Appendix 1: Survey Design

Graduate Student Satisfaction Survey

Start of Block: Introduction

Q46 This is a study about graduate student satisfaction within political science departments. We will collect information on demographics, financial support, institutional support, sexual and racial harassment, career aspirations, and overall satisfaction levels.

This study poses minimal risks. The primary risk to participants is stress or anxiety provoked by sensitive questions. Such questions involve asking about interactions with professors, sexual harassment, microaggressions, and racism from co-workers. The study attempts to minimize this risk by taking questions from previously deployed surveys. Additionally, participants do not have to answer any question and can terminate the survey at any time.

Data will be de-identified by removing department/race/gender and individual respondents will not be traced based on their responses. We will also not share the raw data with anyone and the public.

IRB approval #URIRB210902

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○ I agree to participate (1)

○ I do not agree to participate (2)

 Skip To: End of Survey If This is a study about graduate student satisfaction within political science departments. We will... = I do not agree to participate

End of Block: Introduction

Start of Block: Demographics

Q1 Please note your age.

	0　10　20　30　40　50　60　70　80　90　100
Age ()	

Q2 Status in graduate program

○ PhD student (1)

○ PhD candidate (ABD - all but dissertation) (2)

Q3 University

▼ Stanford University (1) ... Other (52)

Q48 If your university was not on the list and you chose "other," please type the name of the university you attend in the box below.

_____

Q4 What is your gender identity? (check all that apply)

☐　Man (1)

☐　Woman (2)

☐　Trans and/or non-binary (3)

☐　Other (4) _____

Q5 Do you identify as LGTBQ+?

○ Yes (1)

○ No (2)

○ Prefer not to say (3)

Display This Question:

If Do you identify as LGTBQ+? = Yes

Q53 Are you out in your department?

○ Yes (1)

○ No (2)

Page Break

Q6 Race (check all that apply)

☐ White (1)

☐ Black or African American (2)

☐ American Indian or Alaska Native (3)

☐ Asian (4)

☐ Native Hawaiian or Pacific Islander (5)

☐ Middle Eastern (Arab, Amazigh, Persian, etc) (8)

☐ Other (7) _____

Q49 Ethnicity

○ Hispanic or Latinx (1)

○ Not Hispanic or Latinx (2)

Q7 Do you have children?

○ Yes (1)

○ No (2)

Q8 Are you a first generation student?

(a student whose parents did not complete a four-year college or university degree)

○ Yes (1)

○ No (2)

Q9 Are you classified as an international student?

○ Yes (1)

○ No (2)

Q54 What country are you from?

_____

Q10 Field of study (check all that apply)

☐ Comparative Politics (1)

☐ International Relations (2)

☐ American Politics (3)

☐ Political Theory (4)

☐ Public Policy (5)

☐ Public Law (6)

☐ Methods (7)

☐ Other (8) _____

Q50 When you entered your graduate program, what was your goal for after graduation?

○ I didn't have clear goals (1)

○ Become a practitioner / policy-maker (2)

○ Become a professor (3)

Q55 Has your post-graduation goal changed from when you first entered the program?

○ Yes (1)

○ No (2)

End of Block: Demographics

Start of Block: Funding

Q16 What is your primary source of funding now?

○ Teaching Assistant (1)

○ Research Assistant (2)

○ Fellowship/scholarship (3)

○ Loans (4)

○ Other (5) _____

Q17 Does your department's financial aid package provide enough money in an average month to cover your bills?

○ Always (1)

○ Usually (2)

○ Sometimes (3)

○ Rarely (4)

○ Never (5)

Q57 How many years of funding did your program guarantee in your contract when you first entered?

○ 0 (1)

○ 1 (2)

○ 2 (3)

○ 3 (4)

○ 4 (5)

○ 5 (6)

○ More than 5 (7)

Q61 Does your contract guarantee summer funding?

○ Yes (1)

○ No (2)

Q58 How does funding look after your contract ends?

○ Can apply for additional funding from the department with a high likelihood of approval (1)

○ Can apply for additional funding from the department but approval is not guaranteed (2)

○ Can apply for additional funding from outside the department (3)

○ Must seek funds outside the university (4)

Q59 Does your university have a graduate student union?

○ Yes (1)

○ No (2)

Page Break

Display This Question:

If Does your university have a graduate student union? = Yes

Q60 What is the nature of membership?

○ open shop (1)

○ closed shop (place of work where membership in a union is automatic & required) (2)

Q18 Are you certain that your program will continue to fund you until you graduate?

○ Always (1)

○ Usually (2)

○ Sometimes (3)

○ Rarely (4)

○ Never (5)

Q20 Does your department give you money to cover research costs, including fieldwork?

○ All (1)

○ Most (2)

○ Some (3)

○ None (4)

Page Break

Display This Question:

If Does your department give you money to cover research costs, including fieldwork? = All

Or Does your department give you money to cover research costs, including fieldwork? = Most

Or Does your department give you money to cover research costs, including fieldwork? = Some

Q63 How much funding did/will your department provide for your research costs?

○ Less than a semester's worth of funding (1)

○ A single semester (2)

○ An academic year (3)

○ More than 1 academic year (4)

Q64 What does research funding in your department look like?

(For example, a summer/semester/year long research fellowship, funding for research assistants, funding for data purchases, etc)

_____

_____

_____

_____

_____

Page Break

Q66 Do you feel you have a clear understanding of guidelines and decision-making processes for how to get funding?

○ Yes (1)

○ To some degree (2)

○ No (3)

Q68 Do you feel funding decisions in your department are made fairly and transparently?

○ Yes (1)

○ To some degree (2)

○ No (3)

Q67 Has your department provided extra funding or support given the Covid-19 pandemic? If so, describe what that looks like.

_____

_____

_____

_____

_____

Q21 Have you experienced exploitative labor practices in your department? (For example, being promised money or co-authorship in exchange for work but never being paid or credited, expectations that you work more hours than you are paid for, etc.)

○ Yes (1)

○ No (2)

Q22 If you feel comfortable, please tell us about this experience:

_____

_____

_____

_____

_____

Q72 Have you had to work outside your department to make an adequate income?

○ Yes, in another department (1)

○ Yes, outside the university (4)

○ No (2)

End of Block: Funding

Start of Block: Comprehensive Exams

Q69 Was the comprehensive exam process transparent?

○ Yes (1)

○ To some degree (2)

○ No (3)

Q70 Do you feel the comprehensive exam process was fair?

○ Yes (1)

○ To some degree (2)

○ No (3)

Page Break

Display This Question:

    If Do you feel the comprehensive exam process was fair? = No

    Or Do you feel the comprehensive exam process was fair? = To some degree

Q71 In what ways was it unfair?

_____

_____

_____

_____

_____

End of Block: Comprehensive Exams

Start of Block: Vignettes

Q43 The following is reporting by The New York Times on the changing demographics of graduate students in the US, from April 15, 2016.

○ Yes (4)

○ No (7)

Q44 The following is reporting by The New York Times on the sexual misconduct case of Harvard professor Jorge Dominguez from March 6, 2018.

○ Yes (4)

○ No (7)

Q47 The following is reporting by The New York Times on the tenure case of Lorgia Garcia Pena, from July 27, 2021.

○ Yes (1)

○ No (4)

End of Block: Vignettes

Start of Block: Reporting

Q46 Reporting

	1	2	3	4	5	6	7	8	9	10
How likely are you to report misconduct or harassment in your department? 1 being "will not report" and 10 being "will report." ()										

Q41 Is there any sort of harassment or misconduct that you would not report? Explain why.

_____

_____

_____

_____

_____

Q74 How likely are you to report a faculty member engaged in gender-based or sexual harassment?

○ Very unlikely (1)

○ Unlikely (2)

○ Neutral (3)

○ Likely (4)

○ Very likely (5)

Q75 How likely are you to report a faculty member engaged in racial/ethnic harassment?

○ Very unlikely (1)

○ Unlikely (2)

○ Neutral (3)

○ Likely (4)

○ Very likely (5)

Q76 How likely are you to report another graduate student engaged in gender-based or sexual harassment?

○ Very unlikely (1)

○ Unlikely (2)

○ Neutral (3)

○ Likely (4)

○ Very likely (5)

Q77 How likely are you to report another graduate student engaged in racial/ethnic harassment?

○ Very unlikely (1)

○ Unlikely (2)

○ Neutral (3)

○ Likely (4)

○ Very likely (5)

End of Block: Reporting

Start of Block: Reporting

Q23 How comfortable are you sharing your graduate student experience with peers **in** your institution?

○ Extremely uncomfortable (1)

○ Somewhat uncomfortable (2)

○ Neither comfortable nor uncomfortable (3)

○ Somewhat comfortable (4)

○ Extremely comfortable (5)

Q24 How comfortable are you sharing your graduate student experience with peers **outside** your institution?

○ Extremely uncomfortable (1)

○ Somewhat uncomfortable (2)

○ Neither comfortable nor uncomfortable (3)

○ Somewhat comfortable (4)

○ Extremely comfortable (5)

Q25 How comfortable are you sharing your graduate student experience with faculty **in** your institution?

○ Extremely uncomfortable (1)

○ Somewhat uncomfortable (2)

○ Neither comfortable nor uncomfortable (3)

○ Somewhat comfortable (4)

○ Extremely comfortable (5)

Q78 How comfortable are you sharing your graduate student experience with faculty **outside** your institution?

○ Extremely uncomfortable (1)

○ Somewhat uncomfortable (2)

○ Neither comfortable nor uncomfortable (3)

○ Somewhat comfortable (4)

○ Extremely comfortable (5)

Q26 How comfortable are you sharing your graduate student experience **within this survey**?

○ Extremely uncomfortable (1)

○ Somewhat uncomfortable (2)

○ Neither comfortable nor uncomfortable (3)

○ Somewhat comfortable (4)

○ Extremely comfortable (5)

End of Block: Reporting

Start of Block: Gender/Sexual Harassment

Q29 Have you heard of other graduate students experiencing sexual harassment in your department? (For example, inappropriate or sexual comments from another graduate student or faculty member)

○ Yes (1)

○ No (2)

Q27 Have you experienced sexual harassment in your department? (For example, inappropriate or sexual comments from another graduate student or faculty member)

○ Yes (1)

○ No (2)

Display This Question:

If Have you experienced sexual harassment in your department? (For example, inappropriate or sexual... = Yes

Q28 If you feel comfortable, please tell us about this experience:

_____

Q80 Have you heard of other graduate students experiencing homophobia in your department?

○ Yes (1)

○ No (2)

Q79 Have you experienced homophobia in your department?

○ Yes (1)

○ No (2)

Q30 Is there a faculty or staff member who you trust and who you would report gender-based harassment to?

○ Yes (1)

○ Maybe (2)

○ No (3)

Q31 If you file a harassment complaint, do you trust that your department will do something?

○ Yes (1)

○ Maybe (2)

○ No (3)

Q81 Is there another office at your school or in your university that you would trust to advocate for students in such a situation?

○ Yes. Specify below: (1) _____

○ No (2)

○ I don't know (4)

End of Block: Gender/Sexual Harassment

Start of Block: Racial Harassment

Q34 Have you heard of other graduate students experiencing racial harassment or abuse in your department? (For example, inappropriate comments, micro-aggressions, or direct abuse and/or discrimination from another graduate student or faculty member)

○ Yes (1)

○ No (2)

Q32 Have you experienced racial harassment or abuse in your department? (For example, inappropriate comments, micro-aggressions, or direct abuse and/or discrimination from another graduate student or faculty member)

○ Yes (1)

○ No (2)

Display This Question:

If Have you experienced racial harassment or abuse in your department? (For example, inappropriate c... = Yes

Q33 If you feel comfortable, please tell us about this experience:

_____

Q35 Is there a faculty or staff member who you trust and who you would report racial harassment to?

○ Yes (1)

○ Maybe (2)

○ No (3)

Q36 If you file a racial harassment complaint, do you trust that your department will do something?

○ Yes (1)

○ Maybe (2)

○ No (3)

Q89 Is there another office at your school or in your university that you would trust to advocate for students in such a situation?

○ Yes. Specify below: (1) _____

○ No (2)

○ I don't know (4)

End of Block: Racial Harassment

Start of Block: Overall Satisfaction

Q38 Satisfaction

	1	2	3	4	5	6	7	8	9	10
On a scale of burn it down (1) to everyone should go here (10), how satisfied are you with your program? ()										

End of Block: Overall Satisfaction

Start of Block: Satisfaction 2

Q44 Check all of the issues/aspects you were unsatisfied with.

(A reminder that this survey is confidential and no identifiable data will be shared or published)

☐ Funding (1)

☐ Transparency in department policies (6)

☐ Advisor (2)

☐ Class offerings (3)

☐ Job market guidance (4)

☐ Professionalization opportunities (5)

End of Block: Satisfaction 2

Start of Block: Advisor

Q84 Do you have the same advisor as when you entered into your program?

○ Yes (1)

○ No (2)

Q87 Was your advisor assigned to you, or did you specify who you wanted to work with upon entry into the program?

○ Advisor was assigned (1)

○ I specified the advisor I wanted to work with (2)

Q43 Satisfaction

	1	2	3	4	5	6	7	8	9	10
On a scale of not at all supportive (1) to very supportive (10), how satisfied are you with your advisor(s)? ()										

End of Block: Advisor

Start of Block: Final

Q40 Do you intend to pursue a tenure track position in political science?

○ Yes (1)

○ Maybe (2)

○ No (3)

Display This Question:

    If Do you intend to pursue a tenure track position in political science? = Yes

    Or Do you intend to pursue a tenure track position in political science? = Maybe

Q41 Do you expect to attain a tenure track position in political science after you graduate?

○ Yes (1)

○ Maybe (2)

○ No (3)

Q42 If you could do it over again, would you choose the same program?

○ Yes (1)

○ Maybe (2)

○ No (3)

Display This Question:

    If If you could do it over again, would you choose the same program? = Maybe

    Or If you could do it over again, would you choose the same program? = No

Q82 What choices would you have made differently? (For example, enter into a political science program at a different university, enter into a graduate program in a different field, specify a different advisor, etc). Specify below:

_____

_____

_____

_____

_____

Q83 Would you recommend your program to prospective graduate students?

○ Yes (1)

○ To some degree, with caveats   (2)

○ No (3)

End of Block: Final

Start of Block: Resources

Q88 For more information on graduate student union organizing:

https://wugwu.org/resources/graduate-and-undergraduate-student-unions

For more information on structural inequities and exploitation in the academy, we recommend How the University Works by Marc Bousquet.

For resources on sexual harassment reporting: http://web.apsanet.org/cswp/resources-for-survivors/

For information on reporting misconduct through the American Political Science Association:

https://connect.apsanet.org/respect/submit-a-grievance/

End of Block: Resources

Appendix 2: Survey Methodology and Descriptive Results

We started with the US News and World Reports Top 50 Political Science Programs list. The programs in this list are: Stanford, Harvard, Princeton, Berkeley, University of Michigan, Yale, MIT, Columbia, UC San Diego, Duke, University of Chicago, UCLA, UNC, WUSTL, Cornell, NYU, Ohio State, University of Wisconsin, Emory, Northwestern, University of Pennsylvania, Rochester, UT Austin, Vanderbilt, UC Davis, University of Minnesota, University of Illinois, Indiana University, Rice, Stony Brook, Texas A&M, University of Maryland, University of Virginia, Georgetown, Penn State, University of Washington, George Washington, Michigan State, Notre Dame, University of Pittsburgh, Brown, Florida State, John Hopkins, UC Irvine, University of Georgia, University of Colorado Boulder, University of Iowa, Rutgets, UC Riverside, Syracuse, and University of Arizona. A research assistant compiled an email list of all current graduate students in these programs using their websites, totaling 3,349 emails, and sent the completed survey via a Qualtrics link to these emails. We also advertised the survey to our networks, email lists, and social media.

The survey included 63 questions and took 15 minutes to complete. We did not offer any material incentives to complete the survey. We received 271 responses via the Qualtrics link. Of these responses 205 are complete responses. Incomplete responses range from students who stopped when asked what university they are at to students who dropped during sensitive questions to students who filled out all substantive questions except the closing question. Students could skip questions, so even our completed surveys have occasional missing data. Our N for most questions is between 190 and 200.

We received responses from every program in our sampling frame except the University of Rochester. We also received 65 responses from 33 programs outside of the top 50. These responses came after we advertised the survey on social media. Because these responses are outside of the sampling frame, we have excluded them from the analyses and reporting.

We have a low response rate of 8% (271/3349=.081). This low response rate means that our respondents may not be representative of the graduate student population. To evaluate how our

sample compares to other samples of graduate students, we compare the demographics of our sample to Almasri et al (2022) and Gillooly et al (2021).

The American Political Science Association surveys association members each year but the responses only cover people who have completed their PhDs – thus we expect the APSA sample to be whiter, more male, more heterosexual, and more cisgender than our sample. APSA does not have a census of graduate students that we can compare our demographic information to. We prefer to compare our sample to more recent surveys of graduate students in political science, such as Almasri et al (2022) and Gillooly et al (2021). In the following tables, we list the demographic data from our survey respondents compared to other sources.

Our race and ethnicity question had a range of options and students could check as many as applicable and fill in an open-ended response if a category they identify as was not listed. We developed our categories with our graduate student focus groups. Most respondents checked one category. We recategorized some responses during data cleaning: some options had fewer than 10 responses and we collapsed these into "other" so as not to identify students. Some students wrote an existing category into "other"; these we recategorized as that category (for example, recategorizing "Hispanic" as "Latinx"). Some students selected "other" and wrote in a nationality or religion that Americans typically racialize as one group and we recategorized as that group (for example, we recategorized "Other: China" as "Asian" and "White" with "Other: Jewish" as "White"). As a result, our descriptive percentages do not add up to 100%.

Table A2.1. Race and Ethnicity (from complete responses)

Ethnicity	Our Sample	Gillooly et al	APSA 2019
White	60%	73%	75%
Latinx	11%	10%	6%
Asian	14%	16%	10%
Middle Eastern	3%	3%	2%
Black	3%	3%	5%
Other	9%	4%	2%

The gender question on our survey also had multiple responses and students could select as many as were applicable to them and fill out an open-ended "other" option. The vast majority selected only "woman" or "man." 14 students selected multiple categories, "transgender," "nonbinary," or filled out an "other" box; we recoded this group as "trans." Our use of using trans here is as an umbrella category for gender diversity (Stryker 2008). We coded this group as distinct from cisgender "women" and "men" because we want to analyze if gender diverse students systematically experience different training conditions than cisgender students. Even with a

small sample size, our results suggest that they do. As a result of the multiple category approach, our descriptive percentages do not add up to 100%.

Table A2.2. Gender (from complete responses)

Gender	Our Sample	Almasri et al	Gillooly et al	APSA 2019
Cis Women	51%	45%	45%	37%
Cis Men	44%	54%	51%	62%
Trans	5%	NA	1%	0%

Our sample has notably more women and trans people and fewer men than other samples. We suspect that this is because of our gender identities – one author is nonbinary and one author is a woman – and how they influence our networks and respondents' interest in filling out an uncompensated free and unsolicited survey.

We asked a range of other demographic questions as well, namely students' age, program status, first generation status, if they were international students, number of children, and sexual identity. We also asked if students belonged to a union.

Table A2.3: Expanded Demographics

Variable	Our Sample	Gillooly et al 2021	APSA 2019
Age 21-25	23%	6%	1%
Age 26-29	47%	40%	6%
Age 30-35	27%	27%	19%
Age 36+	3%	6%	30%
First generation	22%	20%	18%
Children	8%	10%	NA
International	29%	NA	NA
LGBTQ	31%	NA	NA
Unionized	45%	NA	NA
ABD	53%	NA	NA

Our sample is considerably younger than Gillooly et al's and younger by design compared to APSA's sample (APSA only surveyed people who had graduated with a PhD). We also have many international students and huge representation from the LGBTQ community. Other surveys have not asked if graduate students were LGBTQ so we do not know if this is representative. Anecdotally, we suspect that LGBTQ students are over represented in our sample, but not dramatically. We also have a balance between students who are far enough along in their program to be ABDs and students who started their training more recently. Finally, nearly half of our sample belongs to a graduate student union.

Appendix 3: Analyses and Robustness Checks

Experimental Analysis

The reporting question was a scale from 1 to 10, with 10 being "will report" and 1 being "will not report."

Table A3.1: One-way ANOVA Results

Experimental Condition	Means & Standard Deviations	N
Sexual Harassment	7.140 (2.374)	71
Racial Harassment	6.667 (2.621)	69
Neutral	7.628 (2.537)	70
	F statistic: 2.55*	*Total N*: 210

Regressions

We start with descriptive statistics about our graduate student experiences of interest. We already covered demographics in Appendix 2. Here, we look at the experiences and conditions that students report. Table A3.2 looks at overall satisfaction, relationships with advisors, and funding. Table A3.3 summarizes harassment reports.

Table A3.2

Variable	Responses	Average	Standard Deviation	Minimum	Maximum
Satisfaction	207	6.40	2.32	1	10
Advisor	201	7.98	2.33	1	10
Overall Funding	271	2.67	1.42	0	4

Research Funding	271	1.09	.88	0	3

Table A3.3 Proportions of people who report harassment experiences

Variable	Responses	Yes
Labor Exploitation	223	20%
Sexual Harassment	214	9%
Homophobia	212	6%
Racial Harassment	210	19%

We duplicate our main models from the text here for reference. These are ordinary least squares regressions on graduate student satisfaction with a battery of controls. Model 2 adds in harassment experiences.

Table A3.4: Factors Associated with Graduate Student Satisfaction

Variable	Model 1	Model 2
Advisor Relationship	0.366*** (0.06)	0.348*** (0.053)
Funding	0.387*** (0.123)	0.277** (0.115)
Research funding	0.554*** (0.169)	0.417*** (0.155)
Gender identity (Reference: Man)		
Woman	-0.464* (0.273)	-0.237 (0.248)
Trans	-1.025* (0.554)	-0.644 (0.505)
Race/Ethnicity (Reference: White)		
Black	-1.218	0.375

	(0.771)	(0.751)
Asian	-0.791** (0.395)	0.226 (0.412)
Latinx	0.165 (0.403)	0.392 (0.373)
Middle Eastern	-0.663 (0.674)	-0.042 (0.657)
Other	-1.044* (0.560)	-0.602 (0.516)
Status in program (Reference: ABD)	0.962*** (0.269)	0.914*** (0.247)
Labor exploitation (Reference: No)		-1.068*** (0.336)
Sexual harassment (Reference: No)		-0.442 (0.453)
Racial harassment (Reference: No)		-1.632*** (0.376)
N	199	198

* p<0.1, ** p<0.05, *** p<0.01

Our dependent variable, satisfaction, is an ordinal variable from 1 to 10 that we treat as continuous in the main regression. In Table A3.5, we use an ordinal logistic estimator instead of ordinary least squares. Switching estimators slightly shifts the magnitudes of our estimates and our standard errors but does not dramatically alter our results or change our findings.

Table A3.5: Ordinal Logistic Regressions on Graduate Student Satisfaction

Variable	Model 3	Model 4
Advisor Relationship	0.389*** (0.066)	0.447*** (0.069)
Funding (Reference: Always)		
Never	-2.544*** (0.657)	-2.244*** (0.653)
Rarely	-0.604	-0.369

	(0.617)	(0.654)
Sometimes	-0.929** (0.405)	-0.776* (0.412)
Usually	-1.264*** (0.330)	-1.369*** (0.338)
Research funding (Reference: All)		
Most	-0.087 (0.562)	-0.179 (0.574)
Some	-0.617 (0.531)	-0.648 (0.540)
None	-1.131* (0.606)	-0.958 (0.620)
Gender identity (Reference: Man)		
Woman	-0.090 (0.275)	0.099 (0.279)
Trans	-0.507 (.601)	-0.191 (0.597)
Race/Ethnicity (Reference: White)		
Black	-1.247 (0.799)	0.475 (0.882)
Asian	-0.757* (0.412)	0.329 (0.466)
Latinx	0.064 (0.401)	0.226 (0.421)
Middle Eastern	-0.555 (0.701)	0.307 (0.782)
Other	-0.946 (0.589)	-0.403 (0.583)
Status in program (Reference: ABD)	0.972*** (0.269)	1.059*** (0.279)
Labor exploitation (Reference: No)		-1.068*** (0.382)

Sexual harassment (Reference: No)		-0.414 (0.514)
Racial harassment (Reference: No)		-1.903*** (0.454)
N	197	196

* p<0.1, ** p<0.05, *** p<0.01

We collected additional demographic and program information from respondents. We also added in publicly available information about departments. To our surprise, many factors that we expected to have a significant impact on graduate student satisfaction did not. When we constructed our main models, we selected only control variables that were both statistically significant and contributed to model fit: research funding and PhD student status. We eliminated controls that were statistically insignificant and did not explain much variation in student satisfaction: age, children, international student status, LGBTQ identity, unionization, and program rank. In Table A3.6, we add these variables into the base model to demonstrate that they do not have a significant effect on satisfaction or overall model fit.

Table A3.6: Variables Associated with Graduate Student Satisfaction with Expanded Controls

Variable	Model 5	Model 6	Model 7	Model 8
Advisor Relationship	0.366*** (0.059)	0.348*** (0.053)	0.344*** (0.055)	0.329*** (0.058)
Funding	0.387*** (0.123)	0.277** (0.115)	0.263** (0.120)	0.380*** (0.133)
Research funding	0.554*** (0.169)	0.417*** (0.155)	0.441*** (0.164)	0.361** (0.165)
Gender identity (Reference: Man)				
Woman	-0.464* (0.273)	-0.237 (0.248)	-0.259 (0.252)	-0.302 (0.272)
Trans	-1.025* (0.554)	-0.644 (0.505)	-0.702 (0.507)	-1.659*** (0.602)
Race/Ethnicity (Reference: White)				
Black	-1.218 (0.771)	0.375 (0.751)	0.221 (0.756)	0.404 (0.763)

Asian	-0.791** (0.395)	0.226 (0.412)	0.125 (0.425)	0.663 (0.492)
Latinx	0.165 (0.403)	0.392 (0.373)	0.397 (0.385)	0.321 (0.434)
Middle Eastern	-0.663 (0.674)	-0.042 (0.657)	-0.135 (0.665)	-0.189 (0.856)
Other	-1.044* (0.560)	-0.602 (0.516)	-0.548 (0.541)	-0.847 (0.617)
Status in program (Reference: ABD)	0.962*** (0.269)	0.914*** (0.246)	0.929*** (0.251)	0.851*** (0.291)
Labor exploitation (Reference: No)		-1.067*** (0.336)	-1.063*** (0.337)	-0.875** (0.369)
Sexual harassment (Reference: No)		-0.442 (0.453)	-0.508 (0.455)	-1.188** (0.554)
Racial harassment (Reference: No)		-1.632*** (0.376)	-1.614*** (0.381)	-1.631*** (0.444)
Rank			0.015* (0.009)	
Union (Reference: No)			-0.259 (0.260)	
Public (Reference: Private)			-0.356 (0.297)	
Age				0.007 (0.044)
Children (Reference: No)				0.467 (0.550)
International Student (Reference: No)				0.052 (0.367)
First generation (Reference: No)				-0.171 (0.321)
LGBTQ (Reference: No)				0.551* (0.294)
N	199	198	197	162

* p<0.1, ** p<0.05, *** p<0.01

Models 5 and 6 are the same as the base Models 1 and 2 in Table A3.4 and the main text. We take Model 2 as the base model with controls. Model 7 adds department level controls to Model 2: whether or not students are unionized, if the university is public, and the rank of the department according to U.S. News. Model 8 adds individual level controls to Model 2: students' ages, whether or not students have kids, are first generation students, are international students or identify as LGBTQ. None of these controls are significant and adding these controls does not alter our interpretation of the variables of interest in the base model.

We are interested in patterns of discrimination and graduate students' experiences, not just satisfaction. Thus, we also flipped the models to examine which variables are closely associated with different forms of discrimination. We expected some demographic associations: that women and trans people are more likely to experience sexual harassment and that people of color are more likely to experience racial discrimination. The following models validate these expectations and reveal other associations. In particular, labor exploitation is highly associated with sexual harassment and racial discrimination. International status and funding, variables that we interpret as proxies for how vulnerable a student is, are associated with sexual harassment and labor exploitation, respectively.

Table A3.7: Variables Associated with Sexual Harassment

Variable	Model 9
Gender identity (Reference: Man)	
Woman	1.285* (0.679)
Trans	2.118** (0.982)
Program Rank	0.018 (0.016)
Labor exploitation (Reference: No)	1.365** (0.572)
Racial harassment (Reference: No)	0.211 (0.607)
International student (Reference: No)	1.146* (0.589)
N	209

* p<0.1, ** p<0.05, *** p<0.01

In Table A3.7, gender identity, international status, and labor exploitation are significantly associated with sexual harassment. Women and gender diverse people are much, much more likely to experience sexual harassment than cis men. People who experience labor exploitation are more likely than people who haven't to also be sexually harassed. Finally, international students are more likely to be harassed. We removed racial categories from the model because two categories had no people who reported sexual harassment and the model was unable to estimate standard errors. We interpret this model as suggesting that faculty and students target sexual harassment at students who are relatively vulnerable within their programs: international students, gender minorities, and students who have experienced other forms of harassment. We now turn to racial discrimination.

Table A3.8: Variables Associated with Racial Discrimination

Variable	Model 10
Gender identity (Reference: Man)	
Woman	0.431 (0.525)
Trans	0.013 (1.116)
Race/Ethnicity (Reference: White)	
Black	5.140*** (1.278)
Asian	4.491*** (0.807)
Latinx	3.115*** (0.808)
Middle Eastern	5.070*** (1.027)
Other	3.443*** (0.924)
Labor exploitation (Reference: No)	1.595*** (0.604)
Sexual harassment (Reference: No)	0.855 (0.762)
International student (Reference: No)	-0.757 (0.566)

Variable	Model 10
N	209

* p<0.1, ** p<0.05, *** p<0.01

In Table A3.8, we see that experiencing racial discrimination is highly associated with belonging to a racial or ethnic minority group. While this is expected, the magnitude is still shocking: nearly half of the students of color in our sample experience racial discrimination, especially Black and Middle Eastern political scientists. Surprisingly, labor exploitation is closely associated with experiencing racism: students who report labor exploitation are much more likely to also report racial discrimination.

Table A3.9: Variables Associated with Labor Exploitation

Variable	Model 11
Funding (Reference: Always)	
Never	2.771*** (0.850)
Rarely	2.372** (0.842)
Sometimes	1.346** (0.635)
Usually	0.911* (0.541)
Program Rank	0.013 (0.012)
Status in program (Reference: ABD)	-1.180** (0.469)
Gender identity (Reference: Man)	
Woman	0.078 (0.464)
Trans	0.655 (0.787)
Race/Ethnicity (Reference: White)	
Black	0.394

	(1.140)
Asian	-1.499* (0.785)
Latinx	-1.327 (0.817)
Middle Eastern	-16.604 (852.525)
Other	-0.499 (0.923)
Sexual harassment (Reference: No)	0.884 (0.617)
Racial harassment (Reference: No)	1.781*** (0.656)
N	208

* p<0.1, ** p<0.05, *** p<0.01

Table A3.9 demonstrates that labor exploitation is highly associated with funding adequacy as well as experiences of racism. It is also associated at the 0.1 level with program rank and student status in the directions we would expect. Students at lower-ranked programs are more likely to report labor exploitation than students at higher-ranked programs. We expect this is the case because higher ranked programs tend to have more resources available to faculty and graduate students than lower-ranked programs. We expect exploitation in the form of uncompensated labor is more common in departments where resources for research and teaching are scarce. Students who have progressed to candidacy are also more likely to have experienced labor exploitation. Sexual harassment is positively associated with labor exploitation but the p-value is over our cut-off of .1. This further bolsters our interpretation that experiencing one form of discrimination can lead to further discrimination.

We now turn to the variables associated with graduate student funding. We are interested in why some students report sufficient funds while others struggle, especially since funding is highly associated with satisfaction and labor exploitation. In the model below, we find some unsurprising associations with funding: public schools fund their students less than private schools on average, people on fellowship have more funding, and women are significantly less likely to have sufficient funding than men. We also find that most racial categories, international status, having children, union membership, and experiences with discrimination are not significantly associated with funding (the last four are not reported in this model).

Table A3.10: Variables Associated with Sufficient Funding

Variable	Model 1
Public School	-1.229*** (0.276)
Status in program (Reference: ABD)	0.057 (0.250)
Gender identity (Reference: Man)	
Woman	-0.579** (0.266)
Trans	-1.004* (0.544)
Race/Ethnicity (Reference: White)	
Black	-1.251* (0.671)
Asian	-0.565 (0.357)
Latinx	0.186 (0.420)
Middle Eastern	-0.996 (0.634)
Other	0.191 (0.499)
Funding Source (Reference: TA)	
Fellowship	0.616** (0.288)
Loans	-22.286 (22318)
Research Assistant	0.024 (0.431)
Other	-2.719*** (0.864)
N	245

* p<0.1, ** p<0.05, *** p<0.01

Two demographic variables, identifying as Black or trans, are associated with considerably less funding than identifying with the reference categories (white and cis men). These variables are between conventional levels of significance: above p=.05 and below p=.1; in part because we have few respondents in each category. Finally, we expect that the cost of living in the city in which the department is located, which we did not collect data for, explains a lot of the variation in absolute levels of funding as well as how sufficient funding is for individuals.