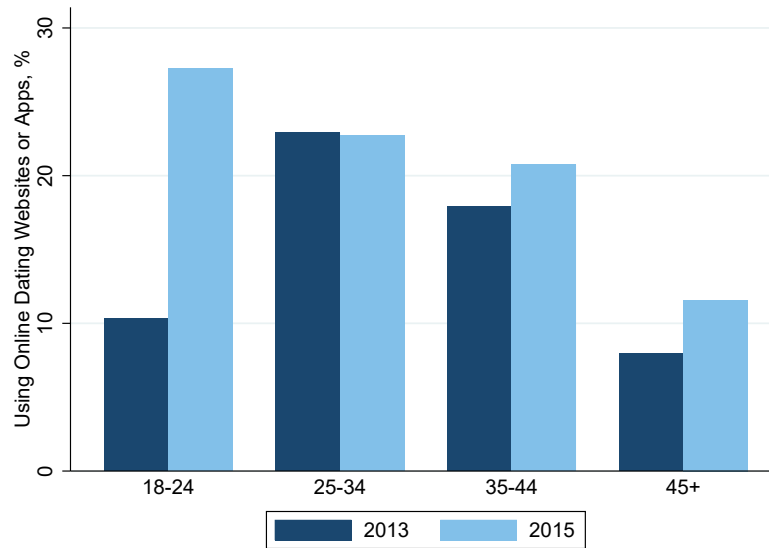


# Online Appendix for “The Impact of Dating Apps on Young Adults: Evidence From Tinder”

## Appendix A. Additional Tables and Figures

Figure A1: Online and Mobile Dating by Age Group, 2013 and 2015



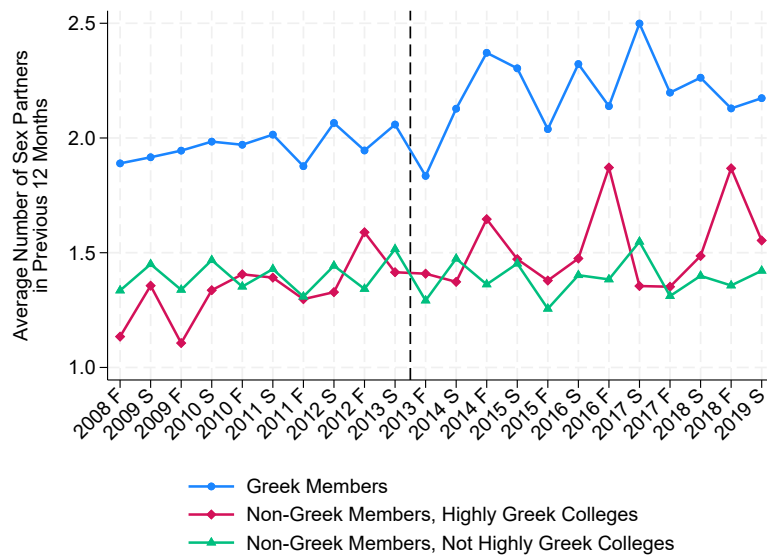
*Notes:* The figure illustrates the rapid, disproportionate growth in the share of young adults using dating websites or apps following Tinder’s full-scale launch in the summer of 2013. The data come from the Pew Internet and American Life Survey conducted April 17 to May 19, 2013, and from the Pew Tracking Survey conducted June 10 to July 12, 2015.

Figure A2: Google Trends for “Tinder” in the United States From 2008 to 2020



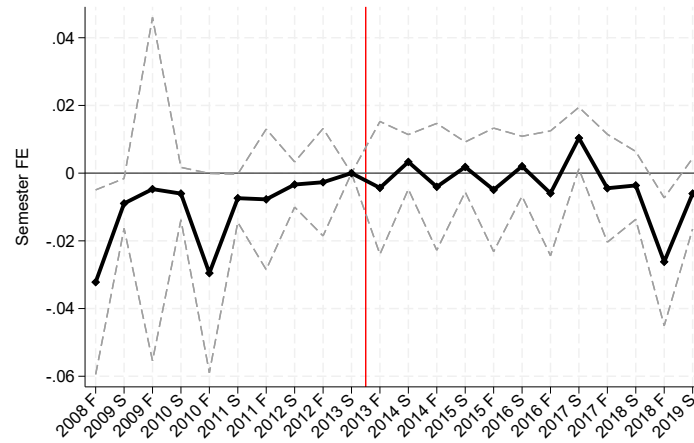
*Notes:* This figure shows the search intensity for the app “Tinder” on Google from January 2008 to January 2020 (roughly matching the time coverage of the NCHA data). The black dashed line indicates the release of the swipe feature on the app.

Figure A3: The Average Number of Sex Partners Between Greek and Non-Greek Members, by College-Level Greek Activity



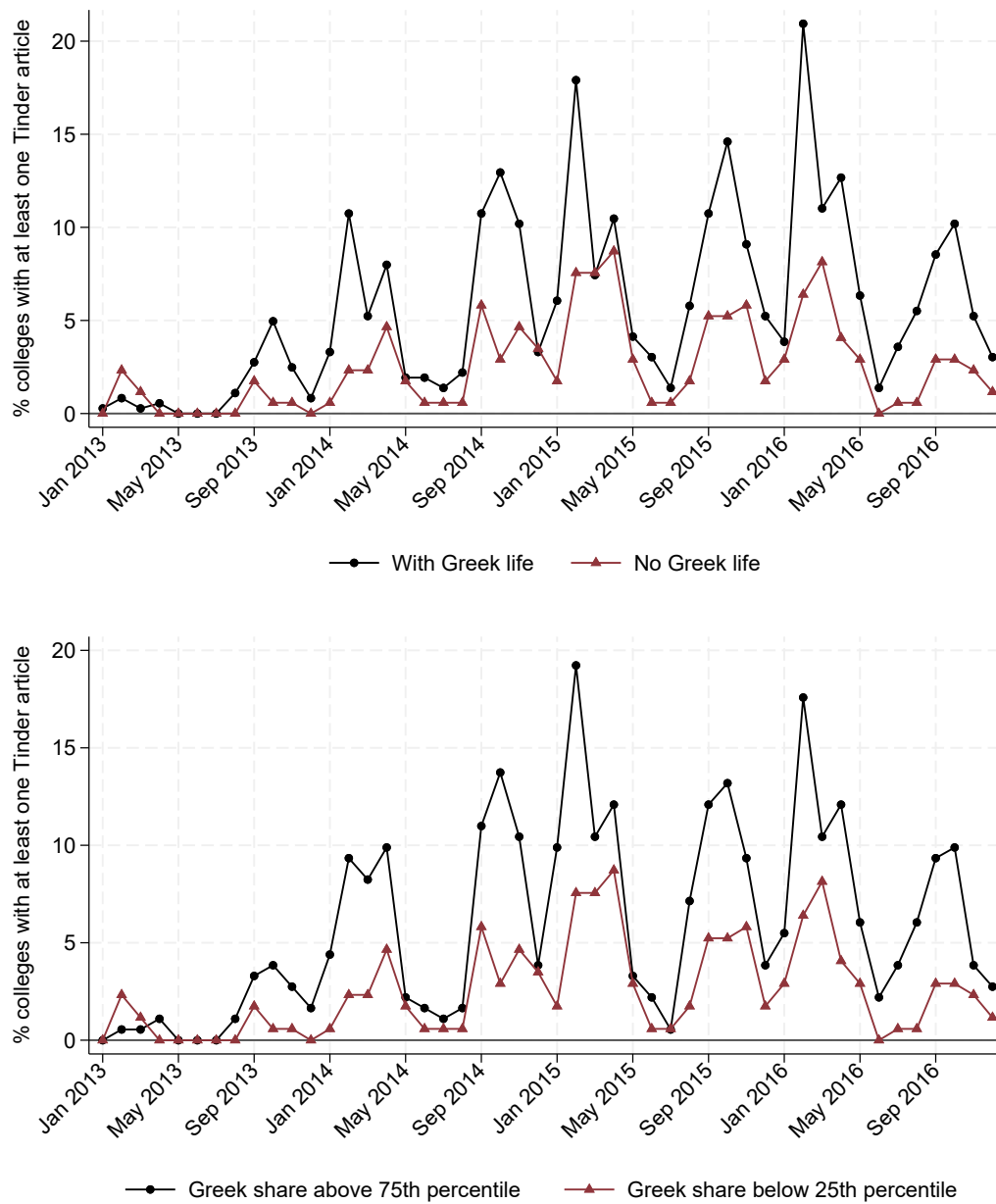
*Notes:* This figure presents the evolution of the average number of sexual partners in the previous 12 months for Greek and non-Greek members across semesters, with the latter group split by whether a non-Greek member was at a college where its share of Greek students was above the 90th percentile in the sample. The data source is the NCHA survey; the sample is restricted to undergraduate students.

Figure A4: Evolution of the Share of Undergraduate Students Involved in Greek Life



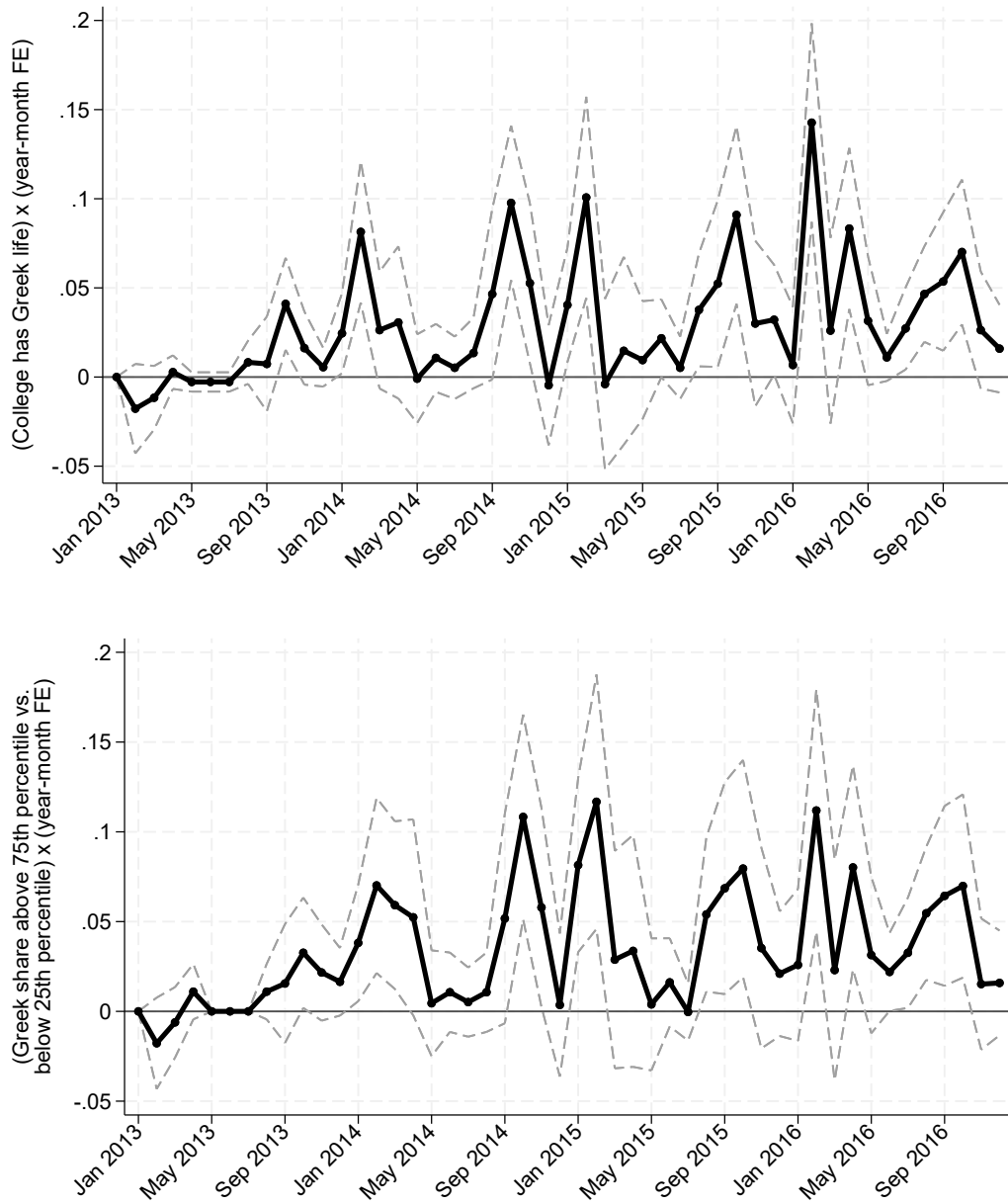
*Notes:* This figure presents the evolution of the share of undergraduate students who were involved in Greek life. It presents the estimates of a college-semester-level specification, regressing the share of students in Greek organizations on the semester fixed effects, taking Spring 2013 as the baseline period. The upper and lower lines represent 95% confidence intervals.

Figure A5: Share of Colleges With Newspaper Articles Mentioning Tinder



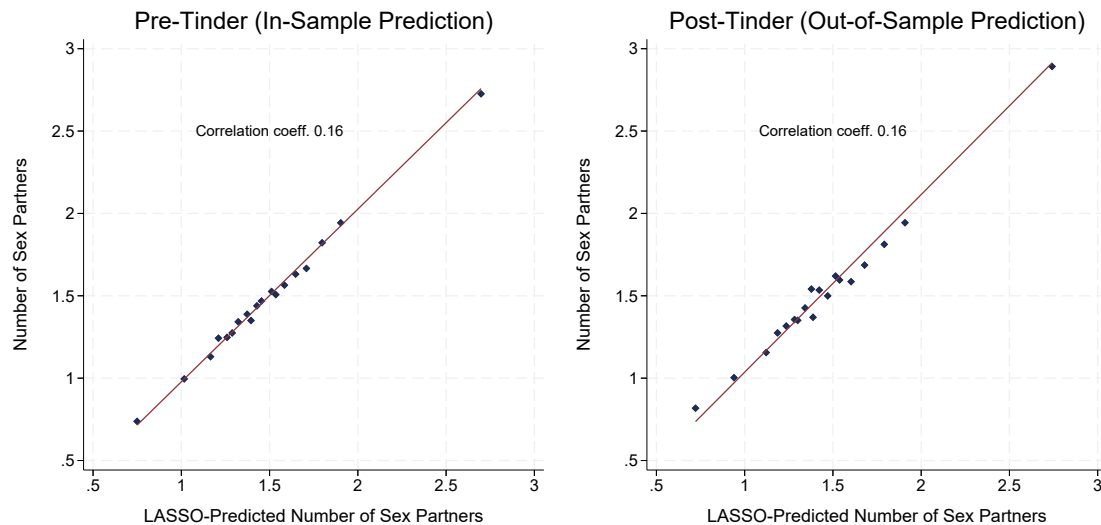
*Notes:* The top figure illustrates the evolution of the share of colleges with at least one article containing the keyword *Tinder* in a given month, separately for colleges with and without Greek life, from January 2013 through December 2016. The bottom figure shows the same trend for colleges in the bottom quartile of Greek-life participation versus colleges in the top quartile. Data on the college newspapers come from LexisNexis; data on Greek organizations are from the Common Data Set.

Figure A6: Colleges With Newspaper Articles Mentioning Tinder, Difference-in-Differences Estimates



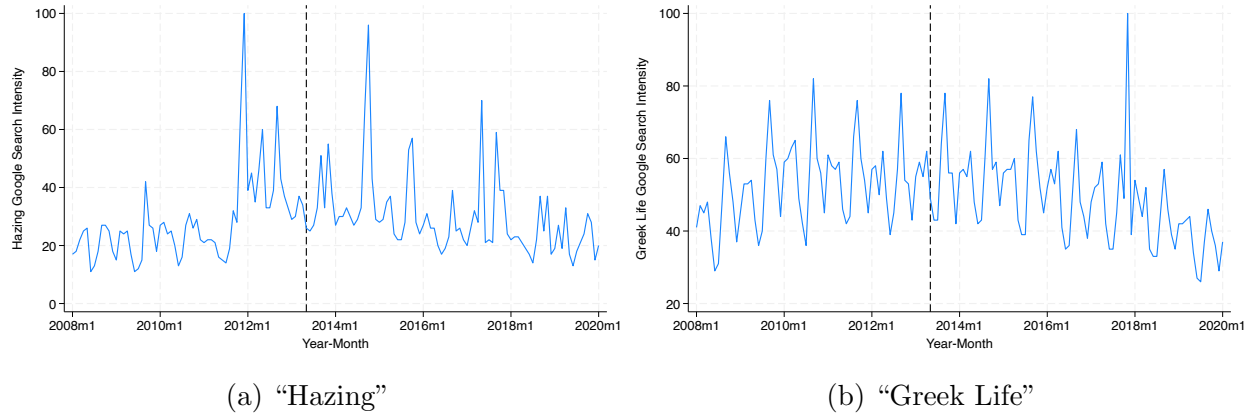
*Notes:* The figures present the difference-in-differences equivalents of the data patterns presented in Figure A5, illustrating that colleges with more-active Greek life were more likely to have newspapers publish articles mentioning Tinder. Specifically, we estimate  $Y_{ct} = \alpha_c + \sum_{t=Jan2013}^{Dec2016} \beta_t \times Greek_c + \varepsilon_{ict}$  where  $Y_{ct}$  stands for the indicator of whether newspapers in college  $c$  had at least one article containing the keyword *Tinder* in a given month  $t$ , and  $\alpha_c$  and  $\beta_t$  are the college and year-month fixed effects, respectively. For the top figure,  $Greek_c$  takes the value of 1 if college  $c$  has Greek life and 0 otherwise. For the bottom figure,  $Greek_c$  takes the value of 1 if the share of Greek students at college  $c$  is in the top quartile and takes the value of 0 if it is in the bottom quartile. The figures display the coefficients  $\beta_t$ . January 2013 is the baseline period. Standard errors are clustered at the college level. Data on the college newspapers come from LexisNexis; data on Greek organizations are from the Common Data Set.

Figure A7: Relationship Between the LASSO-Predicted and Actual Number of Sex Partners



*Notes:* This figure explores the relationship between our LASSO-predicted number of sex partners and the actual number of sex partners a student reported having in the previous year. Specifically, for each ventile of our LASSO-predicted number of sex partners, the figure plots the average predicted number of sex partners against the average actual number of sex partners. See Section ?? for details of the LASSO procedure. The left panel presents data from the period before Tinder’s full-scale launch; the right panel presents data from the period after Tinder’s full-scale launch. Since the LASSO algorithm is trained on pre-period data, the left figure shows in-sample predictions, whereas the right figure shows out-of-sample predictions. The figure also displays correlation coefficients between the LASSO-predicted and actual number of sex partners.

Figure A8: Google Trends for Greek Life Related Words From 2008 to 2020



*Notes:* These figures show the search intensity for “hazing” and “Greek life” on Google from January 2008 to January 2020 (roughly matching the time coverage of the NCHA data). The black dashed line indicates the release of the swipe feature on the app.

Table A1: Top 30 Cities in Terms of Google Search Intensity for Tinder: 2013 and 2014

| 2013                |                      |              |            | 2014               |                      |              |            |
|---------------------|----------------------|--------------|------------|--------------------|----------------------|--------------|------------|
| City                | Nearby Colleges      | Student Pop. | Total Pop. | City               | Nearby Colleges      | Student Pop. | Total Pop. |
| Provo, UT           | BYU                  | 35k          | 116k       | Brookline, MA      | Northeastern, BU, BC | 62k          | 63k        |
| Somerville, MA      | Tufts, Harvard       | 31k          | 81k        | Santa Monica, CA   | UCLA, LMU            | 56k          | 93k        |
| Amherst, MA         | UMass Amherst        | 32k          | 39k        | Berkeley, CA       | UC Berkeley          | 45k          | 124k       |
| Boulder, CO         | CU Boulder           | 36k          | 108k       | Somerville, MA     | Tufts, Harvard       | 31k          | 81k        |
| Beverly Hills, CA   | UCLA                 | 46k          | 33k        | Morro Bay, CA      | –                    | –            | 11k        |
| Brookline, MA       | Northeastern, BU, BC | 62k          | 63k        | Bloomington, IN    | IU Bloomington       | 45k          | 88k        |
| Superior, WI        | UW-Superior          | 3k           | 26k        | Hoboken, NJ        | Stevens IT           | 8k           | 60k        |
| Santa Monica, CA    | UCLA, LMU            | 56k          | 93k        | East Lansing, MI   | MSU                  | 50k          | 49k        |
| East Lansing, MI    | MSU                  | 50k          | 49k        | State College, PA  | Penn State           | 47k          | 42k        |
| Stanford, CA        | Stanford             | 19k          | 21k        | Mount Pleasant, MI | Central Michigan     | 12k          | 89k        |
| Wellesley, MA       | Wellesley College    | 2k           | 29k        | Provo, UT          | BYU                  | 35k          | 116k       |
| Athens, GA          | U of Georgia         | 40k          | 215k       | Cheswold, DE       | –                    | –            | 1k         |
| Blacksburg, VA      | Virginia Tech        | 37k          | 45k        | Santa Barbara, CA  | UCSB                 | 26k          | 90k        |
| Cambridge, MA       | Harvard, MIT         | 31k          | 117k       | Wilmington, NC     | UNC Wilmington       | 19k          | 116k       |
| State College, PA   | Penn State           | 47k          | 42k        | Davis, CA          | UC Davis             | 39k          | 69k        |
| Harrisonburg, VA    | James Madison        | 22k          | 52k        | Carrboro, NC       | UNC Chapel Hill      | 32k          | 21k        |
| Fairfield, CT       | Fairfield            | 6k           | 62k        | Iowa City, IA      | U of Iowa            | 28k          | 75k        |
| Waltham, MA         | Brandeis             | 6k           | 65k        | Arlington, TX      | UT Arlington         | 46k          | 401k       |
| College Park, MD    | U of Maryland        | 41k          | 35k        | Gainesville, FL    | U of Florida         | 54k          | 135k       |
| Hoboken, NJ         | Stevens IT           | 8k           | 60k        | Troy, MI           | –                    | –            | 84k        |
| Annapolis, MD       | Naval Academy        | 5k           | 41k        | Superior, WI       | UW-Superior          | 3k           | 26k        |
| Bloomington, IN     | IU Bloomington       | 45k          | 88k        | SeaTac, WA         | –                    | –            | 29k        |
| Columbia, MO        | U of Missouri        | 31k          | 126k       | Cambridge, MA      | Harvard, MIT         | 31k          | 117k       |
| College Station, TX | Texas A&M            | 73k          | 124k       | Goldsby, OK        | –                    | –            | 3k         |
| Evanston, IL        | Northwestern         | 22k          | 75k        | Brighton, MI       | –                    | –            | 8k         |
| Burlington, VT      | U of Vermont         | 13k          | 45k        | Ann Arbor, MI      | UMich                | 47k          | 124k       |
| Boston, MA          | Northeastern, BU     | 50k          | 676k       | Boston, MA         | Northeastern, BU     | 50k          | 676k       |
| Fort Collins, CO    | Colorado State       | 33k          | 176k       | Fullerton, CA      | CSU Fullerton        | 40k          | 141k       |
| Tempe, AZ           | ASU                  | 135k         | 192k       | Carlsbad, CA       | –                    | –            | 115k       |
| Arlington, TX       | UT Arlington         | 46k          | 401k       | Roseville, CA      | –                    | –            | 149k       |

*Notes:* This table lists the 30 cities with the highest Google search intensity for the app *Tinder* in 2013 and 2014. The data source is Google Trends. The student population and total population columns are in thousands. The cities that don't have colleges nearby are denoted with “–”.



Table A2: Variables: Definitions, Constructions, and Associated NCHA Survey Questions

| Variable                               | Description                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Treatment Variables</b>             |                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Post Tinder introduction               | Coding: 1 = Tinder had already been fully launched by the time the respondent took the survey (after the summer of 2013); 0 = Tinder had not been introduced by the time the respondent took the survey.                                                                                                                                                                                                                       |
| Greek-life involvement (individual)    | Question: “Are you a member of a social fraternity or sorority?”; Coding: 1 = Yes; 0 = No.                                                                                                                                                                                                                                                                                                                                     |
| Greek-life involvement (college-level) | The share is the ratio of students who are part of Greek life over all students.                                                                                                                                                                                                                                                                                                                                               |
| <b>Sexual Outcomes</b>                 |                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Number of sex partners                 | Question: “Within the last 12 months, with how many partners have you had oral sex/vaginal intercourse/anal intercourse?”; Numeric open response.                                                                                                                                                                                                                                                                              |
| Sex previous 12 months                 | Question: “Within the last 12 months, with how many partners have you had oral sex/vaginal intercourse/anal intercourse?”; Numeric open response. Coding: 1 = {any number above zero}; 0 = {zero}.                                                                                                                                                                                                                             |
| Sex previous 30 days                   | Question: “Within the last 30 days, did you have: Oral sex/Vaginal intercourse/Anal intercourse?”<br>Scale: 1 = No, never done; 2 = Have done, not last 30 days; 3 = Yes. Coding: 1 = {3}; 0 = {1,2}.                                                                                                                                                                                                                          |
| Number of sex partners (cond. on >0)   | Question: “Within the last 12 months, with how many partners have you had oral sex/vaginal intercourse/anal intercourse?”; Numeric open response. Coding: replace zeroes with missing values.                                                                                                                                                                                                                                  |
| <b>Relationship-Quality Outcomes</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Cohabiting                             | Question: “What is your relationship status?”; Scale: 1 = Not in a relationship; 2 = In a relationship but not living together; 3 = In a relationship and living together. Coding: 1 = {3}; 0 = {1,2}.                                                                                                                                                                                                                         |
| In relationship                        | Question: “What is your relationship status?”; Scale: 1 = Not in a relationship; 2 = In a relationship but not living together; 3 = In a relationship and living together. Coding: 1 = {2,3}; 0 = {1}.                                                                                                                                                                                                                         |
| Abusive relationship                   | Question: “Within the last 12 months, have you been in an intimate (coupled/partnered) relationship that was emotionally/physically or sexually abusive?”; Coding: 1 = Yes; 0 = No.                                                                                                                                                                                                                                            |
| Difficult relationship                 | Question: “Within the last 12 months, have any of the following been traumatic or very difficult for you to handle?: Intimate Relationships”; Coding: 1 = Yes; 0 = No.                                                                                                                                                                                                                                                         |
| Relationship problems                  | Question: “Within the last 12 months, have any of the following affected your academic performance?”<br>Scale: 1 = Not happened to me, not applicable; 2 = Experienced but academics not negatively affected; 3 = Lower grade on exam/project; 4 = Lower grade in course; 5 = Incomplete or dropped course; 6 = Significant disruption in thesis, dissertation, research, or practicum work. Coding: 1 = {2,3,4,5,6}; 0 = {1}. |
| <b>Negative Sex-Related Outcomes</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Sexual assault                         | Question: “Within the last 12 months, have you been subject to sexual abuse (sexually touched without consent/sexual penetration attempted without consent/sexually penetrated without consent)?”; Coding: 1 = Yes; 0 = No.                                                                                                                                                                                                    |
| Chlamydia                              | Question: “Within the 12 months, have you been diagnosed or treated by any professional for Chlamydia?”; Coding: 1 = Yes; 0 = No.                                                                                                                                                                                                                                                                                              |
| HIV test                               | Question: “Have you ever been tested for Human Immunodeficiency Virus (HIV) infection?”; Scale: 1 = No; 2 = Yes; 3 = Don’t know. Coding: 1 = {2}; 0 = {1,3}.                                                                                                                                                                                                                                                                   |

Table A2: Variables: Definitions, Constructions, and Associated NCHA Survey Questions (cont.)

| Variable                                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Poor Mental Health Symptoms</b>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hopeless                                 | Question: “Have you ever: Felt things were hopeless?”; Scale: 1 = Never; 2 = No, not in last 12 months; 3 = In the last 2 weeks; 4 = In the last 30 days; 5 = In the last 12 months. Coding: 1 = {3,4}; 0 = {1,2,5}                                                                                                                                                                                                                                             |
| Overwhelmed                              | Question: “Have you ever: Felt overwhelmed by all you had to do?”; Scale and coding: same as above.                                                                                                                                                                                                                                                                                                                                                             |
| Exhausted (not physically)               | Question: “Have you ever: Felt exhausted (not from physical activity)?”; Scale and coding: same as above.                                                                                                                                                                                                                                                                                                                                                       |
| Very lonely                              | Question: “Have you ever: Felt very lonely?”; Scale and coding: same as above.                                                                                                                                                                                                                                                                                                                                                                                  |
| Very sad                                 | Question: “Have you ever: Felt very sad?”; Scale and coding: same as above.                                                                                                                                                                                                                                                                                                                                                                                     |
| Severely depressed                       | Question: “Have you ever: Felt so depressed that it was difficult to function?”; Scale and coding: same as above.                                                                                                                                                                                                                                                                                                                                               |
| Overwhelming anxiety                     | Question: “Have you ever: Felt overwhelming anxiety?”; Scale and coding: same as above.                                                                                                                                                                                                                                                                                                                                                                         |
| Overwhelming anger                       | Question: “Have you ever: Felt overwhelming anger?”; Scale and coding: same as above.                                                                                                                                                                                                                                                                                                                                                                           |
| Self-harm                                | Question: “Have you ever: Intentionally cut, burned, bruised or otherwise injured yourself?”; Scale and coding: same as above.                                                                                                                                                                                                                                                                                                                                  |
| Considered suicide                       | Question: “Have you ever: Seriously considered suicide?”; Scale and coding: same as above.                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Index for Mental Health Variables</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Index poor mental health                 | The index is constructed in the following way: (i) For the pretreatment period, all <i>symptoms of poor mental health</i> variables have been standardized to have a mean equal to 0 and a standard deviation equal to 1; (ii) An equally weighted average of the standardized variables has been derived; (iii) For the pretreatment period, the equally-weighted average is standardized again to have a mean equal to 0 and a standard deviation equal to 1. |
| <b>Downstream Academic Performance</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Relationship difficulties (academic)     | Question: “Within the last 12 months, have any of the following affected your academic performance?: Relationship Difficulties”; Scale: 1 = Not happened to me, 2 = Experienced but academics not negatively affected, 3 = Lower grade on exam/project, 4 = Lower grade in course, 5 = Incomplete or dropped course, 6 = Significant disruption in thesis, dissertation, research, or practicum work; Coding: 1 = {3,4,5,6}; 0 = {1,2}.                         |
| Sexual assault (academic)                | Question: “Within the last 12 months, have any of the following affected your academic performance?: Assault (sexual).” Scale and coding as above.                                                                                                                                                                                                                                                                                                              |
| STD (academic)                           | Question: “Within the last 12 months, have any of the following affected your academic performance?: Sexually transmitted disease/infection (STD/I).” Scale and coding as above.                                                                                                                                                                                                                                                                                |
| Depression (academic)                    | Question: “Within the last 12 months, have any of the following affected your academic performance?: Depression.” Scale and coding as above.                                                                                                                                                                                                                                                                                                                    |
| Anxiety (academic)                       | Question: “Within the last 12 months, have any of the following affected your academic performance?: Anxiety.” Scale and coding as above.                                                                                                                                                                                                                                                                                                                       |
| Stress (academic)                        | Question: “Within the last 12 months, have any of the following affected your academic performance?: Stress.” Scale and coding as above.                                                                                                                                                                                                                                                                                                                        |
| ADHD (academic)                          | Question: “Within the last 12 months, have any of the following affected your academic performance?: Attention Deficit and Hyperactivity Disorder (ADHD).” Scale and coding as above.                                                                                                                                                                                                                                                                           |
| Eating disorder (academic)               | Question: “Within the last 12 months, have any of the following affected your academic performance?: Eating disorder/problem.” Scale and coding as above.                                                                                                                                                                                                                                                                                                       |

Table A2: Variables: Definitions, Constructions, and Associated NCHA Survey Questions (cont.)

| Variable                         | Description                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Student Characteristics          |                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Female                           | Question: “What is your gender?”; Coding: 1 = female; 0 = not female.                                                                                                                                                                                                                                                                                                                                                 |
| Height                           | Question: “What is your height in feet and inches?”                                                                                                                                                                                                                                                                                                                                                                   |
| Weight                           | Question: “What is your weight in pounds?”                                                                                                                                                                                                                                                                                                                                                                            |
| White                            | Question: “How do you usually describe yourself? (Mark all that apply)”; Coding: 1 if chose “White”; 0 otherwise.                                                                                                                                                                                                                                                                                                     |
| Black                            | Question: “How do you usually describe yourself? (Mark all that apply)”; Coding: 1 if chose “Black or African American”; 0 otherwise.                                                                                                                                                                                                                                                                                 |
| Hispanic                         | Question: “How do you usually describe yourself? (Mark all that apply)”; Coding: 1 if chose “Hispanic or Latino/a”; 0 otherwise.                                                                                                                                                                                                                                                                                      |
| Asian                            | Question: “How do you usually describe yourself? (Mark all that apply)”; Coding: 1 if chose “Asian or Pacific Islander”; 0 otherwise.                                                                                                                                                                                                                                                                                 |
| Native American                  | Question: “How do you usually describe yourself? (Mark all that apply)”; Coding: 1 if chose “American Indian, Alaskan Native, or Native Hawaiian”; 0 otherwise.                                                                                                                                                                                                                                                       |
| Other race                       | Question: “How do you usually describe yourself? (Mark all that apply)”; Coding: 1 if chose “Other”; 0 otherwise.                                                                                                                                                                                                                                                                                                     |
| International                    | Question: “Are you an international student?”; Scale: 1 = Yes; 0 = No.                                                                                                                                                                                                                                                                                                                                                |
| Age                              | Question: “How old are you?” This variable has been winsorized by cutting off 0.5% at the right tail. This has been used within regressions as separate indicators.                                                                                                                                                                                                                                                   |
| College grade                    | Question: “What is your year in school?”; Scale: 1 = 1st year undergraduate; 2 = 2nd year undergraduate; 3 = 3rd year undergraduate; 4 = 4th year undergraduate; 5 = 5th year or more undergraduate. We keep only undergraduate students in our sample.                                                                                                                                                               |
| Gay/Lesbian                      | Question: “What is your sexual orientation?”; Scale: 1 = Asexual; 2 = Bisexual; 3 = Gay; 4 = Lesbian; 5 = Pansexual; 6 = Queer; 7 = Questioning; 8 = Same-Gender Loving; 9 = Straight/Heterosexual; 10 = Another identity (please specify). Coding: 1 = {2,3,4}; 0 otherwise. We use this variable and coding as opposed to broader categories due to the inconsistency of the available answer options across years. |
| Body Mass Index (BMI)            | Calculated by the ACHA following the standardized formula, weight (in kg) per height (in m) squared.                                                                                                                                                                                                                                                                                                                  |
| Overweight                       | Based on the BMI categories variable in the NCHA, which splits the data into brackets identified by the World Health Organization; Scale: 1 = Underweight, 2 = Healthy Weight, 3 = Overweight, 4 = Class I Obesity, 5 = Class II Obesity, 6 = Class III Obesity. Coding: 1 = {3,4,5,6}; 0 otherwise.                                                                                                                  |
| High Blood Alcohol Content (BAC) | Estimated blood alcohol content at the time of the survey is above 0.08. Estimated by ACHA based on the reported number of drinks and number of hours for the last time students partied/socialized, weight, as well as estimates for total body water weight and the average rate of alcohol metabolism. Follows the formula provided by the U.S. Department of Transportation.                                      |
| On-campus living                 | Question: “Where do you currently live?”; Scale: 1 = Campus residence hall; 2 = Fraternity or sorority house; 3 = Other college/university housing; 4 = Parent/guardian’s home; 5 = Other off-campus housing; 6 = Other. Coding: 1 = {1,2,3}; 0 = {4,5,6}.                                                                                                                                                            |
| GPA                              | Question: “What is your approximate cumulative grade average?”; Scale: 1 = A; 2 = B; 3 = C; 4 = D/F; 5 = N/A; Coding varies depending on the type of analysis and is indicated in the text.                                                                                                                                                                                                                           |

Table A2: Variables: Definitions, Constructions, and Associated NCHA Survey Questions (cont.)

| Variable                       | Description                                                                                                                                                                                                                                                                                  |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Other Variables</b>         |                                                                                                                                                                                                                                                                                              |
| Region                         | The region where the campus is located; Scale: 1 = Northeast, 2 = Midwest, 3 = South, 4 = West.                                                                                                                                                                                              |
| Large college                  | Based on total enrollment; Scale: 1 = Less than 2,500 students, 2 = 2,500–4,999 students, 3 = 5,000–9,999 students, 4 = 10,000–19,999 students, 5 = 20,000 or more students. Coding: 1 = {5}; 0 = {1,2,3,4}.                                                                                 |
| Research institution           | Based on the Basic Carnegie Classification; Scale: 1 = Associates Colleges, 2 = Baccalaureate Colleges, 3 = Masters Colleges and Universities, 4 = Research Institutions, 5 = Special Focus Institutions, 6 = Miscellaneous/Not Classified. Coding: 1 = {4}; 0 = {1,2,3,5,6}.                |
| Southern college               | Based on the region classification above. Coding: 1 = {3}; 0 = {1,2,4}.                                                                                                                                                                                                                      |
| Small city college             | Based on where the campus is located; Scale: 1 = Very large city (population over 500,000), 2 = Large city (250,000–499,999), 3 = Small city (50,000–249,999), 4 = Large town (10,000–49,999), 5 = Small town (2,500–9,999), 6 = Rural Community (<2,500). Coding: 1 = {4,5,6}; 0 = {1,2,3}. |
| Religiously-affiliated college | Based on ACHA-NCHA Reference Group files; Scale: 1 = Yes, 2 = No.                                                                                                                                                                                                                            |

Table A3: Online Dating Patterns Among the College-Student Population

| Survey                                                    | Year(s)       | Question                                                                                                                           | Relevant Respondents                                              | Sample Size | Response |
|-----------------------------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-------------|----------|
| Pew Internet and American Life Project Polls <sup>1</sup> | 2005 and 2009 | Do you ever use an online dating website? (Yes)                                                                                    | Full-time students aged 18–24                                     | 33          | 3.1%     |
| Pew Research Center Poll: Generation Next <sup>2</sup>    | 2006          | Have you ever gone on a date with someone you met online? (Yes)                                                                    | College undergraduates aged 18–24                                 | 24          | 8.3%     |
| Online College Social Life Survey <sup>3</sup>            | 2005–2011     | Where did you first meet your last (romance, hookup, date)? (Personal ad/dating service or “Other response” mentions the internet) | College Undergraduates from 22 different US colleges/universities | 24,131      | 3.58%    |
| Pew Internet & American Life Poll <sup>4</sup>            | 2013          | Have you ever used an online dating site or a dating app on your cell phone? (Yes)                                                 | Adults with a high school or college degree aged 18–24            | 211         | 9.5%     |
| Pew Research Center: Tracking <sup>5</sup>                | 2015          | Have you ever used an online dating site or a dating app on your cell phone? (Yes)                                                 | College undergraduates aged 18–24                                 | 55          | 29%      |
| Pew Research Center: American Trends Panel <sup>6</sup>   | 2019          | Have you ever used an online dating site or dating app? (Yes)                                                                      | Adults with some college or a college degree aged 18–29           | 731         | 49.7%    |

*Notes:* This table presents the shares of college-educated young adults who reported using dating websites or apps from 2005 through 2019. The surveys were identified by searching the Roper Center iPoll database for surveys from the years 2000–2020 containing the keyword *online dating*. Surveys that had questions related to the use of online dating, as well as questions on education level and age, were kept.

1: Only internet users were surveyed. The 2009 survey has only nine respondents who fit the age and education criteria, so their responses are merged with the 2005 survey.

2: Only internet users were surveyed.

3: The indicator for meeting via the internet is equal to 1 if an individual indicated that they met their most recent romance, hookup, or date through a personal ad/dating service or if they chose the “other” category and their response contained one or more of the following strings: *internet*, *online*, *Facebook*, *Myspace*, *Craigslist*, *eHarmony*, *.com*; otherwise, the indicator is equal to 0.

4: The variable is constructed as equal to 1 if an individual answered yes to ever using a dating website or app. The former question was put to internet users, and the latter question was asked of users of mobile phone apps.

5: The variable is constructed in the same way as for the 2013 survey.

6: The sample is restricted to individuals aged 18–29 (finer age categories are not available) and with the highest education level being either a bachelor’s degree or one or more years of college.



Table A4: Changes in Composition of Greek Students Relative to Overall Student Population

| Variable         | Pre-Non-Greek |                  | Pre-Greek |                  | Post-Non-Greek |                  | Post-Greek |                  | P-value for<br>(Pre-/Post-Greek -<br>Pre-/Post-Non-Greek) |
|------------------|---------------|------------------|-----------|------------------|----------------|------------------|------------|------------------|-----------------------------------------------------------|
|                  | N             | Mean/SD          | N         | Mean/SD          | N              | Mean/SD          | N          | Mean/SD          | N                                                         |
| Male             | 506           | 0.33<br>(0.00)   | 503       | 0.33<br>(0.01)   | 538            | 0.30<br>(0.00)   | 527        | 0.30<br>(0.01)   | 0.979                                                     |
| Age              | 506           | 21.57<br>(0.10)  | 503       | 21.77<br>(0.14)  | 538            | 21.42<br>(0.09)  | 527        | 21.83<br>(0.16)  | 0.402                                                     |
| White            | 506           | 0.72<br>(0.01)   | 503       | 0.73<br>(0.01)   | 538            | 0.71<br>(0.01)   | 527        | 0.73<br>(0.01)   | 0.528                                                     |
| Black            | 506           | 0.08<br>(0.01)   | 503       | 0.09<br>(0.01)   | 538            | 0.08<br>(0.00)   | 527        | 0.07<br>(0.01)   | 0.152                                                     |
| Hispanic         | 506           | 0.10<br>(0.01)   | 503       | 0.10<br>(0.01)   | 538            | 0.12<br>(0.01)   | 527        | 0.12<br>(0.01)   | 0.409                                                     |
| Asian            | 506           | 0.10<br>(0.01)   | 503       | 0.08<br>(0.01)   | 538            | 0.11<br>(0.01)   | 527        | 0.09<br>(0.01)   | 0.992                                                     |
| Native American  | 506           | 0.02<br>(0.00)   | 503       | 0.03<br>(0.00)   | 538            | 0.02<br>(0.00)   | 527        | 0.03<br>(0.00)   | 0.694                                                     |
| Other Race       | 506           | 0.03<br>(0.00)   | 503       | 0.03<br>(0.00)   | 538            | 0.02<br>(0.00)   | 527        | 0.03<br>(0.00)   | 0.705                                                     |
| International    | 506           | 0.07<br>(0.00)   | 503       | 0.17<br>(0.01)   | 538            | 0.05<br>(0.00)   | 527        | 0.09<br>(0.01)   | 0.000***                                                  |
| GPA              | 506           | 1.87<br>(0.01)   | 503       | 1.85<br>(0.01)   | 538            | 1.79<br>(0.01)   | 527        | 1.77<br>(0.01)   | 0.935                                                     |
| Freshman         | 506           | 0.30<br>(0.01)   | 503       | 0.22<br>(0.01)   | 538            | 0.30<br>(0.01)   | 527        | 0.22<br>(0.01)   | 0.694                                                     |
| Sophomore        | 506           | 0.24<br>(0.00)   | 503       | 0.26<br>(0.01)   | 538            | 0.24<br>(0.00)   | 527        | 0.24<br>(0.01)   | 0.118                                                     |
| Junior           | 506           | 0.22<br>(0.00)   | 503       | 0.24<br>(0.01)   | 538            | 0.22<br>(0.00)   | 527        | 0.25<br>(0.01)   | 0.308                                                     |
| Height           | 506           | 66.80<br>(0.04)  | 503       | 66.81<br>(0.06)  | 538            | 66.47<br>(0.04)  | 527        | 66.54<br>(0.08)  | 0.308                                                     |
| Weight           | 506           | 156.45<br>(0.41) | 503       | 158.72<br>(0.66) | 538            | 157.81<br>(0.42) | 527        | 160.77<br>(0.88) | 0.597                                                     |
| BMI              | 506           | 24.56<br>(0.06)  | 503       | 24.88<br>(0.10)  | 538            | 25.04<br>(0.07)  | 527        | 25.54<br>(0.15)  | 0.386                                                     |
| Gay/Lesbian      | 506           | 0.03<br>(0.00)   | 503       | 0.02<br>(0.00)   | 538            | 0.03<br>(0.00)   | 527        | 0.02<br>(0.00)   | 0.372                                                     |
| Living on campus | 506           | 0.47<br>(0.01)   | 503       | 0.52<br>(0.01)   | 538            | 0.51<br>(0.01)   | 527        | 0.53<br>(0.01)   | 0.401                                                     |

*Notes:* This table presents the average characteristics of Greek and non-Greek students across colleges before and after Tinder's full-scale launch. The  $p$ -values in the last column correspond to the difference-in-differences regressions of each characteristic on  $\text{Post} \times \text{Greek}$  using aggregate college-by-post-by-Greek data. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A5: Newspaper Articles—First-Stage Results

|                                                | College Has Article on<br>Tinder, 2013–2016 |                    |                    |                    | Number of Articles on<br>Tinder, 2013–2016 |                    |                    |                    |
|------------------------------------------------|---------------------------------------------|--------------------|--------------------|--------------------|--------------------------------------------|--------------------|--------------------|--------------------|
|                                                | (1)                                         | (2)                | (3)                | (4)                | (5)                                        | (6)                | (7)                | (8)                |
| College has Greek life                         | 0.138***<br>(0.046)                         |                    |                    |                    | 0.999***<br>(0.375)                        |                    |                    |                    |
| Share of students in fraternities above median |                                             | 0.112**<br>(0.045) |                    |                    |                                            | 1.244**<br>(0.571) |                    |                    |
| Share of students in sororities above median   |                                             |                    | 0.113**<br>(0.045) |                    |                                            |                    | 1.448**<br>(0.562) |                    |
| Share of students in Greek life                |                                             |                    |                    | 0.435**<br>(0.202) |                                            |                    |                    | 4.205**<br>(2.050) |
| Total articles                                 | ✓                                           | ✓                  | ✓                  | ✓                  | ✓                                          | ✓                  | ✓                  | ✓                  |
| Observations                                   | 540                                         | 530                | 530                | 530                | 540                                        | 530                | 530                | 530                |

*Notes:* This table presents the relationship between the presence of Greek life and the intensity of Tinder mentions in associated college newspapers. The outcome variables in columns (1)–(4) are indicators for whether a college had at least one article mentioning Tinder published in any of its newspapers from 2013 through 2016; the outcome variables in columns (5)–(8) are the numbers of articles mentioning Tinder in any newspaper at a given college from 2013 through 2016. All estimates control for the total number of articles published by newspapers from 2013 through 2016. Data on the college newspapers come from LexisNexis; data on Greek organizations are from the Common Data Set. Robust standard errors are in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .



Table A6: Google Trends—First-Stage Results

|                                                | Google Top 100 “Tinder” |                   |                     |                    |
|------------------------------------------------|-------------------------|-------------------|---------------------|--------------------|
|                                                | Search Intensity        |                   |                     |                    |
|                                                | (1)                     | (2)               | (3)                 | (4)                |
| College has Greek life                         | 0.052**<br>(0.021)      |                   |                     |                    |
| Share of students in fraternities above median |                         | 0.042*<br>(0.022) |                     |                    |
| Share of students in sororities above median   |                         |                   | 0.060***<br>(0.022) |                    |
| Share of students in Greek life                |                         |                   |                     | 0.234**<br>(0.114) |
| Observations                                   | 540                     | 530               | 530                 | 530                |
| Mean of dep. var.                              | 0.070                   | 0.072             | 0.072               | 0.072              |
| SD of dep. var.                                | 0.256                   | 0.258             | 0.258               | 0.258              |

*Notes:* This table presents the relationship between the presence of Greek life at a college and an indicator for whether a city or town where the college is located ranks in the top 100 in terms of Google search intensity for *Tinder* in 2013–2014. Each observation is a college. Data on search intensity come from Google Trends; data on Greek organizations are from the Common Data Set. Robust standard errors are in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A7: App-Usage Data—First-Stage Results

|                                                | Average Daily Use of<br>Tinder During AY 2017–2018 |                     |                     |                   |
|------------------------------------------------|----------------------------------------------------|---------------------|---------------------|-------------------|
|                                                | (1)                                                | (2)                 | (3)                 | (4)               |
| College has Greek life                         | 0.003***<br>(0.001)                                |                     |                     |                   |
| Share of students in fraternities above median |                                                    | 0.004***<br>(0.001) |                     |                   |
| Share of students in sororities above median   |                                                    |                     | 0.003***<br>(0.001) |                   |
| Share of students in Greek life                |                                                    |                     |                     | 0.006*<br>(0.003) |
| Observations                                   | 466                                                | 458                 | 458                 | 458               |
| Mean of dep. var.                              | 0.012                                              | 0.012               | 0.012               | 0.012             |
| SD of dep. var.                                | 0.011                                              | 0.011               | 0.011               | 0.011             |

*Notes:* This table presents the relationship between the presence of Greek life at a college and the average daily usage rate of Tinder within the college’s zip codes. The daily usage rate is calculated as the number of devices using Tinder in a given day divided by the total number of devices for which one of college’s zip codes is the most frequently appearing location during that day. We analyze this relationship for the earliest academic year that the data on Tinder use became available, from September 21, 2017, through May 15, 2018. Each observation is a college. Data on app usage and device location come from Complementics; data on Greek organizations are from the Common Data Set. Observations are weighted by the logarithm of the total number of devices most frequently appearing in the college’s main zip code. Robust standard errors are in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A8: Distribution of Sexual Activity, By Student Gender

|                                   | (1)                 | (2)                 | (3)                 | (4)                 | (5)                 | (6)                 | (7)                 | (8)                 | (9)                 | (10)                | (11)                |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                                   | >0                  | >1                  | >2                  | >3                  | >4                  | >5                  | >6                  | >7                  | >8                  | >9                  | >10                 |
|                                   | Partners            | Partners            | Partners            | Partners            | Partners            | Partners            | Partners            | Partners            | Partners            | Partners            | Partners            |
| <i>Panel A: Males</i>             |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Fraternity/Sorority $\times$ Post | 0.047***<br>(0.006) | 0.048***<br>(0.007) | 0.053***<br>(0.007) | 0.040***<br>(0.006) | 0.035***<br>(0.005) | 0.026***<br>(0.005) | 0.018***<br>(0.004) | 0.013***<br>(0.003) | 0.010***<br>(0.003) | 0.007***<br>(0.003) | 0.005**<br>(0.002)  |
| College-Semester FE               | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   |
| Has controls                      | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   |
| Observations                      | 329,739             | 329,739             | 329,739             | 329,739             | 329,739             | 329,739             | 329,739             | 329,739             | 329,739             | 329,739             | 329,739             |
| Mean of dep. var.                 | 0.664               | 0.289               | 0.190               | 0.125               | 0.087               | 0.060               | 0.044               | 0.036               | 0.028               | 0.025               | 0.017               |
| SD of dep. var.                   | 0.472               | 0.453               | 0.392               | 0.330               | 0.282               | 0.237               | 0.206               | 0.185               | 0.165               | 0.156               | 0.130               |
| <i>Panel B: Females</i>           |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Fraternity/Sorority $\times$ Post | 0.029***<br>(0.005) | 0.029***<br>(0.005) | 0.030***<br>(0.004) | 0.024***<br>(0.003) | 0.017***<br>(0.002) | 0.013***<br>(0.002) | 0.011***<br>(0.002) | 0.009***<br>(0.001) | 0.006***<br>(0.001) | 0.005***<br>(0.001) | 0.003***<br>(0.001) |
| College-Semester FE               | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   |
| Has controls                      | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   |
| Observations                      | 680,290             | 680,290             | 680,290             | 680,290             | 680,290             | 680,290             | 680,290             | 680,290             | 680,290             | 680,290             | 680,290             |
| Mean of dep. var.                 | 0.679               | 0.249               | 0.145               | 0.087               | 0.055               | 0.034               | 0.023               | 0.016               | 0.012               | 0.009               | 0.006               |
| SD of dep. var.                   | 0.467               | 0.433               | 0.353               | 0.282               | 0.228               | 0.181               | 0.149               | 0.126               | 0.107               | 0.096               | 0.076               |

*Notes:* This table presents the estimates of the impact of Tinder's introduction on student sexual activity. Panel A displays the results for male students only, and Panel B displays the results for female students only. The outcome variable is an indicator for whether a student had more than the given number of sex partners (ranging from strictly over 0 to strictly over 10) within the previous 12 months. The coefficient of interest is the interaction of a student's fraternity or sorority membership and an indicator for semesters after Tinder's full-scale launch. All columns include college-semester fixed effects and controls (age, gender, race, grade, international student status, sexual orientation, height, and BMI). For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A9: Heterogeneity By Student- and College-Level Characteristics

|                                              | Outcome: Number of Sex Partners in Previous 12 Months |                    |                     |                     |                     |                     |                                     |                           |                     |                         |                      |                       |                                      |
|----------------------------------------------|-------------------------------------------------------|--------------------|---------------------|---------------------|---------------------|---------------------|-------------------------------------|---------------------------|---------------------|-------------------------|----------------------|-----------------------|--------------------------------------|
|                                              | Student Characteristic X:                             |                    |                     |                     |                     |                     |                                     | College Characteristic X: |                     |                         |                      |                       |                                      |
|                                              | Male                                                  | White              | Black               | Hispanic            | Asian               | Gay/Lesbian         | Freshman,<br>Sophomore<br>or Junior | Overweight                | Large<br>College    | Research<br>Institution | Southern<br>College  | Small City<br>College | Religiously<br>Affiliated<br>College |
|                                              | (1)                                                   | (2)                | (3)                 | (4)                 | (5)                 | (6)                 | (7)                                 | (8)                       | (9)                 | (10)                    | (11)                 | (12)                  | (13)                                 |
| Fraternity/Sorority $\times$ Post            | 0.224***<br>(0.030)                                   | 0.159**<br>(0.063) | 0.201***<br>(0.029) | 0.219***<br>(0.031) | 0.207***<br>(0.031) | 0.220***<br>(0.030) | 0.133***<br>(0.044)                 | 0.228***<br>(0.032)       | 0.154***<br>(0.037) | 0.148***<br>(0.042)     | 0.262***<br>(0.038)  | 0.238***<br>(0.037)   | 0.219***<br>(0.033)                  |
| Fraternity/Sorority $\times$ Post $\times$ X | 0.095<br>(0.070)                                      | 0.050<br>(0.067)   | 0.317<br>(0.196)    | -0.076<br>(0.095)   | -0.019<br>(0.106)   | 0.185<br>(0.347)    | 0.106**<br>(0.053)                  | -0.027<br>(0.056)         | 0.129*<br>(0.066)   | 0.104*<br>(0.059)       | -0.157***<br>(0.059) | -0.080<br>(0.064)     | -0.057<br>(0.078)                    |
| College-Semester FE                          | ✓                                                     | ✓                  | ✓                   | ✓                   | ✓                   | ✓                   | ✓                                   | ✓                         | ✓                   | ✓                       | ✓                    | ✓                     | ✓                                    |
| Post $\times$ X                              | ✓                                                     | ✓                  | ✓                   | ✓                   | ✓                   | ✓                   | ✓                                   | ✓                         | ✓                   | ✓                       | ✓                    | ✓                     | ✓                                    |
| Observations                                 | 1,051,472                                             | 1,057,077          | 1,055,998           | 1,055,867           | 1,055,792           | 1,048,184           | 1,057,717                           | 1,039,838                 | 1,057,717           | 1,057,717               | 1,057,717            | 1,057,717             | 1,057,717                            |
| Mean of dep. var.                            | 1.495                                                 | 1.497              | 1.497               | 1.496               | 1.496               | 1.497               | 1.498                               | 1.497                     | 1.498               | 1.498                   | 1.498                | 1.498                 | 1.498                                |
| SD of dep. var.                              | 2.970                                                 | 2.986              | 2.986               | 2.983               | 2.984               | 2.974               | 2.988                               | 2.944                     | 2.988               | 2.988                   | 2.988                | 2.988                 | 2.988                                |

*Notes:* This table explores the heterogeneity of the baseline estimates for the impact of Tinder's introduction on sexual activity with respect to various student- and college-level characteristics. Each column presents the results of a modified baseline specification where we interact the indicator for semesters after Tinder's full-scale launch with the indicator for a student's fraternity or sorority membership and with the various indicators of interest. All columns include college-semester fixed effects and the interaction between the indicator of interest and the indicator after Tinder's full-scale launch. For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A10: Negative Outcomes Related to Sexual Activity, By Student Gender

|                                   | Sexual Assault      |                     | Chlamydia           |                     | HIV Test            |                     |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                                   | (1)                 | (2)                 | (3)                 | (4)                 | (5)                 | (6)                 |
| <i>Panel A: Males</i>             |                     |                     |                     |                     |                     |                     |
| Fraternity/Sorority $\times$ Post | 0.016***<br>(0.003) | 0.016***<br>(0.003) | 0.006***<br>(0.002) | 0.006***<br>(0.002) | 0.015***<br>(0.006) | 0.016***<br>(0.005) |
| College-Semester FE               | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   |
| Has controls                      |                     | ✓                   |                     | ✓                   |                     | ✓                   |
| Observations                      | 333,819             | 333,819             | 331,961             | 331,961             | 318,054             | 318,054             |
| Mean of dep. var.                 | 0.042               | 0.042               | 0.010               | 0.010               | 0.197               | 0.197               |
| SD of dep. var.                   | 0.201               | 0.201               | 0.097               | 0.097               | 0.397               | 0.397               |
| <i>Panel B: Females</i>           |                     |                     |                     |                     |                     |                     |
| Fraternity/Sorority $\times$ Post | 0.019***<br>(0.003) | 0.019***<br>(0.003) | 0.007***<br>(0.001) | 0.007***<br>(0.001) | 0.018***<br>(0.005) | 0.015***<br>(0.004) |
| College-Semester FE               | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   |
| Has controls                      |                     | ✓                   |                     | ✓                   |                     | ✓                   |
| Observations                      | 686,133             | 686,133             | 684,106             | 684,106             | 647,222             | 647,222             |
| Mean of dep. var.                 | 0.109               | 0.109               | 0.015               | 0.015               | 0.286               | 0.286               |
| SD of dep. var.                   | 0.311               | 0.311               | 0.120               | 0.120               | 0.452               | 0.452               |

*Notes:* This table presents the estimates of the impact of Tinder's introduction on negative outcomes related to sexual activity. Panel A displays the results for male students only, and Panel B displays the results for female students only. The outcome variables are reported experiences of sexual abuse within the previous 12 months, having been diagnosed with or treated for chlamydia within the previous 12 months, and having ever tested for HIV. The coefficient of interest is the interaction of a student's fraternity or sorority membership and an indicator for semesters after Tinder's full-scale launch. All columns include college-semester fixed effects and controls (age, gender, race, grade, international student status, sexual orientation, height, and BMI). For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A11: Mental Health (Excluding Sexually Abused Individuals)

|                                   | (1)                 | (2)                  | (3)                   | (4)                  | (5)                 | (6)                   | (7)                          | (8)                        | (9)                 | (10)                  | (11)                                             |
|-----------------------------------|---------------------|----------------------|-----------------------|----------------------|---------------------|-----------------------|------------------------------|----------------------------|---------------------|-----------------------|--------------------------------------------------|
|                                   | Hopeless            | Over-<br>whelmed     | Mentally<br>Exhausted | Very<br>Lonely       | Very<br>Sad         | Severely<br>Depressed | Over-<br>whelming<br>Anxiety | Over-<br>whelming<br>Anger | Self-Harm           | Considered<br>Suicide | Index Poor<br>Mental<br>Health<br>(Last 30 Days) |
| Fraternity/Sorority $\times$ Post | -0.010**<br>(0.004) | -0.014***<br>(0.003) | -0.012***<br>(0.003)  | -0.012***<br>(0.004) | -0.009**<br>(0.004) | -0.012***<br>(0.003)  | -0.013***<br>(0.003)         | -0.010***<br>(0.003)       | -0.002**<br>(0.001) | -0.005***<br>(0.001)  | -0.040***<br>(0.007)                             |
| College-Semester FE               | ✓                   | ✓                    | ✓                     | ✓                    | ✓                   | ✓                     | ✓                            | ✓                          | ✓                   | ✓                     | ✓                                                |
| Has controls                      | ✓                   | ✓                    | ✓                     | ✓                    | ✓                   | ✓                     | ✓                            | ✓                          | ✓                   | ✓                     | ✓                                                |
| Observations                      | 926,794             | 928,700              | 932,581               | 928,048              | 926,901             | 928,072               | 927,840                      | 925,665                    | 928,487             | 928,730               | 932,581                                          |
| Mean of dep. var.                 | 0.456               | 0.686                | 0.656                 | 0.372                | 0.391               | 0.172                 | 0.340                        | 0.203                      | 0.023               | 0.028                 | 0.052                                            |
| SD of dep. var.                   | 0.498               | 0.464                | 0.475                 | 0.483                | 0.488               | 0.377                 | 0.474                        | 0.402                      | 0.151               | 0.164                 | 0.998                                            |

*Notes:* This table presents the estimates of the impact of Tinder's introduction on student mental health, excluding individuals who reported being victims of sexual assault in the previous year. The outcome variables are feeling hopeless, overwhelmed, mentally exhausted, very lonely, very sad, severely depressed (such that it was difficult to function), overwhelming anxiety, overwhelming anger, self-harm, and considered suicide in the previous 12 months. The index of poor mental health is obtained by adding the standardized versions of all of the variables above and standardizing the resulting variable. The coefficient of interest is the interaction of a student's fraternity or sorority membership and an indicator for semesters after Tinder's full-scale launch. All columns include college-semester fixed effects and controls (age, gender, race, grade, international student status, height, and BMI). For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A12: Mental Health (Controlling for Sexual Activity)

|                                   | (1)                 | (2)                  | (3)                   | (4)                  | (5)                  | (6)                   | (7)                          | (8)                        | (9)                  | (10)                  | (11)                                             |
|-----------------------------------|---------------------|----------------------|-----------------------|----------------------|----------------------|-----------------------|------------------------------|----------------------------|----------------------|-----------------------|--------------------------------------------------|
|                                   | Hopeless            | Over-<br>whelmed     | Mentally<br>Exhausted | Very<br>Lonely       | Very<br>Sad          | Severely<br>Depressed | Over-<br>whelming<br>Anxiety | Over-<br>whelming<br>Anger | Self-Harm            | Considered<br>Suicide | Index Poor<br>Mental<br>Health<br>(Last 30 Days) |
| Fraternity/Sorority $\times$ Post | -0.010**<br>(0.004) | -0.015***<br>(0.003) | -0.013***<br>(0.003)  | -0.012***<br>(0.004) | -0.011***<br>(0.004) | -0.013***<br>(0.003)  | -0.014***<br>(0.003)         | -0.012***<br>(0.003)       | -0.003***<br>(0.001) | -0.005***<br>(0.001)  | -0.043***<br>(0.007)                             |
| College-Semester FE               | ✓                   | ✓                    | ✓                     | ✓                    | ✓                    | ✓                     | ✓                            | ✓                          | ✓                    | ✓                     | ✓                                                |
| Baseline controls                 | ✓                   | ✓                    | ✓                     | ✓                    | ✓                    | ✓                     | ✓                            | ✓                          | ✓                    | ✓                     | ✓                                                |
| Sexual-activity controls          | ✓                   | ✓                    | ✓                     | ✓                    | ✓                    | ✓                     | ✓                            | ✓                          | ✓                    | ✓                     | ✓                                                |
| Observations                      | 914,082             | 915,901              | 919,105               | 915,315              | 914,188              | 915,335               | 915,109                      | 912,968                    | 915,717              | 915,974               | 919,105                                          |
| Mean of dep. var.                 | 0.457               | 0.686                | 0.657                 | 0.373                | 0.391                | 0.172                 | 0.340                        | 0.203                      | 0.023                | 0.028                 | 0.054                                            |
| SD of dep. var.                   | 0.498               | 0.464                | 0.475                 | 0.483                | 0.488                | 0.377                 | 0.474                        | 0.402                      | 0.150                | 0.164                 | 0.995                                            |

*Notes:* This table investigates whether the average positive impact of Tinder's introduction on mental health is driven by increased sexual activity. Specifically, it displays the estimates of the Tinder's impact on mental health controlling for students' number of sexual partners in the previous 12 months and for whether they had sex in the previous 30 days. The outcome variables are feeling hopeless, overwhelmed, mentally exhausted, very lonely, very sad, severely depressed (such that it was difficult to function), overwhelming anxiety, overwhelming anger, self-harm, and considered suicide in the previous 12 months. The index of poor mental health is obtained by adding the standardized versions of all of the variables above and standardizing the resulting variable. The coefficient of interest is the interaction of a student's fraternity or sorority membership and an indicator for semesters after Tinder's full-scale launch. All columns include college-semester fixed effects and controls (age, gender, race, grade, international student status, height, and BMI). For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A13: Robustness: Exclude Non-Greek Students From Highly Greek Colleges

|                                                                                             | (1)                  | (2)                     | (3)               | (4)                                              | (5)                 | (6)                 | (7)                 |
|---------------------------------------------------------------------------------------------|----------------------|-------------------------|-------------------|--------------------------------------------------|---------------------|---------------------|---------------------|
|                                                                                             | # of Sex<br>Partners | Sex Previous<br>30 Days | Cohabiting        | Index Poor<br>Mental<br>Health<br>(Last 30 Days) | Chlamydia           | HIV Test            | Sexual<br>Assault   |
| <i>Panel A: All Students</i>                                                                |                      |                         |                   |                                                  |                     |                     |                     |
| Fraternity/Sorority $\times$ Post                                                           | 0.234***<br>(0.028)  | 0.030***<br>(0.004)     | -0.001<br>(0.002) | -0.033***<br>(0.008)                             | 0.006***<br>(0.001) | 0.017***<br>(0.003) | 0.019***<br>(0.002) |
| College FE                                                                                  | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Semester FE                                                                                 | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Has controls                                                                                | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Observations                                                                                | 1,011,614            | 1,017,814               | 1,021,666         | 1,023,380                                        | 1,017,686           | 966,806             | 1,021,582           |
| Mean of dep. var.                                                                           | 1.492                | 0.520                   | 0.114             | 0.100                                            | 0.013               | 0.257               | 0.087               |
| SD of dep. var.                                                                             | 2.912                | 0.500                   | 0.318             | 1.028                                            | 0.113               | 0.437               | 0.282               |
| <i>Panel B: Non-Greek Students Are From Colleges With Greek Share Below 75th Percentile</i> |                      |                         |                   |                                                  |                     |                     |                     |
| Fraternity/Sorority $\times$ Post                                                           | 0.255***<br>(0.029)  | 0.033***<br>(0.004)     | 0.000<br>(0.002)  | -0.029***<br>(0.009)                             | 0.007***<br>(0.001) | 0.018***<br>(0.004) | 0.019***<br>(0.003) |
| College FE                                                                                  | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Semester FE                                                                                 | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Has controls                                                                                | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Observations                                                                                | 814,913              | 819,998                 | 823,200           | 824,613                                          | 819,834             | 779,748             | 823,099             |
| Mean of dep. var.                                                                           | 1.511                | 0.531                   | 0.123             | 0.099                                            | 0.013               | 0.269               | 0.087               |
| SD of dep. var.                                                                             | 2.929                | 0.499                   | 0.329             | 1.031                                            | 0.115               | 0.443               | 0.281               |
| <i>Panel C: Non-Greek Students Are From Colleges With Greek Share Below 50th Percentile</i> |                      |                         |                   |                                                  |                     |                     |                     |
| Fraternity/Sorority $\times$ Post                                                           | 0.248***<br>(0.032)  | 0.029***<br>(0.005)     | 0.001<br>(0.002)  | -0.031***<br>(0.010)                             | 0.007***<br>(0.001) | 0.017***<br>(0.004) | 0.019***<br>(0.003) |
| College FE                                                                                  | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Semester FE                                                                                 | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Has controls                                                                                | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Observations                                                                                | 587,596              | 591,370                 | 593,745           | 594,822                                          | 591,310             | 561,823             | 593,708             |
| Mean of dep. var.                                                                           | 1.531                | 0.532                   | 0.125             | 0.105                                            | 0.014               | 0.274               | 0.089               |
| SD of dep. var.                                                                             | 2.986                | 0.499                   | 0.331             | 1.035                                            | 0.116               | 0.446               | 0.285               |
| <i>Panel D: Non-Greek Students Are From Colleges With Greek Share Below 25th Percentile</i> |                      |                         |                   |                                                  |                     |                     |                     |
| Fraternity/Sorority $\times$ Post                                                           | 0.239***<br>(0.038)  | 0.024***<br>(0.006)     | 0.001<br>(0.003)  | -0.032**<br>(0.014)                              | 0.007***<br>(0.001) | 0.011**<br>(0.005)  | 0.018***<br>(0.004) |
| College FE                                                                                  | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Semester FE                                                                                 | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Has controls                                                                                | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Observations                                                                                | 350,166              | 352,463                 | 354,015           | 354,659                                          | 352,273             | 334,442             | 353,885             |
| Mean of dep. var.                                                                           | 1.635                | 0.533                   | 0.113             | 0.116                                            | 0.014               | 0.269               | 0.097               |
| SD of dep. var.                                                                             | 3.181                | 0.499                   | 0.317             | 1.035                                            | 0.118               | 0.443               | 0.296               |

*Notes:* This table presents the results of a robustness check for whether the baseline results remain stable after sequentially removing non-Greek-affiliated students in colleges with increasingly higher levels of Greek presence from the sample. Panel A presents the baseline estimates with college and semester fixed effects. Panel B presents the results after excluding non-Greek-affiliated students from colleges above the 75th percentile in its share of Greek students. Panels B and C further decrease this threshold to the 50th and 25th percentiles, respectively. All columns include college and semester fixed effects and controls (age, gender, race, grade, international student status, sexual orientation, height, and BMI). For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level.  $\Delta$ -23

$\Delta$ -23  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A14: Robustness: Student Characteristics Interacted With the Post Indicator

|                                   | (1)                  | (2)                     | (3)               | (4)                                              | (5)                 | (6)                 | (7)                 |
|-----------------------------------|----------------------|-------------------------|-------------------|--------------------------------------------------|---------------------|---------------------|---------------------|
|                                   | # of Sex<br>Partners | Sex Previous<br>30 Days | Cohabiting        | Index Poor<br>Mental<br>Health<br>(Last 30 Days) | Chlamydia           | HIV Test            | Sexual<br>Assault   |
| Fraternity/Sorority $\times$ Post | 0.188***<br>(0.025)  | 0.023***<br>(0.004)     | -0.000<br>(0.004) | -0.036***<br>(0.008)                             | 0.005***<br>(0.001) | 0.011***<br>(0.003) | 0.012***<br>(0.002) |
| College-Semester FE               | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Has controls                      | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Controls $\times$ Post            | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Observations                      | 994,404              | 999,941                 | 1,003,279         | 1,004,944                                        | 999,763             | 949,826             | 1,003,325           |
| Mean of dep. var.                 | 1.482                | 0.521                   | 0.473             | 0.094                                            | 0.013               | 0.256               | 0.086               |
| SD of dep. var.                   | 2.822                | 0.500                   | 0.499             | 1.020                                            | 0.113               | 0.437               | 0.281               |

*Notes:* This table presents the results of a robustness check for whether the baseline results remain stable after the inclusion of the interactions of all baseline controls (age, gender, race, grade, international student status, height, and BMI) and the additional controls (living on campus and having high blood alcohol content at the moment of the survey) with the post-Tinder-introduction indicator for semesters after Tinder's full-scale launch. All columns include college-semester fixed effects. For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A15: Robustness: LASSO-Predicted Sexual Activity Interacted With the Post Indicator

|                                       | (1)                  | (2)                     | (3)              | (4)                                              | (5)                 | (6)                 | (7)                 |
|---------------------------------------|----------------------|-------------------------|------------------|--------------------------------------------------|---------------------|---------------------|---------------------|
|                                       | # of Sex<br>Partners | Sex Previous<br>30 Days | Cohabiting       | Index Poor<br>Mental<br>Health<br>(Last 30 Days) | Chlamydia           | HIV Test            | Sexual<br>Assault   |
| Fraternity/Sorority $\times$ Post     | 0.219***<br>(0.028)  | 0.029***<br>(0.004)     | 0.003<br>(0.004) | -0.032***<br>(0.007)                             | 0.006***<br>(0.001) | 0.016***<br>(0.003) | 0.020***<br>(0.002) |
| College-Semester FE                   | ✓                    | ✓                       | ✓                | ✓                                                | ✓                   | ✓                   | ✓                   |
| Baseline controls                     | ✓                    | ✓                       | ✓                | ✓                                                | ✓                   | ✓                   | ✓                   |
| LASSO # of sex partners $\times$ Post | ✓                    | ✓                       | ✓                | ✓                                                | ✓                   | ✓                   | ✓                   |
| Observations                          | 1,011,613            | 1,017,813               | 1,021,665        | 1,023,379                                        | 1,017,685           | 966,806             | 1,021,581           |
| Mean of dep. var.                     | 1.492                | 0.520                   | 0.473            | 0.100                                            | 0.013               | 0.257               | 0.087               |
| SD of dep. var.                       | 2.912                | 0.500                   | 0.499            | 1.028                                            | 0.113               | 0.437               | 0.282               |

*Notes:* This table presents the results of a robustness check for whether the baseline results remain stable after the inclusion of the interactions of the LASSO-predicted sexual activity of a respondent with post-Tinder-introduction indicator for semesters after Tinder's full-scale launch. For prediction, we use age, gender, race, BMI categories, sexual orientation, and international status, as well as their square terms and interaction terms. All columns include baseline controls and college-semester fixed effects. For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .



Table A16: Robustness: LASSO-Predicted Greek Status Interacted with Post Indicator

|                                   | (1)                  | (2)                     | (3)              | (4)                                              | (5)                 | (6)                 | (7)                 |
|-----------------------------------|----------------------|-------------------------|------------------|--------------------------------------------------|---------------------|---------------------|---------------------|
|                                   | # of Sex<br>Partners | Sex Previous<br>30 Days | Cohabiting       | Index Poor<br>Mental<br>Health<br>(Last 30 Days) | Chlamydia           | HIV Test            | Sexual<br>Assault   |
| Fraternity/Sorority $\times$ Post | 0.223***<br>(0.029)  | 0.030***<br>(0.004)     | 0.003<br>(0.004) | -0.034***<br>(0.007)                             | 0.006***<br>(0.001) | 0.015***<br>(0.003) | 0.018***<br>(0.002) |
| College-Semester FE               | ✓                    | ✓                       | ✓                | ✓                                                | ✓                   | ✓                   | ✓                   |
| Baseline controls                 | ✓                    | ✓                       | ✓                | ✓                                                | ✓                   | ✓                   | ✓                   |
| LASSO Greek status $\times$ Post  | ✓                    | ✓                       | ✓                | ✓                                                | ✓                   | ✓                   | ✓                   |
| Observations                      | 1,011,613            | 1,017,813               | 1,021,665        | 1,023,379                                        | 1,017,685           | 966,806             | 1,021,581           |
| Mean of dep. var.                 | 1.492                | 0.520                   | 0.473            | 0.100                                            | 0.013               | 0.257               | 0.087               |
| SD of dep. var.                   | 2.912                | 0.500                   | 0.499            | 1.028                                            | 0.113               | 0.437               | 0.282               |

*Notes:* This table presents the results of a robustness check for whether the baseline results remain stable after the inclusion of the interactions of the LASSO-predicted Greek status of a respondent with the post-Tinder-introduction indicator for semesters after Tinder's full-scale launch. For prediction, we use age, gender, race, BMI categories, sexual orientation, and international status, as well as their square terms and interaction terms. All columns include baseline controls and college-semester fixed effects. For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A17: Robustness: Survey Nonresponse

|                                   | Missing Response Rate For: |                         |                   |                                                              |                   |                   |                    |
|-----------------------------------|----------------------------|-------------------------|-------------------|--------------------------------------------------------------|-------------------|-------------------|--------------------|
|                                   | (1)                        | (2)                     | (3)               | (4)                                                          | (5)               | (6)               | (7)                |
|                                   | # of Sex<br>Partners       | Sex Previous<br>30 Days | Cohabiting        | Any Component<br>of Mental<br>Health Index<br>(Last 30 Days) | Chlamydia         | HIV Test          | Sexual<br>Assault  |
| Fraternity/Sorority $\times$ Post | 0.001<br>(0.001)           | 0.000<br>(0.000)        | -0.000<br>(0.000) | -0.001<br>(0.001)                                            | 0.001*<br>(0.000) | -0.001<br>(0.002) | -0.000*<br>(0.000) |
| College-Semester FE               | ✓                          | ✓                       | ✓                 | ✓                                                            | ✓                 | ✓                 | ✓                  |
| Baseline controls                 | ✓                          | ✓                       | ✓                 | ✓                                                            | ✓                 | ✓                 | ✓                  |
| Observations                      | 1,023,379                  | 1,023,379               | 1,023,379         | 1,023,379                                                    | 1,023,379         | 1,023,379         | 1,023,379          |
| Mean of dep. var.                 | 0.011                      | 0.005                   | 0.002             | 0.025                                                        | 0.006             | 0.055             | 0.002              |
| SD of dep. var.                   | 0.107                      | 0.074                   | 0.041             | 0.156                                                        | 0.074             | 0.229             | 0.042              |

*Notes:* This table examines the possible differential changes in misreporting after Tinder's introduction by estimating whether nonresponse rates for our main outcomes change differentially for Greek students and non-Greek students before and after Tinder's full-scale launch. All columns include baseline controls and college-semester fixed effects. For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A18: Robustness: Crackdown on Greek Organizations

|                                                                                    | (1)                  | (2)                     | (3)               | (4)                                              | (5)                 | (6)                 | (7)                 |
|------------------------------------------------------------------------------------|----------------------|-------------------------|-------------------|--------------------------------------------------|---------------------|---------------------|---------------------|
|                                                                                    | # of Sex<br>Partners | Sex Previous<br>30 Days | Cohabiting        | Index Poor<br>Mental<br>Health<br>(Last 30 Days) | Chlamydia           | HIV Test            | Sexual<br>Assault   |
| <i>Panel A: Omit Colleges With Large Decline in Greek Share Pre/Post Fall 2013</i> |                      |                         |                   |                                                  |                     |                     |                     |
| Fraternity/Sorority $\times$ Post                                                  | 0.218***<br>(0.033)  | 0.033***<br>(0.005)     | -0.002<br>(0.002) | -0.036***<br>(0.008)                             | 0.006***<br>(0.001) | 0.017***<br>(0.004) | 0.019***<br>(0.003) |
| College-Semester FE                                                                | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Has controls                                                                       | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Observations                                                                       | 760,464              | 765,016                 | 767,895           | 769,139                                          | 764,923             | 727,448             | 767,842             |
| Mean of dep. var.                                                                  | 1.506                | 0.522                   | 0.114             | 0.097                                            | 0.013               | 0.256               | 0.087               |
| SD of dep. var.                                                                    | 2.949                | 0.500                   | 0.318             | 1.025                                            | 0.113               | 0.436               | 0.281               |
| <i>Panel B: Omit Colleges With Any Decline in Greek Share Pre/Post Fall 2013</i>   |                      |                         |                   |                                                  |                     |                     |                     |
| Fraternity/Sorority $\times$ Post                                                  | 0.210***<br>(0.039)  | 0.029***<br>(0.006)     | -0.003<br>(0.002) | -0.039***<br>(0.009)                             | 0.007***<br>(0.001) | 0.017***<br>(0.004) | 0.019***<br>(0.003) |
| College-Semester FE                                                                | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Has controls                                                                       | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Observations                                                                       | 395,072              | 397,111                 | 398,573           | 399,194                                          | 396,991             | 377,245             | 398,531             |
| Mean of dep. var.                                                                  | 1.577                | 0.521                   | 0.092             | 0.085                                            | 0.013               | 0.241               | 0.091               |
| SD of dep. var.                                                                    | 3.013                | 0.500                   | 0.290             | 1.009                                            | 0.112               | 0.428               | 0.287               |

*Notes:* This table presents the results of a robustness check for whether the baseline results remain stable after omitting colleges for which the share of Greek students had declined. This addresses a potential concern about certain colleges concurrently cracking down on Greek life. The estimates in Panel A omit colleges for which the share of Greek students had declined by more than 2.8 percentage points before and after the Fall 2013 semester, which is the 5th percentile of the change in Greek student share. The estimates in Panel B omit colleges for which the share of Greek students had declined by any amount. All columns include baseline controls and college-semester fixed effects. For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A19: Impact on Grade Point Average (GPA)

|                                   | Student's Approximate GPA |                  |                  |
|-----------------------------------|---------------------------|------------------|------------------|
|                                   | A                         | B                | C or lower       |
|                                   | (1)                       | (2)              | (3)              |
| Fraternity/Sorority $\times$ Post | -0.004<br>(0.004)         | 0.003<br>(0.004) | 0.000<br>(0.003) |
| College-Semester FE               | ✓                         | ✓                | ✓                |
| Has controls                      | ✓                         | ✓                | ✓                |
| Observations                      | 1,019,719                 | 1,019,719        | 1,019,719        |
| Mean of dep. var.                 | 0.373                     | 0.485            | 0.123            |
| SD of dep. var.                   | 0.484                     | 0.500            | 0.329            |

*Notes:* This table presents the estimates of the impact of Tinder's introduction on students' self-reported approximate cumulative GPA. The coefficient of interest is the interaction of a student's fraternity or sorority membership and an indicator for semesters after Tinder's full-scale launch. All columns include college-semester fixed effects and controls for age, gender, race, grade level, international student status, sexual orientation, height, and BMI. For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A20: Robustness: Excluding Colleges Surveyed Fewer Than Four Semesters

|                                   | (1)                  | (2)                     | (3)               | (4)                                              | (5)                 | (6)                 | (7)                 |
|-----------------------------------|----------------------|-------------------------|-------------------|--------------------------------------------------|---------------------|---------------------|---------------------|
|                                   | # of Sex<br>Partners | Sex Previous<br>30 Days | Cohabiting        | Index Poor<br>Mental<br>Health<br>(Last 30 Days) | Chlamydia           | HIV Test            | Sexual<br>Assault   |
| Fraternity/Sorority $\times$ Post | 0.228***<br>(0.035)  | 0.029***<br>(0.005)     | -0.003<br>(0.002) | -0.032***<br>(0.008)                             | 0.006***<br>(0.001) | 0.016***<br>(0.004) | 0.019***<br>(0.003) |
| College-Semester FE               | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Has controls                      | ✓                    | ✓                       | ✓                 | ✓                                                | ✓                   | ✓                   | ✓                   |
| Observations                      | 632,245              | 636,011                 | 638,322           | 639,305                                          | 635,932             | 604,878             | 638,246             |
| Mean of dep. var.                 | 1.506                | 0.517                   | 0.109             | 0.100                                            | 0.013               | 0.252               | 0.088               |
| SD of dep. var.                   | 2.949                | 0.500                   | 0.311             | 1.021                                            | 0.113               | 0.434               | 0.283               |

*Notes:* This table presents the results of a robustness check for whether the baseline results remain stable after excluding the colleges that appear in the data for fewer than four semesters, which is the median number of times a college appears in the NCHA survey from Fall 2008 through Spring 2019. For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A21: College-Level Specification, By Student Gender

|                           | Share of Students:              |                            |                     | Share of Students:                        |                     |                     |                   |
|---------------------------|---------------------------------|----------------------------|---------------------|-------------------------------------------|---------------------|---------------------|-------------------|
|                           | Average<br># of Sex<br>Partners | Sex<br>Previous<br>30 Days | Cohabiting          | Average<br>Index Poor<br>Mental<br>Health | Chlamydia           | HIV Test            | Sexual<br>Assault |
|                           | (1)                             | (2)                        | (3)                 | (4)                                       | (5)                 | (6)                 | (7)               |
| <i>Panel A: Males</i>     |                                 |                            |                     |                                           |                     |                     |                   |
| Greek share $\times$ Post | 0.252<br>(0.225)                | 0.079***<br>(0.028)        | 0.054***<br>(0.016) | 0.023<br>(0.062)                          | 0.007<br>(0.006)    | 0.040*<br>(0.023)   | 0.014<br>(0.011)  |
| College FE                | ✓                               | ✓                          | ✓                   | ✓                                         | ✓                   | ✓                   | ✓                 |
| Semester FE               | ✓                               | ✓                          | ✓                   | ✓                                         | ✓                   | ✓                   | ✓                 |
| College-level controls    | ✓                               | ✓                          | ✓                   | ✓                                         | ✓                   | ✓                   | ✓                 |
| Observations              | 1,624                           | 1,624                      | 1,624               | 1,624                                     | 1,624               | 1,624               | 1,624             |
| Mean of dep. var.         | 1.756                           | 0.495                      | 0.100               | -0.124                                    | 0.010               | 0.186               | 0.042             |
| SD of dep. var.           | 0.523                           | 0.086                      | 0.080               | 0.153                                     | 0.008               | 0.066               | 0.020             |
| <i>Panel B: Females</i>   |                                 |                            |                     |                                           |                     |                     |                   |
| Greek share $\times$ Post | 0.433***<br>(0.079)             | 0.051**<br>(0.020)         | 0.040***<br>(0.014) | -0.054<br>(0.083)                         | 0.013***<br>(0.005) | 0.054***<br>(0.018) | 0.003<br>(0.017)  |
| College FE                | ✓                               | ✓                          | ✓                   | ✓                                         | ✓                   | ✓                   | ✓                 |
| Semester FE               | ✓                               | ✓                          | ✓                   | ✓                                         | ✓                   | ✓                   | ✓                 |
| College-level controls    | ✓                               | ✓                          | ✓                   | ✓                                         | ✓                   | ✓                   | ✓                 |
| Observations              | 1,644                           | 1,644                      | 1,644               | 1,644                                     | 1,644               | 1,644               | 1,644             |
| Mean of dep. var.         | 1.343                           | 0.526                      | 0.119               | 0.195                                     | 0.015               | 0.268               | 0.108             |
| SD of dep. var.           | 0.288                           | 0.091                      | 0.092               | 0.164                                     | 0.009               | 0.078               | 0.042             |

*Notes:* This table presents the college-level estimates of the impact of Tinder's introduction on the main outcomes using the college-wide share of Greek students as a treatment intensity. Panel A displays the results for male students only, and Panel B displays the results for female students only. Each observation is a college and survey-wave pair. The outcome variables are (i) the average number of sexual partners per student within the previous 12 months, (ii) the share of students who had sex within the previous 30 days, (iii) the share of students in a cohabiting relationship, (iv) the average value of the index of poor mental health among students, (v) the share of students who had been diagnosed with or treated for chlamydia within the previous 12 months, (vi) the share of students who ever tested for HIV, and (vii) the share of students who reported experiencing sexual assault within the previous 12 months. The coefficient of interest is the interaction of the percentage of students who were part of a Greek-life organization and an indicator for semesters after Tinder's full-scale launch. All specifications include college and survey-wave fixed effects. College-level controls are created by taking the mean value of individual-level indicator controls (gender, race, grade, international student status, and sexual orientation) and the median value of individual-level continuous controls (age, height, and BMI). For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A22: College-Level Specification, By Quartiles of Greek Share

|                                          | Share of Students:              |                            |                   | Share of Students:                        |                     |                   |                   |
|------------------------------------------|---------------------------------|----------------------------|-------------------|-------------------------------------------|---------------------|-------------------|-------------------|
|                                          | Average<br># of Sex<br>Partners | Sex<br>Previous<br>30 Days | Cohabiting        | Average<br>Index Poor<br>Mental<br>Health | Chlamydia           | HIV Test          | Sexual<br>Assault |
|                                          | (1)                             | (2)                        | (3)               | (4)                                       | (5)                 | (6)               | (7)               |
| 2nd-quartile Greek share $\times$ Post   | 0.027<br>(0.031)                | -0.007<br>(0.005)          | -0.000<br>(0.004) | 0.024<br>(0.019)                          | 0.001<br>(0.001)    | -0.009<br>(0.005) | 0.001<br>(0.004)  |
| 3rd-quartile Greek share $\times$ Post   | 0.049<br>(0.031)                | -0.008<br>(0.005)          | 0.000<br>(0.004)  | 0.006<br>(0.017)                          | 0.003***<br>(0.001) | -0.006<br>(0.006) | 0.003<br>(0.004)  |
| Upper-quartile Greek share $\times$ Post | 0.132***<br>(0.029)             | 0.011**<br>(0.006)         | 0.004<br>(0.004)  | 0.010<br>(0.018)                          | 0.004***<br>(0.001) | 0.003<br>(0.005)  | 0.005<br>(0.004)  |
| College FE                               | ✓                               | ✓                          | ✓                 | ✓                                         | ✓                   | ✓                 | ✓                 |
| Semester FE                              | ✓                               | ✓                          | ✓                 | ✓                                         | ✓                   | ✓                 | ✓                 |
| College-level controls                   | ✓                               | ✓                          | ✓                 | ✓                                         | ✓                   | ✓                 | ✓                 |
| Observations                             | 1,644                           | 1,644                      | 1,644             | 1,644                                     | 1,644               | 1,644             | 1,644             |
| Mean of dep. var.                        | 1.482                           | 0.512                      | 0.113             | 0.071                                     | 0.013               | 0.238             | 0.086             |
| SD of dep. var.                          | 0.341                           | 0.084                      | 0.086             | 0.171                                     | 0.008               | 0.071             | 0.033             |

*Notes:* This table presents the estimates of the impact of Tinder's introduction on main outcomes using quartiles of the college-wide share of Greek students as indicators of treatment intensity. Each observation is a college and survey-wave pair. The outcome variables are (i) the average number of sexual partners per student within the previous 12 months, (ii) the share of students who had sex within the previous 30 days, (iii) the share of students in a cohabiting relationship, (iv) the average value of the index of poor mental health among students, (v) the share of students who had been diagnosed with or treated for chlamydia within the previous 12 months, (vi) the share of students who ever tested for HIV, and (vii) the share of students who reported experiencing sexual assault within the previous 12 months. The coefficients of interest are the interactions of the quartiles of the share of students who were part of a Greek-life organization and an indicator for semesters after Tinder's full-scale launch. Colleges in the first quartile of Greek share serve as an omitted category. All specifications include college and survey-wave fixed effects. College-level controls are created by taking the mean value of individual-level indicator controls (gender, race, grade, international student status, and sexual orientation) and the median value of individual-level continuous controls (age, height, and BMI). For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A23: College-Level Specification: Impact on Non-Greek-Affiliated Students

|                           | Share of Students:              |                            |                     | Share of Students:                        |                    |                  |                   |
|---------------------------|---------------------------------|----------------------------|---------------------|-------------------------------------------|--------------------|------------------|-------------------|
|                           | Average<br># of Sex<br>Partners | Sex<br>Previous<br>30 Days | Cohabiting          | Average<br>Index Poor<br>Mental<br>Health | Chlamydia          | HIV Test         | Sexual<br>Assault |
|                           | (1)                             | (2)                        | (3)                 | (4)                                       | (5)                | (6)              | (7)               |
| Greek share $\times$ Post | 0.233*<br>(0.124)               | 0.067***<br>(0.026)        | 0.055***<br>(0.014) | -0.003<br>(0.084)                         | 0.009**<br>(0.004) | 0.030<br>(0.019) | -0.018<br>(0.017) |
| College FE                | ✓                               | ✓                          | ✓                   | ✓                                         | ✓                  | ✓                | ✓                 |
| Semester FE               | ✓                               | ✓                          | ✓                   | ✓                                         | ✓                  | ✓                | ✓                 |
| College-level controls    | ✓                               | ✓                          | ✓                   | ✓                                         | ✓                  | ✓                | ✓                 |
| Observations              | 1,644                           | 1,644                      | 1,644               | 1,644                                     | 1,644              | 1,644            | 1,644             |
| Mean of dep. var.         | 1.410                           | 0.506                      | 0.120               | 0.090                                     | 0.012              | 0.239            | 0.082             |
| SD of dep. var.           | 0.330                           | 0.088                      | 0.088               | 0.168                                     | 0.008              | 0.074            | 0.032             |

*Notes:* This table presents the estimates of the impact of Tinder's introduction on non-Greek-affiliated students using the college-wide share of Greek students as a treatment intensity. Each observation is a college and survey-wave pair. The outcome variables are (i) the average number of sexual partners per student within the previous 12 months, (ii) the share of students who had sex within the previous 30 days, (iii) the share of students in a cohabiting relationship, (iv) the average value of the index of poor mental health among students, (v) the share of students who had been diagnosed with or treated for chlamydia within the previous 12 months, (vi) the share of students who ever tested for HIV, and (vii) the share of students who reported experiencing sexual assault within the previous 12 months. The coefficient of interest is the interaction of the percentage of students who were a part of Greek-life organizations and an indicator for semesters after Tinder's full-scale launch. All specifications include college and survey-wave fixed effects. College-level controls are created by taking the mean value of individual-level indicator controls (gender, race, grade, international student status, and sexual orientation) and the median value of individual-level continuous controls (age, height, and BMI). For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## Appendix B. Full Versions of Tables in Main Text.

Table B1: Distribution of Sexual Activity: Full Version

|                                   | (1)                 | (2)                 | (3)                 | (4)                 | (5)                 | (6)                 | (7)                 | (8)                 | (9)                 | (10)                | (11)                |
|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                                   | >0                  | >1                  | >2                  | >3                  | >4                  | >5                  | >6                  | >7                  | >8                  | >9                  | >10                 |
|                                   | Partners            | Partners            | Partners            | Partners            | Partners            | Partners            | Partners            | Partners            | Partners            | Partners            | Partners            |
| Fraternity/Sorority $\times$ Post | 0.031***<br>(0.004) | 0.032***<br>(0.004) | 0.034***<br>(0.004) | 0.026***<br>(0.003) | 0.021***<br>(0.002) | 0.015***<br>(0.002) | 0.012***<br>(0.002) | 0.009***<br>(0.001) | 0.006***<br>(0.001) | 0.005***<br>(0.001) | 0.003***<br>(0.001) |
| College-Semester FE               | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   |
| Has controls                      | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   | ✓                   |
| Observations                      | 1,011,613           | 1,011,613           | 1,011,613           | 1,011,613           | 1,011,613           | 1,011,613           | 1,011,613           | 1,011,613           | 1,011,613           | 1,011,613           | 1,011,613           |
| Mean of dep. var.                 | 0.674               | 0.262               | 0.160               | 0.099               | 0.065               | 0.043               | 0.030               | 0.023               | 0.017               | 0.014               | 0.010               |
| SD of dep. var.                   | 0.469               | 0.440               | 0.367               | 0.299               | 0.247               | 0.202               | 0.170               | 0.149               | 0.129               | 0.119               | 0.097               |

*Notes:* This table presents the full version of Table 3 in the main text, which estimates of the impact of Tinder's introduction on the distribution of student sexual activity. The outcome variable is an indicator for whether a student had more than a given number of sex partners (ranging from strictly over 0 to strictly over 10) within the previous 12 months. The coefficient of interest is the interaction of a student's fraternity or sorority membership and an indicator for semesters after Tinder's full-scale launch. All columns include college-semester fixed effects and controls (age, gender, race, grade, international student status, sexual orientation, height, and BMI). Table A8 presents these results broken down by gender. For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table B2: Mental Health: Full Version

|                                   | (1)                 | (2)                  | (3)                   | (4)                 | (5)                | (6)                   | (7)                          | (8)                        | (9)                 | (10)                  | (11)                                        |
|-----------------------------------|---------------------|----------------------|-----------------------|---------------------|--------------------|-----------------------|------------------------------|----------------------------|---------------------|-----------------------|---------------------------------------------|
|                                   | Hopeless            | Over-<br>whelmed     | Mentally<br>Exhausted | Very<br>Lonely      | Very<br>Sad        | Severely<br>Depressed | Over-<br>whelming<br>Anxiety | Over-<br>whelming<br>Anger | Self-Harm           | Considered<br>Suicide | Index Poor<br>Mental<br>Health<br>(30 Days) |
| <i>Panel A: All</i>               |                     |                      |                       |                     |                    |                       |                              |                            |                     |                       |                                             |
| Fraternity/Sorority $\times$ Post | -0.008**<br>(0.004) | -0.012***<br>(0.003) | -0.012***<br>(0.003)  | -0.010**<br>(0.004) | -0.007*<br>(0.004) | -0.010***<br>(0.003)  | -0.010***<br>(0.003)         | -0.007**<br>(0.003)        | -0.002*<br>(0.001)  | -0.004***<br>(0.001)  | -0.033***<br>(0.007)                        |
| College-Semester FE               | ✓                   | ✓                    | ✓                     | ✓                   | ✓                  | ✓                     | ✓                            | ✓                          | ✓                   | ✓                     | ✓                                           |
| Has controls                      | ✓                   | ✓                    | ✓                     | ✓                   | ✓                  | ✓                     | ✓                            | ✓                          | ✓                   | ✓                     | ✓                                           |
| Observations                      | 1,017,002           | 1,018,978            | 1,023,379             | 1,018,279           | 1,017,028          | 1,018,283             | 1,018,058                    | 1,015,640                  | 1,018,741           | 1,018,986             | 1,023,379                                   |
| Mean of dep. var.                 | 0.466               | 0.695                | 0.667                 | 0.390               | 0.409              | 0.187                 | 0.356                        | 0.215                      | 0.027               | 0.033                 | 0.100                                       |
| SD of dep. var.                   | 0.499               | 0.461                | 0.471                 | 0.488               | 0.492              | 0.390                 | 0.479                        | 0.411                      | 0.163               | 0.177                 | 1.028                                       |
| <i>Panel B: Males</i>             |                     |                      |                       |                     |                    |                       |                              |                            |                     |                       |                                             |
| Fraternity/Sorority $\times$ Post | -0.006<br>(0.006)   | -0.013**<br>(0.006)  | -0.016***<br>(0.006)  | -0.016**<br>(0.006) | -0.006<br>(0.006)  | -0.005<br>(0.004)     | -0.004<br>(0.005)            | -0.007<br>(0.005)          | 0.001<br>(0.002)    | -0.001<br>(0.002)     | -0.025**<br>(0.012)                         |
| College-Semester FE               | ✓                   | ✓                    | ✓                     | ✓                   | ✓                  | ✓                     | ✓                            | ✓                          | ✓                   | ✓                     | ✓                                           |
| Has controls                      | ✓                   | ✓                    | ✓                     | ✓                   | ✓                  | ✓                     | ✓                            | ✓                          | ✓                   | ✓                     | ✓                                           |
| Observations                      | 332,182             | 332,600              | 334,472               | 332,375             | 332,183            | 332,494               | 332,433                      | 331,789                    | 332,617             | 332,760               | 334,472                                     |
| Mean of dep. var.                 | 0.416               | 0.574                | 0.563                 | 0.326               | 0.316              | 0.153                 | 0.257                        | 0.189                      | 0.021               | 0.032                 | -0.115                                      |
| SD of dep. var.                   | 0.493               | 0.494                | 0.496                 | 0.469               | 0.465              | 0.360                 | 0.437                        | 0.392                      | 0.143               | 0.175                 | 1.004                                       |
| <i>Panel C: Females</i>           |                     |                      |                       |                     |                    |                       |                              |                            |                     |                       |                                             |
| Fraternity/Sorority $\times$ Post | -0.009*<br>(0.005)  | -0.013***<br>(0.003) | -0.011***<br>(0.004)  | -0.009**<br>(0.004) | -0.008*<br>(0.004) | -0.012***<br>(0.003)  | -0.015***<br>(0.004)         | -0.006*<br>(0.004)         | -0.002**<br>(0.001) | -0.005***<br>(0.002)  | -0.037***<br>(0.009)                        |
| College-Semester FE               | ✓                   | ✓                    | ✓                     | ✓                   | ✓                  | ✓                     | ✓                            | ✓                          | ✓                   | ✓                     | ✓                                           |
| Has controls                      | ✓                   | ✓                    | ✓                     | ✓                   | ✓                  | ✓                     | ✓                            | ✓                          | ✓                   | ✓                     | ✓                                           |
| Observations                      | 683,197             | 684,754              | 687,277               | 684,283             | 683,219            | 684,165               | 684,001                      | 682,230                    | 684,499             | 684,601               | 687,277                                     |
| Mean of dep. var.                 | 0.491               | 0.753                | 0.717                 | 0.421               | 0.453              | 0.203                 | 0.404                        | 0.227                      | 0.030               | 0.033                 | 0.203                                       |
| SD of dep. var.                   | 0.500               | 0.431                | 0.450                 | 0.494               | 0.498              | 0.402                 | 0.491                        | 0.419                      | 0.172               | 0.178                 | 1.023                                       |

*Notes:* This table presents the full version of Table 6, which estimates the impact of Tinder's introduction on student mental health. In addition to the outcome variables in Table 6 (feeling hopeless, overwhelmed, mentally exhausted, very lonely, severely depressed such that it was difficult to function, overwhelming anxiety, overwhelming anger, self-harm, and considering suicide within the previous 30 days), the table also presents two additional outcomes: feeling very sad and conducting self-harm within the previous 30 days. The index of poor mental health is obtained by adding the standardized versions of all of the variables above and standardizing the resulting variable. The coefficient of interest is the interaction of a student's fraternity or sorority membership and an indicator for semesters after Tinder's full-scale launch. All columns include college-semester fixed effects and controls (age, gender, race, grade, international student status, sexual orientation, height, and BMI). We present the results for all students in Panel A, for male students only in Panel B, and for female students only in Panel C. For detailed variable definitions, see Appendix Table A2. Standard errors in parentheses are clustered at the college level. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .