

Collecting, Analyzing, and Reporting on Data from Small Populations



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Agenda

- Why study small populations?
- Who are the small populations we want to study?
- What are potential administrative issues with studying small populations?
- How can we analyze data and communicate results for small populations?
- What can we say about the validity and data quality for small populations?

Why study small populations?

- Groups experience higher education differently; when we disaggregate data, some groups are small
- The experiences of small populations can be lost in aggregate results
- Not studying small populations can further marginalize often-marginalized groups
- Some schools are just small to begin with!

Example: Campus X

- Campus X has difficulty attracting and keeping students of color through graduation
- 600 seniors; 72 seniors of color (12%)
- Survey response rate ~30% leads to 22 senior respondents of color
- Just because there are few students of color, it does not mean African American (4 respondents) and American Indian (1 respondent) seniors experience Campus X the same OR that race/ethnicity does not matter
 - Researchers may be tempted to group all students of color together OR not look at race/ethnicity at all

Who are the small populations we want to study?

- LGBTQ students and faculty
- Gender variant students and faculty
- Students and faculty of color
- Biracial and multiracial students and faculty
- Students and faculty with intersecting complex identities
- Students and faculty at small institutions
- Gender variant, LGBTQ, and nonreligious students and faculty at religious institutions
- Graduate students who teach
- Students and faculty in small fields/disciplines
- Faculty teaching large courses

Example Questions

- How does participation in high-impact practices vary for gender variant students?
- How do biracial students from divergent racial/ethnic makeups engage differently than one another and their monoracial peers on campus?
- How do various aspects of civic engagement compare for Black or African American men faculty and women and White men and women faculty?
- What are the occupational goals of African American women graduate students who teach?
- Who are the faculty who report experiencing discrimination, harassment, or isolation?
- **Campus X:** How engaged are students of color at Campus X?

What are potential administrative issues with studying small populations?

- Think ahead of time about your small populations so strategic efforts can be made to recruit them
- It can be difficult to find and contact the people in small populations in order to study them
- It can be difficult to get the people from small populations to buy in to studies (particularly when they already feel marginalized)
- You may not want to 'out' people from small populations

What are potential administrative issues with studying small populations?

- Given the population is already small, you may get very few participants
- Small groups of people can be quickly exhausted with survey and study burden
- **Campus X:** If students of color are disconnected from campus they will less likely respond to study requests
- Other issues?

How can we analyze data and communicate results for small populations?

- Statistically, methods for analyzing small populations are limited, but it's important to not disregard them
 - Percent differences and descriptive analyses are legitimate forms of analysis!
- Very few resources exist to guide researchers in examining small populations, often the focus of research is on having obtained large sample sizes
- Comparing small populations to the general population does not have to be the standard for analysis. Their story alone is enough
- Be wary of clumping together small groups to increase your counts

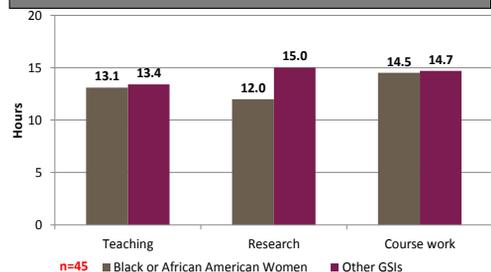
How can we analyze data and communicate results for small populations?

- Reset the expectations of your audience before presenting results on small populations
- **Campus X:** Studying the results for some of their students of color is better than not studying them at all! Issues raised by some of their students of color should still be addressed even though they are a small group of students. Examining the survey responses for this small group on their own allows researchers to get a glimpse of the experiences of these students even if they are not included in statistical models
- Other suggestions?

Examples

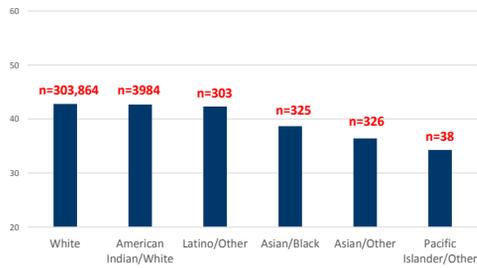
The following slides give some example findings from studies of small populations. These findings come from real data examined by researchers at the Center for Postsecondary Research.

Time Spent Per Typical Week by Graduate Students Who Teach



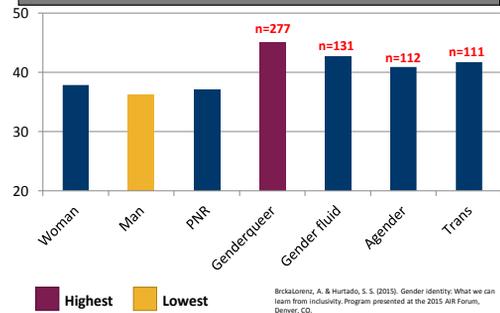
Wheatle, K. & Bristol-Lewis, A. (2015). Socializing narratives? Examining graduate student engagement of black women graduate instructors. Program presented at the 28th Annual National Conference on Race & Ethnicity in American Higher Education, Washington, DC.

Quality of Interactions by Select Racial/Ethnic Identification



Harris, J., BrckaLorenz, A., & Nelson Laird, T. (2014). Engaging in the margins: Exploring differences in biracial students' engagement by racial/ethnic makeup. Paper presented at the Association for the Study of Higher Education Annual Conference, Washington, DC.

Reflective & Integrative Learning by Gender Identity



BrckaLorenz, A. & Hurtado, S. S. (2015). Gender identity: What we can learn from inclusivity. Program presented at the 2015 AHE Forum, Denver, CO.

What can we say about the validity and data quality for small populations?

- Data collection from multiple cohorts can help strengthen the findings from small populations. This may mean collecting data more frequently, if possible.
- An expanded evidence base with a triangulation of results from multiple sources can strengthen the validity of smaller sample sizes
- Take a qualitative stance on interpreting quantitative results—you're still telling the story of some students even if the results aren't generalizable
- Having an unbiased but small sample can be far more reliable than a biased but large sample

What can we say about the validity and data quality for small populations?

- It's possible that a small group of participants actually captures most or all of your entire small population!
- **Campus X:** Analyzing multiple sources of data, seriously considering the results of their 1 American Indian student, and being careful about not trying to generalize to all students gives strength to findings about students of color at Campus X.
- Other suggestions?

Final thoughts and questions?

Thank you for joining us!

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This presentation and more information about NSSE, FSSE, and research on small populations can be found at nsse.indiana.edu

