research studies, and where does this awareness come from?
- **RQ2:** In what ways do the samples used in research studies impact students?
- **RQ3:** How would students like to see professors approach this issue?

By centering student perspectives, this research aims to illuminate the overlooked impact of the “diversity crisis” in psychology on undergraduate students and identify pedagogical strategies to help overcome this limitation in our field.

Method

Positionality

The authors have a range of positionality within the academic hierarchy, including undergraduate students, a postbaccalaureate staff member, a PhD student, a postdoctoral fellow, and a

tenured professor. The authors also have a variety of social identities and experiences that confer various levels of power and privilege. We view reflexivity and a diversity of viewpoints as a strength of our collaborative process and have worked intentionally to center the voices and experiences of participants, while maintaining a critical awareness of how our own positions shape the research by engaging in collaborative coding and reflexive discussion of analytic decisions, prioritizing participants' accounts, and discussing multiple possible interpretations of the data as a team.

Design

The study employed a qualitative research design to examine undergraduate students' perceptions of representation in social science research, its impact on their classroom experiences, and their thoughts and feelings about the field. Given that little is known about this topic, a qualitative approach was used to explore these ideas in an open-ended, participant-directed manner. Focus groups were used to provide an interactive and conversational setting, allowing students to articulate the nuances and complexities in their perspectives on representation in research, their emotional responses to feeling represented or underrepresented, and their thoughts on how the field and their professors could improve in addressing diversity in research.

Participants and Procedure

The study was conducted at a large public university in the United States. Participants were recruited through flyers sent via email from social science departments to their enrolled students, as well as through flyers posted on various student forums and social media sites. Students were invited to participate in a study about "social science courses" if they met the inclusion criteria, which included being a social science major, having completed at least two courses in their major, and being at least 18 years old. Eligible students were scheduled into a focus group based on their availability. Each participant was provided a pizza dinner during the focus group as well as a \$25 gift card upon completion of the focus group.

Demographics were assessed using an online interest form during the recruitment process. Of the 75 responses received, 42 were eligible to enroll, with 27 students ultimately participating in the study, based on their availability and scheduling constraints. The majority of participants ($n=21$, 78%) were Psychology majors, with an additional three Human Development and Family Science majors, one Social Work major, one Sociology major, and one Human Ecology major. Participants had completed an average of 5.6 social sciences courses ($SD=2.8$), with a range of 3–13 courses. Importantly, all participants had completed multiple psychology courses, and psychology coursework represented the primary shared academic context across the sample. Accordingly, references to "courses" throughout the manuscript refer to psychology courses. Overall, the final sample reflected substantial demographic diversity across gender identity, race

Table 1. Sociodemographic Characteristics of Participants.

Characteristic	<i>n</i>	%
Gender identity		
Female	18	67%
Male	7	26%
Nonbinary	1	4%
Gender-fluid	1	4%
Race/Ethnicity		
Asian/Pacific Islander	8	30%
Black	8	30%
White	5	19%
Hispanic/Latino	4	15%
Mixed Race	2	7%
Sexual orientation		
Straight	17	63%
Bisexual	5	19%
Lesbian	1	4%
Gay	1	4%
Questioning	1	4%
Demisexual & biromantic	1	4%
Prefer not to answer	1	4%
Year in college		
1 st	1	4%
2 nd	4	15%
3 rd	13	48%
4 th	9	33%

Note. $N=27$.

and ethnicity, sexual orientation, and year in school (see Table 1 for full demographic information).

Four focus groups were conducted (with 4–8 participants each), each of which lasted for two hours and was conducted in a quiet conference room, providing a comfortable and private environment for participants. Upon arrival, participants received a research information sheet and were offered pizza and beverages before the focus group began. Each focus group was facilitated by a primary moderator, a comoderator, and a notetaker. These three roles were filled by two undergraduate students and a recent college graduate, to ensure that participants felt comfortable talking openly about their experiences with classes and faculty members. The moderator led the discussion using a detailed discussion guide, and the comoderator assisted in clarifying questions and probing answers when needed to ensure full understanding. The designated notetaker recorded key points during each focus group and prepared a brief summary that was read aloud at the end of the discussion to confirm that participants' main points had been accurately captured. Each focus group was recorded with an audio recorder, and the recordings were transcribed. All study protocols were approved by the Institutional Review Board of the University of Texas at Austin (STUDY00006694).

Materials

The focus groups used an interview guide that consisted of 11 open-ended questions designed to explore participants' awareness of the samples used in psychological research, how their

professors present this information, and how this impacts them. Consistent with best practices in qualitative interviewing, questions were organized in a funnel-shaped structure that began with broad, open-ended prompts and gradually moved toward more specific topics related to representation (Krueger & Casey, 2014). Early questions were intentionally framed broadly to allow participants to describe what was most salient to them without being cued toward a particular interpretation: “Often in classes, professors discuss specific research studies. When your professors talk about a study, what are some things that stand out from the research, or that you notice?” As the discussion progressed, later questions more explicitly addressed issues of identity and representation to explore whether, how, and when these considerations became relevant to students’ classroom experiences: “Still thinking about the research studies that professors talk about in class – have you felt that your identities were well represented in the research presented in your classes?” and “Think back to a time when your identity was not well-represented in the research being presented in your class. Can you describe what you were thinking and feeling at that moment?” See Williamson (2026) for the full interview guide.

Analysis

We used thematic analysis to examine patterns across verbatim transcripts of the focus group discussions (Braun & Clarke, 2006). Themes were developed inductively, grounded in participants’ responses rather than guided by a preexisting theoretical framework. As a first step, the senior author reviewed a subset of the data and generated a preliminary set of codes. The remaining coders (four of the coauthors) then applied and refined these codes across the dataset. Through an iterative process involving regular team discussions, the code definitions were revised, and broader themes were developed collaboratively. Coding and analysis were conducted using Taguette, an open-source qualitative analysis tool (Rampin & Rampin, 2021). Discrepancies were resolved through consensus, and thematic development continued until no new themes emerged and conceptual saturation was achieved.

Results

Are Students Aware of the Samples Used in Research Studies, and Where Does This Awareness Come From?

Professors as Catalysts for Critical Awareness. Many students described professors as pivotal in fostering awareness around sample demographics and historical exclusion in scientific research. Some instructors created more inclusive classroom environments by openly discussing the limitations of homogeneous research samples and emphasizing the importance of diversity in psychological research. For example, one student shared that a professor taught them that many samples used in psychological research are “not representative of the entire

population and lack generalizability.” Others noted they likely wouldn’t have thought about representation in research had their instructors not initiated those conversations.

Courses that spurred this awareness included general courses such as Research Methods and Intro to Clinical Psychology, as well as courses that focused specifically on diversity, such as Multicultural Psychotherapy and Diversity in Cognitive Aging. Across these settings, students reported that their professors significantly shaped their critical thinking about research and helped them question whose experiences were represented or excluded in scientific findings. While general courses introduced foundational conversations about sample demographics and research practices, special topics courses often had a deeper personal and intellectual impact. These classes not only expanded students’ understanding of representation in science but also fostered a stronger sense of belonging, particularly when course content reflected their own identities and experiences. Together, these classroom experiences served as key moments in developing students’ capacity to examine research through a more critical lens, often influencing how they approached course materials across their academic programs.

At the same time, students recognized when professors routinely failed to address representation in their teaching. Some expressed disappointment that open dialogue about sample demographics was not standard practice, noting that while a few instructors were candid and intentional, most avoided the topic altogether. One student observed that “professors are hesitant” to consistently discuss study demographics and that this lack of consistency limits progress: “awareness rarely progresses to a standard practice.” Despite this inconsistency, students emphasized the lasting influence of the few professors who did engage critically with representation, underscoring the power of faculty to shape how students interpret, question, and learn from research.

Passive Consumption Versus Active Inquiry. The information presented by instructors was influential to all students, but students differed in the degree to which they actively engaged with the research beyond what was presented in class. Some adopted a critical lens, questioning what was missing from studies and seeking out demographic information that instructors did not explicitly provide. These students, who often described either their own minoritized identities or a broader attunement to issues of diversity and representation as shaping their interests, described noticing patterns of exclusion and taking initiative to investigate further. One student noted, “If the study doesn’t explicitly set out to focus on a certain minority population, then the population is male, White, middle-class, heterosexual.” This awareness often emerged independently of formal instruction and reflected a more inquisitive approach to scientific knowledge. In contrast, other students relied more passively on the material presented by instructors, regardless of their identities. Even when aware that demographic details were missing, they rarely pursued additional context. Some students didn’t notice the absence of demographic information at all. These differences reflect a spectrum of engagement

orientations, ranging from active reflection on representation to prioritization of other aspects of course content over representation.

Divergent Priorities in Academic Focus. Beyond how students engaged with course materials, they also differed in what they prioritized in their academic experience. For some students, especially those attuned to issues of equity and representation, understanding who was included in research samples was central to their interpretation of findings and their connection to the material. These students valued the relevance and inclusiveness of research as key to their learning. In contrast, other students across the sample, regardless of background, approached coursework with more pragmatic goals, such as mastering the material needed to succeed on exams or assignments. For them, demographic representation was not a central concern; instead, their focus was on absorbing the core concepts emphasized by the instructor. As one student explained, they “don’t consciously think about being represented” when reading empirical papers and were more concerned with understanding the results. These contrasting academic priorities shaped levels of awareness about representation in research.

In What Ways Do the Samples Used in Research Studies Impact Students?

Discouragement and Disillusionment. Many students described strong emotional responses to the persistent lack of diversity in the research samples presented in their coursework. Students used words such as “discouraged,” “frustrated,” “angry,” and even “disturbed” to describe how they felt when they did not see their identities reflected in classroom materials. These emotional reactions were often accompanied by a sense of disempowerment; students expressed uncertainty about how to raise concerns or influence their instructors to address the issue. Many of these students shared impassioned arguments regarding how they felt and the ways in which this lack of representation negatively impacted their emotional state. Several reported feeling unable to participate in classroom discussions and doubting their ability to thrive in academia. For some students, particularly those who described involvement in research labs and prior interest in research careers, the lack of representation contributed to a broader sense of disillusionment, leading them to question whether a future in academic research was possible or even desirable. As one student put it, they no longer believed they could make a positive difference through academic research and intended to pursue a different career path that they perceived as more impactful.

Lack of Representation as Motivation. For some students, feeling that they were not represented in the research discussed in class became a motivating force. Rather than feeling discouraged or excluded, these students described how the lack of representation inspired them to pursue research that is more inclusive of diverse and marginalized communities. One student explained,

“I think that if I were to go into research the lack of representation [would] make me more motivated to partake in something that would have a greater focus on representing more groups of people, or specifically those that tend to be underrepresented.” These students viewed the underrepresentation not simply as a barrier but as a gap they felt compelled to address. For them, the lack of representation served as fuel to find their place within the field and to make meaningful changes. The desire to see themselves and their experiences represented in research became a source of motivation to contribute to a more equitable and inclusive future in psychology.

The Power of Small Moments of Representation. Although most students acknowledged the broader lack of representation in academic research, some described how even brief or subtle instances of inclusion had a meaningful impact on their academic experience. These moments often involved recognizing a shared identity, cultural background, or lived experience within a study. One student recalled encountering an author with the same uncommon last name, which they associated with their own minoritized cultural background. This moment led them to feel a connection to the researcher and increased their enthusiasm for completing the assigned reading. Another student shared that seeing themselves reflected in research “gives more meaning and purpose to the data that I’m reading.” For students who are rarely represented in academic settings, these small but powerful instances helped foster a sense of connection, personal relevance, and belonging. Even when representation was not central to the course, these moments created emotional resonance, increasing students’ engagement and motivation.

Assumed Inclusion and Accepted Exclusion. In contrast to the positive and negative impacts described above, some students reported that the research discussed in their courses had no personal impact. The reasons for this lack of impact differed significantly for students with majority versus minoritized identities. Students without minoritized identities typically felt adequately represented in the research presented in their classes, perceiving their inclusion as standard and thus experiencing no change in their interest in the class, research, or the field of psychology. One student stated, “I feel like I’m aware that there are groups that are underrepresented in research, but when I read papers and stuff I don’t consciously think about being represented.” Thus, for these students, representation was an afterthought and something that many took for granted.

In contrast, many minoritized students described a normalized experience of exclusion, noting that not seeing their identities represented in research was so common that they had no expectation of representation. One student described feeling “detached” from the research because it is “normal for me to not see myself in the data.” Others characterized the lack of representation as “unsurprising” or “not shocking.” For some, this expectation of exclusion led to feelings of apathy and indifference. As one student reflected, “It’s scary to think about how apathetic [we’ve] become to the disparity in research with

minorities.” This suggests that while minority students are acutely aware of underrepresentation, many accept it as the prevailing standard in social science research.

Finally, some students with minoritized identities reported that the lack of representation in research samples did not significantly affect them, as other classroom factors, such as the inclusivity of instructors and peers, had a more immediate impact on their personal and academic experiences. One student stated, “I’m there to learn the content and so I think what would negatively impact me is if the environment I’m in doesn’t make me comfortable.” Others agreed that a welcoming classroom climate was more influential than the demographic composition of research samples in shaping their engagement and well-being. When describing what made a classroom feel welcoming, students overwhelmingly pointed to opportunities for open discussion, including respectful interaction among peers and instructors who encouraged multiple perspectives and made space for students to share their own experiences.

How Would Students Like to See Professors Approach This Issue?

Appreciating Challenges While Expecting Progress. Many students acknowledged the complexities and difficulties instructors face in incorporating representative research into their classrooms, particularly given that much of the material taught in core courses consists of older, “foundational” studies that do not reflect the diversity of contemporary populations. Students nevertheless expressed appreciation when professors encouraged critical engagement with these studies rather than omitting them altogether. They emphasized that foundational research remains valuable and influential for understanding the development of psychological knowledge, even when its samples were limited.

Students also recognized that some classic studies could not be ethically replicated today with more diverse samples, yet still viewed them as important to include in the psychology curriculum. For example, students mentioned Milgram’s studies of obedience and Zimbardo’s Stanford Prison Experiment as examples of studies that were deeply influential to the field, while also being composed primarily of White male participants and using procedures that would not meet current ethical standards. Taken together, students articulated a nuanced position: while these studies are outdated in terms of representation and ethics, they retain educational value when taught with appropriate historical context and critical discussion.

Beyond appreciating historical context, many students, particularly those with experience as research assistants, recognized the practical challenges researchers encounter in creating diverse, representative samples. They identified barriers such as funding constraints, language differences, limited resources for community outreach, and complexities in data collection processes. Students were aware of and sympathetic to the limitations and hardships researchers face in collecting data that is diverse and widely representative. However, despite

recognizing these difficulties, students continue to hope for greater diversity in future studies and greater transparency when discussing existing studies.

Accountability and Intentionality in Research and Teaching. Students emphasized the importance of transparency in classroom discussions, where students wanted instructors to openly address research methods, sample demographics, and study limitations. Students emphasized that transparency should extend beyond brief or casual mentions of limitations, encouraging professors to teach students to critically evaluate sampling choices and to provide cultural and historical context to help them accurately interpret research findings.

Intentional, deliberate efforts by instructors to foster inclusivity in their teaching were also highly valued. Students believed that when instructors intentionally foster inclusivity, it positively impacts not only the classroom climate but also the ways students engage with research and make future career decisions. One student described their desire to see professors “try and inspire the students who are really interested in research and going down that path in their career” to become agents of change.

Finally, students held high expectations for instructors to demonstrate personal efforts toward inclusivity in their own research and to be transparent about these efforts. One student stated, “I think [professors need to be] more mindful that people are expecting a change and expecting a difference. It’s one thing to say ‘yes, we’re aware of those limitations...’ and then another thing to say that ‘we’re actively working on trying to get rid of those limitations and broaden the populations that we’re studying.’” Together, these expectations highlight students’ desire for instructors to be both accountable and proactive in fostering a more diverse and inclusive academic environment.

Discussion

A growing body of metascience research has highlighted a persistent lack of diversity in the samples used across psychological science. Although scholars have long critiqued the field’s overreliance on nondiverse samples, the recent replication crisis has reinvigorated calls to address the limited generalizability of much psychological research (Apicella et al., 2020; Henrich et al., 2010). The primary focus of these discussions has been scientific validity and external generalizability, but one potential consequence of the “diversity crisis” has remained largely overlooked: the impact of nonrepresentative research samples on the undergraduate students who are learning this science in the classroom.

This study aimed to address that gap by examining how students understand and respond to the lack of diversity in the research they are taught, and what they expect from their instructors in light of these limitations. Our findings suggest that many students, particularly those from minoritized backgrounds (e.g., racial/ethnic minorities, sexual and gender minorities, students from immigrant backgrounds), do notice

when they are not represented in research, and that this recognition can shape their academic engagement, motivation, and even career aspirations. Consistent with prior research on students' negative responses to a lack of representation (Maton et al., 2011; Snidman et al., 2024), our results indicate that the absence of representation can lead to emotional and academic costs for minoritized students. Many participants described feelings of alienation, frustration, and discouragement when they failed to see themselves reflected in the research being taught. These reactions are consistent with the concept of invisibility (Syed et al., 2018), in which minoritized students feel unseen in both the academic content and the institutional environment, leading to disengagement and a sense of not belonging. These emotional responses are not trivial but they can have lasting effects on students' academic self-concept, career trajectories, and persistence in academia (Fan et al., 2021; Gummadam et al., 2016).

At the same time, several students described how the absence of representation served as a source of motivation. Rather than alienating them, the gap inspired a desire to conduct more inclusive research and change the culture of academia from within. This determination to transform adversity into meaningful action reflects these students' resilience (Taormina, 2015). Yet, it remains unclear what fosters this adaptive response in some students but not others. More research is needed to better understand what determines whether a student experiences underrepresentation as motivating or demoralizing, and what role instructors may play in shaping that response. If faculty can learn how to frame existing gaps in the literature in ways that promote student empowerment, they may help mitigate the harmful effects of invisibility and foster greater engagement from all students. This idea parallels efforts within the open science movement to reframe the replication crisis as a "credibility revolution," emphasizing collective improvement and transparency in order to promote empowerment and engagement (Korbmacher et al., 2023).

For students from backgrounds historically underrepresented in academia, the emotional impact of seeing themselves represented, however infrequently, was notable. One student described how even a single study or author that reflected their cultural background provided a greater sense of connection, excitement, and relevance to the course. These small acts of inclusion appeared to have disproportionate positive effects, suggesting that greater intentionality in the selection and discussion of research examples could meaningfully improve student experiences. In contrast, the consistent absence of diversity often went unremarked upon by instructors, reinforcing a sense of exclusion that some students had come to expect.

Importantly, professors played a crucial role in this process. Students expressed clear expectations that their instructors approach the issue of sample diversity with accountability and intentionality in their research and their teaching. They wanted professors to be transparent about the limitations of the literature and to model inclusive practices in their teaching of psychological science. Although many students expressed empathy for the real barriers to conducting representative

research, they still expected professors to discuss those challenges and strive for improvement openly. These findings echo and extend APA's guidance for instructors to examine their spaces of power and privilege and underscore the role of instructors in shaping the academic climate (Task Force on Socioeconomic Status, 2007).

Implications for Teaching

These findings suggest several actionable directions for instructors to address the "diversity crisis" in psychology and improve inclusivity in psychological education. Instructors can begin by routinely addressing the demographics of research samples and providing critical context when discussing classic or foundational studies. Additionally, professors should actively update their teaching materials to include diverse examples and research studies whenever possible, ensuring that a wider range of identities and experiences are represented throughout the curriculum. Instructors can also create space for students to reflect on whose experiences are represented in the research they are learning and why that matters. These relatively small pedagogical choices can send a strong message to students that their identities and perspectives matter in scientific discourse, even though the literature does not yet fully reflect the backgrounds and experiences of all students. More extensive discussions of these instructional approaches can be found in the literature on decolonizing pedagogies, which offers detailed guidance on teaching practices that foreground critical examination of knowledge production, representation, and power in the classroom (Macedo de Lucas et al., 2026; Phiri et al., 2023; Saxena et al., 2024).

However, these classroom dynamics are unfolding in a politically charged environment where legislative efforts to restrict diversity, equity, and inclusion (DEI) initiatives have become increasingly common across the United States. In Texas, Senate Bill 17 prohibits DEI offices in higher education, while Senate Bill 37 restricts the teaching of some race- and gender-related concepts (Governance of Public Institutions of Higher Education Act, 2025; Responsibility of Governing Boards Regarding Diversity, Equity and Inclusion Initiatives, 2023). Similarly, Florida's Stop WOKE Act (Individual Freedom Act, 2022) bans DEI programs and the discussion of the so-called "divisive concepts," including in STEM and social science courses. Other states, including Oklahoma, Ohio, Kentucky, Indiana, North Dakota, and Iowa, have introduced or passed laws limiting the teaching of certain concepts about race and gender, DEI offices, and the consideration of diversity in hiring and tenure decisions (Dismantling DEI: A Coordinated Attack on American Values, 2024). While some of these laws explicitly constrain what can be taught in university classrooms, others exert a more subtle chilling effect on academic discourse by discouraging faculty from engaging openly with issues of representation. The findings of this study suggest that such restrictions will negatively impact students by undermining the transparency and intentionality that foster belonging and motivation in the classroom. Institutions can

support faculty and students by resisting efforts to curtail discussion of DEI in classrooms and actively investing in training and resources that empower instructors to facilitate complex conversations about representation, privilege, and power in science.

Finally, faculty should recognize that their research and teaching endeavors are intertwined. For many students, professors are not only sources of knowledge but also examples of how to conduct research responsibly and with integrity. When professors are transparent about the demographic limitations of their studies or make a visible effort to recruit more diverse participants, students take notice. These actions communicate that inclusivity is not only a theoretical ideal but also a practical and ethical consideration in real-world research. Conversely, when students perceive their instructors as indifferent to the lack of diversity in their own research, they may conclude that these issues are peripheral or unimportant in the field of psychological science.

Despite these implications and contributions, limitations of the current study must also be acknowledged. This study was conducted at a single institution, which limits the generalizability of the findings. Future research should seek to replicate these results at similar large public R1 institutions and explore these dynamics across different types of institutions, such as community colleges and smaller liberal arts colleges. It would also be valuable to examine the impact on students who have not yet declared a major to determine whether the content of early introductory courses influences persistence in the major. It is also possible that students' perceptions of representation in psychological research influenced their willingness to participate in the study. Recruitment materials described the project broadly as an exploration of students' experiences in social science courses, and the sample included students from a wide range of demographic backgrounds, suggesting that participation was not limited to a narrow group. However, motivations for participation were not assessed, so we cannot directly determine whether or how perceptions of representation shaped the sample; future research could examine this question directly. Finally, studies that incorporate faculty perspectives would be valuable for understanding the perceived challenges to incorporating considerations of diversity and representation in their pedagogy.

In sum, the lack of diversity in psychological research is not only a threat to the validity, interpretability, and generalizability of scientific findings but also a source of meaningful impact on undergraduate students in the classroom. This study highlights how undergraduates engage with representation in research, how it shapes their sense of belonging, and what they expect of their teachers. Instructors who respond with transparency, intentionality, and inclusivity can foster more equitable learning environments and cultivate a new generation of scholars equipped and motivated to advance a more representative psychological science.

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References

- Apicella, C., Norenzayan, A., & Henrich, J. (2020). Beyond WEIRD: A review of the last decade and a look ahead to the global laboratory of the future. *Evolution and Human Behavior, 41*(5), 319–329. <https://doi.org/10.1016/j.evolhumbehav.2020.07.015>
- Arnett, J. J. (2008). The neglected 95%: Why American psychology needs to become less American. *American Psychologist, 63*(7), 602–614. <https://doi.org/10.1037/0003-066X.63.7.602>
- Bauserman, R. (1997). International representation in the psychological literature. *International Journal of Psychology, 32*(2), 107–112. <https://doi.org/https://doi.org/10.1080/002075997400908>
- Bell, R. Q., & Hertz, T. W. (1976). Toward more comparability and generalizability of developmental research. *Child Development, 47*(1), 6–13. <https://doi.org/10.2307/1128278>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Callahan, J. L., Smotherman, J. M., Dziurzynski, K. E., Love, P. K., Kilmer, E. D., Niemann, Y. F., & Ruggero, C. J. (2018). Diversity in the professional psychology training-to-workforce pipeline: Results from doctoral psychology student population data. *Training and Education in Professional Psychology, 12*(4), 273–285. <https://doi.org/10.1037/tep0000203>
- Cheon, B. K., Melani, I., & Hong, Y. (2020). How USA-centric is psychology? An archival study of implicit assumptions of generalizability of findings to human nature based on origins of study samples. *Social Psychological and Personality Science, 11*(7), 928–937. <https://doi.org/10.1177/1948550620927269>
- Digest of Education Statistics (Table 322.30 Bachelor's degrees conferred by postsecondary institutions, by Race/ethnicity and Field of study: Academic years 2020-21 and 2021-22). (2023). National Center for Education Statistics. https://nces.ed.gov/programs/digest/d23/tables/dt23_322.30.asp

- Dismantling DEI: A coordinated attack on American values. (2024). Movement Advancement Project. <https://www.mapresearch.org/file/2024-DEI-report-MAP.pdf>.
- Eisenberg, D., Ketchen Lipson, S., Heinze, J., & Zhou, S. (2025). *The Healthy Minds Study: 2024–2025 Data Report*. University of California. <https://healthpolicy.ucla.edu/our-work/publications/healthy-minds-study-2024-2025-data-report>.
- Fan, X., Luchok, K., & Dozier, J. (2021). College students' satisfaction and sense of belonging: Differences between underrepresented groups and the majority groups. *SN Social Sciences*, 1(1), Article 22. <https://doi.org/10.1007/s43545-020-00026-0>
- Fry, R., & Cilluffo, A. (2019). *A rising share of undergraduates are from poor families, especially at less selective colleges*. Pew Research Center. <https://www.pewresearch.org/social-trends/2019/05/22/a-rising-share-of-undergraduates-are-from-poor-families-especially-at-less-selective-colleges/>.
- Gallander Wintre, M., North, C., & Sugar, L. A. (2001). Psychologists' response to criticisms about research based on undergraduate participants: A developmental perspective. *Canadian Psychology*, 42(3), 216–225. <https://doi.org/https://doi.org/10.1037/h0086893>
- Governance of Public Institutions of Higher Education Act, Tex. Educ. Code § 51.315. (2025). <https://capitol.texas.gov/tlodocs/89R/billtext/pdf/SB00037I.pdf>.
- Graham, S. (1992). "Most of the subjects were white and middle class": Trends in published research on African Americans in selected APA journals, 1970-1989. *American Psychologist*, 47(5), 629–639. <https://doi.org/https://doi.org/10.1037/0003-066X.47.5.629>
- Grunewald, S., Shriberg, D., Wheeler, A. S., Miranda, A. H., O'bryon, E. C., & Rogers, M. R. (2014). Examining diversity research literature in school psychology from 2004 to 2010. *Psychology in the Schools*, 51(5), 421–433. <https://doi.org/10.1002/pits.21764>
- Gummadam, P., Pittman, L. D., & Ioffe, M. (2016). School belonging, ethnic identity, and psychological adjustment among ethnic minority college students. *The Journal of Experimental Education*, 84(2), 289–306. <https://doi.org/10.1080/00220973.2015.1048844>
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, 33(2–3), 61–83. <https://doi.org/10.1017/S0140525X0999152X>
- Henry, P. J. (2008). College sophomores in the laboratory redux: Influences of a narrow data base on social psychology's view of the nature of prejudice. *Psychological Inquiry*, 19(2), 49–71. <https://doi.org/https://doi.org/10.1080/10478400802049936>
- Individual Freedom Act, Fla. SB 7, ch. 2022-72. (2022). <https://www.flsenate.gov/Session/Bill/2022/7>.
- Korbmacher, M., Azevedo, F., Pennington, C. R., Hartmann, H., Pownall, M., Schmidt, K., Elsherif, M., Breznau, N., Robertson, O., Kalandadze, T., Yu, S., Baker, B. J., O'Mahony, A., Olsnes, JØ-S, Shaw, J. J., Gjoneska, B., Yamada, Y., Röer, J. P., & Murphy, J., ..., & T. Evans (2023). The replication crisis has led to positive structural, procedural, and community changes. *Communications Psychology*, 1(1), 3. <https://doi.org/10.1038/s44271-023-00003-2>
- Krueger, R. A., & Casey, M. A. (2014). *Focus groups: A practical guide for applied research* (5th ed.). Sage Publications, Inc. <https://www.perlego.com/book/4604969/focus-groups-a-practical-guide-for-applied-research-pdf>.
- Ledgerwood, A., Hudson, S.-K. T. J., Lewis, N. A., Maddox, K. B., Pickett, C. L., Remedios, J. D., Cheryan, S., Diekman, A. B., Dutra, N. B., Goh, J. X., Goodwin, S. A., Munakata, Y., Navarro, D. J., Onyeador, I. N., Srivastava, S., & Wilkins, C. L. (2022). The pandemic as a portal: Reimagining psychological science as truly open and inclusive. *Perspectives on Psychological Science*, 17(4), 937–959. <https://doi.org/10.1177/17456916211036654>
- Macedo de Lucas, I., Kent, C., Ahmed, N., Ozcuc, U., Downey, G., & Allen, P. (2026). Decolonising the psychology curriculum: Perspectives from faculty at a UK university. *Teaching in Higher Education*, 31(2), 211–228. <https://doi.org/10.1080/13562517.2025.2571902>
- Maton, K. I., Wimms, H. E., Grant, S. K., Wittig, M. A., Rogers, M. R., & Vasquez, M. J. T. (2011). Experiences and perspectives of African American, Latina/o, Asian American, and European American psychology graduate students: A national study. *Cultural Diversity & Ethnic Minority Psychology*, 17(1), 68–78. <https://doi.org/10.1037/a0021668>
- Nielsen, M., Haun, D., Kärtner, J., & Legare, C. H. (2017). The persistent sampling bias in developmental psychology: A call to action. *Journal of Experimental Child Psychology*, 162, 31–38. <https://doi.org/10.1016/j.jecp.2017.04.017>
- Nusbaum, A. T. (2020). Who gets to wield academic Mjolnir?: On worthiness, knowledge curation, and using the power of the people to diversify OER. *Journal of Interactive Media in Education*, 2020(1), Article 4. <https://doi.org/10.5334/jime.559>
- Phiri, P., Sajid, S., & Delanerolle, G. (2023). Decolonising the psychology curriculum: A perspective. *Frontiers in Psychology*, 14, 1193241. <https://doi.org/10.3389/fpsyg.2023.1193241>
- Pollet, T. V., & Saxton, T. K. (2019). How diverse are the samples used in the journals 'evolution & human behavior' and 'evolutionary psychology'? *Evolutionary Psychological Science*, 5(3), 357–368. <https://doi.org/10.1007/s40806-019-00192-2>
- Qu, Y., Jorgensen, N. A., & Telzer, E. H. (2020). A call for greater attention to culture in the study of brain and development. *Perspectives on Psychological Science*, 16(2), 275–293. <https://doi.org/10.1177/1745691620931461>
- Rad, M. S., Martingano, A. J., & Ginges, J. (2018). Toward a psychology of homo sapiens: Making psychological science more representative of the human population. *Proceedings of the National Academy of Sciences*, 115(45), 11401–11405. <https://doi.org/10.1073/pnas.1721165115>
- Rampin, R., & Rampin, V. (2021). Taguette: Open-source qualitative data analysis. *Journal of Open Source Software*, 6(68), 3522. <https://doi.org/10.21105/joss.03522>
- Responsibility of Governing Boards Regarding Diversity, Equity, and Inclusion Initiatives, Tex. Educ. Code § 51.3525. (2023). <https://capitol.texas.gov/BillLookup/History.aspx?LegSess=88R&Bill=SB17>.
- Richmond, A. S., Broussard, K. A., Sterns, J. L., Sanders, K. K., & Shardy, J. C. (2015). Who are we studying? Sample diversity in teaching of psychology research. *Teaching of Psychology*, 42(3), 218–226. <https://doi.org/10.1177/0098628315587619>
- Roberts, S. O., Bareket-Shavit, C., Dollins, F. A., Goldie, P. D., & Mortenson, E. (2020). Racial inequality in psychological research: Trends of the past and recommendations for the future.

- Perspectives on Psychological Science*, 15(6), 1295–1309. <https://doi.org/10.1177/1745691620927709>
- Saxena, G., Allen, P. J., Kent, C., & Yardley, L. (2024). Co-producing recommendations for decolonising the psychology curriculum with psychology academic staff. *Teaching of Psychology*, 53(1), 91–103. <https://doi.org/10.1177/00986283241304026>
- Sears, D. O. (1986). College sophomores in the laboratory: Influences of a narrow data base on social psychology's view of human nature. *Journal of Personality and Social Psychology*, 51(3), 515–530. <https://doi.org/https://doi.org/10.1037/0022-3514.51.3.515>
- Simons, D. J., Shoda, Y., & Lindsay, D. S. (2017). Constraints on generality (COG): A proposed addition to all empirical papers. *Perspectives on Psychological Science*, 12(6), 1123–1128. <https://doi.org/10.1177/1745691617708630>
- Snidman, H. R., Rice, L., & Sparger, K. (2024). Representation, belongingness, and rumination in underrepresented psychology students. *Teaching of Psychology*, 51(2), 188–198. <https://doi.org/10.1177/00986283221095115>
- Stamm, K., Ward, K., Page, C., & Assefa, M. (2024). Progress in psychology degrees earned by underrepresented racial identities. *Monitor on Psychology*, 55(8), 21. <https://www.apa.org/monitor/2024/11/datapoint-psychology-degrees-racial-diversity>
- Syed, M., Santos, C., Yoo, H. C., & Juang, L. P. (2018). Invisibility of racial/ethnic minorities in developmental science: Implications for research and institutional practices. *American Psychologist, New Directions in Developmental Science With Youth Experiencing Marginalization*, 73(6), 812–826. (2018-43153-009). <https://doi.org/10.1037/amp0000294>
- Taormina, R. J. (2015). Adult personal resilience: A new theory, new measure, and practical implications. *Psychological Thought*, 8(1), 35–46. <https://doi.org/https://doi.org/10.23668/psycharchives.1964>
- Task Force on Socioeconomic Status. (2007). *Report of the APA task force on socioeconomic status*. American Psychological Association.
- Tseng, C., PettyJohn, M. E., Huerta, P., Miller, D. L., Agundez, J. C., Fang, M., & Wittenborn, A. K. (2021). Representation of diverse populations in couple and family therapy intervention studies: A systematic review of race/ethnicity, sexual orientation, age, and income in the United States from 2014 to 2019. *Family Process*, 60(2), 424–440. <https://doi.org/10.1111/famp.12628>
- Williamson, H. C. (2026, May 20). Materials for “How Does The Lack Of Diversity In Psychological Science Research Affect Undergraduate Students?” <https://doi.org/10.17605/OSF.IO/B235J>
- Williamson, H. C., Bornstein, J. X., Cantu, V., Ciftci, O., Farnish, K. A., & Schouweiler, M. T. (2022). How diverse are the samples used to study intimate relationships? A systematic review. *Journal of Social and Personal Relationships*, 39(4), 1087–1109. <https://doi.org/10.1177/02654075211053849>
- Yust, P., Liu, J., & Hard, B. (2021). Course belonging and engagement in introductory psychology: Why they matter and what predicts them. *Scholarship of Teaching and Learning in Psychology*, 7(3), 206–227. <https://doi.org/10.1037/stl0000295>