

Graduate Student and Faculty Mental Health: Evidence from European Economics Departments

Elisa Macchi^{*}, Clara Sievert[†], Valentin Bolotnyy[‡], Paul Barreira^{§¶}

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Abstract

We study the mental health of graduate students and faculty at 14 Economics departments in Europe. Using clinically validated surveys sent out in the fall of 2021, we find that 34.7% of graduate students experience moderate to severe symptoms of depression or anxiety and 17.3% report suicidal or self-harm ideation in a two-week period. 19.2% of students with significant symptoms are in treatment. 15.8% of faculty members experience moderate to severe depression or anxiety symptoms, with prevalence higher among non-tenure track (42.9%) and tenure track (31.4%) faculty than tenured (9.6%) faculty. We estimate that the COVID-19 pandemic accounts for about 74% of the higher prevalence of depression symptoms and 30% of the higher prevalence of anxiety symptoms in our European sample relative to a 2017 U.S. sample of economics graduate students. We also document issues in the work environment, including a high incidence of sexual harassment, and make recommendations for improvement.

Keywords: Campus mental health, mental health survey, Economics faculty, European Economics graduate students.

JEL Classification: A23, I12, I18, I23.

^{*}Brown University. Email: elisa_macchi@brown.edu.

[†]CERGE-EI. Email: clara.sievert@cerge-ei.cz.

[‡]Hoover Institution, Stanford University. Email: vbolotnyy@stanford.edu.

[§]Harvard University. Email: paul_barreira@harvard.edu.

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1 **1 Introduction**

2 A 2017-2018 study of mental health issues among graduate students in top U.S. Economics
3 departments provided evidence of high rates of depression and anxiety symptoms, as well as
4 suicidal or self-harm ideation (Bolotnyy, Basilico, and Barreira 2022). The paper raised
5 interest in how well the findings reflected graduate student mental health outside of the top
6 U.S. departments and left the state of faculty mental health unaddressed. Aiming to address
7 these gaps, we implemented a new data-collection effort to investigate mental health issue
8 prevalence among graduate students and faculty in Economics departments in Europe.

9 Our study consists of one graduate student survey, about 45 minutes in length, and one
10 faculty survey, about 15 minutes in length, administered in the fall of 2021. Our objectives
11 were to (1) understand the prevalence and severity of mental health issues in Economics
12 departments in Europe; (2) understand student and faculty experiences in their departments;
13 (3) compare prevalence rates of student mental health issues and student experiences to
14 those of U.S. students (Bolotnyy, Basilico, and Barreira 2022); and (4) make data-informed
15 recommendations to departments on ways to improve graduate student and faculty mental
16 health. Our data collection plans were significantly delayed by the COVID-19 pandemic and
17 took place 1.5 years into the pandemic. Motivated by existing studies of the effects of the
18 pandemic on the mental health of the global population (Pfefferbaum and North 2020), we
19 turned the delay into an opportunity to gain insight into how the pandemic affected mental
20 health in Economics departments.

21 The 14 programs participating in the study were: Bocconi University, Bonn Graduate
22 School of Economics, Central European University, European University Institute, London
23 School of Economics, Mannheim Graduate School of Economics, Paris School of Economics,
24 Sciences Po, Stockholm School of Economics and Social Sciences, University College London,
25 Universitat Pompeu Fabra, University of Warwick, University of Zurich, and Uppsala Univer-
26 sitet. These departments are selected in that they offer a cohort-model PhD program, to be
27 comparable with the U.S. sample in Bolotnyy, Basilico, and Barreira 2022. A week before the
28 launch of the survey, each Department Chair e-mailed his or her students and faculty with

29 an endorsement of the study, making clear that responses would be strictly confidential and
30 promising that the results would be taken seriously. No financial participation incentives were
31 provided for any of the surveys.

32 1,144 Economics PhD students and approximately 814 faculty members across these pro-
33 grams received a link to our survey by email. In total, 556 students and 255 faculty members
34 voluntarily participated in our study.¹ While the European sample seems generally compa-
35 rable to the 2017-2018 sample of graduate students from top Economics departments in the
36 U.S. (Bolotnyy, Basilico, and Barreira 2022), it is characterized by higher diversity in terms
37 of socio-economic background (in our European sample, the percentage of students who have
38 fathers with a high school degree or less is about twice as large as in the U.S. sample) and by
39 slightly older graduate students.

40 Our data show high rates of depression and anxiety symptoms, as well as suicidal or self-
41 harm ideation, loneliness, and imposter phenomenon among graduate students in European
42 Economics departments. 34.7% of graduate students experience moderate to severe symptoms
43 of depression or anxiety and 17.3% report suicidal or self-harm ideation in a two-week period.
44 59% of students experience frequent or intense imposter phenomenon. These rates are higher
45 than nationally representative equivalents from many European countries at the peak of the
46 first COVID-19 wave (March 2020; Shevlin et al. 2022) and at subsequent moments of the
47 pandemic (November 2020, January 2021, and April 2021; Hajek et al. 2022).²

48 The prevalence of severe and moderate depression and anxiety symptoms in our sample
49 of European Economics graduate students is notably higher than in the 2017-2018 sample
50 of graduate students from top Economics departments in the U.S. (Bolotnyy, Basilico, and
51 Barreira 2022) and higher than in a meta-analysis of depression, anxiety, and suicidal ideation
52 among PhD students prior to the COVID-19 pandemic (Satinsky et al. 2021).

1. We defined participation for students as completing both the PHQ-9 (screen for depression symptoms) and the GAD-7 (screen for anxiety symptoms) and participation for faculty as finishing the survey, regardless of how many sections of it they skipped. 12 students took our survey but skipped at least one of the PHQ-9 and GAD-7 sections. 90 faculty members took our survey but skipped at least one of the PHQ-9 and GAD-7 sections.

2. Hajek et al. (2022) also notes a slight trend of decreasing prevalence rates in both probable depression and probable anxiety from November 2020 to April 2021. If this trend continued, our comparison here may be underestimating the true difference between our sample in the fall of 2021 and the general European population.

53 A supplementary analysis, which exploits data from a Harvard internal longitudinal study
54 (2016-2022) on mental health, suggests that only a part of the increased prevalence of de-
55 pression and anxiety in the European sample can be ascribed to the COVID-19 pandemic
56 (Barreira and Bolotnyy 2022). Assuming that the trend observed among Harvard University
57 PhD students is indicative of the overall trend in the U.S. sample and that the U.S. and
58 European trends are comparable, we can attribute approximately 74% of the difference in
59 the prevalence of moderate-severe depression and 30% of the difference in the prevalence of
60 moderate-severe anxiety between our European sample and the 2017-2018 U.S. sample to the
61 impact of the COVID-19 pandemic.

62 In our faculty sample, the prevalence of severe and moderate anxiety is on average lower
63 than graduate students as well as than comparable statistics for the post COVID-19 Euro-
64 pean population. This average, however, hides a substantial heterogeneity by seniority level.
65 Untenured tenure-track faculty in Europe are as likely to experience depression and anxiety
66 symptoms as graduate students in our sample, and non-tenure track faculty show even higher
67 prevalence of depression or anxiety symptoms. In contrast, the prevalence of depression and
68 anxiety symptoms among European tenured faculty in our sample is about 70% lower than
69 among their graduate students and is well below the comparable rates in the post-pandemic
70 European population.

71 In terms of the work and learning environment, European departments in our sample
72 appear similar to top U.S. departments in 2017-2018. Hours worked by graduate students
73 and satisfaction with the PhD experience are broadly comparable (Figure 2), with European
74 students only slightly less likely than U.S. students to state that they work over 60 hours a
75 week. Economics PhD students in our European sample and the U.S. one are also similarly
76 satisfied with their PhD experience, with 71% of students saying they are satisfied or more
77 than satisfied with their PhD experience (Figure 3). For comparison, in a Nature 2022 study
78 of graduate student mental health across countries, most respondents work between 41 to
79 50 hours per week and 62% of respondents say they are satisfied with their current program
80 (Woolston 2022). European and U.S. sample students are also similar in terms of regrets, with

81 time management by far the most common source of frustration for both U.S. and European
82 student samples (Figure 4). Finally, 25.9% of students in the European sample report having
83 experienced at least one form of sexual harassment. Excluding a form of harassment not
84 included in the U.S. study, the sexual harassment prevalence rate in our European graduate
85 student sample (19.5%) is comparable to the U.S. sample (19.4%).

86 There is, however, evidence of less frequent interactions between students and faculty in
87 Europe, and of European faculty being less satisfied with their job than U.S. faculty – pat-
88 terns that may or may not be due to disruptions caused by the pandemic. Another significant
89 difference is that European Economics PhD students with moderate-severe symptoms of de-
90 pression or anxiety are less likely to be in treatment (19.2%) than Economics PhD students
91 in U.S. top departments (25.2%).

92 The paper contributes to the growing literature on mental health in academia, particularly
93 among graduate students, and examines the impact of the COVID-19 pandemic. Motivated by
94 Bolotnyy, Basilico, and Barreira 2022, who found that 24.8% of graduate students experienced
95 moderate or severe depression or anxiety symptoms at top U.S. Economics PhD programs
96 in 2017, we explore mental health in European Economics departments, provide the first
97 measures of faculty mental health, and highlight the pandemic effects.

98 Outside economics, Evans et al. 2018 surveyed 2,279 graduate students across various
99 fields and found that 41% experienced moderate to severe anxiety, and 39% had moderate to
100 severe depression. Additionally, Keloharju et al. 2022 used administrative data from Sweden
101 (2005-2015) to show that 7% of PhD students received treatment for depression annually, with
102 5% for anxiety. Their difference-in-difference approach attributes 80% of the mental health
103 disadvantage to the PhD program. The lower diagnosis and treatment rates in this study
104 may be due to the inclusion of only students who have already sought treatment.

105 Other studies offer valuable insights but face challenges with lower response rates (Garcia-
106 Williams, Moffitt, and Kaslow 2014), have a more qualitative focus (e.g., Gin et al. 2021), or
107 lack clinically validated measures (e.g., Hyun et al. 2006). Comprehensive university reports,
108 like Dench, Nock, and Small 2020, further contribute by analyzing data from over 6,800

109 graduate students at Harvard, revealing that about 24% experienced moderate to severe
110 depression and anxiety, with 25% receiving treatment for depression.

111 Finally, we contribute to the literature on the impact of the COVID-19 pandemic on mental
112 health. For example, Hajek et al. 2022 find a prevalence rate of 23.8% for depression and of
113 22.1% for anxiety in April 2021 using the European Covid Survey, a longitudinal dataset of
114 mental health in seven European countries. For comparison, Rotenstein et al. 2016 measures
115 the mental health of the general population before the pandemic. Using data from the second
116 wave of the European Health Interview Survey (2013-2015) across 27 European countries,
117 the authors find a 6.38% prevalence of depressive disorder, with significant variation between
118 countries (from 2.58% in the Czech Republic to 10.33% in Iceland).

119 **2 Methodology**

120 **2.1 Screening Tools**

121 Depression: PHQ-9

122 We utilize several standardized screening tools from the mental health literature to assess
123 symptoms of common mental health disorders in our population. To examine depressive
124 symptoms, we use the PHQ-9 survey instrument. The PHQ-9 has nine questions related to
125 core symptoms of Major Depressive Disorder, assessing mood, sleep, interest, guilt, energy,
126 concentration, attention, psychomotor slowing, and suicidality. The nine symptoms assessed
127 are classic clinical features of Major Depressive Disorder, a diagnosis that can only be made
128 by a licensed clinician (APA 2013).

129 In the PHQ-9, respondents are asked to report how often they have experienced the nine
130 symptoms over the previous two weeks, with four available answer choices to assess both
131 presence and severity of the symptom: not at all (0 points), several days (1 point), more than
132 half the days (2 points), or nearly every day (3 points). Hence, the allowable range of scores
133 is 0 (no presence of any symptom) to 27 (full severity of each of the 9 symptoms). With a
134 cutoff threshold of greater than or equal to 10, the PHQ-9 has an 88% sensitivity and an
135 88% specificity for the diagnosis of Major Depressive Disorder (Kroenke and Spitzer 2002).

136 Sensitivity tells us the probability of testing positive for depression ($\text{PHQ-9} \geq 10$) when the
137 disease is present, while specificity shows the probability of testing negative ($\text{PHQ-9} < 10$)
138 for depression when the disease is absent.

139 The PHQ-9 is widely used not only as a tool for epidemiological measurement, but also
140 for clinical screening in physicians' offices and hospitals (Kocalevent, Hinz, and Brahler 2013).
141 Since diagnosis of Major Depressive Disorder must involve an interview with a licensed clin-
142 ician, we are able to gather information on the prevalence of symptoms, not to report the
143 measured prevalence of the disorder itself. As noted above, the PHQ-9 relies on the self-
144 report of symptoms. These, in turn, are predictive of diagnosis and of biological changes
145 due to an interaction of genes with environmental stressors (Sapolsky 2003). While many
146 active efforts are underway to identify biomarkers of mental health issues, self-description of
147 symptoms remains a core feature of the American Psychiatric Associations diagnostic criteria
148 (APA 2013).

149 Other instruments commonly used to measure depressive symptoms include the Beck
150 Depression Inventory II (BDI-II), the Hamilton Depression Rating Scale (HAM-D), and the
151 Center for Epidemiologic Studies Depression Scale (CES-D). Numerous studies comparing
152 these instruments have found high internal consistency among the measures (e.g., Schwenk,
153 Davis, and Wimsatt 2010, Kung et al. 2013, Choi et al. 2014). We chose to use the PHQ-9 in
154 our study because it is short, free, widely used, and has a high sensitivity and specificity. A
155 number of other studies of graduate and professional student mental health have also utilized
156 the PHQ-9, allowing us to directly compare our results to other settings in higher education
157 (e.g., Garcia-Williams, Moffitt, and Kaslow 2014, Evans et al. 2018, Dench, Nock, and Small
158 2020, Bolotnyy, Basilico, and Barreira 2022). Instrument internal consistency, however, also
159 allows us to make comparisons across studies that use these other instruments (e.g., UCOP
160 2017).

161 Anxiety: GAD-7

162 Our assessment of symptoms of anxiety proceeded similarly, using the GAD-7 survey
163 instrument. The GAD-7 assesses the severity of common symptoms of anxiety, including

164 feeling nervous, not being able to control worrying, and feeling afraid as if something awful
165 might happen. The scoring system resembles the PHQ-9: points are assessed from 0 to 3
166 for each symptom, depending on its reported presence and severity over the past two weeks.
167 Using a cutoff threshold of greater than or equal to 10, the GAD-7 has a sensitivity of 89%
168 and specificity of 82% for the diagnosis of Generalized Anxiety Disorder (Spitzer et al. 2006).
169 As with depression, a clinician is required for the diagnosis of this disorder; our results here
170 indicate the prevalence of symptoms of anxiety, not of the disorder itself. The GAD-7 is
171 widely used for epidemiological estimation and as a clinical screening tool for Generalized
172 Anxiety Disorder (Stein and Sareen 2015, Plummer et al. 2016).

173 Suicidality: PHQ-9 Item 9

174 We assess the presence of suicidal risk through responses to the final question (Item 9) of
175 the PHQ-9, which asks “over the last two weeks, how often have you been bothered by thoughts
176 that you would be better off dead, or hurting yourself in some way? Thoughts of death and
177 self-harm measured through this question have been demonstrated to be a predictor of suicidal
178 behavior and completed suicide, which is why we refer to it as a measure of suicidal ideation
179 and suicidality (e.g., Uebelacker et al. 2011, Simon et al. 2013, and Rossom et al. 2017). The
180 question is also widely used as an indicator of suicidality in the epidemiologic literature and
181 as a clinical assessment tool in behavioral health offices (Arenson et al. 2018).

182 For robustness, we use an additional screening tool for suicidality (Healthy Minds Net-
183 work 2022), adapted from survey instruments by the National Comorbidity Survey replication
184 (Kessler et al. 2004). The tool assesses the presence of self-reported suicidal ideation in the
185 previous year, particularly thinking about suicide, making a plan, and attempting suicide.
186 While we focus on PHQ-9 Item 9 results throughout the paper, both measures produce simi-
187 lar results.

188 Loneliness: UCLA Loneliness Scale

189 We also assess loneliness, a psychological state that is closely related to several common
190 mental health disorders (Mushtaq et al. 2014). We measure loneliness through a validated,

191 3-question version of the UCLA Loneliness Scale, a tool utilized by the vast majority of studies
192 on loneliness (e.g., Russell, Peplau, and Cutrona 1980, Oshagan and Allen 1992, and Hughes
193 et al. 2004). The UCLA Loneliness screen yields scores from 3 to 9, with 9 indicating a high
194 degree of loneliness. Additional questions borrowed from other instruments, including the
195 RAND American Working Conditions Survey and *Nature's* 2017 survey of graduate student
196 work experiences, are discussed in-depth throughout Section 4. Finally, respondents to the
197 student survey also responded to a Brief Inventory of Thriving (BIT) questionnaire, which we
198 included to track resilience. Analyzing the data, it became clear that the BIT scores tracked
199 closely with PHQ-9 scores and did not appear to add additional insights. We thus do not
200 include BIT analyses in this paper.

201 Imposter Phenomenon: Clance Imposter Phenomenon Scale

202 Imposter phenomenon (IP), first described in a 1978 article by Clance and Imes, is a condi-
203 tion in which one feels like a fraud and worries about being found out. Individuals experiencing
204 imposter phenomenon do not believe that their success is due to their competence, but rather
205 ascribe success to external factors such as luck. Those experiencing imposter phenomenon
206 often experience fear, stress, self-doubt, and discomfort with their achievements. Imposter
207 fears interfere with a persons ability to accept and enjoy their abilities and achievements,
208 and have a negative impact on emotional well-being (Sakulku 2011). Imposter phenomenon
209 is widely observed, however certain populations tend to record higher IP scores based on
210 variables including gender, race, socioeconomic status, and psychological well-being (Sakulku
211 2011). We measure imposter phenomenon through the Clance Imposter Phenomenon Scale
212 (Clance and Imes 1978).

213 **3 Data**

214 **3.1 Sample Selection**

215 We surveyed 14 European Economics departments. The final list of participating institu-
216 tions included: Bocconi University, Bonn Graduate School of Economics, Central European
217 University, European University Institute, London School of Economics, Mannheim Graduate

218 School of Economics and Social Sciences, Paris School of Economics, Sciences Po, Stockholm
219 School of Economics, University College London, Universitat Pompeu Fabra, University of
220 Warwick, University of Zurich, and Uppsala Universitet.

221 The institutions in our sample are not a random sample of Economics departments in
222 Europe. First, we restricted our interest to Economics departments that offer a cohort-style
223 PhD program, where graduate students are admitted in cohorts to a graduate school, rather
224 than following a chair-style model. As a result of our selection criteria, which was meant to
225 improve comparability with other studies of graduate students mental health in the U.S., we
226 contacted departments that are highly ranked among R1 research universities and often enroll
227 relatively large cohorts. Departments actively chose to participate in the study.³ In addition
228 to the selection of participating institutions, there is selection among graduate students and
229 faculty who took the survey. To mitigate selection bias and reach a representative sample,
230 we worked closely with each department's administration and student groups to achieve high
231 response rates, as shown in Table 1.

232 In total, 556 students (47.4%) and 255 faculty members (31.3%) voluntarily took the
233 mental health surveys.⁴ The participation rate across departments ranges from 27.4% (LSE)
234 to 75.8% (Zurich) among graduate students, and from 0% (Sciences Po) to 66% (Mannheim)
235 among faculty. Working with administrators at each of the participating departments, we
236 obtained administrative data on total enrollment, as well as gender breakdowns by program
237 phase in the program.⁵ We additionally collected publicly available information on the number
238 of faculty members from the department websites. To provide an additional layer of privacy
239 protection and encourage survey completion, we did not collect any demographic data on our
240 faculty respondents.

3. The full list of contacted departments included, in addition to those participating: Cambridge, CEMFI, Oxford, and the Toulouse School of Economics, for a total of 18 departments.

4. At departments of the London School of Economics, University College London, Sciences Po, Mannheim, Bonn, and the European University Institute, students first opted into receiving our emails through a pre-study opt-in survey.

5. We consider two relevant phases: the course phase (normally consisting of one or two years when students primarily take classes, comparable to G1 and G2 years in the U.S.) and the dissertation phase (normally lasting between two to four years, when students mainly focus on their dissertation writing, comparable to G3+ years in the U.S.).

241 **3.2 Sample Characteristics**

242 For extensive demographic characteristics of our student sample, please see Table A.1 in
243 the Online Appendix. Among our respondents, about 60% of students are male. Almost 88%
244 are between 25 and 34 years old, with 70.4% having completed a 2-year Masters degree before
245 starting their PhD. About 30% of students live alone, 56.7% are in a long-term relationship
246 or married, and most students have no children (95.7%).⁶

247 Because the graduate students surveyed in Bolotnyy, Basilico, and Barreira 2022 (hence-
248 forth, “U.S. study”) are our most natural comparison and because voluntary participation
249 in the study could induce differential selection, it is useful to compare response rates across
250 the two samples. Our response rate is comparable, although slightly larger, among students:
251 47.4% in our sample vs. 45.1% in the U.S. study. In contrast, our response rate is slightly
252 lower among faculty: 31.3% in our sample vs. 42% in the U.S. study. The lower response
253 rate among faculty could be partly explained by the slightly longer survey tool, 15 minutes
254 vs. 5 minutes in the U.S. study; by the fact that we also asked questions about mental
255 health, a potential turn-off for some faculty; and because no faculty member from Sciences
256 Po participated in our study.

257 The European and U.S. samples are comparable in terms of gender composition (39.4%
258 female in our study, 34.7% in the U.S. study), tenure in the PhD program (57.6% of students
259 in our study are in the dissertation phase, 63.7% in the U.S. study) and sexual minority
260 (10.6% identify as LGBTQI+ in our study, 9.2% in the U.S. study). There are, however,
261 some notable differences between our graduate student sample and the U.S. study one.

262 Students in our sample are older (26.9% are older than 30 years old, compared to 13.3% in
263 the U.S.). For most students (91.2%) in the European sample, English is not the first language
264 (49.1% in the U.S.) and 63.4% of the students are not native speakers of the country where
265 their program is located (53.7% in the U.S.). Racial representation is less diverse among our
266 sample (77.9% White) than in the U.S. sample (61.1% White), though our respondents are
267 more diverse by nationality. The European sample is also characterized by a significantly

6. As mentioned above, we did not collect demographic characteristics for the faculty sample.

268 higher share of first-generation students: 18.9% of respondents' fathers and 17.2% of respon-
269 dents' mothers have only ever completed high school. The corresponding statistics for the
270 U.S. sample are 9.2% and 10.7%, respectively. Across the U.S. more broadly, 65 percent of
271 U.S.-born Economics PhD recipients between 2010 and 2018 had at least one parent with a
272 graduate degree, higher than what we see in our sample (Schultz and Stansbury 2022). About
273 52.5% of European students start their PhD straight after finishing their bachelor or master
274 degree.⁷ In the U.S. study, 24.3% of respondents start the PhD right after finishing their
275 bachelor degree.

276 4 Main Results

277 4.1 Student Mental Health

278 Depression Among students in our sample, we find a prevalence of depressive symptoms that
279 is larger than in nationally representative samples from many European countries at the peak
280 of the first COVID-19 wave in March 2020 (Shevlin et al. 2022) and at subsequent moments
281 of the pandemic.

282 We launched our survey in November 2021. At this point, 27.3% of our Economics students
283 scored in the moderate or severe symptom zone and were likely to have been diagnosed
284 with depression upon seeing a mental health professional (Table 2). For comparison, about
285 6 months earlier, in April 2021, 23.8% of a representative sample of non-institutionalized
286 inhabitants (18+) from Germany, United Kingdom, Denmark, Netherlands, France, Portugal,
287 and Italy had probable depression (European COVID Survey (ECOS), Hajek et al. 2022).⁸
288 According to a meta-analysis conducted by Satinsky et al. 2021 based on data prior to the
289 COVID-19 pandemic, the estimated proportion of PhD students experiencing depression was
290 24%. This estimate was based on 16 studies involving a total of 23,469 PhD students.

291 Narrowing our comparison sample to other economics graduate students, the prevalence of

7. The question in our survey is: "Did you go straight into this Economics PhD program after completing your Masters or undergraduate degree?".

8. Hajek et al. 2022 find evidence of a reduction in the prevalence of depression and anxiety symptoms from November 2020 to April 2021. If this trend continued, the prevalence of depression symptoms in April 2021 may overestimate the prevalence of depression symptoms in the general population at the time of our survey, November 2021.

292 depressive symptoms we see is larger than the prevalence of comparable depressive symptoms
293 in the U.S. study (17.7%). Similar to the U.S. study, depression symptoms are more prevalent
294 for those who are further along in their PhD program: the prevalence of moderate and severe
295 depressive symptoms was 28.4% for students in the dissertation phase and 24.3% for students
296 in the course phase (Table 2). The higher rate of depression in the dissertation phase is driven
297 by students in years 6 and above as shown in Figure 1.

298 As in the U.S. study, minority status does not unequivocally predict higher depression
299 rates. Women (28.2%) and non-white students (29.3%) are slightly more likely than the
300 average student to be experiencing such symptoms, while first-generation students show a
301 slightly lower (25.7%) prevalence of symptoms compared to the average student. Students
302 who report being gay, lesbian, or bisexual, and non-white are particularly afflicted, with a
303 prevalence rate of 42.6% (Table 3).

304 Anxiety

305 Anxiety symptoms in our sample are also substantially higher than in the general popu-
306 lation and higher than in the U.S. study.

307 The overall prevalence rate for severe and moderate anxiety symptoms is 25.9% (Table 2),
308 which is higher than the corresponding prevalence among the Hajek et al. 2022 representative
309 sample of the European population in April 2021 (22.1%), among the graduate student sample
310 of the U.S. study (17.6%), and in a meta-analysis by Satinsky et al. 2021 of nine studies, pre-
311 pandemic, across 15,626 students (17%).

312 Female students (27.7%) are more likely than male students (24.2%) to be experiencing
313 serious symptoms of anxiety. As in the case of depressive symptoms prevalence, differences in
314 sample composition are unlikely to explain the larger levels of anxiety symptoms prevalence
315 in the European sample as compared to the U.S. sample. Indeed, first-generation (21.1%)
316 students, who are a larger share of the sample in the European than the U.S. study, fare better
317 than the average student, while minority (29.3%) students fare worse (Table 3). Different from
318 the depression results, and similar to the U.S. study, LGBTQI+ students (26.2%) show only
319 slightly larger prevalence rates of anxiety relative to the average student.

320 In contrast to the U.S. sample, European graduate students in the dissertation phase, i.e.,
321 more senior graduate students, exhibit lower levels of anxiety (24.4%) compared to students
322 in the course phase, i.e. graduate students in the initial years of their program (28.6%) as
323 shown in Table 2. Upon closer examination of the data, we observe a U-shaped trend in
324 anxiety levels among European graduate students by year (Figure 1). This is in contrast to
325 the linear increasing trend highlighted by Bolotnyy, Basilico, and Barreira 2022 in the U.S..
326 The notably high levels of anxiety in the first two years of the program in Europe may be a
327 result of the COVID-19 pandemic. However, they could also reflect stricter requirements for
328 passing the course phase in European departments, similar to past requirements in U.S. PhD
329 programs.

330 Suicidality

331 17.3% of students (96 people) report frequently thinking of committing suicide or self-
332 harm in the two weeks before taking the survey (Table 2), a larger share than in the U.S.
333 study (11%). Focusing on suicidal thoughts in the one-year period before our survey, 11%
334 of European Economics PhD students thought seriously about suicide and 1.8% of students
335 planned a suicide attempt. The COVID-19 pandemic could be a risk factor for higher levels of
336 suicidal thoughts or behaviors. A review of published data worldwide on the consequences of
337 suicidal behavior in the first 6 months of the COVID-19 pandemic found that the percentage of
338 the population with suicidal or self-harm ideation in that period was 515% (Giner et al. 2022).
339 Thus, the frequency of suicidal or self-harm ideation in our sample appears larger than the
340 upper bound of general population estimates at the onset of the pandemic.

341 There is, however, heterogeneity by student characteristics. Though the differences are
342 not statistically significant, men (17.3%) are more likely than women (14.9%) to have scores
343 of concern on the PHQ-9 Item 9, which measures suicidal and self-harm ideation. As in the
344 U.S. study, LGBTQI+ students (24.6%) exhibit especially high prevalence rates of suicidal
345 ideation (Table 3). The patterns in the data are very similar when considering other measures
346 of suicidality.

347 Loneliness

348 Our sample revealed a high prevalence of loneliness among graduate students. The rates
349 in our sample were comparable to the rates observed in the U.S. study, and which were above
350 average relative to the U.S. population.

351 The mean score on the UCLA 3-item loneliness scale was 5.3, with a standard deviation of
352 1.9. The prevalence of loneliness in our sample is comparable to the prevalence of loneliness
353 among the sample of graduate students in the U.S. study, where the mean score was 5.2. 9.7%
354 of respondents scored 9 on the UCLA Loneliness Scale, meaning that they feel a high degree
355 of loneliness, i.e. the respondent often lacks companionship, often feels left out, and often
356 feels isolated from others (Table 4).

357 Imposter Phenomenon

358 Feelings of not being good enough or being an imposter are pronounced in our sample.
359 59% of students experience frequent or intense imposter phenomenon symptoms (Table 5
360 Panel A). A similar fraction of graduate students (61%) experienced frequent or intense im-
361 poster phenomenon symptoms in the U.S. study. 93.1% of students in our sample experience
362 moderate, frequent, or intense imposter phenomenon.

363 In a 2020 study across graduate programs at Harvard University, the percentage of students
364 experiencing frequent or intense imposter phenomenon symptoms ranged across programs
365 from 49.4% to 78.9%, putting Economics roughly in the middle of the range (Dench, Nock,
366 and Small 2020). The Harvard report underscores that such symptoms are more prevalent
367 among underrepresented minority, LGBTQI+, first-generation, and low income students.

368 Our setting confirms that LGBTQI+ students experience a stronger incidence of imposter
369 phenomenon. Table 5 Panel B shows, for example, that 49.2% of LGBTQI+ students face
370 frequent imposter phenomenon compared to 36.9% of non-LGBTQI+ students. In contrast to
371 findings in the Harvard graduate program setting, women face higher rates of imposter phe-
372 nomenon than men: 28.9% of women face intense imposter phenomenon and 41.8% of women
373 face frequent imposter phenomenon, compared to 15.7% and 36.7% of men, respectively. We
374 do not find a significant difference in imposter phenomenon prevalence by racial minority and

375 first-generation status.

376 Diagnoses

377 24.4% of Economics students in our study report having been diagnosed by a professional
378 with a mental illness: 14.7% before starting their PhD program and another 9.7% after
379 starting their program (Table 2). For comparison, a similar rate (25%) of graduate students
380 in the U.S. study had been diagnosed by a mental health professional before or during the
381 program.

382 Graduate students in the dissertation phase – that is, more senior graduate students –
383 have a lower probability of being diagnosed pre-program (12.5%) than graduate students in
384 the course phase (18.5%), that is, less senior graduate students. Students in the dissertation
385 phase have a higher probability of having been diagnosed during the program (11.3%) than
386 students in the course phase (6.9%).

387 The fact that younger students are more likely to have been diagnosed pre-program may
388 indicate improved access to mental health professionals among younger cohorts, which may
389 also be related to the COVID-19 pandemic. The fact that older students are more likely to be
390 diagnosed during the program could be mechanical, but it may also be due to either students
391 being more likely to seek help the longer they are in the program and/or students further into
392 their program being more likely to suffer from mental health issues. The latter explanation
393 would be consistent with our results in Figure 1 and data from the U.S. study, showing that
394 the prevalence of depression and anxiety increases with seniority in the graduate program. In
395 a related study leveraging administrative medical records in Sweden, Keloharju et al. 2022
396 also find an increase in depression or anxiety diagnoses for PhD students once they start their
397 programs.

398 As noted before, the main difference in mental health trends over the course of the program
399 years, between the U.S. and Europe, is the very high levels of anxiety in the first two years of
400 the program in Europe as shown in Figure 1.⁹ Also different from the U.S. study, graduate

9. Note that having a diagnosed mental illness is different from experiencing moderate or severe symptoms of that illness. Diagnosis and proper treatment can reduce symptom severity.

401 students diagnosed with mental health issues during the PhD program are not more likely to
402 have worse mental health today than those diagnosed before the PhD program.

403 Appendix Table A.3 (Online) reports that of those students who were diagnosed in grad-
404 uate school, 50.0% experience moderate or severe symptoms of depression; among students
405 who were diagnosed before graduate school, the percentage is about 52.4%. Of those students
406 who were diagnosed in graduate school, 25.9% have contemplated suicide in a 2-week period;
407 of those who were diagnosed before the PhD, 30.5% contemplated suicide in the same 2-week
408 period. This small difference could be explained through selection – those diagnosed before
409 the PhD have worse mental health – or the correlation of years in the program, mental health
410 concerns, and diagnosis during the program.

411 Treatment

412 Among our European graduate students, 12.4% are currently in treatment for some mental
413 health issue, with the percentage only rising mildly with tenure in the program: from 12.2%
414 in the course phase to 12.8% in the dissertation phase (Table 2). Treatment rates are low
415 with respect to students in the U.S. study and students in other studies of graduate student
416 mental health (Woolston 2022). In the U.S. study, despite the lower prevalence of mental
417 health issues, on average 14.9% of students are in treatment for mental illness. In the 2022
418 Nature graduate student sample, about 30% of respondents report that they have already
419 received help for anxiety or depression caused by their graduate school work and another 21%
420 say they want help but have yet to receive it. In a study on PhD student mental health in
421 Sweden using administrative records, Keloharju et al. 2022 finds that 7% of students receive
422 medication or diagnosis of depression in a given year (5% for anxiety), validating the relatively
423 low rates of students in our whole sample who say they are in treatment.

424 Zooming in on those students with moderate or severe mental health issues, the share
425 receiving treatment is higher (19.2%) than for the sample overall. The share is also rising
426 with tenure in the graduate program, from 11.6% in the course phase to 22.2% in the disser-
427 tation phase. Overall, however, these percentages are still lower than the U.S. study average
428 of 25.2% (Bolotnyy, Basilico, and Barreira 2022). One finding in the seemingly opposite

429 direction is that, when focusing only on students with severe symptoms of depression, the
430 percentage of graduate students in treatment is about twice as large in the European sample
431 (47.1%) as in the U.S. one (28.6%), as shown in Appendix Table A.4 (Online). However,
432 this outlier can be explained by (i) a small sample size for those with severe depression in
433 Europe and by (ii) the cutoff for the severity of depression. While 47.1% of students with
434 severe depression are in treatment, only 3.6% of students with moderately-severe depression
435 are in treatment, compared to 18.2% in the U.S. We do not see a discrepancy in treatment
436 for those students experiencing severe symptoms of anxiety between the U.S. and European
437 sample. The share in treatment of those with severe symptoms of anxiety is comparable in
438 the European (18.8%) and U.S. (18.2%) samples. Finally, only 21.9% of those students (96)
439 who report contemplating suicide or self-harm within a 2-week period are currently receiving
440 some form of treatment. Again, the percentage of students who receive treatment conditional
441 on reporting suicidal ideation is lower than the percentage in the U.S. study (26.8%).

442 While we cannot make definitive statements on the reasons behind the lower rates of
443 treatment in the European sample as compared to the U.S. sample, certain survey responses
444 point to European students facing higher barriers to using mental health services than U.S.
445 students. 25.6% of European Economics graduate students say that they would not know
446 where to turn for help if experiencing a mental health issue, a share that is about 2 times
447 higher than in the U.S. study (12.9%) (see Table 6). Only 31.8% of students in the European
448 sample feel encouraged to speak up about potential mental health issues, and 37.7% report
449 being encouraged to seek departmental support for mental health concerns (see Appendix
450 Table A.9 (Online)).

451 **4.2 Faculty Mental Health**

452 The prevalence of depressive symptoms in our faculty sample is lower than in our graduate
453 student sample. About 11.6% of faculty experience moderate to severe symptoms of depression
454 (Table 7). Symptoms of anxiety are also less common, with 11.9% of faculty experiencing
455 moderate to severe symptoms of anxiety. Overall, about 15.8% are experiencing moderate to
456 severe symptoms of depression or anxiety. Focusing on the last item of the PHQ-9 scale, we

457 find 6.1% of the faculty (10 people) reporting frequently thinking of suicide or self-harm in
458 the past two weeks (Table 7).

459 The average prevalence of depression and anxiety in our sample masks a sizable hetero-
460 geneity by seniority. In particular, we observe significant and large differences in the preva-
461 lence of depressive symptoms between tenured and untenured tenure-track faculty: 31.4%
462 of untenured tenure-track faculty and 42.9% of non-tenure track untenured faculty such as
463 postdoctoral fellows experience moderate to severe depression or anxiety symptoms compared
464 to 9.6% of the already tenured faculty. The depression and anxiety prevalence rates we find
465 among untenured faculty are comparable to or larger than those of graduate students in our
466 sample.

467 The prevalence of depression and anxiety symptoms among untenured faculty is also larger
468 than nationally representative equivalents from many European countries at the peak of the
469 first COVID-19 wave (March 2020; Shevlin et al. 2022) and at subsequent moments of the
470 pandemic (November 2021, January 2021, and April 2021; Hajek et al. 2022). In contrast,
471 depression and anxiety rates among our sample of tenured faculty are much lower than overall
472 European population rates (about 20-25%) at the peak of the COVID-19 pandemic. For refer-
473 ence, the prevalence of depressive disorder symptoms in 27 European countries was estimated
474 to be about 6.8% before the pandemic (Torre et al. 2021).

475 **4.3 Work Experiences**

476 Bolotnyy, Basilico, and Barreira 2022 uses the 2015 RAND American Working Conditions
477 Survey (Maestas et al. 2015) to get an overview of the work environment in U.S. Economics
478 departments and a sense of how it compares to what Americans generally experience in their
479 jobs. We use the RAND survey questions in our survey of students and faculty to similarly
480 understand the work experiences of our respondents and draw comparisons with the U.S. We
481 additionally ask a set of questions on stress factors, which were not asked in the U.S. study.
482 We summarize the stress factor statistics in Table 8 and the RAND survey question results
483 in Table 9.

484 Graduate Students

485 Our data reveal that the European Economics PhD programs in our sample appear to be
486 similar, and in some instances worse, than top U.S. departments in the frequency with which
487 graduate students experiences satisfaction, usefulness, and meaningfulness.

488 Compared to students in the U.S. sample, graduate students in our European sample
489 report lower job satisfaction and lower satisfaction with their PhD experience (Figure 3).
490 33.8% of our students report experiencing satisfaction of work well done always or most of the
491 time (Table 9), compared to 37% in the U.S. study. The job satisfaction rate among graduate
492 students in the U.S. study was lower than the average job satisfaction of American men and
493 women with a college degree between the ages of 25 and 35 (Bolotnyy, Basilico, and Barreira
494 2022).

495 On metrics of usefulness, the two samples appear relatively comparable. For example,
496 24% of graduate students in our sample report experiencing the feeling of doing useful work
497 always or most of the time, and fewer than 20% of students feel that they have opportunities
498 to make a positive impact on their community or society. These numbers are similar to the
499 rates for graduate students in the U.S. study, which again were lower than the equivalent
500 rates in the general U.S. population. Additionally, about one student out of two (48.6%) feels
501 they have opportunities to fully use their talents always or most of the time.

502 For most students in the European sample, making time for their personal life (77%, either
503 somewhat or extensively), balancing academic work with other responsibilities (85.7%), and
504 managing their time (91.4%) are a source of stress (Table 8). This suggests that graduate
505 students in our sample struggle with work-life balance. In fact, many students report having
506 more to do than they can comfortably handle (62.9%) and feel like they cannot say no when
507 being asked to take on more responsibilities within the department (35.9%) (Table 10).

508 Another relevant source of stress comes from uncertainty in the advising relationship
509 (Table 8). Students find it stressful, somewhat or extensively, to manage their relationship
510 with their adviser (56.6%), as well as other faculty in the department (53.7%). In addition,
511 69% of students stress about being unsure of what advisers expect from them. Overall, stress

512 derived from work-life balance and one's relationship with faculty is comparable to the stress
513 graduate students feel as a result of world events, such as the COVID-19 pandemic. We
514 further investigate the relationship between students and advisers in section 4.4.

515 Another major stressor for graduate students in our sample is finding a job after gradua-
516 tion. Indeed, more than half (50.4%) of graduate students in our sample experienced finding
517 a job after graduate school as an extensive stressor in the previous year. Appendix Table A.5
518 (Online) shows that 40.1% of students who experience finding a job after graduate school as
519 an extensive stressor experience moderate-severe symptoms of depression and 34.3% experi-
520 ence moderate to severe symptoms of anxiety. In contrast, of those who do not experience
521 the job search as a major stressor at all, only 12.7% score above the critical PHQ-9 thresh-
522 old and 18.2% above the critical GAD-7 threshold. This difference suggests that finding a
523 job after graduate school could contribute to depression and anxiety prevalence and/or that
524 students who are prone to symptoms of depression and anxiety are also experiencing some of
525 the highest levels of stress related to finding a job after graduate school.

526 Faculty

527 Faculty in our sample and faculty in the U.S. study sample share many work experiences,
528 but show differences in levels of job satisfaction and financial security.

529 The data indicate that, while on average Economics faculty in the sampled European de-
530 partments report higher levels of job satisfaction compared to graduate students in the same
531 departments, their job satisfaction is lower than that of Economics faculty in top U.S. depart-
532 ments. 54.5% of European Economics faculty in our sample report experiencing satisfaction of
533 work well done always or most of the time (Appendix Table A.6 (Online)), compared to 77%
534 among faculty in the U.S. study. Similarly, 54.2% of our faculty report experiencing the feel-
535 ing of doing useful work always or most of the time, compared to 70% of faculty respondents
536 in the U.S. sample and 63% of the entire U.S. working age population. Only 44.3% of faculty
537 in our sample feel that they have opportunities to make a positive impact on their community
538 or society always or most of the time, compared to 58% of faculty in the U.S. sample and 53%
539 of the U.S. working population. Finally, 69.1% of faculty feel they have opportunities to fully

540 use their talents always or most of the time, compared to 85% of faculty in the U.S. study.

541 European faculty members also face more difficulties in making ends meet financially, with
542 23% of them struggling to do so always or most of the time, compared to only 0.5% in the
543 U.S. sample. In terms of work-life balance, the faculty members in our European sample are
544 comparable to those in the U.S. study. About 51% of faculty in our European sample report
545 worrying about work when they are not working, which is similar to the 60% reported by
546 U.S. faculty. Additionally, 18.3% of European faculty members find themselves too tired for
547 activities in their private lives most of the time, in line with the 20.1% rate among U.S. faculty
548 (Appendix Table A.7 (Online)).

549 It is worth noting that only 1.2% of faculty members reported that work has prevented
550 them from spending time with family or significant others always or most of the time, whereas
551 22% of faculty members in the U.S. study sample indicated it did.

552 **4.4 Student Relationships with Peers and Advisers**

553 To learn more about the Economics PhD environment, we asked students detailed ques-
554 tions about their interactions with their peers and advisers. While students report positive
555 impressions overall, the majority of students are uncomfortable engaging in seminars and
556 many do not communicate honestly and effectively with their advisers.

557 As we show in Table 11, most students have friendly relationships with other graduate
558 students in their department (66% strongly agree). 76.9% of students believe, strongly or
559 slightly, that peers in their department care about their mental health and 88.4% strongly
560 or slightly agree that there is at least one peer in their department they can turn to if they
561 need help. Still, a sizable number of students feel isolated and out of place. 10.5% of students
562 disagree strongly or slightly that they have a personal support network that can help them
563 through mental health challenges. 5.6% of students say they have zero people in their personal
564 life whom they can talk to about their most private feelings (5.8% in the U.S. sample). Another
565 11% say that there is only one person in their personal life with whom they can be so open
566 (14.6% in the U.S. sample). 20.6% of students say they often lack companionship and 18.9%
567 say they often feel isolated from others (Table 4).

568 Although these numbers indicate some level of isolation among graduate students, they
569 are not sufficient to explain the stark differences in mental health outcomes between U.S.
570 and European departments. Indeed, students in both regions generally maintain positive
571 relationships with their peers. Moreover, despite the impact of the COVID-19 pandemic,
572 European students seem to have stronger peer support networks than their U.S. counterparts.
573 Given that peer interactions do not seem to be the primary driver of mental health issue
574 differences between graduate students from European and U.S. departments, we investigate
575 other factors that could be contributing to the differences.

576 Looking at the general learning environment, we find that about 22.9% of male students
577 and 45.3% of female students feel uncomfortable voicing a thought in a seminar setting (Ap-
578 pendix Table A.8 (Online)). Only 7% of female students feel very comfortable in doing so,
579 compared to 13.1% of male students. These numbers are comparable with the U.S. study.

580 With regards to students' relationships with their advisers, in our European sample 9.9%
581 of students have not met with their main adviser in the past 2 months (Table 12). In the
582 U.S. study, the number of graduate students who did not meet with their main adviser at
583 all was lower, 4.4%. Importantly, the average hides sizable in-sample heterogeneity, with one
584 department having 23.3% of students who did not meet at all with their adviser in the 2
585 months before our study. Notably, 57.9% of students believe, more or less strongly, that the
586 number of advising meetings they have is sufficient to meet their needs, and for 25.3% of
587 students the number of meetings is too few. Moreover, 30.2% of students feel that they do
588 not receive enough feedback to understand if they are on track with their progress (Table 13).
589 Overall, this suggests that the lower number of adviser-advisee meetings reported by students
590 in the European sample is not just explained by a lower demand from the student side.

591 Advising relationships are directly related to student mental health (Hyun et al. 2006).
592 In the U.S. study, students who talk to faculty that care about their success and care about
593 them as a person have better mental health than students who do not. In our sample, as
594 summarized in Table 14, 29.9% of students believe that the faculty in their department do
595 not care about their mental health and well-being. 22.4% of students do not have a faculty

596 member from whom they feel they can seek advice and guidance, and 26.2% believe that
597 faculty would not be supportive of them if they were facing mental-health or well-being
598 issues. 46.2% of students feel that their mental health has a negative effect on their progress
599 in the PhD program (Table 13). 52% of students would not know where to turn for help if
600 they were facing issues with advising (Table 6). The latter number is heterogeneous across
601 departments, with one department having as many as 79.4% of students who would not know
602 where to turn for help with advising issues.

603 Another relevant area of student-faculty interaction is the preparation for post-graduate
604 life (Table 15). In our European sample, most students (71.7%) agree that faculty are aware
605 of the challenges facing current students entering the job market. However, 19.1% of students
606 disagree strongly or slightly that there are professional development opportunities in the
607 department to prepare them for the job search. 30.2% say that faculty are not proactively
608 helping students to develop professional networks. Concerning the nature of the job-market
609 conversation with advisers, 30.1% of students would not feel comfortable discussing plans for
610 a career outside academia with their advisers (Table 14). This number is similar to the share
611 of students, 25.7%, that do not feel like they can be honest when discussing other personal
612 life issues with their advisers (Appendix Table A.9 (Online)).

613 More generally, most students (57%) agree that there is a strong sense of community in
614 their graduate program (Table 16). Yet, for more than 25% of students this is not the case
615 and only 35.1% of the students think that departments take great care to make students feel
616 included. In sum, while pursuing a graduate degree in Economics is a positive experience for
617 most students, there is a significant minority of students who are not having good experiences
618 in their program. In particular, compared to U.S. students, European students are similarly
619 likely to interact with their peers, but less likely to interact with faculty.

620 **4.5 Sexual Harassment**

621 To obtain a more complete picture of the departmental environment, we asked questions
622 about sexual harassment. Specifically, we wanted to know what share of students have experi-
623 enced some form of sexual harassment in their department and what form that harassment

624 took.

625 For comparability purposes, we used the same phrasing for our questions that was em-
626 ployed by the Association of American Universities (AAU) Climate Survey on Sexual Assault
627 and Sexual Misconduct in 2015 (see Cantor et al. 2017). A preamble to the questions em-
628 phasized that students should think of situations in which a student, faculty member, staff
629 member, or someone else associated with their Department said or did something that inter-
630 fered with their work, limited their ability to participate in their program, or created a hostile
631 work environment.

632 We find that 25.9% of students experienced some form of sexual harassment in their
633 department since starting the PhD program (Table 17). These forms of sexual harassment
634 are listed in Table 17 Panel B and range from “inappropriate or offensive comments about
635 your or someone else’s body, appearance, or sexual activities”, to “requests to go out for
636 dinner, have drinks, or have sex even though you said ‘No’”, and also include “something else
637 that makes me uncomfortable but doesn’t fall into any of the other categories”. Breaking it
638 down by gender, 34.5% of women, more than 1 in 3, experienced harassment, compared to
639 18.7%, slightly fewer than 1 in 5, of men.

640 Next, we dive deeper into the distribution across types of sexual harassment. Panel B of
641 Table 17 shows the percentage of respondents who have ever experienced sexual harassment
642 by type of harassment in the European sample in column (1). In order from most common to
643 least common, respondents experienced: (1) inappropriate or offensive comments about your
644 or someone else’s body, appearance, or sexual activities (9.4%), (2) sexual remarks, jokes, or
645 stories that were insulting or offensive to you (6.1%), (3) requests to go out for dinner, have
646 drinks, or have sex even though you said, ‘No’ (1.5%), (4) crude or gross sexual comments
647 or tried to get you to talk about sexual matters when you did not want to (1.4%), and (5)
648 email(s), text(s), phone call(s), or instant message(s) with offensive sexual remarks, jokes,
649 stories, pictures, or videos that you did not want to receive (1.1%). In addition, 14.7% of
650 respondents experienced “something else that makes me uncomfortable but doesn’t fall into
651 any of the other categories”.

652 In Panel B of Table 17, we present the corresponding U.S. survey results for comparison.
653 Overall, the U.S. sample shows similar patterns regarding which types of sexual harassment
654 occur most frequently. The most common type is 0.6 percentage points higher in Europe
655 than the U.S. mean of 8.8%, and the second most common type is 0.5% percentage points
656 higher than the U.S. mean of 5.6%. A notable difference is that in this European study we
657 included an additional category, Something else that makes me uncomfortable but doesn't
658 fall into any of the other categories (14.7%). To compare overall rates, we excluded this
659 extra category and found that 19.5% of European respondents and 19.4% of U.S. respondents
660 reported experiencing sexual harassment under the specified categories indicating similar rates
661 in both regions. However, our findings highlight the importance of including open-ended
662 categories to capture all forms of sexual harassment, suggesting that a deeper exploration of
663 this additional category is a worthwhile direction for future research.

664 Who commits sexual harassment? Panel C of Table 17 shows the percentage of respon-
665 dents who have ever experienced sexual harassment by the reported aggressor type in the
666 European sample in column (1) and in the U.S. sample in column (2), based on data from
667 Bolotnyy, Basilico, and Barreira 2022. As in the U.S. sample, the most common identified
668 aggressors of sexual harassment were graduate student friends or acquaintances (9.9%). A
669 notable difference, however, is that in the European sample 4.1% of students experienced sex-
670 ual harassment from professors. This number is about seven times larger than the equivalent
671 number in the U.S. (0.6%).

672 The context of our survey, namely the fact that our survey ran in November 2021 or
673 about 1.5 years into the COVID-19 pandemic, is relevant for the interpretation of the sexual
674 harassment statistics in the European sample. In fact, this implies that our respondents had
675 more limited in-person interactions in their department than respondents to previous surveys.
676 Thus, our numbers may be a lower bound for the prevalence rates of sexual harassment in
677 European Economics departments during non-pandemic years. In the 2022 Nature graduate
678 student mental health study, 20% of students stated that they felt discriminated or harassed
679 during the course of their graduate degree (3% preferred not to say), likely also a lower bound

680 of prevalence in non-pandemic years.

681 **4.6 The COVID-19 Pandemic**

682 Our findings indicate a significant prevalence of symptoms related to depression and anxiety among European Economics graduate students and untenured faculty. Although the time
683 of our survey was after the peak of the pandemic in 2020, the prevalence of mental health
684 issues in our sample is notably higher than in the general population at the peak of the pandemic and among U.S. graduate students in studies conducted prior to the pandemic. One
685 hypothesis is that the COVID-19 pandemic may have had exacerbating effects on the mental
686 health of these groups, and these effects were still lingering afterwards.

689 Our data show that most students (81.1%) report that world events such as the COVID-
690 19 pandemic were a source of stress for them during the last year before the survey took
691 place (Table 8). We also asked students to what extent specific aspects of their professional
692 and personal lives were affected by the pandemic (Table 18). The major impact was on
693 students' connections. For almost half of the students (49.1%), the pandemic affected the
694 possibility of maintaining existing relationships or making new ones a lot or to a great extent.
695 A comparable share of students (45.9%) stated that the pandemic impacted their feeling of
696 connection with their Economics department to a similarly great extent. For 34.4% of the
697 students, the pandemic impacted their professional productivity, while fewer students (14.2%)
698 reported a direct impact on their physical or mental health. The pandemic affected viability of
699 research projects for 31% of students. However, only 6.1% felt the pandemic had a significant
700 impact on uncertainty about their future employment or job-market prospects, with 7.8%
701 saying the pandemic significantly impacted their decisionmaking related to finishing their
702 graduate program.

703 Table 18 shows correlation coefficients with prevalence of depression and anxiety (PHQ-9
704 score and GAD-7 score) as well as suicidal ideation (PHQ-9 Item 9). Concerns about a family
705 members or friends health and safety, keeping research projects viable, managing remote
706 work, professional productivity, and completing the graduate program show the strongest
707 correlations with depression and anxiety prevalence. Additionally, worries about a family

708 members health and finishing the program have the highest correlations with suicidal ideation.

709 Since we know that social connections are an important determinant of mental health,
710 we examine whether mental health issues are more prevalent in departments that closed in
711 response to the pandemic. To explore this mechanism, we compare the prevalence of anxiety
712 and depression symptoms among students from departments that were closed at some point in
713 2021 with those that remained open. In Appendix Figure A.1 (Online), we show the prevalence
714 of mental health issues by G-year. No clear patterns emerge. Across the entire student sample,
715 the rates of moderate-to-severe depression and anxiety symptoms are similar between the two
716 groups. At departments that were closed at some point in 2021, 27.1% of graduate students
717 exhibit moderate-to-severe depression symptoms and 26.5% show moderate-to-severe anxiety.
718 In departments that remained open, these rates are 27.0% and 24.5%, respectively.

719 Our data show a higher prevalence of mental health issues among Economics graduate
720 students in Europe in 2021 than in the U.S. in 2017, before the pandemic. The difference
721 in time between the U.S. and European surveys draws into question whether the observed
722 difference in mental health prevalence stems from the COVID-19 pandemic or is the result of
723 other factors. A key issue is the lack of post-COVID-19 data on Economics graduate students
724 in the U.S., which leaves us without a valid comparison group. To overcome this, we draw
725 on internal data from the Harvard Graduate Student Mental Health Initiative (Barreira and
726 Bolotnyy 2022), led by one of the authors (Paul Barreira). This dataset measures mental
727 health prevalence using a similar framework to ours. For comparability reasons, we focus on
728 data for social science departments available in 2016, 2020, and 2022. We use these data to
729 construct an artificial comparison group for the European study.

730 The trend in mental health issue prevalence in the Harvard study is not as pronounced
731 as the difference in mental health issue prevalence between the U.S. and European studies.
732 Indeed, in the Graduate Student Mental Health Initiative sample, the percentage of students
733 with moderate-severe depression increased by 40%, and the percentage of students experienc-
734 ing moderate-severe anxiety increased by 14% between pre-COVID (2016) and post-COVID
735 (2022) years. If we extrapolate the 2022 mental health prevalence of the U.S. sample from the

736 2017 data assuming a similar trend as at Harvard, the time trend accounts for 74.0% of the
737 U.S.-European difference in depression prevalence and 30.1% of the U.S.-European difference
738 in anxiety prevalence.¹⁰

739 The increase of mental health issue prevalence over the COVID-19 period at Harvard
740 might not be representative – it could be smaller or larger than the true change in the U.S.
741 sample of 2017 or in Europe. However, for it to explain the full U.S.-European difference it
742 would need to underestimate the true U.S. trend in the sample by 26% for depression and by
743 69.1% for anxiety.

744 Taken together, our analyses suggests that a significant part of the difference in mental
745 health issue prevalence between the European and U.S. contexts is likely unrelated to the
746 COVID-19 pandemic. Instead, the difference is likely the result of structural factors, such as
747 access to mental health services, inadequate clarity about expectations and job prospects, and
748 program requirements. Future data collection on the mental health of economics graduate
749 students in the U.S. and in Europe, post-COVID-19, would be valuable for more insight into
750 the differences we observe.

751 5 Recommendations

752 Normalize and Enable Usage of Mental Health Services by Students and Faculty

753 Even accounting for the COVID-19 trend, depression and anxiety symptom prevalence
754 are much higher in the European sample compared to the U.S. sample. At the same time,

10. To bound the difference in mental health issue prevalence between the European and U.S. samples, we project the U.S. prevalence rates from Bolotnyy, Basilico, and Barreira 2022 to post-COVID levels based on the increase in issue prevalence between pre-COVID (2016) and post-COVID (2022) years found in the Harvard sample described above. Our assumption is that the COVID-19 pandemic had a similar impact on the trend of mental health in Europe and the U.S. We project the post-pandemic adjusted rate of moderate-severe depression in the U.S. to be 24.8%, reducing the difference with the European sample to 2.5 percentage points. Similarly, we can project the post-pandemic-adjusted rate of moderate-severe anxiety to be 20.1% in the U.S., leading to a difference with the European sample of 5.8 percentage points. Based on this exercise, the COVID pandemic can explain 74% of the U.S.-European difference in moderate-severe depression prevalence and 30.1% of the U.S.-European difference in moderate-severe anxiety prevalence. We can do a similar exercise using the Harvard Graduate Student Mental Health Initiative's 2020 data for the social science departments. Between 2016 and 2020, the percentage of students with moderate-severe depression increased by 47%. The percentage of students with moderate-severe anxiety increased by 0%. We would project the percentage of students with moderate-severe depression mid-COVID to be 26% for the Bolotnyy, Basilico, and Barreira 2022 sample and the percentage of students with moderate-severe anxiety mid-COVID to be 17.6%, reducing the U.S.-European difference for depression to 1.3 percentage points and for anxiety to 8.3 percentage points.

755 the percentage of students with symptoms of depression and anxiety in treatment is lower in
756 Europe. One explanation is that the COVID-19 pandemic increased the barrier for students
757 to seek or receive treatment. Another explanation is that access to mental health care is in
758 general harder in Europe, perhaps especially so for university populations. While students at
759 U.S. universities often have direct access to mental health services through university health
760 services, this is often not the case in Europe, where in many countries health services are
761 generally not integrated into the university. Provision of mental health services also varies
762 substantially between European countries. Countries differ in terms of who provides mental
763 health services, who is the access point and who refers to mental health services, whether
764 services are reimbursed, and the number of available mental health care providers (Dezetter
765 et al. 2013).

766 There are things that European Economics departments can do to improve access to
767 health care. For example, independent psychological counselors can give initial guidance and
768 help students navigate the health care system with active support. Lowering the barrier
769 and cost for initial consultations and follow-up with professionals is essential for people with
770 mental health concerns who struggle having the energy and confidence for active action. In
771 our European sample, indeed, many departments have already taken steps to address and
772 improve student mental health. Some of the departments have student groups bringing the
773 topic of mental health to the table for discussion with administrators. One department has
774 training for faculty and staff on student mental health and detection of mental health issues.
775 Three departments reported having psychologists or well-being officers that the students can
776 approach.

777 Departmental efforts to normalize mental health support should not only be targeted at
778 students. Our results show that both untenured tenure-track and non-tenure-track faculty, e.g.
779 postdoctoral fellows, experience similarly high levels of anxiety and depression as graduate
780 students. It is important to provide mentorship for these individuals and to ensure that they
781 have and know how to access mental health resources.

782 We recommend implementing regular surveys to monitor the mental health of both stu-

783 dents and faculty members. This approach can help inform targeted mental health initiatives
784 and ensure that departments prioritize mental health. The Harvard Graduate Student Mental
785 Health Initiative provides a useful example of such an effort, and the Blueprint for Mental
786 Health and Well-being in Higher Education (Barreira and Bolotnyy 2022) can offer guidance
787 on how to implement similar initiatives. In addition, given the significant percentage of stu-
788 dents who do not believe that mental health is a priority in their departments, regular surveys
789 may also serve as a collaborative effort between students and faculty to make improvements
790 and instil a general sense of care in the departmental community.

791 Address Sexual Harassment

792 The high rate of sexual harassment – comparable to that in the U.S. – disproportionately
793 affects women and involves perpetrators ranging from fellow students to professors. The
794 challenge of identifying specific cases underscores the need to allocate more resources toward
795 reporting and support systems.

796 Thus, we encourage departments to have a broader discussion about sexual harassment
797 and to help all faculty, staff, and students get on the same page about the kinds of speech and
798 conduct that are not appropriate in the community. Clear procedures should be established
799 to address any instances of sexual harassment, particularly regarding reporting. In our study,
800 we ensure a very high level of privacy for respondents, and it is essential to continue this
801 practice in future internal analyses to avoid misinterpreting potentially lower reporting as a
802 declining incidence of harassment. Recent work on monitoring harassment in organizations
803 highlights the value of using garbled survey methods as a way to give respondents plausible
804 deniability that they were the ones who filed an incriminating report (Boudreau et al. 2023).

805 Improve Advising Relationships

806 European Economics graduate students are less satisfied with their graduate program and
807 struggle to find usefulness and meaningfulness in their work even more than graduate students
808 in the U.S. sample. Most common stress factors are advising relationships, uncertainty about
809 expectations, and time management, which even trump world events such as the COVID-19
810 pandemic. At the same time, European graduate students in our sample are less likely to

811 interact with their adviser or other faculty in their departments.

812 Gin et al. 2021 interviewed life science PhD students with depression in the U.S. and found
813 that negative reinforcement and absence of positive reinforcement can worsen depression, but
814 that meaningful work can alleviate depression. We see helping students arrive at research
815 projects that are particularly meaningful to them and that will sustain them over time as
816 vital for students' mental well-being and research. We also see good mentorship of students
817 as essential to counteract perpetual feelings of failure, negative reinforcement, loneliness, and
818 imposter phenomenon.

819 Many articles have described interventions that may improve imposter phenomenon, how-
820 ever there are no controlled studies of advising in any population. Overall, the literature
821 suggests that activities that allow a person to share their experience with others, such as
822 facilitated workshops, may reduce imposter fears (Bravata et al. 2020). Learning how to do
823 research is characterized by repetitive failure and negative reinforcement, which aggravate de-
824 pression (Gin et al. 2021). Active and good mentorship by advisers who actively incorporate
825 positive feedback, normalize expectations about success and failure, and give students a sense
826 of belonging appears important.

827 Creating opportunities for faculty and students to interact is particularly relevant after the
828 COVID-19 pandemic. We recommend implementing active programs that give students the
829 chance to reconnect with each other and with faculty, not only to recover pandemic losses but
830 also because social connections are vital protective measures against mental health concerns
831 (Woolston 2022). Acknowledging the loss of productivity and actively trying to address it
832 will help students regain their footing and succeed.

833 Offer Structure and Help Students Avoid Ruts

834 In our sample, one of the students' biggest struggles and regrets is their time management.
835 Gin et al. 2021 found that a lack of structure and a lack of short-term goals that give a feeling of
836 accomplishment are exacerbating factors for already existing depression. Administrators and
837 advisers can implement guidelines and practises to offer students more structure on research
838 activities, preventing them from falling through the cracks and getting stuck for long periods

839 of time. A clear system of check-ins, accountability, and help should be a part of every
840 student-faculty advising relationship.

841 **6 Conclusion**

842 Motivated by the study on graduate student mental health in U.S. Economics departments
843 (Bolotnyy, Basilico, and Barreira 2022), we surveyed graduate students and faculty at 14 Eu-
844 ropean Economics departments on mental health, well-being, and their correlates. Our goals
845 were to measure prevalence of mental health issues among students and faculty, understand
846 student and faculty experiences at the department, compare the findings to the U.S. sample,
847 and to make evidence-based recommendations to departments on how to improve student and
848 faculty well-being. The European surveys were administered in November 2021. 556 students
849 and 255 faculty voluntarily participated in the study, with response rates of 47.4% and 31.3%,
850 respectively.

851 The European student sample exhibits high levels of anxiety and depression symptoms.
852 About one third of the students experience moderate to severe symptoms of depression or
853 anxiety and almost one fifth report suicidal ideation. These levels are higher than in the
854 U.S. graduate student sample of 2017. Mental health concerns increase over the years in the
855 program on average, with the exception of anxiety, which is, in contrast to the 2017 U.S. study,
856 particularly high for students in the course phase. Students in years 6+ exhibit the highest
857 risk of depression and suicidal ideation. LGBTQI+ students exhibit the highest depression
858 and suicidal ideation rates of any group, at 42.6% and 24.6%, respectively. 59% of students
859 experience frequent or intense imposter phenomenon.

860 Economics faculty in Europe experience fewer mental health issues than students on av-
861 erage, but this disguises a significant heterogeneity by tenure status. 31.4% of untenured
862 tenure-track faculty and 42.9% of non-tenure track faculty exhibit moderate to severe depres-
863 sion or anxiety symptoms, compared to 9.6% for tenured faculty. Thus, untenured faculty
864 experience levels of anxiety and depression that are comparable to those of their graduate stu-
865 dents. On average, European Economics faculty are less satisfied with their job than faculty
866 at the eight top-ranked U.S. institutions surveyed in 2017.

867 About one quarter of students report having been diagnosed by a professional with a
868 mental illness and 12.4% of students are currently in treatment for some mental health issue.
869 Of the diagnosed students, more were diagnosed before the start of their PhD (14.7%) than
870 during the program (9.7%). Fewer students are in treatment compared to students in the U.S.
871 study. 19.2% of those with moderate-severe depression or anxiety symptoms are currently in
872 treatment, compared to 25.2% in the U.S. study. Only 21.9% of students who exhibit suicidal
873 ideation are receiving treatment. Finally, 25.6% of students in Europe do not know where to
874 turn for help if they have issues with mental health, almost 2 times as many as in the U.S.

875 Events of the COVID-19 pandemic had a substantial adverse impact on students' social
876 connections, their ability to maintain and make friendships, their feeling of connection to the
877 department, and their productivity. However, our evidence, based on both internal data and
878 a comparison with external contemporaneous longitudinal analyses of undergraduates in the
879 U.S., does not support the hypothesis that differences in mental issue prevalence across our
880 sample and the 2017 U.S. study should be entirely attributed to the pandemic.

881 Lastly, we find that 25.9% of European graduate students in our sample have experienced
882 at least one form of sexual harassment since starting their PhD program, with 34.5% of women
883 and 18.7% of men reporting at least one such experience. The most frequent aggressors are
884 fellow graduate students and professors, with the former being more than 2 times as likely to
885 be the source of harassment as the latter.

886 In addition to the recommendations reported in Bolotnyy, Basilico, and Barreira 2022,
887 our findings suggest the following recommendations for promoting mental health and well-
888 being in economics departments: (1) Normalize and enable usage of mental health services
889 by students and faculty; (2) Address sexual harassment; (3) Improve advising relationships
890 through clearer and more consistent communication about progress, expectations, life after
891 the PhD, and other issues; and (4) Offer structure and help students avoid ruts.

892 **7 List of Figures**

893 **Figure 1:** Prevalence of depression, anxiety, and suicidal ideation symptoms by year, com-
894 paring U.S. and European studies

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896 **Figure 2:** Comparison of the distribution of average weekly student work hours across Nat-
897 ural Science and Engineering, and Economics (American versus European) departments

898

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900 ural Science and Engineering, and Economics (American versus European) departments

901

902 **Figure 4:** Comparison of the distribution of students' stated changes if restarting their pro-
903 gram across Natural Science and Engineering, and Economics departments in the U.S. and
904 Europe

905

906 **Figure A.1:** Prevalence of depression, anxiety, and suicidal ideation symptoms in graduate
907 programs by year, comparing closed and open departments in Europe during COVID-19

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1053 **Tables**

Table 1: Eligible and study participants for the student and faculty surveys, by program

Panel A: Student Survey				
Programs	Total invited	Total responded	% responded	% of all responses
Bocconi University	61	45	73.8%	8.1%
Bonn Graduate School of Economics	117	60	51.3%	10.8%
Central European University	21	11	52.4%	2%
European University Institute	100	74	74%	13.3%
London School of Economics	135	37	27.4%	6.7%
Mannheim Graduate School of Economics	103	45	43.7%	8.1%
Paris School of Economics	144	53	36.8%	9.5%
Sciences Po	37	11	29.7%	2%
Stockholm School of Economics	37	14	37.8%	2.5%
Universitat Pompeu Fabra	97	36	37.1%	6.5%
University College London	87	33	37.9%	5.9%
University of Warwick	87	39	44.8%	7%
University of Zurich	95	72	75.8%	12.9%
Uppsala Universitet	52	26	50%	4.7%
Total	1173	556	47.4%	100%
Panel B: Faculty Survey				
Bocconi University	44	18	40.9%	7.1%
Bonn Graduate School of Economics	52	10	19.2%	3.9%
Central European University	58	16	27.6%	6.3%
European University Institute	13	8	61.5%	3.1%
London School of Economics	71	31	43.7%	12.2%
Mannheim Graduate School of Economics	47	31	66%	12.2%
Paris School of Economics	139	20	14.4%	7.8%
Sciences Po	34	0	0%	0%
Stockholm School of Economics	28	11	39.3%	4.3%
Universitat Pompeu Fabra	140	28	20%	11%
University College London	64	27	42.2%	10.6%
University of Warwick	65	26	40%	10.2%
University of Zurich	38	18	47.4%	7.1%
Uppsala Universitet	21	11	52.4%	4.3%
Total	814	255	31.3%	100%

Note: Panel A of the table shows the total number of students invited to participate in the fall 2021 survey; the total number of students who took the survey and completed the depression and anxiety screening; the percent of invited students who took the survey and completed the depression and anxiety screening; and the percent of the entire sample represented by students from each program for each participating Economics PhD program. Panel B of the table shows the total number of faculty receiving the fall 2021 survey; the total number of faculty who took the survey; the percent of invited faculty who took the survey; and the percent of the entire sample represented by faculty from each program.

Table 2: Student survey: Mental health issues, diagnoses, and treatment, by program phase

	Program Phase				Upper and Lower Bounds			
	All	Course Phase	Dissertation Phase	Phase Wgt	Lower Est	Upper Est	Min Dept. Means	Max Dept. Means
Panel A: Mental Health Issue Prevalence								
Depression	27.3%	24.3%	28.4%	27.3%	13.3%	64.7%	14.3%	38.9%
Anxiety	25.9%	28.6%	24.4%	25.6%	12.6%	64%	7.1%	36.4%
Depression or Anxiety	34.7%	36.5%	33.8%	34.5%	16.9%	68.3%	21.4%	42.2%
Suicidality 2-weeks	17.3%	14.3%	18.8%	17.6%	8.4%	59.8%	0%	27.8%
Suicidal thought 1-year	11%	9%	12.5%	11.5%	5.4%	56.8%	0%	21.6%
Suicidal plan 1-year	1.8%	1.1%	1.6%	1.5%	0.9%	52.3%	0%	10.3%
Suicidal attempt 1-year	0.4%	0.5%	0%	0.1%	0.2%	51.6%	0%	2.2%
Panel B: Diagnoses and Treatment								
Diagnosed, pre-program	14.7%	18.5%	12.5%	14.2%	7.2%	58.6%	6.7%	24.2%
Diagnosed, during program	9.7%	6.9%	11.3%	10.1%	4.7%	56.1%	0%	17%
In treatment for any mental illness	12.4%	12.2%	12.8%	12.6%	6%	57.4%	0%	22.6%
Of those w/moderate-severe depression or anxiety, % in treatment	19.2%	11.6%	22.2%	19.3%	9.3%	60.7%	0%	46.7%

Note: Panel A shows the percentage of students who score above critical thresholds on mental health survey instruments, by program phase. Depression and Anxiety show those scoring 10 or higher on the PHQ-9 and GAD-7, respectively. Suicidality 2-weeks captures individuals reporting contemplating suicide or self-harm on at least several days in the last two weeks, as measured by Item 9 on the PHQ-9. The Phase Wgt column weights each prevalence rate based on the typical cohort sizes for the course phase and the total number of enrolled students in the programs we survey. We calculate the weights based on data provided by a subsample of departments and assume the same weights for all departments in the sample. The Lower Est column provides lower bound estimates (assuming that all who do not participate in the study score below critical thresholds) and the Upper Est column provides upper bound estimates (assuming that all who do not participate in the study score above critical thresholds). The Min Dept. Means and Max Dept. Means columns give the max and min of means by departments respectively. For robustness, we use an additional screening tool for suicidality used by the Healthy Minds Study (Healthy Minds Network 2022), adapted from survey instruments by the National Comorbidity Survey replication (Kessler et al. 2004). The tool assesses the presence of self-reported suicidal ideation in the previous year, particularly thinking about suicide, making a plan, and attempting suicide. Panel B shows the percentage of students who report being diagnosed by a mental health professional with some form of mental illness, either before or during the PhD program, by program phase. We also show percentages of students who are in treatment for any mental illness and the percentage of those with moderate or severe symptoms of depression or anxiety (PHQ-9 \geq 10 or GAD-7 \geq 10) who are in treatment.

Table 3: Student survey: Percent of students scoring above critical thresholds

Category	Depression	Anxiety	Suicidality 2-weeks	Suicidality thought 1-yr	Suicidality plan 1-yr	Suicidality attempt 1-yr
All	27.3%	25.9%	17.3%	11%	1.8%	0.4%
Male	24.8%	24.2%	17.3%	11.1%	2%	0.3%
Female	28.2%	27.7%	14.9%	10.4%	0.5%	0%
All Gender Wgt	25.9%	25.3%	16.5%	10.9%	1.5%	0.2%
<i>Diff male & female p-val</i>	0.456	0.429	0.539	0.914	0.318	0.834
Minority Race	29.3%	29.3%	17.3%	12.8%	3%	0%
<i>Diff w/White p-val</i>	0.373	0.309	0.786	0.56	0.15	0.589
Minority Sexuality	42.6%	26.2%	24.6%	23%	3.3%	0%
<i>Diff w/Heterosexual p-val</i>	0.005	0.892	0.103	0.003	0.439	0.241
First-Generation	25.7%	21.1%	12.8%	9.2%	2.8%	0%
<i>Diff w/Non-First Gen p-val</i>	0.923	0.262	0.301	0.58	0.346	0.482

Note: Table shows percent of students scoring above thresholds for mental health concern. Depression and Anxiety show those scoring 10 or higher on the PHQ-9 and GAD-7, respectively. Suicidality 2-weeks are those reporting contemplating suicide or self-harm on at least several days in the last two weeks, as captured by Item 9 on the PHQ-9. Suicidality thought 1-year, suicidality plan 1-year, suicidality attempt 1-year are those having thought about, made a plan, or attempted a suicide suicide in the past year. The “All Gender Wgt” row weights each prevalence rate based on the gender breakdown of students enrolled in the programs we survey. We calculate the weights based on data provided by a subsample of departments and assume the same weights for all departments in the sample. Students classified as minority race are those who select at least one non-White race (Black or African American, Hispanic or Latino, Asian or Asian American, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native). Students classified as minority sexuality are those who select Bisexual or Gay or Lesbian as their sexual orientation. Students with a father or mother with high school or less as the highest level of educational attainment are included in the First-Generation category. P-values for chi-squared tests of differences are also reported, showing levels of statistical significance for relationships between mental health and gender, race, sexual orientation, and parent education level.

Table 4: Student survey: UCLA Loneliness

Panel A: Question and Answer	
	Percent
How often do you feel you lack companionship?	
Hardly ever (1)	46.8%
Some of the time (2)	32.7%
Often (3)	20.6%
How often do you feel left out?	
Hardly ever (1)	42.2%
Some of the time(2)	40.4%
Often (3)	17.5%
How often do you feel isolated from others?	
Hardly ever (1)	38.9%
Some of the time (2)	42.2%
Often (3)	18.9%
Panel B: Distribution of scores	
	Percent
3	23.6%
4	19.0%
5	14.3%
6	17.1%
7	9.2%
8	7.0%
9	9.7%

Note: Panel A shows the questions and answers. A higher response value indicates greater loneliness. Panel B shows the distribution of the UCLA Loneliness score. The UCLA Loneliness screen yields a score ranging from 3 to 9. A score of 9 indicates a high degree of loneliness. For exact question wording, please see survey instrument in Appendix B.1 (Online).

Table 5: Student survey: Imposter Phenomenon

Panel A: Imposter Phenomenon Distribution			
Question and Answer	Percent		
Low IP	6.8%		
Moderate IP	34.1%		
Frequent IP	38%		
Intense IP	21%		
Panel B: Imposter Phenomenon by Demographics			
Category	IP score mean	% Frequent IP	% Intense IP
Male	62.43	36.7%	15.7%
Female	69.75	41.8%	28.9%
<i>Diff male & female p-val</i>	0.000	0.293	0.001
Non-minority race	64.64	34.8%	21.1%
Minority race	65.94	42%	20.6%
<i>Diff w/white p-val</i>	0.449	0.188	1.000
Non-minority sexuality	64.42	36.9%	20.2%
Minority sexuality	72.26	49.2%	27.9%
<i>Diff w/heterosexual p-val</i>	0.000	0.086	0.229
Non-first-generation	65.94	40.7%	22.2%
First-generation	65.24	38.1%	20.6%
<i>Diff w/Non-first gen p-val</i>	0.694	0.692	0.823

Note: The Clance Imposter Phenomenon screen includes 20 questions and provides a score of between 20 and 100. Scores are grouped into 4 categories representing the degree to which the individual experiences feeling like an imposter (few, moderate, frequent, intense). If the total score is 40 or less, the respondent has few imposter characteristics; if the score is between 41 and 60, the respondent has moderate IP experiences; a score between 61 and 80 means the respondent frequently has imposter feelings; and a score higher than 80 means the respondent often has intense IP experiences. Panel A shows the percentage of respondents falling into each IP category. Panel B shows the mean of the Imposter Phenomenon score and the percent of students who fall into the frequent IP and intense IP category by demographic group. For exact question wording, please see survey instrument in Appendix B.1 (Online).

Table 6: Student survey: Help with mental health and advising

Question	Answer	Mean	Min department mean	Max department mean
If issue with mental health, would you know where to turn for help?	Yes	74.4 %	61.1%	84.6 %
	No	25.6%	17.8%	38.9%
If issue with advising, would you know where to turn for help?	Yes	48%	20.6%	84%
	No	52%	23.1%	79.4%

Note: A higher response value indicates knowing where to turn for help. Min and max give the minimum and maximum values of the average by department. For exact question wording, please see survey instrument in Appendix B.1(Online).

Table 7: Faculty survey: Mental health issues

	Tenure track	Non-tenure track	Tenured	All
Depression	25.7%	28.6%	6.2%	11.6%
Anxiety	20.6%	28.6%	8%	11.9%
Depression or Anxiety	31.4%	42.9%	9.6%	15.8%
Suicidality 2-weeks	8.6%	0%	6.1%	6.1%

Note: Table shows the percentage of faculty who score above critical thresholds on mental health survey instruments. Depression and Anxiety show those scoring 10 or higher on the PHQ-9 and GAD-7, respectively. Suicidality 2-weeks are those reporting contemplating suicide or self-harm on at least several days in the last two weeks, as captured by Item 9 on the PHQ-9. The columns indicate the percentage of tenure track, non-tenure track, and tenured faculty score above the critical value for depression, anxiety, depression or anxiety, and suicidality.

Table 8: Student stressors: Extent to which the following had been source of stress during past year

Question and Answer	Not at all	Somewhat	Extensive
Making time for my personal life	23%	45.6%	31.4%
Balancing academic work with other responsibilities	14.3%	46.6%	39.1%
Managing my time	8.6%	39.1%	52.3%
Managing my relationship with my adviser	43.4%	38.1%	18.5%
Managing personal relationships at home	41.9%	37.1%	21%
Managing relationships with peers in my department/lab	60.9%	30.9%	8.2%
Finding a job after graduate school	20.2%	29.4%	50.4%
Tenure Status of adviser	84.7%	12.4%	2.9%
Managing relationships with faculty in the department	46.3%	42.8%	10.9%
Finding funding	56.6%	24.3%	19.1%
Being unsure what is expected of me by my adviser	31%	46.6%	22.4%
Passing my qualifying exams	34.5%	23.3%	42.2%
Finding a dissertation topic	16.2%	37.6%	46.2%
Putting together a dissertation committee	46.8%	35.5%	17.7%
Finishing my dissertation	17.2%	34.4%	48.5%
Financial difficulties	58.7%	27.5%	13.8%
Paying off debt/loans	86.3%	10.3%	3.4%
Food Insecurity	95.6%	2.9%	1.5%
World events (politics, climate issues, COVID-19, etc.)	18.9%	48.3%	32.8%
Access to safe and affordable housing	69.1%	21.7%	9.2%
Personal health issues	55%	33.3%	11.8%
Issues pertaining to visas	77%	13.3%	9.7%
Other	60%	10%	30%

Note: Responses show to which extent each of the listed items were sources of stress during the previous year. A higher response value indicates a respondent experienced more of each type of situation. For exact question wording, please see survey instrument in Appendix B.1 (Online).

Table 9: Student survey: RAND meaningfulness of work

	Question and Answer	Percent
Opportunities to fully use your talents		
	Always	6.2%
	Most of the time	42.4%
	Sometimes	39%
	Rarely	10.8%
	Never	1.6%
Opportunities to make positive impact on community/society		
	Always	3.9%
	Most of the time	14.8%
	Sometimes	38.1%
	Rarely	29.4%
	Never	13.8%
Sense of personal accomplishment		
	Always	5.3%
	Most of the time	27.4%
	Sometimes	43.8%
	Rarely	19%
	Never	4.5%
Goals to aspire to		
	Always	13.1%
	Most of the time	35.4%
	Sometimes	33.2%
	Rarely	15%
	Never	3.3%
Satisfaction of work well done		
	Always	5.6%
	Most of the time	28.2%
	Sometimes	40.6%
	Rarely	20.3%
	Never	5.2%
Feeling of doing useful work		
	Always	4.1%
	Most of the time	19.9%
	Sometimes	40.6%
	Rarely	27.3%
	Never	8%

Note: These questions were borrowed from the RAND American Working Conditions Survey (Maestas et al. 2015). A higher response value indicates a respondent's work provides more of each question item. For exact question wording, please see survey instrument in Appendix B.1 (Online).

Table 10: Learning environment for students: Work-life balance

	Question and Answer	Percent
	I feel like I have more to do than I can comfortably handle	
	Strongly disagree	4.2%
	Slightly disagree	15.4%
	Neither agree or disagree	17.5%
	Slightly agree	32.6%
	Strongly agree	30.3%
	I feel like I can't say no to others in my department when being asked to take on more work responsibilities than I am comfortable with	
	Strongly disagree	14.6%
	Slightly disagree	24.5%
	Neither agree or disagree	25%
	Slightly agree	27.6%
	Strongly agree	8.3%

Note: A higher response value indicates greater feeling of good work-life balance. For exact question wording, please see survey instrument in Appendix B.1 (Online).

Table 11: Student survey: Social sources of support

Question and Answer	Percent	Min of department means	Max of department means
About how many people do you have in your personal life that you can really open up to about your most private feelings without having to hold back?			
0	5.6%	0%	14.7%
1	11%	0%	20%
2 to 5	59.4%	45.7%	70%
6 to 10	19.7%	4.2%	39.2%
11 or more	4.3%	0%	14.3%
When you have a problem or worry, how often do you let someone in your personal life know about it?			
Never	2.1%	0%	8.6%
Rarely	20.2%	4.2%	32.6%
Sometimes	27.7%	20%	45.8%
Often	30.9%	18.2%	40%
Very often	19.1%	0%	36.4%
I have friendly relationships with other graduate students in my department			
Strongly disagree	1.5%	0%	6.7%
Slightly disagree	4.1%	0%	30%
Neither agree or disagree	5.1%	0%	20%
Slightly agree	23.3%	10%	42.9%
Strongly agree	66%	40%	79.5%
I have friendly relationships with other graduate students outside of my department			
Strongly disagree	19.1%	0%	44.4%
Slightly disagree	10%	0%	22.9%
Neither agree or disagree	17.2%	7.7%	33.3%
Slightly agree	22.1%	9.1%	38.5%
Strongly agree	31.7%	2.9%	46.2%
There is at least one peer in my department that I feel like I can turn to if I need help			
Strongly disagree	4.1%	0%	11.8%
Slightly disagree	3.4%	0%	20%
Neither agree or disagree	4.1%	0%	10%
Slightly agree	17.5%	5.9%	42.9%
Strongly agree	70.9%	40%	84.9%
I have a personal support network (at my university or elsewhere) to help me through mental health challenges			
Strongly disagree	4.5%	0%	11.4%
Slightly disagree	6%	0%	20%
Neither agree or disagree	9.4%	4.2%	17.2%
Slightly agree	24.8%	14.3%	40%
Strongly agree	55.3%	31.4%	70.8%
I believe that my peers in my department care about my mental health and well-being			
Strongly disagree	3.6%	0%	8.6%
Slightly disagree	6.2%	0%	20%
Neither agree or disagree	13.3%	0%	40%
Slightly agree	29.5%	13.3%	36.4%
Strongly agree	47.4%	20%	64.3%

Note: A higher response rate indicates more people to open up to, more frequently letting someone know about a problem, more friendly relationships at the department, more friendly relationships outside of the department, having a peer at the department to turn to for help, having a personal support network, and higher perception that the department cares about mental health. For exact question wording, please see survey instrument in Appendix B.1 (Online).

Table 12: Student survey: Number of meetings with advisers

Question and Answer	Percent	Min of department means	Max of department means
In the last 2 months, # of times met with main adviser			
0	9.9%	0%	23.3%
1	12.4%	4.3%	33.3%
2	18.9%	3%	29.3%
3	13.2%	0%	23.3%
4	12.6%	0%	22%
5	8.8%	0%	21.2%
6 to 10	19.1%	9.8%	39.1%
11 to 15	2.5%	0%	9.1%
15 +	2.5%	0%	6.1%
In the last 2 months, # of times met with any of three advisers			
0	7.4%	0%	20%
1	7.6%	0%	20%
2	9.2%	3%	19.5%
3	12.2%	4.9%	18.5%
4	8.8%	2.9%	15.4%
5	10.3%	0%	27.3%
6 +	44.5%	20%	69.6%
The number of times I have met with my advisers over the past year was sufficient to meet my needs			
Strongly disagree	9.3%	0%	24.1%
Slightly disagree	16%	4%	26.9%
Neither agree or disagree	16.8%	0%	28.6%
Slightly agree	27.4%	7.1%	36.4%
Strongly agree	30.5%	20.7%	52%

Note: For the first question, a higher response value indicates greater number of times met with main adviser. For the second question, a higher response value indicates greater number of times met with one of three advisers (summed across the three advisers). For exact question wording, please see survey instrument in Appendix B.1 (Online).

Table 13: Learning environment for students: Progress to the degree

	Question and Answer	Percent
I am on track to complete my degree program on time		
	Strongly disagree	7.1%
	Slightly disagree	16.2%
	Neither agree or disagree	19.4%
	Slightly agree	34.8%
	Strongly agree	22.5%
I am well-prepared for the work required to complete my program		
	Strongly disagree	6.4%
	Slightly disagree	18.2%
	Neither agree or disagree	27.5%
	Slightly agree	34.7%
	Strongly agree	13.2%
I felt well-prepared when I took my general exam/qualifying exam/PGE/etc.		
	Strongly disagree	9.8%
	Slightly disagree	18%
	Neither agree or disagree	23.9%
	Slightly agree	30%
	Strongly agree	18.3%
I feel like I receive the feedback necessary to understand whether or not I am on track with my progress		
	Strongly disagree	6.1%
	Slightly disagree	24.1%
	Neither agree or disagree	24.9%
	Slightly agree	32.2%
	Strongly agree	12.7%
I feel that my mental health has had a negative effect on my progress in the PhD program		
	Strongly disagree	18.8%
	Slightly disagree	14.7%
	Neither agree or disagree	20.1%
	Slightly agree	24.2%
	Strongly agree	22.2%

Note: A higher response value indicates greater feeling of progress towards the degree. For exact question wording, please see survey instrument in Appendix B.1 (Online).

Table 14: Student survey: Perceptions of faculty care

Question and Answer	Percent	Min of department means	Max of department means
My advisers really care about my well-being.			
Strongly disagree	5.2%	0%	13.8%
Slightly disagree	9.2%	0%	20%
Neither agree or disagree	17.3%	0%	30.8%
Slightly agree	37.4%	25.7%	70%
Strongly agree	30.8%	6.9%	64%
I would feel comfortable telling my advisers about my post-graduation plans if they were outside of academia.			
Strongly disagree	13.4%	0%	31%
Slightly disagree	16.7%	0%	26.5%
Neither agree or disagree	18.4%	6.9%	29.4%
Slightly agree	24.6%	9.1%	50%
Strongly agree	26.9%	6.9%	45.5%
I have at least one faculty member in my department aside from my adviser from whom I can seek advice and guidance.			
Strongly disagree	11.1%	0%	18.8%
Slightly disagree	11.3%	0%	19.5%
Neither agree or disagree	10.7%	0%	19.1%
Slightly agree	31.9%	18.2%	50%
Strongly agree	35.1%	23.3%	54.5%
I believe that the faculty in my department would be supportive of me if a mental health or well-being-related issue interfered with my work.			
Strongly disagree	9.3%	0%	22%
Slightly disagree	16.9%	0%	45.5%
Neither agree or disagree	22.2%	12%	32.3%
Slightly agree	31.1%	9.1%	44%
Strongly agree	20.5%	3%	64.3%
I believe that the faculty in my department care about my mental health and well-being.			
Strongly disagree	10.7%	0%	22.5%
Slightly disagree	19.2%	7.1%	36.4%
Neither agree or disagree	20.4%	4%	30.3%
Slightly agree	32%	14.3%	48%
Strongly agree	17.7%	3%	57.1%

Note: A higher response value indicates greater perceived care. For exact question wording, please see survey instrument in Appendix B.1 (Online).

Table 15: Learning environment for students: Preparation for post-graduate life

	Question and Answer	Percent
In applying to this program, I was aware of the career outcomes of the departments recent graduates		
	Strongly disagree	6.4%
	Slightly disagree	10.7%
	Neither agree or disagree	7.5%
	Slightly agree	40.1%
	Strongly agree	35.2%
Faculty are proactive in helping students develop professional networks		
	Strongly disagree	10.6%
	Slightly disagree	19.6%
	Neither agree or disagree	22.3%
	Slightly agree	38.1%
	Strongly agree	9.4%
There are professional development opportunities in my department that help prepare students for the job search		
	Strongly disagree	6.4%
	Slightly disagree	12.7%
	Neither agree or disagree	22.4%
	Slightly agree	41.2%
	Strongly agree	17.3%
Faculty are aware of the challenges facing current students entering the job market		
	Strongly disagree	3.3%
	Slightly disagree	6.6%
	Neither agree or disagree	18.4%
	Slightly agree	45%
	Strongly agree	26.7%

Note: A higher response value indicates greater feeling of preparation for post-graduate life. For exact question wording, please see survey instrument in Appendix B.1 (Online).

Table 16: Learning environment for students: Sense of community

	Question and Answer	Percent
There is a strong sense of community in my graduate program		
	Strongly disagree	8.6%
	Slightly disagree	16.7%
	Neither agree or disagree	17.7%
	Slightly agree	35.7%
	Strongly agree	21.3%
The department takes great care to make students feel included		
	Strongly disagree	17.1%
	Slightly disagree	23.8%
	Neither agree or disagree	24%
	Slightly agree	23.2%
	Strongly agree	11.9%
I make an effort to create or foster an inclusive environment for others		
	Strongly disagree	4.8%
	Slightly disagree	10.4%
	Neither agree or disagree	21.7%
	Slightly agree	39%
	Strongly agree	24%
Academic accomplishments of current graduate students are celebrated by my department		
	Strongly disagree	8.1%
	Slightly disagree	13.8%
	Neither agree or disagree	24%
	Slightly agree	38%
	Strongly agree	16.1%
Professional accomplishments of current graduate students are celebrated by my department		
	Strongly disagree	17%
	Slightly disagree	21.5%
	Neither agree or disagree	30.7%
	Slightly agree	21.9%
	Strongly agree	9%

Note: A higher response value indicates greater feeling of sense of community. For exact question wording, please see survey instrument in Appendix B.1 (Online).

Table 17: Sexual harassment of students: Experience, type, and aggressor

Panel A: Respondent has experienced sexual harassment in department			
	Yes	Min of dept means	Max of dept means
All	25.9%	22.4%	50.0%
Female	34.5%	28.6%	63.6%
Male	18.7%	15.4%	50.0%
Panel B: Respondent has experienced sexual harassment by type			
	Europe	U.S.	
Inappropriate or offensive comments about your or someone else's body, appearance, or sexual activities	9.4%	8.8%	
Sexual remarks, jokes, or stories that were insulting or offensive to you	6.1%	5.6%	
Requests to go out for dinner, have drinks, or have sex even though you said 'No'	1.5%	3.1%	
Crude or gross sexual comments or tried to get you to talk about sexual matters when you did not want to	1.4%	1.9%	
Email(s), text(s), phone call(s), or instant message(s) with offensive sexual remarks, jokes, stories, pictures, or videos you did not want to receive	1.1%	0.0%	
Something else that makes me uncomfortable but doesn't fall into any of the other categories	14.7%	N/A	
None of the above	65.6%	N/A	
Panel C: Respondent has ever experienced sexual harassment by aggressor			
	Europe	U.S.	
Graduate student friend or acquaintance	9.9%	11.3%	
Professor	4.1%	0.6%	
Adviser	0.7%	0.0%	
Staff member	0.5%	0.0%	
Undergraduate student friend or acquaintance	0.5%	0.6%	
At the time, it was someone I was romantically involved or intimate with	0.2%	0.0%	
Someone I had been romantically involved or was intimate with	0.2%	0.6%	
Stranger	0.4%	1.3%	
Other	0.2%	0.0%	
Don't know	0.2%	0.0%	

Note: Panel A shows percentage of each group of students that report having experienced one or more forms of sexual harassment from someone in their department. Panel B shows the distribution of the harassment type of all survey responses. Panel C shows the distribution of harassment aggressors of all survey responses. The U.S. data come from Bolotnyy, Basilico, and Barreira 2022. For exact question wording, please see survey instrument in Appendix B.1 (Online). N/A stands for not available in Bolotnyy, Basilico, and Barreira 2022.

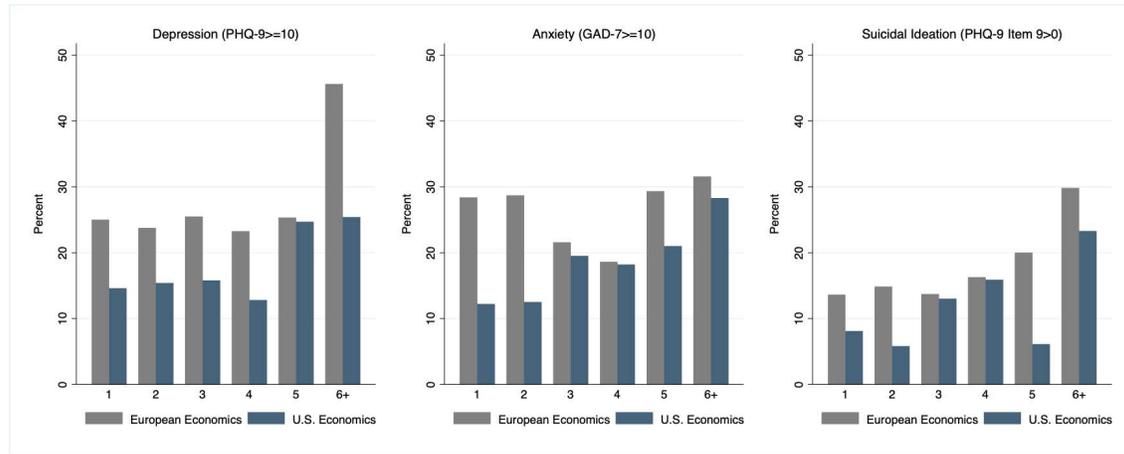
Table 18: Student survey: Has the COVID-19 pandemic impacted the following...?

Question and Answer	Percent	PHQ-9 ρ	GAD-7 ρ	PHQ-9 Item 9 ρ
Your physical/mental health		0.164	0.146	0.038
Not at all	38.3%			
A little	28.5%			
Moderately	18.9%			
A lot	11.9%			
To a great extent	2.3%			
Your family members'/friends' health and safety		0.296	0.264	0.197
Not at all	12.5%			
A little	29.8%			
Moderately	29.6%			
A lot	19.1%			
To a great extent	9%			
Your financial health		0.115	0.114	0.025
Not at all	24.5%			
A little	29.4%			
Moderately	29.7%			
A lot	11%			
To a great extent	5.5%			
Uncertainty about your future employment and/or job market		0.17	0.13	0.111
Not at all	73.5%			
A little	13.8%			
Moderately	6.6%			
A lot	4.3%			
To a great extent	1.8%			
Maintaining the viability of your research projects		0.233	0.249	0.081
Not at all	41.4%			
A little	26.4%			
Moderately	18.2%			
A lot	10.5%			
To a great extent	3.5%			
Managing the demands of remote work		0.203	0.219	0.064
Not at all	59.7%			
A little	17.7%			
Moderately	13%			
A lot	7.3%			
To a great extent	2.4%			
Your professional productivity		0.239	0.142	0.116
Not at all	15.4%			
A little	21.5%			
Moderately	28.7%			
A lot	24.4%			
To a great extent	10%			
Finishing your graduate program		0.233	0.26	0.158
Not at all	67.8%			
A little	16.1%			
Moderately	8.3%			
A lot	4.9%			
To a great extent	2.9%			
Maintaining existing or making new relationships, friendships, and social connections		0.184	0.189	0.112
Not at all	6.5%			
A little	17%			
Moderately	27.4%			
A lot	32.7%			
To a great extent	16.4%			
Staying connected with your Economics department		0.177	0.163	0.108
Not at all	11.4%			
A little	14.9%			
Moderately	27.7%			
A lot	30.8%			
To a great extent	15.1%			

Note: A higher response value indicates greater concern about the impact of COVID-19 on the item. Higher PHQ-9, GAD-7, and PHQ-9 Item 9 scores reflect worse mental health. PHQ-9 captures depressive symptoms, GAD-7 captures anxious symptoms, and PHQ-9 Item 9 captures thoughts of suicide and self-harm. Last three columns report Pearson correlation (ρ) between response to the question and each mental health measure. For exact question wording, please see survey instrument in Appendix B.1 (Online).

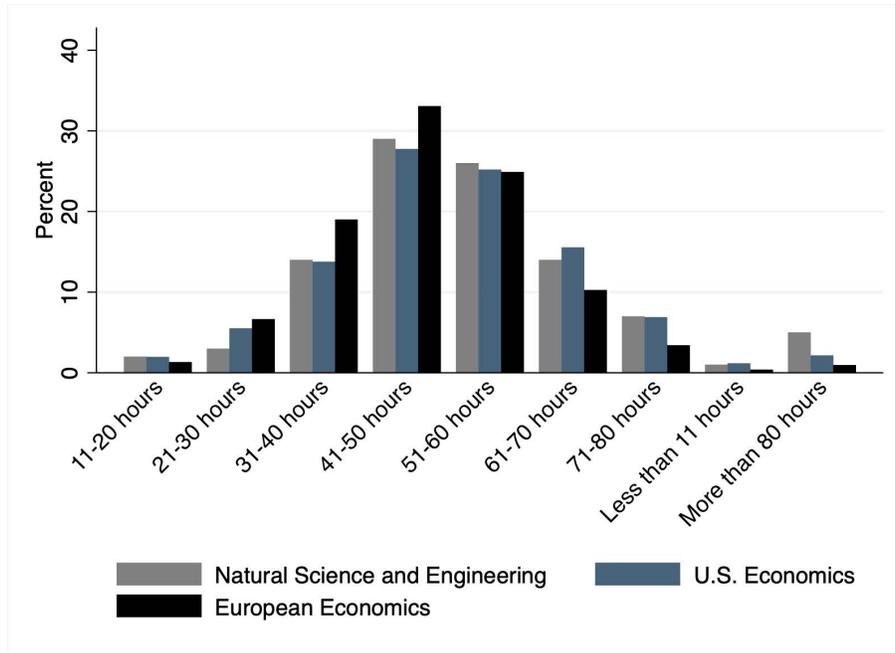
1054 **Figures**

Figure 1: Prevalence of symptoms by year in graduate program in U.S. and European studies



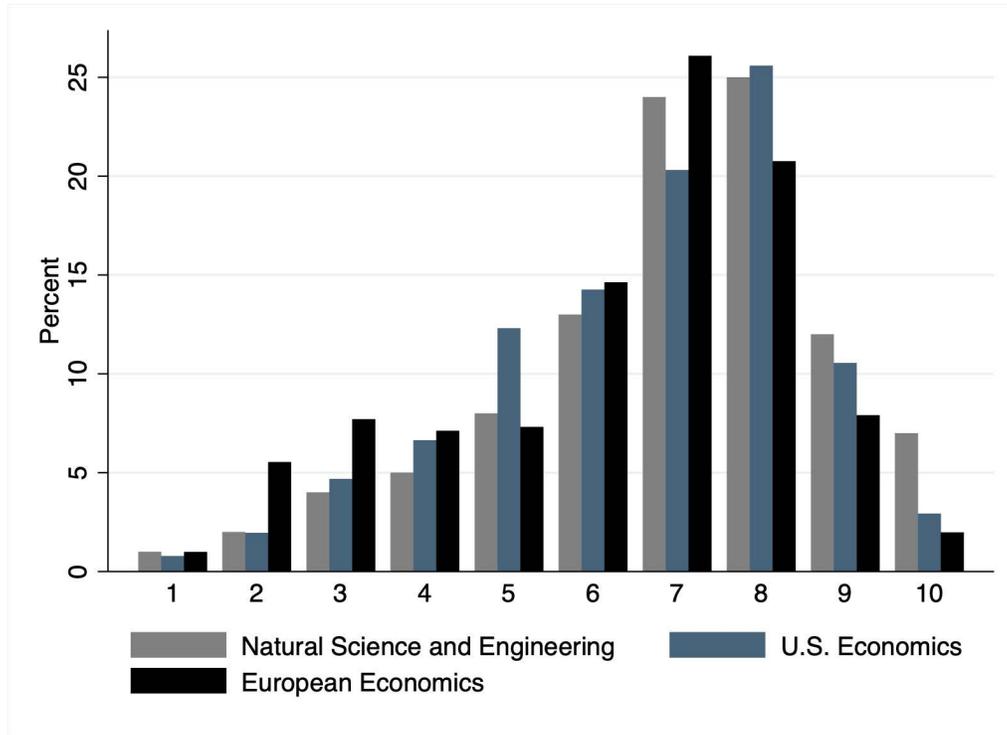
Note: PHQ-9 measures symptoms of depression. GAD-7 measures symptoms of anxiety. Symptom intensity increases as PHQ-9 and GAD-7 scores increase. Mental health professionals use a score of 10 on the PHQ-9 and the GAD-7 as a cutoff when diagnosing individuals with depression or anxiety disorder, respectively. The PHQ-9 Item 9 measures suicidality by asking on how many days over the past two weeks a student was bothered by thoughts of wanting to be dead or wanting to hurt themselves. We show here the percent of students scoring 10 or higher on the PHQ-9 and GAD-7, and the percent of students bothered by suicidal thoughts in a two week period. The x-axis shows year in the graduate program. Results for U.S. Economics come from Bolotnyy, Basilico, and Barreira 2022.

Figure 2: On average, how many hours a week do you typically work?



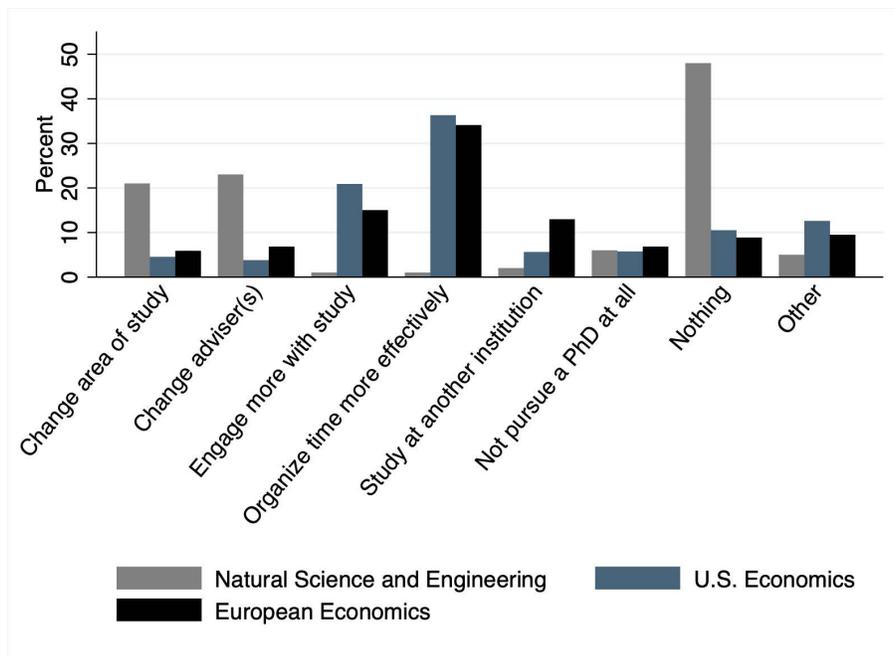
Note: Based on the results obtained from student survey. Results for Natural Science and Engineering PhD students come from Woolston 2017. Results for U.S. Economics come from Bolotnyy, Basilico, and Barreira 2022.

Figure 3: On a scale of 1 to 10, where 1 = Extremely dissatisfied and 10 = Extremely satisfied, how satisfied are you with your PhD experience?



Note: Based on the results obtained from student survey. Results for Natural Science and Engineering PhD students come from Woolston 2017. Results for U.S. Economics come from Bolotnyy, Basilico, and Barreira 2022.

Figure 4: What would you do differently right now if you were starting your program?



Note: Based on the results obtained from student survey. Results for Natural Science and Engineering PhD students come from Woolston 2017. Results for U.S. Economics come from Bolotnyy, Basilico, and Barreira 2022.

APPENDIX A: ADDITIONAL TABLES AND FIGURES

Table A.1: Student Background Characteristics

	All	Male	Female
Gender Identity			
Man	59.6%	100%	0
Woman	39.4%	0	100%
Other	1%	0	0
Age			
Younger than 24	10.8%	12.1%	8.5%
25 to 29	62.4%	62.7%	62.3%
30 to 34	25.1%	23.5%	27.1%
35 to 39	1.4%	1%	2%
40 or older	0.4%	0.7%	0
Race			
Asian	12.4%	10.5%	15.8%
Black or African American	0.6%	0.7%	0.5%
Hispanic or Latino	8.3%	8.2%	8.7%
White	77.9%	81.4%	71.9%
Middle Eastern or North African	4.1%	3.6%	5.1%
Other	1.4%	1.3%	1.5%
English Language			
English is first language	8.8%	8.5%	7.9%
English is not first language	91.2%	91.5%	92.1%
Native speaker of program's country			
Is native speaker of program's country	36.3%	38.7%	32.2%
Is not native speaker of program's country	63.7%	61.3%	67.8%
Disability			
Disability	2.2%	2.3%	1.5%
No disability	97.8%	97.7%	98.5%
Sexual Orientation			
Heterosexual	89.4%	90.7%	87.8%
Bisexual	7.2%	5%	10.2%
Gay or lesbian	3.4%	4.3%	2%

Table A.1: (Cont.) Student Background Statistics

Relationship Status			
Single	29.2%	33.3%	22.1%
Casual	2.5%	2%	3.5%
Dating	10.4%	10.8%	10.1%
Long-term/committed	46.1%	42.5%	51.8%
Married	10.6%	10.1%	11.6%
Divorced	0	0	0
Other	1.2%	1.3%	1%
Living Alone			
Living alone	29.5%	32.5%	25.5%
Not living alone	70.5%	67.5%	74.5%
Children			
One or more	4.3%	3.6%	5.5%
None	95.7%	96.4%	94.5%
Father - Highest degree earned			
High school or below	18.9%	18%	20.3%
Apprenticeship	9.9%	10.2%	9.4%
Bachelor 's	16.4%	18.4%	13.9%
Master's	37%	34.4%	41.6%
PhD	17.7%	19%	14.9%
Mother - Highest degree earned			
High school or below	17.2%	19%	14.4%
Apprenticeship	13.8%	15.4%	11.4%
Bachelor 's	21.4%	18.7%	25.7%
Master's	37.4%	38%	36.6%
PhD	10.1%	8.9%	11.9%
Math courses btw. start of undergrad & PhD			
0	6.7%	5.9%	8.2%
1 or 2	26.6%	27.8%	24.5%
3 or 4	26.8%	25.5%	28.1%
5 or 6	18.1%	17.6%	19.4%
7+	21.7%	23.2%	19.9%
Straight from undergrad or master to PhD?			
Yes	52.5%	55.6%	48.2%
No	47.5%	44.4%	51.8%
Did 2-year MSc			
Yes	70.4%	69.9%	72.4%
No	29.6%	30.1%	27.6%

Table A.1: (Cont.) Student Background Statistics

Positions for compensation in the last two months			
Teaching assistant	42%	43%	39.3%
Research assistant	23.2%	21.9%	25%
Grader	12.2%	12.6%	11.2%
Private Tutor	2.5%	2%	3.1%
Non-academic data scientist	2.5%	2.3%	3.1%
Other	10.3%	9.9%	10.7%
Did not work for compensation	36.9%	37.4%	37.8%

Table A.2: Student survey: Symptom severity and mental health diagnoses

Panel A: Depression			
PHQ-9 Score	Category	Diagnosed Before	Diagnosed After
0 to 4	none-minimal	20.7%	16.7%
5 to 9	mild	26.8%	33.3%
10 to 14	moderate	34.1%	33.3%
15 to 19	moderately-severe	11%	9.3%
≥ 20	severe	7.3%	7.4%
Panel B: Anxiety			
GAD-7 Score	Category	Diagnosed Before	Diagnosed After
0 to 4	none-minimal	29.3%	22.2%
5 to 9	mild	26.8%	33.3%
10 to 14	moderate	26.8%	25.9%
≥ 15	severe	17.1%	18.5%
Panel C: Suicidality			
PHQ-9 Item 9 Score	Category	Diagnosed Before	Diagnosed After
0	not at all	69.5%	74.1%
≥ 1	more than zero days	30.5%	25.9%

Note: Table shows the percentage of students diagnosed with a mental health issue before starting the PhD program and percentage of students diagnosed after starting the PhD program who are scoring in each PHQ-9, GAD-7, and PHQ-9 Item 9 category. Those who score 10 or higher on the PHQ-9 or the GAD-7 would, with a 90% probability, be diagnosed with depression or anxiety disorder, respectively, upon seeing a mental health professional. PHQ-9 Item 9 measures suicidality by asking on how many days over the past two weeks a student was bothered by thoughts of wanting to be dead or wanting to hurt themselves.

Table A.3: Students receiving treatment for depression, anxiety, or any mental health issue, by symptom severity

Panel A: Depression						
PHQ-9 Score	Category	Num. Students	Percent in Treatment	Min of Department Means	Max of Department Means	
0 to 4	none-minimal	218	2.8%	0%	9.1%	
5 to 9	mild	186	5.4%	0%	20%	
10 to 14	moderate	107	11.2%	0%	18.2%	
15 to 19	moderately-severe	28	3.6%	0%	50%	
≥ 20	severe	17	47.1%	0%	100%	
Panel B: Anxiety						
GAD-7 Score	Category	Num. Students	Percent in Treatment	Min of department means	Max of department means	
0 to 4	none-minimal	243	5.3%	0%	20%	
5 to 9	mild	169	8.3%	0%	20%	
10 to 14	moderate	96	12.5%	0%	33.3%	
≥ 15	severe	48	18.8%	0%	50%	
Panel C: Suicidality						
PHQ-9 Item 9 Score	Category	Num. Students	Percent in Treatment	Min of department means	Max of department means	
0	not at all	460	10.4%	0%	25%	
≥ 1	more than zero days	96	21.9%	0%	60%	

Note: PHQ-9 measures symptoms of depression. GAD-7 measures symptoms of anxiety. Symptom severity increases as PHQ-9 and GAD-7 scores increase. Mental health professionals use a score of 10 on the PHQ-9 and the GAD-7 as a cutoff when diagnosing individuals with depression or anxiety disorder, respectively. The PHQ-9 Item 9 measures suicidality by asking on how many days over the past two weeks a student was bothered by thoughts of wanting to be dead or wanting to hurt themselves. Treatment in Panel A refers to treatment for depression; in Panel B, treatment for anxiety; in Panel C, treatment for any mental health issue.

Table A.4: Student Survey: Job search after graduate school as a source of stress and correlation with mental health

Question and Answer	Depression	Anxiety
Finding a job after graduate school has been source of stress during previous year:		
Not at all	12.7%	18.2%
Somewhat	23.7%	20%
Extensively	40.1%	34.3%

Note: The table shows the percent of students with moderate-severe symptoms of depression (PHQ-9) and anxiety (GAD-7) by answer choice for the question “To which extent had the following been a major source of stress during the previous year?”. For exact question wording, please see survey instrument in Appendix B1.

Table A.5: Faculty survey: Meaningfulness of work

	Question and Answer	Percent
Opportunities to fully use your talents		
	Never	0.6%
	Rarely	3%
	Sometimes	26.7%
	Most of the time	55.8%
	Always	13.3%
	Don't know	0.6%
Opportunities to make positive impact on community/society		
	Never	3%
	Rarely	10.3%
	Sometimes	41.8%
	Most of the time	37.6%
	Always	6.7%
	Don't know	0.6%
Sense of personal accomplishment		
	Never	1.2%
	Rarely	6.1%
	Sometimes	21.8%
	Most of the time	46.7%
	Always	23.6%
	Don't know	0.6%
Goals to aspire to		
	Never	1.2%
	Rarely	9.7%
	Sometimes	37.6%
	Most of the time	40%
	Always	10.9%
	Don't know	0.6%
Satisfaction of work well done		
	Never	0.6%
	Rarely	9.7%
	Sometimes	35.2%
	Most of the time	41.8%
	Always	12.7%
	Don't know	0
Feeling of doing useful work		
	Never	1.2%
	Rarely	9.1%
	Sometimes	35.4%
	Most of the time	46.3%
	Always	7.9%
	Don't know	0

Note: These questions were borrowed from the RAND American Working Conditions Survey (rand2015). Similar questions were asked of the students. For comparison with student responses, please see Table ???. For exact

Table A.6: Faculty survey: Work issues

	Question and Answer	Percent
Worried about work when not working		
	Never	3%
	Rarely	10.3%
	Sometimes	35.8%
	Most of the time	35.2%
	Always	15.8%
Were too tired for activities in private life		
	Never	8.5%
	Rarely	26.2%
	Sometimes	44.5%
	Most of the time	18.3%
	Always	2.4%
Were too tired to do household jobs		
	Never	11.5%
	Rarely	37%
	Sometimes	35.2%
	Most of the time	12.1%
	Always	4.2%
Had difficulty making ends meet financially		
	Never	10.9%
	Rarely	23.6%
	Sometimes	42.4%
	Most of the time	20%
	Always	3%
Had work prevent time with family or significant others		
	Never	73.9%
	Rarely	19.4%
	Sometimes	5.5%
	Most of the time	0%
	Always	1.2%

Note: These questions were borrowed from the RAND American Working Conditions Survey (rand2015). For exact question wording, please see survey instrument in Appendix B2.

Table A.7: Student survey: Seminar environment

Question and Answer	Percent All	Percent Female	Percent Male
Comfortable voice a thought in a seminar setting?			
Not comfortable at all	31%	45.3%	22.9%
Somewhat comfortable	35.5%	30.3%	38.6%
Moderately comfortable	22.7%	17.4%	25.5%
Very comfortable	10.7%	7%	13.1%

Note: A higher response value indicates greater comfort and certainty. For exact question wording, please see survey instrument in Appendix B1.

Table A.8: Student survey: Discussing difficulties with advisers

Question and Answer	Percent
How honest can you be with advisers about difficulties with ...?	
Research progress	
Not honest at all	2%
Somewhat honest	13.3%
Moderately honest	34.2%
Very honest	50.5%
Presentations	
Not honest at all	2.4%
Somewhat honest	11.1%
Moderately honest	25.6%
Very honest	60.9%
Teaching	
Not honest at all	2.7%
Somewhat honest	11.9%
Moderately honest	20.1%
Very honest	65.2%
Refereeing	
Not honest at all	4.1%
Somewhat honest	11.8%
Moderately honest	21%
Very honest	63.1%
Co-authoring with other students	
Not honest at all	6.6%
Somewhat honest	16.5%
Moderately honest	19.8%
Very honest	57.1%
Your mental health	
Not honest at all	10.7%
Somewhat honest	22.4%
Moderately honest	24.6%
Very honest	42.3%
Your other advisers	
Not honest at all	15.4%
Somewhat honest	25.3%
Moderately honest	26.8%
Very honest	32.5%
Preparing for the job market	
Not honest at all	6.5%
Somewhat honest	18.5%
Moderately honest	25.7%
Very honest	49.3%
Your decision to get a PhD in Economics	
Not honest at all	12.6%
Somewhat honest	22.6%
Moderately honest	22.6%
Very honest	42.3%
Decisions related to starting a family	
Not honest at all	26.3%
Somewhat honest	23.5%
Moderately honest	22.9%
Very honest	27.3%
Co-authoring with these faculty	
Not honest at all	27.5%
Somewhat honest	29.9%
Moderately honest	24.4%
Very honest	18.2%
Other personal life issues	
Not honest at all	25.7%
Somewhat honest	33.7%
Moderately honest	22.3%
Very honest	18.4%

Note: A higher response value indicates greater ease of discussing non-academic career options and greater honesty with difficulties in each question category. For exact question wording, please see survey instrument in Appendix B1.

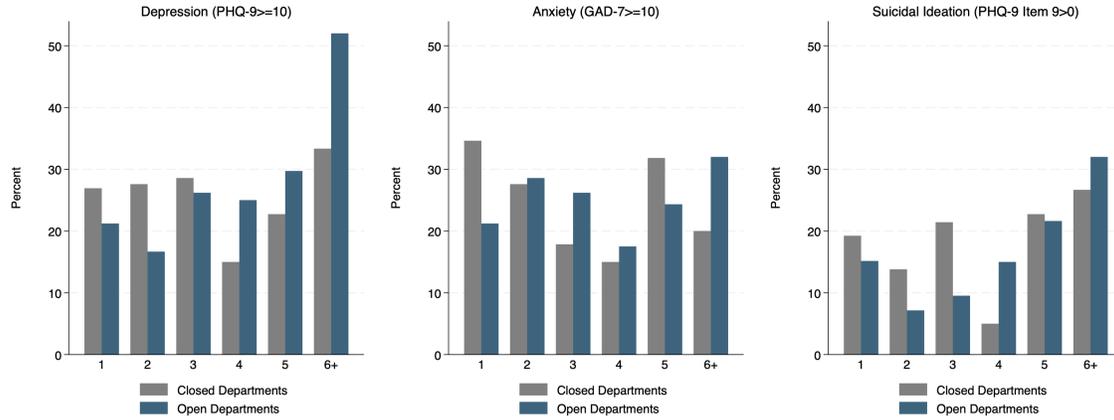
Table A.9: Learning environment for students: Stigma of mental health

	Question and Answer	Percent
Mental health is prioritized by the department		
	Strongly disagree	20.8%
	Slightly disagree	27.7%
	Neither agree or disagree	29.1%
	Slightly agree	17.9%
	Strongly agree	4.4%
I believe that my department is conducive to and supportive of mental health and well-being		
	Strongly disagree	13.5%
	Slightly disagree	25.1%
	Neither agree or disagree	29.3%
	Slightly agree	24.5%
	Strongly agree	7.5%
Students are encouraged to speak up about potential mental health issues		
	Strongly disagree	18.9%
	Slightly disagree	22.5%
	Neither agree or disagree	26.8%
	Slightly agree	22.9%
	Strongly agree	8.9%
Students are encouraged to seek help for mental health issues through support within the department		
	Strongly disagree	17.2%
	Slightly disagree	20.5%
	Neither agree or disagree	24.6%
	Slightly agree	26.5%
	Strongly agree	11.2%

Note: A higher response value indicates greater feeling of sense of community. For exact question wording, please see survey instrument in Appendix B1.

FIGURES

Figure A.1: Prevalence of symptoms by year in graduate program and by closed versus open departments in Europe



Note: PHQ-9 measures symptoms of depression. GAD-7 measures symptoms of anxiety. Symptom intensity increases as PHQ-9 and GAD-7 scores increase. Mental health professionals use a score of 10 on the PHQ-9 and the GAD-7 as a cutoff when diagnosing individuals with depression or anxiety disorder, respectively. The PHQ-9 Item 9 measures suicidality by asking on how many days over the past two weeks a student was bothered by thoughts of wanting to be dead or wanting to hurt themselves. We show here the percent of students scoring 10 or higher on the PHQ-9 and GAD-7, and the percent of students bothered by suicidal thoughts in a two week period. The x-axis shows year in the graduate program. “Closed Departments” are departments that were closed for at least one month in 2021 due to the COVID-19 pandemic. “Open Departments” are departments that were not closed during 2021. The variable was created from an administration survey with available data for 9 departments.

APPENDIX B1: 2021 FALL STUDENT SURVEY

Qualtrics Survey Software

24.06.23, 10:40



Overview

Graduate Student Mental Health: A Study of European Economics
Departments

Researchers: Paul Barreira, MD (Harvard University); Elisa Macchi
(University of Zürich); Clara Sievert (Harvard University)

Consent Form

Participation is voluntary

It is your choice whether or not to participate in this research. If you choose to participate, you may change your mind and leave the study at any time. Refusal to participate or stopping your participation will involve no penalty or loss of benefits to which you are otherwise entitled.

What is the purpose of this research?

The purpose of this research is to understand the prevalence and severity of common mental health problems among graduate students in economics departments across Europe. In addition, the study will help identify environmental factors that may mitigate or contribute to mental health issues. A faculty survey portion of the study will help supplement the graduate student study by shedding additional light on faculty-student relationships and faculty mental health.

What can I expect if I take part in this research?

The study is intended for economics graduate students in all years of the PhD program (including course phase).

The survey will take about 40 minutes to complete. At the end of the survey, you will receive scores on the clinically validated mental health screens and explanations for what those scores mean about your mental health.

Once you begin a survey you will not be able to leave it and return to it at another time, so please complete it in one sitting. There is also no “Back” button, so you cannot change responses once you proceed to the next page.

The researchers will produce an aggregated report across all participating economics programs, as well as an aggregated report specifically for your department. Data from your department will only be studied in an aggregated way. The researchers will only share aggregate department-specific results with only your department Chair. The report aggregated across all participating programs will not identify department-specific results.

What are the risks and possible discomforts?

If you choose to participate, answering questions that require reflection on issues related to your mental health and potentially distressing past experiences has some psychological risk. If you become upset or feel any distress when you are responding to these questions, please call your university’s mental health services. You can find the number of your National Suicide Prevention Lifeline under this [link](#). They are available for you if you need help.

Benefits

We cannot promise any benefits to you or others from your taking part in this research. However, possible benefits include an improved understanding of your own mental health and its connection to your life experiences; structural department-level and profession-level reforms that improve student and faculty quality of life; improved departmental culture around mental health; initiatives across graduate programs worldwide to improve mental health among students and faculty.

If I take part in this research, how will my privacy be protected? What happens to the information you collect?

The data we collect will be stored on a secure server and analyzed in an anonymous way. No raw, individual response-level data will ever be made public. Such data will also not be handled or accessed by anyone other than a data scientist hired by the researchers. The data scientist has no affiliation with any economics department and has signed a confidentiality agreement. No attempt will ever be made to identify whether or how specific individuals answered the questions in this study.

If I have any questions, concerns, or complaints about this research study, who can I talk to?

The lead researcher for this study is *Paul Barreira, MD* who can be reached at + 857-998-7905, paul_barreira@harvard.edu.

Please contact him if you have questions, concerns, complaints, or:

- If you would like to talk to the research team,
- If you think the research has harmed you, or
- If you wish to withdraw from the study.

This research has been reviewed by the Committee on the Use of Human Subjects in Research at Harvard University. The Committee can be reached at +1-617-496-2847, 1350 Massachusetts Avenue, 9th Floor, Suite 935, Cambridge, MA 02138, or cuhs@harvard.edu for any of the following:

- If your questions, concerns, or complaints are not being answered by the research team,
- If you cannot reach the research team,
- If you want to talk to someone besides the research team, or
- If you have questions about your rights as a research participant.

Statement of Consent

I have read the information in this consent form. All my questions about the research have been answered to my satisfaction.

[Click here to download consent form PDF](#)

Signature

By selecting this box, I freely consent to taking part in this research.

GDPR ADDENDUM

The researchers will collect information about you. This form calls such information your “Personal Information” and it will include your name, demographic information, your responses to any tests, surveys or procedures described in this informed consent form. It may also include information about your past and present health conditions, sexuality, substance use disorders, mental health disorders,

race, ethnicity, and sexual orientation.

If you withdraw your permission, you will no longer be able to participate in the study. No new information will be collected about you or from you by the study team. Your withdrawal has no effect on the lawfulness of the data processing that occurred prior to your withdrawal.

Your Personal Information that has already been collected to the time of your withdrawal will be kept and used to guarantee the integrity of the study and/or for any other purposes permitted under applicable data protection and privacy laws.

Your Personal Information will not be used for further research. However, if permitted by applicable law, your Personal Information may be anonymized so that the information does not identify you personally, and such anonymized information may be used for further research.

Your Personal Information will be treated in compliance with applicable data protection laws. Harvard is the controller of your Personal Information collected for this study.

Harvard and some of the other people using your Personal Information may be based in countries other than your country, including the United States. The European Commission has determined that the data protection laws of the United States do not protect personal information to the same extent as those of the European Economic Area. By signing this consent form, you consent to the transfer of your information to the U.S. Harvard and those working with Harvard will take steps to maintain the confidentiality of your Personal Information.

Harvard, the IRB(s) and IEC(s), will obtain and use your Personal Information to conduct and manage this study, and to comply with legal or regulatory requirements, including to:

- verify that the study is conducted correctly and that study data are accurate;
- answer questions from IRB(s), IEC(s), or government or regulatory agencies;
- contact you during and after the study (if necessary); and
- answer your data protection requests (if any).

Your Personal Information may also be used by the individuals and groups listed above to:

- Publish summaries of the study results in academic journals, on the internet or at educational meetings of other researchers. You will not be directly identified in any publication or report of the study. But, some journal representatives may need access to your Personal Information to verify the study results and ensure the research meets the journal's quality standards. Also, journals may require that certain data from the study that does not directly identify you (i.e., de-identified survey responses) be made available to other researchers for further research projects.
- Improve the quality, design and safety of this study and other research studies.
- Conduct additional studies with the data collected in this study to advance scientific research and public health. At this time, we do not know the specific details of these future research projects. If your Personal Information is used for additional studies, specific safeguards will be used to protect the data, which may include:
 - Using only information from which your direct identifiers have been removed instead of information that readily identifies you.
 - Limiting access to specific individuals who are obligated to keep the information confidential.
 - Using security measures to avoid data loss and unauthorized access.
 - Anonymizing the data by destroying the link between the information and your personal identifiers.

- When required by applicable law, ensuring that the scientific research has the approval of IECs, IRBs, or other similar review groups.

Harvard will retain your Personal Information (including your Coded Information) for the period necessary to fulfill the purposes outlined in this informed consent form, unless a different retention period is required or permitted by law.

Your rights related to your Personal Information collected under the study are described below. If you wish to exercise any of these rights, you must contact EEAdatasubjectrequest@harvard.edu

- You have the right to see the information being collected about you in the study.
- You have the right to correct or update your Personal Information if it is inaccurate.
- You have the right to limit the collection and use of your Personal Information under certain circumstances (for example, if you think that the information is inaccurate).
- You have the right to receive your Personal Information in a structured, common computer format (for example, in a readable text electronic file or chart) for your own purposes or for giving it to others, as required by applicable data protection laws. You may not have the right to receive your Personal Information that has been used for public interest purposes or in the exercise of official authority vested in Harvard.
- You have the right to request the deletion of your Personal Information if you are no longer participating in the study. However, there are limits on your ability to request deletion of your Personal Information. Harvard may keep and use some or all of your Personal Information if deletion would seriously impair the study (for example, if deletion would affect the consistency of study results) or if your Personal Information is needed to comply with legal requirements.
- You have the right to make a complaint to a data protection authority within the EU (<http://ec.europa.eu/justice/data-protection/article-29/structure/data-protection->

[authorities/index_en.htm](#)).

Statement of Consent

My checking this box documents that I have freely given my consent to the use of Personal Information as described in this GDPR addendum.

Please note that refreshing the survey or using your browser navigation button to go back will invalidate the survey.

Self Ratings

How would you rate your physical health overall?

Poor Fair Good Very Good Excellent

How would you rate your mental health overall?

Poor Fair Good Very Good Excellent

Exercise

The American Heart Association (AHA) recommends the following amount of physical activity each week:

* At least 30 minutes of moderate-intensity aerobic activity at least 5 days per week for a total of 150 minutes

OR

*At least 25 minutes of vigorous aerobic activity at least 3 days per week for a total of 75 minutes; or a combination of moderate- and vigorous-intensity aerobic activity

AND

*Moderate- to high-intensity muscle-strengthening activity at least 2 days per week for additional health benefits.

In the past week, have you met the AHA recommendation?

- Yes
- No
- I am not sure

What part of the **recommendation** did you not meet? (Check all that apply)

Number of days

- Duration of workouts
- Intensity
- Strength training
- Other, please specify

Sleep

On how many of the past 7 days did you get enough sleep so that you felt rested when you woke up in the morning?

- 0 days 1 day 2 days 3 days 4 days 5 days 6 days 7 days

People sometimes feel sleepy during the daytime. In the past 7 days, how much of a problem have you had with sleepiness (feeling sleepy, struggling to stay awake) during your daytime activities?

- No problem at all
- A little problem
- More than a little problem
- A big problem
- A very big problem

Have you had sleep-related treatment(s) such as sleep aids, etc. at least once in the last 7 days?

- Yes, prescription sleep aid
- Yes, non-prescription sleep aid
- Yes, other. Please specify.
- No

Physical Health

Have you ever been diagnosed with any chronic or ongoing physical health issues?

- Yes
- No

Are you currently in treatment for any chronic or ongoing physical health issue(s)?

- Yes
- No

Question on Feeling Overwhelmed

Over the last 2 weeks, how often have you felt overwhelmed?

- Not at all
- Several days
- More than half the days
- Nearly every day

Negative Event

In the past 2 months:

	Yes	No
Has a significant other, friend, or family member experienced a significant negative life event?	<input type="radio"/>	<input type="radio"/>
Have you experienced a significant negative life event?	<input type="radio"/>	<input type="radio"/>

Mental Health Diagnosis & Treatment

Have you ever been diagnosed with the following:

	Yes	No	No, I have concerns but have not been clinically diagnosed
Depression	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anxiety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Panic Attacks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Substance Use Disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eating Disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Any other mental health issue? If yes, please specify	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="text"/>			

Any other mental health issue? If yes, please specify

When was the first time you were diagnosed with the following:

Before coming to my graduate program

Since coming to my graduate program

» Depression

» Anxiety

» Panic Attacks

» Substance Use Disorder

» Eating Disorder

» Any other mental health issue? If yes, please specify

» Any other mental health issue? If yes, please specify

Do you currently take prescription medication(s) for any of the following:

Yes

No

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» Depression	<input type="radio"/>	<input type="radio"/>
» Anxiety	<input type="radio"/>	<input type="radio"/>
» Panic Attacks	<input type="radio"/>	<input type="radio"/>
» Substance Use Disorder	<input type="radio"/>	<input type="radio"/>
» Eating Disorder	<input type="radio"/>	<input type="radio"/>
» Any other mental health issue? If yes, please specify	<input type="radio"/>	<input type="radio"/>
<input type="text"/>		
» Any other mental health issue? If yes, please specify	<input type="radio"/>	<input type="radio"/>
<input type="text"/>		

Are you currently seeing a mental health professional for any of the following:

	Yes	No	No, but I tried to seek help and was not able to find a provider	No, but I am considering seeking help
» Depression	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Anxiety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Panic Attacks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Substance Use Disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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» Eating Disorder

» Any other mental health issue? If yes, please specify

» Any other mental health issue? If yes, please specify

Select which best describes your situation:

- I am seeing a mental health professional at my university.
- I am seeing an outside provider.
- I am not seeing a mental health professional

Is the frequency that you meet with your mental health professional sufficient to work on your current concerns?

- Yes
- No

Do you find the sessions with your mental health professional helpful?

- Yes
- Somewhat

No

If you have not met with a mental health professional, do you want to?

- Yes
- No
- Maybe

PHQ-9

Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the days	Nearly everyday
1. Little interest or pleasure in doing things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Feeling down, depressed, or hopeless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Trouble falling or staying asleep, or sleeping too much	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Feeling tired or having little energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Poor appetite or overeating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Feeling bad about yourself - or that you are a failure or have let yourself or your family down	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Trouble concentrating on things, such as reading the newspaper or watching television
8. Moving or speaking so slowly that other people could have noticed? Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual
9. Thoughts that you would be better off dead or of hurting yourself in some way

How difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all Somewhat difficult Very difficult Extremely difficult

GAD-7

Over the last 2 weeks, how often have you been bothered by any of the following problems?

- | | Not at all | Several days | More than half the days | Nearly everyday |
|---|-----------------------|-----------------------|-------------------------|-----------------------|
| 1. Feeling nervous, anxious or on edge | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. Not being able to stop or control worrying | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

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- | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| 3. Worrying too much about different things | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. Trouble relaxing | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. Being so restless that it is hard to sit still | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6. Becoming easily annoyed or irritable | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 7. Feeling afraid as if something awful might happen | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all Somewhat difficult Very difficult Extremely difficult

Mental Health effect

In the past 2 months, how often have you felt that your mental health has had a negative effect on your quality of life?

- Never
- Rarely
- Sometimes
- Often
- Very Often

If you ever feel that you are experiencing a mental health issue, would you know where to turn for help?

- Yes
- No

AUDIT-C

How often do you have a drink containing alcohol?

- Never
- Monthly or less
- 2-4 times per month
- 2-3 times per week
- 4+ times per week

How many standard drinks containing alcohol do you have on a typical day?

- 1-2
- 3-4
- 5-6
- 7-9
- 10 or more

How often do you have 6 or more drinks on one occasion?

- Never
- Less than monthly
- Monthly
- Weekly
- Daily or almost daily

Single-Question Screening Test for Drug Use

How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?



Loneliness

The following questions address how you feel about different aspects of your life. For each question, please tell us currently how often you feel that way.

	Hardly Ever	Some of the Time	Often
How often do you feel you lack companionship?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often do you feel left out?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often do you feel isolated from others?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Suicidality

The following questions ask about suicidal behaviors.

If you become upset or feel any distress when you are responding to these questions, please call your national Urgent Care line. You can find your national Urgent Care line number [here](#).

In the past year, did you ever seriously think about attempting suicide?

Yes

No

In the past year, did you make a plan for attempting suicide?

Yes

No

In the past year, did you attempt suicide?

Yes

No

Imposter Phenomenon (IP)

For this set of questions, please check the box that best indicates how true the statement is of you. It is best to give the first response that enters your mind rather than dwelling on each statement and thinking about it over and over.

Not At All
True

Rarely
True

Sometimes
True

Often True

Very True

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I have often succeeded on a test or task even though I was afraid that I would not do well before I undertook the task

I can give the impression that I'm more competent than I really am

I avoid evaluations if possible and have a dread of others evaluating me

When people praise me for something I've accomplished, I'm afraid I won't be able to live up to their expectations of me in the future

I sometimes think I obtained my present position or gained my present success because I happened to be in the right place at the right time or knew the right people

Not At All True Rarely True Sometimes True Often True Very True

I'm afraid people important to me may find out that I'm not as capable as they think I am

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I tend to remember the incidents in which I have not done my best more than those times I have done my best

I rarely do a project or task as well as I'd like to do it

Sometimes I feel or believe that my success in my life or in my job has been the result of some kind of error

It's hard for me to accept compliments or praise about my intelligence or accomplishments

Not At All True Rarely True Sometimes True Often True Very True

At times, I feel my success has been due to some kind of luck.

I'm disappointed at times in my present accomplishments and think I should have accomplished much more.

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I'm often afraid that I may fail at a new assignment or undertaking even though I generally do well at what I attempt.

When I've succeeded at something and received recognition for my accomplishments, I have doubts that I can keep repeating that success.

If I receive a great deal of praise and recognition for something I've accomplished, I tend to discount the importance of what I've done.

Not At All True Rarely True Sometimes True Often True Very True

I often compare my ability to those around me and think they may be more intelligent than I am.

I often worry about not succeeding with a project or examination, even though others around me have considerable confidence that I will do well.

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If I'm going to receive a promotion or gain recognition of some kind, I hesitate to tell others until it is an accomplished fact.

Sometimes I'm afraid others will discover how much knowledge or ability I really lack.

I feel bad and discouraged if I'm not "the best" or at least "very special" in situations that involve achievement.

Adviser

In the last 2 months, how many times have you met with your:

Main adviser (the faculty member with whom you meet most frequently)

Second adviser (the faculty member with whom you meet second-most frequently)

Third adviser (the faculty member with whom you meet third-most frequently)

Think of your Economics Department faculty members with whom you've met in the last 2 months.

How honest can you be with them about the difficulties you face with:

	Not honest at all	Somewhat honest	Moderately honest	Very honest	Not applicable/have not met with faculty in the last 2 months
Research progress	<input type="radio"/>				
Presentations	<input type="radio"/>				
Teaching	<input type="radio"/>				
Refereeing	<input type="radio"/>				
Co-authoring with other students	<input type="radio"/>				
Co-authoring with these faculty	<input type="radio"/>				
Your <u>other</u> advisers	<input type="radio"/>				
Preparing for the job market	<input type="radio"/>				
Your decision to get a PhD in economics	<input type="radio"/>				
Decisions related to starting a family	<input type="radio"/>				
Your mental health	<input type="radio"/>				
Other personal life issues	<input type="radio"/>				

How honest would you like to be with them about the difficulties you face with:

	Not honest at all	Somewhat honest	Moderately honest	Very honest	Not applicable/have not met with faculty in the last 2 months
Research progress	<input type="radio"/>				
Presentations	<input type="radio"/>				
Teaching	<input type="radio"/>				
Refereeing	<input type="radio"/>				
Co-authoring with other students	<input type="radio"/>				
Co-authoring with these faculty	<input type="radio"/>				
Your <u>other</u> advisers	<input type="radio"/>				
Preparing for the job market	<input type="radio"/>				
Your decision to get a PhD in economics	<input type="radio"/>				
Decisions related to starting a family	<input type="radio"/>				
Your mental health	<input type="radio"/>				
Other personal life issues	<input type="radio"/>				

Think of your Economics Department faculty members with whom you've met in the last 2 months. Listed below are statements about working with them. In this section we will refer to them as your advisers. Please rate the degree to which you agree or disagree with each statement.

	Strongly Disagree	Slightly/Moderately Disagree	Neither Agree nor Disagree	Slightly/Moderately Agree	Strongly Agree
My advisers really care about my well-being.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The number of times I have met with my advisers over the past year was sufficient to meet my needs (first year students - respond to number of times since entering the program)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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I would feel comfortable telling my advisers about my post-graduation plans if they were outside of academia

Even if I did the best job possible, my advisers would fail to notice.

If I had difficulties in my program, I would be inclined to keep them from my advisers.

If you ever feel that you are experiencing issues with advising, would you know where to turn for help?

- Yes
 No

Faculty

Listed below are statements about working with FACULTY in your department (other than your adviser). Please rate the degree to which you agree or

disagree with each statement.

	Strongly Disagree	Slightly/Moderately Disagree	Neither Agree nor Disagree	Slightly/Moderately Agree	Strongly Agree
I have at least one faculty member in my department aside from my adviser from whom I can seek advice and guidance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe that the faculty in my department would be supportive of me if a mental health or wellbeing-related issue interfered with my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe that the faculty in my department care about my mental health and well-being.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

When I seek advice from a faculty member, I feel I come away feeling I have been heard and with productive steps to move forward (skip question if this does not apply to you)

If I had difficulties in my program, I would be inclined to keep them from faculty in my department.

Listed below are statements about your preparation for POST-GRADUATE LIFE. Please rate the degree to which you agree or disagree with each statement.

Strongly Slightly/Moderately Somewhat Slightly/Moderately Strongly

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	Disagree	Disagree	disagree	Agree	Agree
In applying to this program, I was aware of the career outcomes of the department's recent graduates	<input type="radio"/>				
Faculty are proactive in helping students develop professional networks	<input type="radio"/>				
There are professional development opportunities in my department that help prepare students for the job search	<input type="radio"/>				
Faculty are aware of the challenges facing current students entering the job market	<input type="radio"/>				

Peer Support

Listed below are statements that represent possible opinions that you may have about your PEERS.

	Strongly Disagree	Slightly/Moderately Disagree	Neither Agree nor Disagree	Slightly/Moderately Agree	Strongly Agree
I have friendly relationships with other graduate students in my department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I have friendly relationships with other graduate students outside of my department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
There is at least one peer in my department that I feel like I can turn to if I need help	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I have a personal support network (at my university or elsewhere) to help me through mental health challenges	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

I believe that my peers in my department care about my mental health and well-being

Peer Support 2

About how many people do you have in your personal life that you can really open up to about your most private feelings without having to hold back?

- 0
- 1
- 2-5
- 6-10
- 11 or more

When you have a problem or worry, how often do you let someone in your personal life know about it?

- Never
- Rarely
- Sometimes
- Often
- Very Often

Inclusive Learning Environment

Listed below are statements about the LEARNING ENVIRONMENT in your department. Please rate the degree to which you agree or disagree with each statement.

	Strongly Disagree	Slightly/Moderately Disagree	Neither Agree nor Disagree	Slightly/Moderately Agree
The learning environment in my department is respectful and inclusive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The learning environment in my department promotes a sense of connectedness between graduate students and faculty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The opinions and ideas of graduate students are encouraged by faculty in my department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

As of right now, how comfortable would you be voicing a thought in a seminar setting?

Not comfortable at all

- Somewhat comfortable
- Moderately comfortable
- Very comfortable

In general, how often does your work provide you with the following:

	Always	Most of the time	Sometimes	Rarely	Never	Don't Know
Opportunities to fully use your talents	<input type="radio"/>					
Opportunities to make positive impact on community/society	<input type="radio"/>					
Sense of personal accomplishment	<input type="radio"/>					
Goals to aspire to	<input type="radio"/>					
Satisfaction of work well done	<input type="radio"/>					
Feeling of doing useful work	<input type="radio"/>					

Job & Teaching

On average, how many hours a week do you typically work?

Less than 11 hours	11-20 hours	21-30 hours	31-40 hours	41-50 hours	51-60 hours	61-70 hours	71-80 hours	More than 80 hours
<input type="radio"/>								

Over the last 7 days, how many days did you work in the Economics Department?

0 days 1 day 2 days 3 days 4 days 5 days 6 days 7 days

Over the last 2 months, what position(s) have you held for compensation? (Select all that apply)

- Teaching Assistant
- Grader
- Research Assistant
- Private tutor
- Non-academic data scientist
- Other
- Did not work for compensation

WorkLife Balance

Listed below are statements about WORK-LIFE BALANCE. Please rate the degree to which you agree or disagree with each statement.

Neither

	Strongly Disagree	Slightly/Moderately Disagree	Agree nor Disagree	Slightly/Moderately Agree	Strong
I feel like I have more to do than I can comfortably handle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
I feel like I can't say no to others in my department when being asked to take on more work responsibilities than I am comfortable with	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Progress

Listed below are statements about your PROGRESS TO DEGREE. Please rate the degree to which you agree or disagree with each statement.

	Strongly Disagree	Slightly/Moderately Disagree	Neither Agree nor Disagree	Slightly/Moderately Agree	Strongly Agree
I am on track to complete my degree program on time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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I am well-prepared for the work required to complete my program	<input type="radio"/>				
I felt well-prepared when I took my general exam/qualifying exam/etc. (leave blank if this does not apply to you)	<input type="radio"/>				
I feel like I receive the feedback necessary to understand whether or not I am on track with my progress	<input type="radio"/>				
I feel that my mental health has had a negative effect on my progress in the Ph.D. program	<input type="radio"/>				

Sense of Community

Listed below are statements about the SENSE OF COMMUNITY in your department. Please rate the degree to which you agree or disagree with each statement.

	Strongly Disagree	Slightly/Moderately Disagree	Neither Agree nor Disagree	Slightly/Moderately Agree
There is a strong sense of community in my graduate program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The department takes great care to make students feel included	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I make an effort to create or foster an inclusive environment for others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Strongly Disagree	Slightly/Moderately Disagree	Neither Agree nor Disagree	Slightly/Moderately Agree
Academic accomplishments of current graduate students are celebrated by my department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional accomplishments of current graduate students are celebrated by my department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Stigma

Listed below are statements about how your department views issues about MENTAL HEALTH. Please rate the degree to which you agree or disagree with each statement.

	Strongly Disagree	Slightly/Moderately Disagree	Neither Agree nor Disagree	Slightly/Moderately Agree
Mental health is prioritized by the department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe that my department is conducive to and supportive of mental health and well-being.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Strongly Disagree	Slightly/Moderately Disagree	Neither Agree nor Disagree	Slightly/Moderately Agree
Students are encouraged to speak up about potential mental health issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students are encouraged to seek help for mental health issues through support within the department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Brief Inventory of Thriving (BIT)

Please indicate your agreement or disagreement with each of the following statements using the scale below.

	Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
My life has a clear sense of purpose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am optimistic about my future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My life is going well	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel good most of the time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
What I do in life is valuable and worthwhile	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree
I can succeed if I put my mind to it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am achieving most of my goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In most activities I do, I feel energized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are people who appreciate me as a person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel a sense of belonging in my community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Stress

Please indicate the extent to which each of the following had been a source of stress during the past year (extensive, somewhat, not at all, not applicable)

	Not at all	Somewhat	Extensive	N/A
Making time for my personal life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Balancing academic work with other responsibilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing my time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not at all	Somewhat	Extensive	N/A
Managing my relationship with my adviser	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing personal relationships at home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing relationships with peers in my department/lab	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing relationships with faculty in the department	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Not at all Somewhat Extensive N/A

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Finding funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being unsure what is expected of me by my adviser	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Passing my qualifying exams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finding a dissertation topic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Putting together a dissertation committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finishing my dissertation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finding a job after graduate school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tenure Status of adviser	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Not at all	Somewhat	Extensive	N/A
Financial difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Paying off debt/loans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food Insecurity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
World events (politics, climate issues, Covid-19, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to safe and affordable housing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal health issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Issues pertaining to visas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (Please specify):				

Microaggressions

Please indicate your agreement or disagreement with each of the following statements.

	Strongly Disagree	Slightly/Moderately Disagree	Neither Agree nor Disagree	Slightly/Moderately Agree	Strongly Agree
I feel ignored in my department because of my identity (race/ethnicity, gender, nationality, sexuality/orientation, disability, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel my contributions are dismissed or devalued because of how other perceive me/my identity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel people in my department make assumptions about my intelligence and abilities because of how they perceive me/identity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Environmental Questions Title IX

These next questions ask about situations in which a student, faculty member, staff member, or someone else associated with your Department said or did something that:

- Interfered with your academic or professional performance,
- Limited your ability to participate in your academic program, or
- Created an intimidating, hostile or offensive social, academic or work environment

Check all that you have experienced since becoming a PhD student from a student, faculty member, staff member, or someone else associated with the department:

- Sexual remarks, jokes, or stories that were insulting or offensive to you
- Inappropriate or offensive comments about your or someone else's body, appearance, or sexual activities
- Crude or gross sexual comments or tried to get you to talk about sexual matters when you did not want to
- Email(s), text(s), phone call(s), or instant message(s) with offensive sexual remarks, jokes, stories, pictures, or videos that you did not want to receive
- Requests to go out for dinner, have drinks, or have sex even though you said "No"

- Something else that makes me uncomfortable but doesn't fall into any of the other categories
- None of the above

At the time of this event/these events, what was the person's/were the persons' relationship(s) to you? (Select all that apply)

- At the time, it was someone I was romantically involved or intimate with
- Someone I had been romantically involved or was intimate with
- Professor
- Adviser
- Staff member
- Graduate student friend or acquaintance
- Undergraduate student friend or acquaintance
- Stranger
- Other
- Don't know

G-Year Question

The following questions will help us determine if rates of anxiety, depression, or other mental health issues differ by year in the program and other demographic characteristics.

All responses are anonymous, all data will be reported in the aggregate, and the data will not be used to identify individuals in any way. Data will not be

reported when group size is less than 10.

Please select in which year of the program you are.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9+
- graduated

If you are a 2nd year student or above, please answer the following: What was the average of your grades in the first-year Microeconomic Theory and Macroeconomic Theory courses?

What do you consider to be your primary field?

What do you consider to be your secondary field, if you have one?

On a scale of 1 to 10, where 1 = Extremely dissatisfied and 10 = Extremely satisfied, how satisfied are you with your PhD experience?

1 2 3 4 5 6 7 8 9 10

What would you do differently right now if you were starting your program?
Please select as many as apply.

- Change area of study
- Change adviser(s)
- Not pursue a PhD at all
- Study at another institution
- Engage more with study
- Organize time more effectively
- Nothing
- Other (Please specify.)

Demographics

The following questions will help us determine if rates of anxiety, depression,

or other mental health issues vary by demographic groups. All responses are anonymous, all data will be reported in the aggregate, and the data will not be used to identify individuals in any way.

Were you the first generation in your family to attend university (first generation university student)?

- Yes
- No

Which of the following best describes you. (Select all that apply)

- Asian (including Indian subcontinent and Philippines)
- Black (including Africa and Caribbean)
- Hispanic or Latino
- White
- Middle Eastern or North African
- Other (Please specify)

Are you a citizen or permanent resident of the country where your program is set?

- Yes
- No

How old are you?

- 24 years or younger
- 25-29
- 30-34
- 35-39
- 40 years or older

Is English your first language?

- Yes
- No

Is your mother tongue the same language as of the country your program is set in?

- Yes
- No

Which best describes your gender identity?

- Man
- Woman
- Transgender
- Other

Do you consider yourself to be:

- Heterosexual
- Bisexual
- Gay or lesbian
- Other

Do you have a disability?

- Yes
- No

How would you best describe your current relationship status?

- Single
- Casual
- Dating
- Long-term/Committed
- Married
- Divorced
- Other

Do you live alone?

- Yes

No

Do you have children under the age of 18 or dependents that live with you at home?

Yes

No

Please indicate the highest degree earned by your father (biological or step).
If you have multiple fathers, select the highest degree earned.

High school or below

Apprenticeship

Bachelor's

Master's degree or Diploma

PhD or Doctorate

Please indicate the highest degree earned by your mother (biological or step). If you have multiple mothers, select the highest degree earned.

High school or below

Apprenticeship

Bachelor's

Master's degree or Diploma

PhD or Doctorate

How many math courses did you take between the start of your undergraduate study and the start of this PhD program?

- 0
- 1 or 2
- 3 or 4
- 5 or 6
- 7+

Did you complete a 2-year MSc Degree?

- Yes
- No

Did you go straight into this Economics PhD program after completing your Master or undergraduate degree?

- Yes
- No

MH perception

Think of the students including yourself who are taking this survey at your Department. What percentage of these students stated that during the last two weeks they ...

Please provide your best guess.

0 10 20 30 40 50 60 70 80 90 100

Felt down, depressed, or hopeless more than half the days?

Felt nervous, anxious or on edge more than half the days?

Do you think your mental health is better or worse than the mental health of the average PhD student in your department?

- Better
- Worse

Covid

Has the Covid-19 pandemic impacted the following...?

	Not at all	A little	Moderately	A lot	To a great extent
Your physical health	<input type="radio"/>				
Your mental health	<input type="radio"/>				

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Your family members' friends health and safety	<input type="radio"/>				
Your financial health	<input type="radio"/>				
Your future employment and/or job market prospects	<input type="radio"/>				
Viability of your research projects	<input type="radio"/>				
Your professional productivity	<input type="radio"/>				
Your graduation decision	<input type="radio"/>				
Maintaining existing or making new relationships, friendships and social connections	<input type="radio"/>				
Staying connected with your Economics department	<input type="radio"/>				
Other: Please specify.	<input type="radio"/>				
<input type="text"/>					

What is your single greatest professional-related concern right now (if any)?

Dept

Last question: Which Economics Department are you at?

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APPENDIX B2: 2021 FALL FACULTY SURVEY

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Overview & ID

Graduate Student Mental Health: A Study of European
Economics Departments

Researchers: Paul Barreira, MD (Harvard University);
Elisa Macchi (University of Zürich); Clara Sievert
(Harvard University)

Consent Form

Participation is voluntary

It is your choice whether or not to participate in this research. If you choose to participate, you may change your mind and leave the study at any time. Refusal to participate or stopping your participation will involve no penalty or loss of benefits to which you are otherwise entitled.

What is the purpose of this research?

The purpose of this research is to understand the prevalence, severity, and correlates of common mental health problems among graduate students in economics departments across Europe. The faculty survey portion of the study will help supplement the graduate student study by shedding additional light on faculty-student relationships and faculty mental health.

What can I expect if I take part in this research?

This survey should take about 10 to 15 minutes to complete. It is intended for all tenured or tenure-track or non-tenure-track faculty in Economics.

Once you begin the survey you will not be able to leave it and return to it at another time, so please complete it in one sitting. There is also no "Back" button, so you cannot change responses once you proceed to the next page.

The researchers will produce an aggregated report

across all participating economics programs, as well as an aggregated report specifically for your department. Data from your department will only be studied in an aggregated way. The researchers will only share aggregate department-specific results with only your department Chair. The report aggregated across all participating programs will not identify department-specific results.

What are the risks and possible discomforts?

Answering questions that require reflection on issues related to mental health has some psychological risk.

Benefits

We cannot promise any benefits to you or others from your taking part in this research. However, possible benefits include faculty's and students' improved understanding of their own mental health and its connection to their life experiences; structural department-level and profession-level reforms that improve student and faculty quality of life; improved

departmental culture around mental health; initiatives across graduate programs worldwide to improve mental health among students and faculty.

If I take part in this research, how will my privacy be protected? What happens to the information you collect?

The data we collect will be stored on a secure server and analyzed in an anonymous way. No raw, individual response-level data will ever be made public. Such data will also not be handled or accessed by anyone other than a data scientist hired by the researchers. The data scientist has no affiliation with any economics department and has signed a confidentiality agreement. No attempt will ever be made to identify whether or how specific individuals answered the questions in this study.

If I have any questions, concerns, or complaints about this research study, who can I talk to?

The lead researcher for this study is *Paul Barreira, MD* who can be reached at 857-998-7905; 75 Mt. Auburn Street,

Cambridge, MA 02138; paul_barreira@harvard.edu.

Please contact him if you have questions, concerns, complaints, or:

- If you would like to talk to the research team,
- If you think the research has harmed you, or
- If you wish to withdraw from the study.

This research has been reviewed by the Committee on the Use of Human Subjects in Research at Harvard University. The Committee can be reached at 617-496-2847, 1350 Massachusetts Avenue, 9th Floor, Suite 935, Cambridge, MA 02138, or cuhs@harvard.edu for any of the following:

- If your questions, concerns, or complaints are not being answered by the research team,
- If you cannot reach the research team,
- If you want to talk to someone besides the research team, or
- If you have questions about your rights as a research participant.

Statement of Consent

I have read the information in this consent form. All my questions about the research have been answered to my satisfaction.

[Click here for EMHS faculty consent form PDF](#)

Signature

By selecting this box, I consent to taking part in this research.

GDPR ADDENDUM

The researchers will collect information about you. This form calls such information your “Personal Information” and it will include your name, demographic information, your responses to any tests, surveys or procedures described in this informed consent form. It may also include information about your past and present health conditions, sexuality, substance use disorders, mental health disorders, race, ethnicity, and sexual orientation.

If you withdraw your permission, you will no longer be able to participate in the study. No new information will be collected about you or from you by the study team. Your withdrawal has no effect on the lawfulness of the data processing that occurred prior to your withdrawal.

Your Personal Information that has already been collected to the time of your withdrawal will be kept and used to guarantee the integrity of the study and/or for any other purposes permitted under applicable data protection and privacy laws.

Your Personal Information will not be used for further research. However, if permitted by applicable law, your Personal Information may be anonymized so that the information does not identify you personally, and such anonymized information may be used for further research.

Your Personal Information will be treated in compliance with applicable data protection laws. Harvard is the controller of your Personal Information collected for this study.

Harvard and some of the other people using your Personal Information may be based in countries other than your country, including the United States. The European Commission has determined that the data protection laws of the United States do not protect personal information to the same extent as those of the European Economic Area. By signing this consent form, you consent to the transfer of your information to the U.S. Harvard and those working with Harvard will take steps to maintain the confidentiality of your Personal Information.

Harvard, the IRB(s) and IEC(s), will obtain and use your Personal Information to conduct and manage this study, and to comply with legal or regulatory requirements, including to:

- verify that the study is conducted correctly and that study data are accurate;

- answer questions from IRB(s), IEC(s), or government or regulatory agencies;
- contact you during and after the study (if necessary); and
- answer your data protection requests (if any).

Your Personal Information may also be used by the individuals and groups listed above to:

- Publish summaries of the study results in academic journals, on the internet or at educational meetings of other researchers. You will not be directly identified in any publication or report of the study. But, some journal representatives may need access to your Personal Information to verify the study results and ensure the research meets the journal's quality standards. Also, journals may require that certain data from the study that does not directly identify you (i.e., de-identified survey responses) be made available to other researchers for further research projects.
- Improve the quality, design and safety of this study and other research studies.
- Conduct additional studies with the data collected in this study to advance scientific research and public health. At this time, we do not know the specific details of these future research projects. If your Personal Information is used for additional studies, specific safeguards will be used to protect the data, which may include:

- Using only information from which your direct identifiers have been removed instead of information that readily identifies you.

- Limiting access to specific individuals who are obligated to keep the information confidential.
- Using security measures to avoid data loss and unauthorized access.
- Anonymizing the data by destroying the link between the information and your personal identifiers.
- When required by applicable law, ensuring that the scientific research has the approval of IECs, IRBs, or other similar review groups.

Harvard will retain your Personal Information (including your Coded Information) for the period necessary to fulfill the purposes outlined in this informed consent form, unless a different retention period is required or permitted by law.

Your rights related to your Personal Information collected under the study are described below. If you wish to exercise any of these rights, you must contact EEAdatasubjectrequest@harvard.edu

- You have the right to see the information being collected about you in the study.
- You have the right to correct or update your Personal Information if it is inaccurate.
- You have the right to limit the collection and use of your Personal Information under certain circumstances (for example, if you think that the information is inaccurate).
- You have the right to receive your Personal Information in a structured, common computer format (for example, in a readable text electronic file or chart) for your own purposes or for giving it to

others, as required by applicable data protection laws. You may not have the right to receive your Personal Information that has been used for public interest purposes or in the exercise of official authority vested in Harvard.

- You have the right to request the deletion of your Personal Information if you are no longer participating in the study. However, there are limits on your ability to request deletion of your Personal Information. Harvard may keep and use some or all of your Personal Information if deletion would seriously impair the study (for example, if deletion would affect the consistency of study results) or if your Personal Information is needed to comply with legal requirements.
- You have the right to make a complaint to a data protection authority within the EU (http://ec.europa.eu/justice/data-protection/article-29/structure/data-protection-authorities/index_en.htm).

Statement of Consent

- My checking this box documents that I have freely given my consent to the use of Personal Information as described in this GDPR addendum.**

Please note that refreshing the survey or using your browser navigation button to go back will invalidate the survey.

Advising

Think of the PhD students with whom you've met in the last 2 months:

How honest do you think they would be with you if they faced difficulties with:

	Not honest at all	Somewhat honest	Moderately honest	Very honest	Not applicable/d not meet wit students
Research progress	<input type="radio"/>				
Presentations	<input type="radio"/>				
Teaching	<input type="radio"/>				
Refereeing	<input type="radio"/>				
Co-authoring with other students	<input type="radio"/>				
Co-authoring with you	<input type="radio"/>				
Their <u>other</u> advisers	<input type="radio"/>				
Preparing for the job market	<input type="radio"/>				
Their decision to get a PhD in economics	<input type="radio"/>				

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Their decisions related to starting a family	<input type="radio"/>				
Their mental health	<input type="radio"/>				
Their other personal life issues	<input type="radio"/>				

How easy do you think it would be for them to talk to you about non-academic career options?

- Not easy at all
- Somewhat easy
- Moderately easy
- Very easy
- Not applicable or did not meet with students

From your impressions, please rank the years of the Economics PhD program by the level of strain on mental health experienced by the average student. 1 = highest level of strain, 7 = lowest level of strain.

	1	2	3	4	5	6	7
1st year	<input type="radio"/>						
2nd year	<input type="radio"/>						

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3rd year	<input type="radio"/>						
4th year	<input type="radio"/>						
5th year	<input type="radio"/>						
6th year	<input type="radio"/>						
7th+ year	<input type="radio"/>						

Think of the students who are taking the graduate student mental health survey at your Department. What percentage of these students stated that during the last two week they ...

Please provide your best guess.

0 10 20 30 40 50 60 70 80 90 100

Felt down, depressed, or hopeless more than half the days?

Felt nervous, anxious or on edge more than half the days?

RAND American Working Conditions Survey

The following are standard questions based on the RAND American Working Conditions Survey:

In general, how often does your work provide you with the following:

	Always	Most of the time	Sometimes	Rarely	Never	Don't know
Opportunities to fully use your talents	<input type="radio"/>					
Opportunities to make positive impact on community/society	<input type="radio"/>					
Sense of personal accomplishment	<input type="radio"/>					
Goals to aspire to	<input type="radio"/>					
Satisfaction of work well done	<input type="radio"/>					
Feeling of doing useful work	<input type="radio"/>					

Thinking about both your commitments at work and

outside of work, please select the response which best describes your situation. How often, in the last 3 months, has it happened that you:

	Always	Most of the time	Sometimes	Rarely	Never
Worried about work when not working	<input type="radio"/>				
Were too tired for activities in private life	<input type="radio"/>				
Were too tired to do household jobs	<input type="radio"/>				
Had difficulty making ends meet financially	<input type="radio"/>				
Had work prevent time with family or significant others	<input type="radio"/>				

PHQ-9

Over the last 2 weeks, how often have you been bothered by any of the following problems?

More than half the
Nearly

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	Not at all	Several days	days	everyday
1. Little interest or pleasure in doing things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Feeling down, depressed, or hopeless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Trouble falling or staying asleep, or sleeping too much	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Feeling tired or having little energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Poor appetite or overeating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Trouble concentrating on things, such as reading the newspaper or watching television	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Thoughts that you would be better off dead or of hurting yourself in some way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How difficult have these problems made it for you to do your work, take care of things at home, or get along with

other people?

Not difficult at all Somewhat difficult Very difficult Extremely difficult

GAD-7

Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the days	Nearly everyday
1. Feeling nervous, anxious or on edge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Not being able to stop or control worrying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Worrying too much about different things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Trouble relaxing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Being so restless that it is hard to sit still	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Becoming easily annoyed or irritable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Feeling afraid as if something awful might happen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How difficult have these problems made it for you to do

your work, take care of things at home, or get along with other people?

Not difficult at all Somewhat difficult Very difficult Extremely difficult

Demographics

What is your level of seniority in the department?

- On tenure track
- Non-tenure track
- Tenured

Since receiving your PhD, for how many years have you held an academic position?

Have you ever received training on a mental health-related topic?

- Yes
- No

Don't know

Have you ever advised PhD student(s) who were experiencing an issue with mental health at the time?

Yes

No

Don't know

If yes, approximately how many of such students have you advised?

How strongly do you agree with the following statement?

I have very good friends at my Economics Department.

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

Advice

This our last question.

What advice would you give to other faculty members who might be advising a PhD student with a mental health issue?

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