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Research Article

Partnering in turbulent times: Hooking up, dating, and romantic relationship formation in college, 2019–2024

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Partnering in turbulent times: Hooking up, dating, and romantic relationship formation in college, 2019–2024

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Abstract

BACKGROUND
The COVID-19 pandemic and related mitigation policies potentially were related to romantic and sexual partnering among straight and queer college students in 2020–2024.

OBJECTIVE
We examine percentages of those hooking up, dating, and forming long-term romantic relationships in college during 2019–2024; the number of intimate events and relationships; partner meeting contexts; and how patterns varied by gender and sexual orientation.

METHODS
We present results from surveys of 11,993 college students collected at 34 colleges between fall 2019 and spring 2024. We use random effects regression models to examine how partnering and meeting contexts changed among students surveyed each academic year. We examine differences separately by gender and sexual orientation.

RESULTS
Percentages of those hooking up remained relatively flat, while dating and long-term relationship formation rose temporarily over the period examined. Differences could be attributed to the changing age composition of students, with older students more common after 2019–2020. After standardization by age, percentages of those hooking up first declined and then recovered, but not fully. Dating percentages were flat before declining in the last year examined, and relationship formation was also flat with a brief rise in

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2022–2023. Students met partners online more commonly during the height of the pandemic.

CONCLUSIONS
The COVID-19 pandemic was related to partnering in college in part because average age increased, partners increasingly met online, and hooking up declined.

CONTRIBUTION
We analyze a new large dataset to examine trends in sexual and romantic partnering on campus, providing new insights into college intimacy both before and during the pandemic.

1. Introduction

How were the COVID-19 pandemic and related mitigation efforts related to sexual and romantic partnering (dates, hookups, and romantic relationships) among straight and queer college students in the United States in the 2019–2024 period? Hookups are casual sexual encounters that carry no expectations of a committed relationship; dates take place in public, can also include sexual activity, and carry more expectations related to relationship formation (Bailey 1989; Bogle 2008; Bradshaw, Kahn, and Saville 2010; Kuperberg and Padgett 2015; 2016). We draw on sexual fields and sexual geographies theories, along with theories related to sex ratios, risk-taking, and sexual scripts, to examine and develop theoretical explanations for changes in sexual and romantic partnering among college students over the 2019–2024 period. The results allow us to examine how shifts in the contexts in which potential partners are met can result in shifts in the nature of romantic and sexual partnering, and how the cohort of students attending college during the pandemic was affected in terms of romantic and sexual partnering in college, which can have longer-term impacts on relationship trajectories over the life course.

Sexual fields and sexual geographies theories focus on characteristics of the social contexts (fields) in which sexual relationships are formed, how they are structured by institutions and social norms, and how they shape the extent and nature of sexual partnerships, including the likelihood of engaging in risky sexual activity (Kuperberg and Padgett 2017; Wade 2021). A separate but similar theoretical tradition focuses on marital formation and how characteristics of the "marriage market" shape whether and whom people marry (Becker 1973; Chiappori 2020). These characteristics can include factors such as sex ratio (the ratio of men to women in a given population), which, given that most students tend to partner heterosexually, can restrict opportunities for those in the

larger group to form partnerships (Kuperberg and Padgett 2016; Uecker and Regnerus 2010).

College settings are a type of sexual field (Green 2013): a socially structured network of patterned relations in which sexual and romantic encounters are produced, evaluated, and stratified (Wade 2021; Hirsch and Khan 2020). While dating and romantic relationships are also common on college campuses, college sexual fields facilitate partnering and encourage a "hookup culture" as campuses concentrate young, often single people in contexts and physical locations (e.g., dormitories, fraternity/sorority housing) associated with expectations of sexual experimentation as part of the college experience (Kuperberg and Padgett 2016; Thorpe and Kuperberg 2021; Wade 2017). Wade (2017: 68) refers to residential college campuses as "total institutions" where "hookup culture is totally institutionalized." The geography of campus in part shapes the "sexual scripts" (expectations about sexual interactions) students enact, cueing power relations and the likelihood of certain types of sexual interaction, depending on where it takes place (Hirsch and Khan 2020; Kuperberg and Padgett 2015; 2017; Simon and Gagnon 2003). Hookup culture as a sexual field is also embedded within broader sexual geographies: the spatial and institutional arrangements that organize sexual interaction on and off campus. These include the physical layout of the campus, including the separation of public and private spaces, and forms of university governance, such as alcohol, student housing, and Title IX policies. Indeed, hookup culture is shaped by how campus geographies are regulated and accessed, producing distinct patterns in sexual opportunities.

During the pandemic, mitigation policies, including university housing restrictions, lockdowns, and social distancing guidelines, dramatically reconfigured campus sexual geographies (Hirsch and Khan 2020) in ways that limited where and how students could connect sexually and meet potential sexual and romantic partners, providing a natural experiment in which to examine college partnering patterns and how they are shaped in part by campus settings. Many students were sent home or relocated to off-campus housing, collapsing boundaries between campus life and family space (van Stee, Kuperberg, and Mazelis 2024). Those remaining on campus often faced restrictions on visitors in dorm rooms, closure of common social areas, and limited access to parties, gatherings, or classrooms – key social spaces where both hookup and date partners often met pre-pandemic (Kuperberg and Padgett 2015).

Partnering may have declined temporarily, or changed in nature, as students moved to alternative methods of meeting sexual and romantic partners during the pandemic, with numbers recovering over time as campus life returned to normal. Casual sexual encounters such as hookups may have particularly declined during the pandemic, with fears about disease transmission reducing students' willingness to engage in casual sexual relationships and with access to college sexual fields associated with hookups also

reduced. Lacking other social outlets, and facing a global crisis, students may have "settled down" with romantic partners; past research has found that natural disasters can motivate people to take action when it comes to romantic relationships (Cohan and Cole 2002). Or students may have turned to sexual partners and dates for social contact, increasing use of other methods to find partners once in-person contact declined; online apps aimed at partnering became more popular during the pandemic, with dating companies reporting record-breaking new usage throughout 2020–2021 (Dietzel, Myles, and Duguay 2021). In line with sexual fields and geographies theories, a shift to online dating may be related to changes in partnering that differed depending on gender and sexual orientation; queer students have long been more likely to find partners online than straight students, and the gender ratio of men and women on online dating apps (where men outnumber women) differs from that of a typical college campus (where women outnumber men) (Bruch and Newman 2019; Kuperberg and Padgett 2015; Uecker and Regnerus 2010).

Drawing upon the second wave of the Online College Social Life Survey (OCSLS), a large dataset of almost 12,000 students collected every semester from fall 2019 through spring 2024 (and ongoing), we examine percentages reporting hooking up, dating, and forming long-term romantic relationships in college among college students between the 2019–2020 and 2023–2024 academic years. We also examine variation by gender and sexual orientation, changes in the number of partners, and theoretical explanations for results. Results contribute to our understanding of short- and medium-term trends in romantic and sexual partnering during the COVID pandemic. Findings also speak to broader shifts in sexual and romantic partnering that may occur in reaction to shifts in the sexual fields and sexual geographies within which people form partnerships.

We also examine dating app use and how meeting places for hookups, dates, and romantic relationships changed throughout the pandemic to examine whether the pandemic was associated with a shift in partnering strategies. While previous research using the first wave of the OCSLS (collected in 2005–2011) found that meeting partners online was rare among college students, meeting dates online (3.4%) was statistically more common than meeting hookup partners online (2.4%) (Kuperberg and Padgett 2015). The higher rate of meeting dates online has been theorized to be tied to a sense of risk and socially shaped expectations about how an interaction will unfold (sexual scripts) (Simon and Gagnon 2003) when meeting strangers; people who meet partners online will often begin their encounter with a public date rather than a hookup (Kuperberg and Padgett 2015).

2. Prior research

2.1 Hookups, dates, and romantic relationships in college

We examine engagement in three types of partnerships among college students: hookups, dates, and romantic relationships that last at least six months. Hookups are casual sexual encounters and have ties to the 1960s sexual revolution, with scholars arguing that a hookup culture emerged on college campuses in the 1990s (Bogle 2008; Heldman and Wade 2010; Mahay and Laumann 2004: 134). Despite the hookup script involving no long-term commitment, substantial numbers of students report hooking up in hopes of forming a longer-term relationship; one report found that more than one-third of recent marriages began with a hookup (Garcia and Reiber 2008; Rhoades and Stanley 2014; Thorpe and Kuperberg 2021). Dating originated in the early 20th century with the rise of the automobile, with encounters generally taking place in public and involving economic consumption (Bailey 1989). A fair number of dates (but not all) also involve sexual activity, and dating scripts (expectations) focus on the potential for romantic relationship formation (Bailey 1989; Kuperberg and Padgett 2015; 2017). Some have argued that hookups have now surpassed dating on college campuses. Research using the first wave of the OCSLS found roughly equal percentages of college students who reported ever having dated and ever having hooked up, but they reported more hookups than dates when engaging in those types of partnering (Bogle 2008; Kuperberg and Padgett 2015). Long-term relationships are enduring romantic relationships that may in some cases lead to marriage; these were found to be less common in college than either hooking up or dating, but roughly half of students reported a long-term relationship lasting at least six months while in college (Kuperberg and Padgett 2015).

Recent decades have seen an explosion of research on college hookups since Kathleen Bogle's book *Hooking Up* (2008) was first published. More limited recent research has examined dating, with some research comparing college dates to hookups and finding that these types of partnerships have many similarities, with many dates involving sexual activity (but not as commonly as hookups) and with dating and hookup partners generally meeting in fairly similar contexts (Kuperberg and Padgett 2015, 2016). Other research has focused on enduring gender inequalities within dates, with dating scripts positioning men in more active roles and women in more passive roles (Lamont 2020). A larger body of research has examined longer-term romantic relationships, with research on young adults examining the timing and sequencing of relationships, inequalities in relationship formation, attitudes about relationships, and effects on well-being (Kuperberg and Padgett 2016; Tillman, Brewster, and Holway 2019).

Research on hooking up finds it can allow students to bypass the social "greediness" of heterosexual romance and access sexual relationships without the time and emotional

demands of committed relationships (Allison and Risman 2017; Armstrong, Hamilton, and England 2010; Wade 2017). Like their male peers, heterosexual women may appreciate the opportunity to explore their sexual desires as active agents in an activity that theoretically separates sex from emotion (Albanesi 2010). Indeed, middle-class, often White college women are more likely to hook up during college, which they view as a critical time to explore and have fun before settling into a time- and potentially emotionally consuming relationship (Armstrong and Hamilton 2013; James-Kangal et al. 2018; Kuperberg and Padgett 2016). The college hookup scene may also provide students with opportunities to explore same-sex sexual attraction and desire (Rupp et al. 2014; Kuperberg and Walker 2018).

Still, research on campus hookup culture spotlights how these positive aspects are counterbalanced by problematic tendencies (Ford 2021; Hirsch and Khan 2020; Littleton et al. 2009). Similar to dating and long-term relationships, hookup culture on college campuses takes place in a "profoundly gendered and heteronormative sexual field" (Rupp et al. 2014: 212). Heterosexual men benefit the most from a hookup culture that is institutionalized in the sexual field of college campuses via male-dominated spaces such as athletics, fraternity life, and the party scene (Bogle 2007, 2008; Fielder and Carey 2010; Glenn and Marquardt 2001; Hirsch and Khan 2020; Wade 2017). Men are much more likely than women to desire opportunities for more hookups on campus, although both men and women desire opportunities for dates or long-term relationships more than they want opportunities to hook up (Kuperberg and Padgett 2015). Some have argued that college settings particularly enable hookup culture because of men's lower rate of college attendance (Uecker and Regnerus 2010). Because men are rarer on campus, they may be better able to realize their preferences for more casual sex, while women, who less often prefer casual sex, are less able to realize their preferences (Kuperberg and Padgett 2016; Mahay and Laumann 2004). The rise of college hookup culture in the 1990s (Heldman and Wade 2010) may therefore have been partially driven by the shift of the sex ratio in colleges in that decade, with women overtaking men among college students in 1991 (Mather 2007). In this social context, or sexual field and geography, heterosexual men control the initiation, context, and practices of sexual contact. (See also Armstrong, Hamilton, and England 2010; Bogle 2008; Hamilton 2007.)

Research also shows that hookups often involve alcohol use, with nearly half of college men and women binge drinking during encounters, increasing sexual assault risk; participation in hookups furthermore raises the overall risk of assault in college (Flack Jr. 2007; Ford and Soto-Marquez 2016; Glenn and Marquardt 2001: 15; Hirsch and Khan 2020; Littleton et al. 2009; Kuperberg and Padgett 2017). Qualitative research highlights how gendered sexual scripts and double standards persist in heterosexual hookups and relationships. Women frequently face slut shaming and peer marginalization (Allison and Risman 2013) and are more likely to downplay hookup activity. Men often report

respecting female partners less after hookups (Uecker and Martinez 2017). Gendered expectations also shape dating and long-term relationship scripts, with men expected to initiate dates and sexual activity and women expected to be passive (Lamont 2020).

Hookup research distinguishes between active participants and abstainers, who often feel socially excluded and sometimes actively resist the hookup scene (Epstein et al. 2009; Wade 2017). The literature shows that the whiteness and heteronormativity of hookup culture tends to marginalize BIPOC and LGBTQ+ students, limiting their partnering opportunities (Allison and Risman 2014; Curington, Lundquist, and Lin 2021; Kuperberg and Padgett 2016; Spell 2017). Sexual minorities often experience hostility or exclusion in heteronormative hookup spaces (Hamilton 2007; Tillapaugh 2013), and LGBTQ+ students face higher sexual assault risks (Edwards et al. 2015).

Despite exclusion, LGBTQ+ sexual geographies can thrive at LGBTQ+-friendly campuses through organizations, online dating, and parts of the party scene (Pham 2020). Older studies found that sexual scripts emphasized casual sexual encounters for gay men but dating and long-term relationship formation for lesbians (Klinkenberg and Rose 1994), while more recent research shows LGBTQ+ students often critique hookup culture (Lamont, Roach, and Kahn 2018) yet also use it for identity affirmation (Hanna-Walker et al. 2023). Past research found that gay men were more likely than heterosexual men to hook up and were less likely to form long-term relationships, with no differences in dating behaviors, while sexual orientation among women was not related to patterns in hookups, dating, or romantic relationships (Kuperberg and Padgett 2016).

Despite the explosion of research on hooking up produced within the past decade or so, several important questions remain unanswered. Little research has addressed how the conditions of the pandemic were related to college students' intimate life. The literature also does not fully address the potentially mediating role played by online dating apps, which are increasingly a component of college sexual geographies. Together, these gaps in the research motivate the current study.

2.2 Hooking up, dating, and forming and maintaining relationships during COVID-19

The full demographic impacts of COVID-19 are only beginning to be assessed. Much past research on sexual and romantic relationships and families during the pandemic is drawn from cross-sectional surveys collected in 2020 (c.f. Gleason et al. 2021; Luetke et al. 2020; Nadarzynski et al. 2023; Rodrigues 2022) or 2021 (Jung and Lee 2023; Kreidl and Hubatková 2023; Mowen and Heitkamp 2022; Wood et al. 2022) measuring short-term changes in trends during the pandemic. Across many countries, COVID-19 was associated with a reduction in short-term marriage rates and divorce rates, and some

found marriage intentions also were reduced (Choi, Kwan, and Kye 2023; Jung and Lee 2023; Kim and Kim 2021; Manning and Payne 2021; Hoehn-Velasco et al. 2023). The pandemic was associated with a rise in the overall single status of the US population, with singles reporting high levels of isolation and difficulty dating (Brown 2022; Rosenfeld 2025). The pandemic's relationship to fertility is not fully understood, but during initial stages people reduced intended fertility rates and there was a temporary baby bust, although some found no effect on fertility rates in some countries (Choi, Kwan, and Kye 2023; Jung and Lee 2023; Luppi, Arpino and Rosina 2020; Nitsche and Wilde 2024).

Some research examined established relationships during the pandemic, finding that roughly one-third of those in relationships experienced conflict related to pandemic restrictions and theorizing that external stressors and reduced social connections during the pandemic harmed relationship functioning (Gleason et al. 2021; Kourti et al. 2023; Luetke et al. 2020; Pietromonaco and Overall 2021). During the height of the pandemic, partnership quality and marital happiness decreased and couples became more prone to separate (Kreidl and Hubatková 2023; Liu and Hsieh 2024). These relationship stressors may have reduced the chances of relationships during the pandemic reaching the six-month mark we use as an indicator of long-term relationships. Conversely, one study focusing on parents found that time spent home together during the pandemic's "enforced togetherness" improved relationship satisfaction for more than half the couples examined, as it increased communication and time spent on shared leisure activities (Fritz, Um, and Risman 2024).

Studies of casual sex during the pandemic found a reduction in partnering, especially casual sex and hookups, early in the pandemic (Nadarzynski et al. 2023). One study found 40% of those hooking up before the pandemic reporting no post-pandemic partners by October 2020 (Gleason et al. 2021). But the 60% who did report a post-pandemic hookup partner waited an average of just six to seven weeks into the pandemic to resume casual sexual activity (Gleason et al. 2021). Studies show that dating app usage increased during the pandemic, while sexual risk-taking behaviors decreased and people had fewer sexual partners (Brown 2022; Ting and Maclachlan 2022; Qaderi 2023).

Research on general disasters has found that they often drive romantic partners to confront momentous decisions. For instance, research on a 1989 hurricane found that both marriage and divorce increased in the regions most affected in the year following the hurricane (Cohan and Cole 2002). Life-threatening events thus motivate people to take action in their close relationships that could alter their life course. Similarly, as the pandemic hit, students may have been motivated to take action by asking a potential partner on a date, thus increasing the proportion of students dating, or by ending a relationship, thus decreasing the proportion of relationships that reached the six-month mark. Another study examined the aftermath of a major flood, finding that those who

experienced greater property loss during the flood had better relationship adjustment and that those who experienced PTSD as a result of the flood had worse relationship adjustment (Fredman et al. 2010). The majority of the sample felt closer to their families after the flood, at least in the short term. As the social context or field in which sexual scripts are formed largely coordinates sexual behavior, the pandemic may similarly have led relationship partners to bond over shared misfortune.

2.3 Theorizing changes to sexual and romantic partnering on campus during COVID

How did the changing sexual geography of the 2019–2020 through the 2023–2024 academic years potentially affect sexual and romantic partnering on campus during the global COVID pandemic? We theorize that the social context of the COVID-19 pandemic and especially related mitigation policies potentially were related to romantic and sexual partnering patterns among everyone, and among college students in particular, in multiple ways. The pandemic may have reduced interest in sexual contact due to fear of infection transmission, changing the nature of sexual fields for everyone temporarily. While COVID infections themselves were not found to directly affect sexual functioning among women, pandemic-related stress could explain why people reported lesser interest in sexual activity and lower sexual function during the pandemic (Demircivi et al. 2024; Qaderi 2023; Stavridou et al. 2021). A study of American, Mexican, and German adults found those more focused on infection prevention were less likely to plan to have casual sex (Rodrigues 2022). Research specifically on college students found that negative views of masking and distancing were related to a higher likelihood of hooking up (Mowen and Heitkamp 2022). Health fears may also have influenced the sequencing or likelihood of intimate unions. Students may have chosen to go on a date in an outdoor setting rather than hooking up with a potential romantic or sexual partner because hookups mostly take place indoors and involve close sexual contact, which has a higher potential of spreading disease. On the other hand, vaccine mandates at universities may have given students an increased sense of trust, allowing them to take that risk if they limited their dating market to other college students.

For college students specifically, mitigation policies aimed at reducing disease transmission on campus also changed partnering opportunities and the sexual field and geography in which students could meet potential partners in several respects. First, most courses shifted online in March 2020, and in the 2020–2021 year many schools continued to operate at a limited in-person capacity, restricting the ability of students to meet romantic and sexual partners in person in sexual fields on campus. Prior to the pandemic many students met hookup and dating partners in campus locations such as classrooms,

dormitories, and campus social groups (Kuperberg and Padgett 2015). In our sample, approximately 15% of schools were fully online in fall 2020, and another 77% had some form of hybrid course policy, which took several forms: Some had in-person meetings for only a limited number of classes, such as labs or art courses; some had large classes online and smaller courses in person; and some offered hybrid courses in which students came in only occasionally and completed most material online. In spring 2021, only around 15% of schools we surveyed offered classes fully in person; 19% were fully or almost fully online; and the remainder offered some combination of hybrid or in-person classes, often with a delayed start in person due to a January 2021 COVID spike. By fall 2021 all schools in our sample had returned to in-person instruction, although some continued to offer more online courses than was typical during that academic year, some had short online delays to in-person instruction during the start of the semester, and most required masks and vaccinations for students. Most measures aimed at pandemic mitigation had ended by the 2022–2023 academic year.

COVID mitigation policies also affected student housing. After dormitories closed late in the spring 2020 semester, most students were sent home for the remainder of the semester. Many dormitories opened at a more limited capacity in fall 2020, with many students opting to take online courses and live with their parents at home or in other off-campus living situations established in the early pandemic. Among undergraduates in the United States, Europe, and likely other areas, couples were separated when large numbers of students returned home after dormitory closures, with related reductions in sexual activity and higher rates of relationship dissolution (Herbernick et al. 2022; Luppi, Rosina, and Sironi 2024; van Stee, Kuperberg, and Mazelis 2024). Past research found that college students often met hooking up and dating partners in dormitories and that female students living with their parents were more likely to form long-term relationships compared to those living on campus (Kuperberg and Padgett 2016).

As students and other young adults faced increased social isolation, hooking up or dating may have been one of few available outlets for social contact, increasing the rewards of engaging in this practice. Risk calculations are influenced by the degree to which a behavior may be rewarding (Kuperberg and Padgett 2017); therefore, as rewards of engaging in partnering increased due to prolonged social isolation, students may have taken the associated risks of disease transmission. These trends may have differed by sexual orientation; LGBTQ+ students may be more health conscious when it comes to sexual encounters and safety due to an emphasis on safe sex practices and health in the queer community, especially among men (Graham et al. 2017). Students may also have settled down with a partner they were dating more casually because of increased closeness resulting from the experiencing of a shared disaster (Fredman et al. 2010), because of the perceived difficulties of finding alternative partners during the pandemic, or because commitment reduces romantic networks of exposure.

Campus closures reduced opportunities to meet partners at school and access to on-campus reproductive health services (Wood et al. 2022), changing the institutionalized culture and geographies of hooking up and the gendered market power of college students by altering the spatial nature of the sexual fields in which students met partners, potentially altering partner formation patterns. Facing more limited opportunities to meet sexual or romantic partners in these fields, some may have shifted to alternative ways to meet partners, such as by increasing use of online apps, which might explain their rise in use during the pandemic (Ting and Mclachlan 2022). This field has a sex ratio that is the reverse of that on college campuses, with generally more men than women among younger cohorts (Bruch and Newman 2019), enabling women to better leverage their preferences.

Past research finds that meeting online is also more common for dates than for hookups, likely as a result of the perceived risk of meeting people online. When meeting online, students may first go out on a date in a public setting to assess safety before proceeding to a hookup (Kuperberg and Padgett 2015). A shift to meeting partners online during COVID-19 (Ting and Mclachlan 2022) may therefore be associated with a reduction in hookups relative to dates, even beyond potential declines in partnering overall. Such a shift may also have increased relationship formation as a result of social scripts and expectations tying dates to relationship formation (Kuperberg and Padgett 2015). Students are also far more likely to meet same-sex partners in online settings compared to those engaging in heterosexual hookups or dates (Kuperberg and Padgett 2015). As partnering moved online in greater numbers during the pandemic (Ting and Mclachlan 2022), queer partnership formation may have changed in unique ways, since they had already been using these means to form relationships more commonly and also lost access to in-person campus LGBTQ+ networks. We examine results separately by gender and sexual orientation to capture potential differences.

Finally, changes to the demographic composition of college students during the pandemic may additionally be related to partnering because this alters the nature of the campus sexual field. During the pandemic, an unanticipated effect of campus COVID mitigation strategies was the drop in enrollment in many universities, especially for new freshman (National Center for Education Statistics 2023), as students delayed college entrance until they could have more of a typical college experience, with in-person courses and dormitory living. One study found that more than one-third of those who had planned to take college courses in fall 2020 canceled their plans (Liu 2021). Another report found that the number of high school graduates immediately enrolling in college fell by nearly 7% in fall 2020 as compared to fall 2019, a drop 4.5 times larger than the decline in enrollment from fall 2018 to 2019 (National Student Clearinghouse 2021). Changes to the proportion of traditional-aged freshman enrolling in college can have pronounced effects on college age composition, since most students attend college during

a very limited age range; results from OCSLS 1.0 found that more than 90% of respondents were aged 18–23 (Kuperberg and Padgett 2016). So the college students answering our survey during the pandemic may have been older on average than students prior to the pandemic. Older students are more likely to have hooked up, dated, or formed long-term relationships while in college (Kuperberg and Padgett 2016), in part because they typically had a longer exposure time of college attendance, during which they could form intimate unions, and in part because older students may be more likely to start school after already forming a stable relationship.

2.4 Our study

Much recent research on hooking up has drawn upon the OCSLS, a large dataset of more than 24,000 college students collected between 2005 and 2011. The dataset mostly predated online dating apps such as Tinder, which have now gained widespread popularity. Further, more recent cohorts have been described as undergoing a "sex recession," with higher rates of sexual inactivity compared to earlier cohorts (Bozick 2021). In 2019 sociologists Jennifer Lundquist and Celeste Curington set out to update this dataset in collaboration with Paula England, the original researcher, Arielle Kuperberg, and Lisa Wade. They updated survey questions; collected data at schools where the first wave was collected; expanded the sample in terms of racial, ethnic, economic, and sexual diversity; and broadened the range of colleges represented in the sample by including more southern schools, regional schools, schools that were not "elite," and community colleges.

We draw from these newer data (henceforth referred to as OCSLS 2.0) to examine students' reports of ever engaging in hookups, dating, or romantic relationships in college and the number of hookups, dates, and romantic relationships they engaged in while in college. We also examine changes in the age composition of college students and how trends changed for students both with and without accounting for differences in age composition over cohorts. We control for gender, race, and parents' education to account for changing selection by these factors over the years examined. Finally we examine changes over time in where students met their most recent hookup, date, or long-term relationship partner and the use of online dating apps. These responses allow us to directly assess shifts in sexual fields during the pandemic.

Engagement with certain types of partnering is likely to operate differently than the number of partners; that is, the difference between zero and one hookups or dates will be more of a leap than the difference between one and two hookups or dates, indicating that these measures should be examined separately. For instance, research with the first wave of the OCSLS found that students were about equally likely to date or hookup, but they

reported more hookup partners than past dating partners in college, with an average of 4.1 past hookups and 3.5 past dates (Kuperberg and Padgett 2016). The cumulative measure we examine of ever having hooked up, dated, or formed long-term relationships in college does not precisely capture changes in partnering over time, since these measures are cumulative over students' college enrollment period. However, insofar as some students would have first engaged in these types of relationships in a given semester and there is yearly turnover in college students, these measures can capture some shifts in the number of students engaging in various types of intimate unions. Examining numbers of partners may more accurately capture recent short-term declines or increases in partnering compared to cumulative measures of having ever formed a partnership in college, although if students increased partnering in later semesters to "make up for lost time" after an earlier decline in partnering, partnering may appear more stable than it was, a limitation of these data. To examine more recent changes in partnering, we also examine reports of having hooked up or dated during the semester in which students completed the survey, and we examine partnering and the number of partners among traditionally aged (18- and 19-year-old) freshman.

We ask the following research questions:

1. How did the reported prevalence of having hooked up, dated, and formed long-term relationships in college change among students enrolled in college between 2019–2020 and 2023–2024?
2. Among students who engaged in hooking up, dating, or long-term relationships, how many partners did they hook up with, date, or form long-term relationships with while in college and how did those numbers change between 2019–2020 and 2023–2024?
3. How did these trends vary by gender and sexual orientation?
4. Among college students who hooked up, dated, or formed relationships, how did partner meeting contexts and dating app use change between 2019–2020 and 2023–2024?
5. Are differences between cohorts in 1 to 3 explained by changes in the demographic composition of college students (gender, race, class, age) over the course of our study?

As this study is exploratory given the varying potential factors described in the literature review, we do not develop specific hypotheses. However, our reading of prior research and literature suggests that partnering, and especially casual sexual partnering, likely dropped during the pandemic as traditional fields in which students met partners (classrooms, dormitories, college parties) were restricted. This may have led to an increase in meeting partners online; however, given that meeting online is associated with

dating more than hooking up and that college campuses are associated with hookup culture, hooking up may have declined more than dating or romantic relationship formation at the height of the pandemic.

3. Participants and procedures

3.1 Data

We analyze survey data from the second wave of the OCSLS, a survey we collected from 13,142 college students at 34 universities in the United States each semester between fall 2019 and spring 2024. OCSLS 2.0 is cross-sectional but asks both retrospective questions and detailed previous event questions about experiences of hooking up, dating, and forming long-term relationships in college. It is a 20- to 30-minute survey that builds upon the original dataset collected from 2004 through 2011. Requests were sent to the original 22 colleges in the study and to professional association listservs to recruit professors willing to distribute the surveys in their courses each semester. We also increased recruitment efforts to oversample minorities and first-generation students by recruiting minority-serving institutions as well as community colleges to gain more representation of non-White, non-middle-class college populations. After we obtained IRB approval, the survey was distributed in undergraduate courses as an extra-credit assignment, with an alternative assignment offered to students who did not want to take the survey. Reports from individual instructors indicate a high response rate, with typically more than 80% of students within each class participating in the assignment. OCSLS 2.0 is not yet publicly available; it will be made available upon the end of data collection (estimated summer 2027). We expanded the dataset to include questions on online dating experiences and other new topics, updated language, and added new variables regarding online dating, gender, and sexual and racial identities.

As with many studies on sexual behavior, our survey data are not nationally representative, However, a number of factors mitigate this drawback. Our methods of statistical accounting for clustering (see below) increase the generalizability of results, and we recruited students from a diverse set of colleges. Our recruitment methods resulted in an exceptionally high response rate, as compared to less than 20% in typical online surveys (Laguilles, Williams, and Saunders 2011), and a large sample size, which allows for intergroup comparisons. Most studies of sexual behavior are not nationally representative due to challenges with gaining access to participants, reliance on volunteers, and lack of funding for larger surveys (Fitzgerald and Grossman 2020). However, our focus is on changes over time within the institutions we studied, and

recruitment methods did not substantively change over the time period examined. Results do not represent estimates of exact levels of national trends over time.

Our sample also overrepresents women compared to the typical gender ratio of students enrolled in the colleges where we collected data. Women are typically more likely to answer surveys than men (Groves 2006). Further, our recruitment for this survey often took place in courses related to sociology, sexuality, or family studies, which can further affect the gender ratio of respondents, as women are disproportionately likely to take those courses (American Sociological Association, 2020).

To confirm that trends found in our data were related to demographic changes with a nationally representative dataset, we also examine data from the Current Population Survey (CPS)-Annual Social and Economic Supplement (ASEC) between the years 2019 and 2024 (Flood et al. 2024). The CPS-ASEC is a large nationally representative dataset that each March collects data on 60,000 US households, inclusive of approximately 110,000 individuals, with results weighted to represent estimates of national frequencies. We examine the number of students who were enrolled part-time or full-time in college and who had either completed a high school degree or a GED, some college, or an associate's degree but not a bachelor's degree. We examine how these frequencies changed overall, and changed among 18-year-olds and 19-year-olds, to understand how the age distribution of college students changed nationally during the pandemic.

3.2 Variables

When asked about dates, students were told, "By date, we mean when one person invites someone to do something with a possible romantic interest. Dates might include inviting someone or being invited to go out for a meal, see a movie, attend a formal date function, or whatever you and your friends call a date." Questions on hookups were preceded by the statement "For this section use whatever definition of hookup you and your friends generally use. It doesn't have to include sex. If you and your friends would call it a hookup, then it counts." Students were then asked, "Since you started college (counting summers and any terms abroad): how many people total, if any, have you hooked up with?"; "Since you started college (counting summers and any terms abroad): how many people in total, if any, have you been on dates with whom you were NOT already in a relationship with?"; "Since you started college: have you been in a romantic relationship that lasted longer than six months?"; "If yes, how many?" We used these questions to create variables indicating that the participant had ever hooked up, dated, or formed a long-term relationship in college and the number of each type of relationship for those who participated in them. Finally, we examine whether students responded yes to "Have you ever used a dating app or dating website for meeting people?" and responses to

"Where did you and [the person you hooked up with, your date, or your significant other] first meet?"

For those reporting each type of partnership occurring in college, we asked about the month and year of the most recent hookup, date, and romantic relationship lasting at least six months and used these dates to calculate the academic year in which the event occurred for analyses examining partner meeting contexts.[5] For these results we include responses from an additional 1,261 students who completed the survey in fall 2024 if the event occurred in spring 2024 or earlier; fall 2024 responses are otherwise not included in this paper.

We also used month and year of the most recent date and hookup to calculate separate measures examining whether students reported a recent date or hookup, with students coded 1 if they hooked up (or in a separate measure dated) and the encounter occurred in the semester in which they took the survey or coded 0 if they either reported never hooking up (or dating) in college or if their most recent hookup (or date) occurred prior to the semester in which they took the survey. These measures allowed us to capture shorter-term changes in sexual and romantic partnering. However, we could not calculate analogous measures for long-term relationships lasting at least six months, since by definition those relationships could not have begun during the semester in which the student was surveyed. Given the smaller incidence at which students reported recent hookups or dates compared to the overall incidence of hooking up or dating in college, we do not calculate gender/sexual orientation–specific results for these outcome variables.

Models controlled for several variables to account for demographic changes in the composition of college students over time, including gender (cisgender women, cisgender men, transgender men, transgender women, nonbinary and other gender respondents), race (White, Black, Latino, Asian, multiracial, other), class (mother or father has a bachelor's degree: yes or no), and age at survey. We removed from the sample students who did not respond to questions related to gender, race, class, age at survey, or sexual orientation to harmonize our sample across models. While not all students provided information on all our dependent variables, we retained students who responded to

[5] In error, students who were asked to report the date of their most recent partnership were not given the option of November or December as a month choice until mid-February 2020, and those who were asked about partnerships in January and early February 2020 were not given the option of 2020. To address this, we imputed an academic year 2019–2020 date for events reported by affected participants who had the year of event missing in early 2020 (N = 37 hookups and 60 dates) and for affected respondents in November 2019–February 2020 who reported a year of event as 2019 or had a 2020 date imputed but did not report a month (N = 36 hookups, including 25 with year also imputed, and 162 dates, including 37 with year also imputed). Romance start dates were not imputed, since romances collected through February 2020 began prior to fall 2019 if they had lasted at least six months. We also removed 139 romances with a reported start date less than five months before the month in which respondents took the survey.

questions on some outcome variables but not others in models examining those dependent variables to maximize our data usage. We also examine results separately by gender and sexual orientation. Sexual orientation is divided into those reporting they are straight and those with a queer/LGBTQ+ or uncertain sexual identity, including those reporting they are gay or lesbian, bisexual, pansexual, or not sure. A total of 1,149 students were dropped from the sample for not responding to questions related to gender, race, age, parents' education, or sexual orientation, for a final sample size of 11,993.

While it wasn't the focus of our analyses, to examine the context in which changes occur, we also examined descriptive responses for living situation at the time of survey, dividing responses into the categories "On campus" (inclusive of those living in dorms, Greek housing, or other on-campus housing), "With parents," and "Off campus or other" (less than 2.0% of this category responded "other").

Findings are examined separately by academic year of survey, apart from analyses of meeting places, which are examined by academic year of event. Responses collected during the summer semester were included with the previous year's responses. One limitation of these data is that we did not collect a full academic year of data before the onset of the pandemic. The first year examined included data collected after the start of the pandemic, including 14.4% of responses from that year collected in April, May, and June. However, since our measures captured any hooking up, dating, or long-term relationship activity that happened since starting college and many students who answered the survey data had engaged in partnering prior to the pandemic, we decided to group these students with the 2019–2020 students. As a sensitivity test, we examined whether hooking up, dating, relationship formation, number of partners, or dating app usage differed between those surveyed from September 2019 to March 2020 and those surveyed in April, May, or June, in random effects logistic and OLS regression models using the same set of controls used in other models in this study (see below). We found no difference in reports of engaging in or number of hookups, dates, relationships, or app use between these two groups.

3.3 Analysis

First we examine the demographic composition of our sample over each academic year in the study. We estimate chi square and ANOVA tests examining whether results varied over time. Next, using the *vce(cluster)* option in Stata, we estimate a series of linear and logistic random effects models, controlling for clustering in schools. Accounting for clustering allows for consideration of campus-level variation in factors including culture or COVID mitigation strategies, allowing for greater accuracy and more inference about

campuses outside the study compared to other types of models (Rabe-Hesketh and Skrondal 2008).

Our outcome variables include whether or not respondents had ever been on a date, hooked up with someone, or formed a long-term relationship lasting at least six months since starting college; the number of partners in each type of relationship they had had since starting college; and whether they had ever used a dating app since starting college. We estimate two models for each outcome related to partner formation, number of partners, and dating app use in college, first examining differences by the academic year of survey, using the year as an independent variable and controlling for clustering in schools only. Next we estimate models controlling for gender, race, parents' education, and age, in addition to school clustering. Models are estimated for the entire sample, and complete models are estimated separately for (1) cisgender straight women, (2) cisgender queer women, (3) cisgender straight men, (4) cisgender queer men, and (5) transgender, nonbinary, and other gender minorities of any sexual orientation in the sample. We also include estimates of whether students reported having been on a date or hookup in the semester in which they completed the survey. As a sensitivity test to examine shorter-term changes among a group with a shorter exposure period in college, we additionally examine percents reporting hooking up, dating, and forming relationships, and the number of such relationships, among freshmen aged 18–19, with results reported in the appendix.

After estimating each model in Stata, we used the *margins* command to produce regression-adjusted means for each time period examined for the outcome variable examined; these adjusted means estimate what the mean outcome would be for each time period if all other variables in the model were held constant across each time period. Proportions are multiplied by 100 to acquire percents; regression-adjusted means and percents are presented in tables. To examine the degree to which changes to coefficients across models or across gender groups are significant, we use methods developed by Mize, Doan, and Long (2019) to calculate the average discrete change, cross-model difference, comparing model 1 to model 2 and comparing gender groups, with p-values presented in the appendix.

Finally we examine meeting places for last date, hookup, and relationship partner to descriptively examine how partner meeting contexts changed over time. Results are grouped by year in which the event occurred or the relationship began, and we present regression-adjusted means accounting for gender, race, age, parents' education, and college clustering. All results from the OCSLS 2.0 were calculated using Stata, version 18. CPS-ASEC results were calculated using the IPUMS.org online data analyzer (Flood et al. 2024). Results from the CPS-ASEC were weighted using individual-level weights to be nationally representative.

4. Findings

4.1 Demographic composition of sample over time

Table 1 presents results related to sample demographics and how they changed over time; all results across years had a p-value of less than 0.001 in chi square tests (gender, race, parent BA) or ANOVA tests (age). Table 1 also presents sample size by semester for each gender/sexual orientation group. Of note is that in 2019–2020 there were fewer than 30 gender minorities (transgender, nonbinary, or other gender folks) in the sample. In 2021–2022 there were fewer than 50 gender minorities, and in 2022–2023 there were fewer than 50 queer men, so results for these groups from these years should be taken with great caution and may be affected by the small sample sizes.

Table 1: Demographic characteristics of sample by academic year of survey

Year of survey	2019–2020	2020–2021	2021–2022	2022–2023	2023–2024	Total
Female – cisgender, straight %	57.1	60.6	57.5	52.1	51.6	55.6
N	*1493*	*1456*	*1068*	*702*	*1944*	*6663*
Female – cisgender, queer %	15.0	18.2	20.1	20.7	18.1	18.0
N	*391*	*437*	*373*	*279*	*682*	*2162*
Male – cisgender, straight %	23.5	16.2	16.1	19.0	23.6	20.4
N	*613*	*389*	*299*	*256*	*889*	*2446*
Male – cisgender, queer %	3.4	3.0	3.2	3.5	3.8	3.4
N	*90*	*72*	*60*	*47*	*142*	*411*
Transgender, nonbinary, or other gender %	1.0	2.0	3.2	4.8	3.0	2.6
N	*26*	*49*	*59*	*64*	*113*	*311*
White	53.4	46.5	47.4	53.2	55.7	51.8
Black	9.0	11.5	11.2	12.2	10.4	10.6
Latino	10.4	13.6	12.9	10.8	6.8	10.3
Asian	9.8	8.4	6.8	5.0	9.7	8.5
Mixed race or other race	17.5	20.1	21.8	18.8	17.4	18.8
Parent has BA	63.3	57.2	55.7	60.8	68.0	62.1
No parent with BA	36.7	42.8	44.3	39.2	32.0	37.9
Age – mean	20.0	20.9	20.7	20.6	20.1	20.4
Age – median	19	20	20	20	20	20
Percent age 18	25.5	12.1	14.5	19.1	21.8	19.3
Percent age 19	25.6	18.1	17.6	17.4	22.8	21.1
Percent age 25+	6.4	13.5	11.9	11.8	6.4	9.3
Percent lived on campus	45.0	19.1	24.6	25.21	45.7	34.6
Percent lived with parents	24.1	32.1	27.4	26.5	13.8	23.2
Percent off campus or other housing	31.0	48.9	48.0	48.4	40.5	42.2
N	*2613*	*2403*	*1859*	*1348*	*3770*	*11993*

Note: Differences across semesters all had p-values of < 0.001 level in chi square tests (race, gender, parent BA, living situation) or ANOVA tests (age).

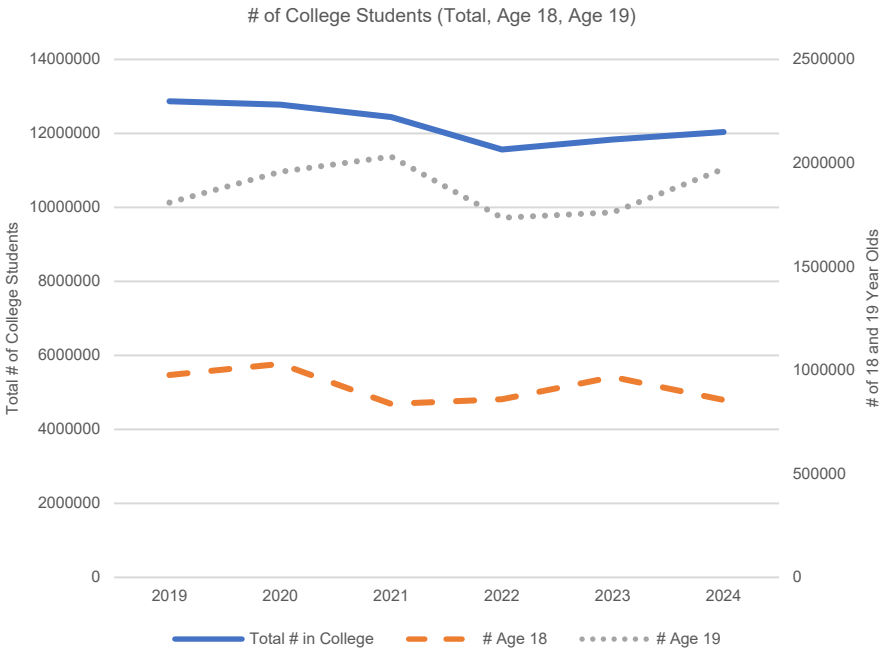
Of the sample, almost three-quarters were female, just over half were White, and around 62% had at least one parent with a bachelor's degree (see Table 1). Likely reflecting broader changes in the demographic composition of the colleges surveyed, as

certain groups withdrew from or decided not to attend college at higher rates than others during the pandemic, the demographic composition of our sample changed over the pandemic as well. During the height of the pandemic, in 2020–2021 and 2021–2022, there was a drop in the proportion of students who were White, were male, or had at least one parent with a bachelor's degree. Notably, the sample's age composition also shifted during the pandemic, as the proportion of students who were 18 years old dropped precipitously after the start of the pandemic, from over a quarter of the sample in 2019–2020 to only 12% in 2020–2021 and 14.5% in 2021–2022, while the proportion of 19-year-olds dropped during these years as well. While the proportion of 18-year-olds increased in later cohorts, numbers did not reach pre-pandemic levels during the time under observation. The average age of the sample peaked in 2020–2021, at a mean of 20.9 and a median of 20, with these numbers around one year older than in 2019–2020. This seemingly small change can substantively influence results, given that more than 85% of our sample was between the ages of 18 and 22 and more than 90% of the sample was between the ages of 18 and 24.

Although this is not the focus of further analysis, we note that on-campus residence was more limited during the height of the pandemic. In our survey, 45% of students lived on campus in 2019–2020, falling to 19% in 2020–2021 and to 25% in 2021–2022 and 2022–2023 and not fully recovering to prior levels until 2023–2024. Living with parents increased somewhat during 2021–2022, and living off campus without parents increased substantially during the pandemic and remained at elevated levels throughout the time observed.

To confirm that findings regarding age in our sample reflected national trends, we examined data from the CPS. Results in Figure 1 indicate declines in college enrollment after 2020. National college enrollment dropped by almost 335,000 students between 2020 and 2021, including 193,000 fewer 18-year-olds — a nearly 20% decline in 18-year-olds compared to 2020, accounting for 56.7% of declines in college enrollment between 2020 and 2021. The number of 18-year-olds was also depressed in 2022, with numbers starting to recover in 2023 but declining again in 2024. This trend also resulted in fewer 19-year-olds in 2022 and 2023 compared to earlier and later years. As discussed further below, the decline of younger students in college during the pandemic substantively altered trends in partnering among college students.

Figure 1: Number of college students (total, age 18, age 19)



Notes: Results from the Current Population Survey, March Supplement; analyzed by authors using Ipums.org online data analyzer.

4.2 Hookups

Compared to the 2019–2020 year, the likelihood that a student had hooked up was fairly flat over time, with a small dip in 2021–2022 (see Table 2). Adding controls for gender, race, and whether parents had a college degree did not alter results or coefficients across models (results available from authors). However, adding controls for age at the time of survey resulted in substantially different findings, confirmed by cross-model testing (see appendix). Model 2 shows results including both demographic and age controls. After accounting for demographic differences, especially age differences, reports of hooking up in college declined over time, especially in 2021–2022 and 2022–2023, with results rebounding but not fully reaching prior levels even among students enrolled in 2023–2024. Examining cross-model differences by gender and sexual orientation found similar patterns across the board, with reports of hooking up declining to a low point in 2021–

2022. Cross-model differences (Table A-1) indicated similar patterns across groups, except in the final year. In 2023–2024, reports of hooking up rebounded to pre-pandemic levels for straight women, straight men, and queer women but further declined among queer men.

While these percentages are cumulative, we also limit our analysis to hookups that occurred in the semester in which students completed the survey to confirm that patterns observed are temporally linked to the semester in which they were measured. Recent hookups follow similar patterns, though the initial decrease in recent hookups between 2019–2020 and 2020–2021 is greater and the number takes longer to begin rising again. Additional sensitivity tests in which we limited analyses to freshman aged 18–19 (see Table A-5) found similar dips in reports of having hooked up in college and especially reported numbers of hookups following the onset of the pandemic, which did not rebound to pre-pandemic levels during the period under observation.

Among those who participated in hookups, the number of partners did not change much over time overall, especially for straight men and women. However, queer women and men had distinct patterns. Queer men had a decline in the number of hookups in 2020–2021. But queer women showed a substantive increase in hookup partners that year and also had more partners in 2022–2023.

4.3 Dates

Table 3 demonstrates that the odds that a student had been on date increased during the pandemic in models that did not account for demographic changes, from 60% in 2019–2020 to highs above about 64% in 2021–2022, although reports of having been on a date dropped to pre-pandemic levels by 2023–2024. Accounting for gender, race, and parents' education did not change results (available from authors), but as with hooking up, accounting for age substantially altered findings. After controlling for age, the percent of students reporting dating was essentially flat across academic years, with a decline in the last year examined. This decline was primarily driven by a decline in straight men having gone on dates, although other groups had smaller declines that were not different from pre-pandemic behavior. There were few differences across gender models and across years, except that queer women saw a decline in having dated in 2020–2021. Examining only recent dates resulted in somewhat similar patterns, except there was something of an initial decline in reports of recent dates in 2020–2021 compared to the prior year (from 27% to 21%; $p = 0.155$), which we did not find in the measure of ever dating in college (from 63% to 62%) – although the standard error is not small. As with ever dating in college, reports of recent dating declined in the last years examined. Examining dates among traditional-aged freshman (see Table A-5) found an increase in reports of dating

in 2021–2022 compared to earlier or later years, but the overall percent reporting dating otherwise remained fairly steady over time.

Table 2: Percent hooked up and number of hookups in college

Year of survey	2019–2020	2020–2021	2021–2022	2022–2023	2023–2024
Has hooked up					
Model 1: Clustering only	60.5	61.5	57.7	58.3	58.7
	57.9–63.0	57.9–65.0	56.6–58.8	54.9–61.7	56.5–60.9
	—	0.624	0.035	0.338	0.316
Model 2: Model 1 + age, race, parent BA, gender					
Total sample	62.7	59.7	56.1	57.5	59.3
	59.4–66.0	56.0–63.4	54.5–57.8	54.9–60.1	57.8–60.8
	—	0.155	0.000	0.018	0.082
Cis straight women	62.6	58.7	55.1	56.2	59.8
	59.8–57.4	55.0–62.3	52.8–57.4	53.7–58.7	57.9–61.8
	—	0.045	0.000	0.001	0.128
Cis queer women	65.8	61.6	59.4	61.1	63.4
	61.4–70.2	59.1–64.2	56.3–62.5	57.8–64.6	61.7–65.2
	—	0.123	0.015	0.121	0.357
Cis straight men	60.9	61.7	54.1	55.7	58.1
	54.3–67.3	50.9–72.5	51.1–57.0	48.6–62.8	54.7–61.5
	—	0.887	0.085	0.301	0.423
Cis queer men	66.6	62.5	59.6	60.5	54.5
	59.5–73.8	56.5–68.4	54.5–64.7	56.8–64.2	47.9–61.2
	—	0.403	0.134	0.118	0.025
Trans, nonbinary, other gender	57.3	49.3	59.2	59.5	42.6
	39.8–74.8	39.4–59.3	49.6–68.7	49.1–69.9	31.7–53.5
	—	0.443	0.855	0.834	0.177
Total sample, recent hookups only	22.5	17.8	18.7	16.7	18.6
	18.4–26.6	14.6–20.7	16.5–20.8	12.7–20.7	16.1–21.2
	—	0.012	0.030	0.050	0.112
Number of hookups (hooked up only)					
Model 1: Clustering only	4.9	5.1	5.0	5.2	4.9
	4.6–5.2	4.8–5.4	4.9–5.2	4.4–6.0	4.7–5.2
		0.167	0.389	0.388	0.773
Model 2: Model 1 + age, race, parent BA, gender					
Total sample	5.2	5.0	4.9	5.1	4.9
	4.8–5.5	4.6–5.3	4.8–5.0	4.3–5.8	4.7–5.2
	—	0.274	0.141	0.797	0.267
Cis straight women	4.7	4.4	4.4	4.4	4.3
	4.2–5.1	4.2–4.6	4.1–4.6	3.7–5.1	4.0–4.6
	—	0.286	0.282	0.504	0.192
Cis queer women	5.1	5.6	4.8	6.1	5.2
	4.7–5.5	5.2–6.0	4.4–5.1	5.6–6.7	4.7–5.7
	—	0.058	0.216	0.006	0.859
Cis straight men	5.7	5.8	5.1	5.2	5.3
	5.2–6.1	5.3–6.3	4.3–5.9	3.8–6.6	4.6–6.0
	—	0.769	0.235	0.527	0.369
Cis queer men	9.4	7.0	10.4	7.8	10.9
	7.4–11.3	5.2–8.7	6.0–14.8	3.8–11.9	8.8–13.1
	—	0.040	0.641	0.509	0.240
Trans, nonbinary, other gender	7.2	3.9	5.5	7.4	9.9
	3.2–11.3	1.9–5.9	3.5–7.4	5.0–9.9	5.0–8.9
	—	0.178	0.393	0.935	0.899

Notes: Regression-adjusted percentages/means in first line, 95% confidence intervals in second line, p-values in third line (ref: 2019–2020). "Recent" is defined as occurring during the semester surveyed.

Table 3: Percent went on date and number of dates in college

Year of survey	2019–2020	2020–2021	2021–2022	2022–2023	2023–2024
Has dated					
Model 1: Clustering only	60.4	64.2	64.6	64.0	59.0
	57.6–63.4	62.3–66.0	63.0–66.3	60.2–67.8	54.3–63.7
	—	0.035	0.013	0.143	0.608
Model 2: Model 1 + age, race, parent BA, gender					
Total sample	63.0	61.9	62.7	63.2	59.9
	61.0–65.0	60.3–63.6	61.5–63.9	61.6–64.9	57.5–62.4
	—	0.396	0.784	0.856	0.057
Cis straight women	60.9	62.6	61.8	60.5	59.6
	58.2–63.7	61.2–64.0	60.8–62.7	57.3–63.8	55.8–63.4
	—	0.289	0.593	0.851	0.581
Cis queer women	66.2	60.1	63.3	67.7	63.3
	62.9–69.6	57.9–62.3	61.1–62.4	64.6–70.8	60.5–66.1
	—	0.022	0.140	0.516	0.185
Cis straight men	65.5	63.2	65.5	63.5	57.8
	60.3–70.6	55.7–70.8	61.3–69.8	60.7–66.2	54.8–60.9
		0.591	0.984	0.507	0.018
Cis queer men	63.9	57.9	62.5	70.0	62.1
	56.0–71.8	47.9–68.0	54.2–70.8	64.1–75.1	55.3–69.0
	—	0.300	0.807	0.285	0.745
Trans, nonbinary, other gender	56.8	52.3	60.5	69.8	62.9
	39.6–74.0	43.2–61.4	52.2–68.8	60.1–79.6	55.8–69.9
	—	0.645	0.699	0.191	0.542
Total sample, recent dates only	27.1	21.1	24.1	23.1	21.7
	22.5–31.6	16.0–26.2	23.4–24,8	21.2–24.8	21.0–22.5
	—	0.155	0.219	0.089	0.014
Number of dates (dated only)					
Model 1: Clustering only	4.1	4.5	4.4	4.6	4.1
	3.9–4.4	4.2–4.9	4.2–4.6	4.1–5.0	4.0–4.3
	—	0.111	0.080	0.091	0.897
Model 2: Model 1 + age, race, parent BA, gender					
Total sample	4.3	4.4	4.3	4.5	4.2
	4.2–4.5	4.0–4.7	4.1–4.5	4.1–4.8	4.1–4.3
	—	0.905	0.821	0.550	0.220
Cis straight women	4.1	3.9	4.1	4.1	4.0
	3.8–4.3	3.7–4.1	4.0–4.2	3.9–4.4	3.7–4.2
	—	0.198	0.891	0.708	0.493
Cis queer women	4.5	5.1	4.6	4.5	4.4
	4.0–5.0	4.7–5.5	4.0–5.1	4.1–4.8	4.1–4.7
	—	0.050	0.818	0.925	0.673
Cis straight men	4.7	5.0	4.3	4.5	5.2
	4.0–5.3	4.2–5.8	4.0–4.5	4.2–6.1	4.0–4.9
	—	0.523	0.338	0.409	0.516
Cis queer men	4.7	5.3	5.3	6.0	5.0
	3.1–6.3	4.2–6.4	4.0–6.5	4.0–8.0	3.7–6.2
	—	0.575	0.621	0.298	0.755
Trans, nonbinary, other gender	5.6	4.3	4.8	4.5	5.7
	3.3–7.8	2.2–6.3	3.7–5.8	3.7–5.3	4.2–7.1
		0.408	0.504	0.366	0.928

Notes: Regression-adjusted percentages/means in first line, 95% confidence intervals in second line, p-values in third line (ref: 2019–2020). "Recent" is defined as occurring in the semester surveyed.

Table 4: Percent formed relationship and number of relationships in college

	2019–2020	2020–2021	2021–2022	2022–2023	2023–2024
Had relationship					
Model 1: Clustering only	44.2	52.6	49.4	53.1	46.0
	39.5–48.9	47.6–57.6	48.0–50.8	49.3–56.9	42.3–49.7
	—	0.000	0.036	0.004	0.546
Model 2: Model 1 + age, race, parent BA, gender					
Total sample	47.5	48.8	46.1	51.7	48.3
	45.4–49.7	46.7–50.8	44.9–47.3	49.9–53.4	46.4–50.3
	—	0.161	0.252	0.004	0.558
Cis straight women	49.1	51.2	50.1	57.2	50.9
	46.3–51.8	49.8–52.5	48.4–51.8	54.8–59.6	49.0–52.9
	—	0.099	0.499	0.000	0.265
Cis queer women	50.2	48.7	48.3	49.9	48.1
	44.3–56.1	47.0–50.4	45.2–51.3	47.6–52.3	44.8–51.3
	—	0.585	0.559	0.940	0.497
Cis straight men	42.3	45.8	35.3	40.3	44.2
	38.8–45.7	40.0–51.6	31.7–38.9	35.3–45.3	41.3–47.1
	—	0.316	0.004	0.539	0.451
Cis queer men	34.7	27.0	25.2	49.5	36.4
	29.1–40.3	20.5–33.5	16.8–33.5	37.2–61.8	30.5–42.3
	—	0.071	0.081	0.034	0.687
Trans, nonbinary, other gender	51.3	60.3	51.0	44.0	40.6
	37.9–64.7	54.0–66.6	45.3–56.7	31.0–57.0	31.9–49.3
	—	0.164	0.968	0.466	0.176
Number of relationships (had relationships only)					
Model 1: Clustering only	1.3	1.4	1.4	1.4	1.3
	1.3–1.4	1.4–1.4	1.4–1.5	1.3–1.4	1.3–1.4
	—	0.240	0.086	0.747	0.798
Model 2: Model 1 + age, race, parent BA, gender					
Total sample	1.4	1.3	1.4	1.3	1.4
	1.3–1.4	1.3–1.4	1.4–1.4	1.3–1.4	1.3–1.4
	—	0.502	0.574	0.378	0.667
Cis straight women	1.4	1.3	1.4	1.3	1.4
	1.3–1.5	1.3–1.4	1.4–1.4	1.2–1.4	1.3–1.4
	—	0.043	0.953	0.087	0.506
Cis queer women	1.3	1.4	1.4	1.5	1.3
	1.2–1.4	1.3–1.5	1.3–1.4	1.3–1.6	1.3–1.4
	—	0.260	0.279	0.109	0.534
Cis straight men	1.3	1.4	1.4	1.4	1.3
	1.2–1.5	1.3–1.5	1.3–1.6	1.1–1.6	1.3–1.4
	—	0.582	0.372	0.830	0.922
Cis queer men	1.3	1.1	1.2	1.4	1.3
	1.0–1.5	1.0–1.2	1.0–1.4	1.0–1.8	1.1–1.5
	—	0.157	0.528	0.534	0.975
Trans, nonbinary, other gender	1.3	1.3	1.2	1.1	1.3
	1.0–1.6	1.1–1.4	1.0–1.5	1.0–1.1	1.1–1.5
	—	0.995	0.853	0.135	0.926

Note: Regression-adjusted percentages/means in first line, 95% confidence intervals in second line, p-values in third line (ref: 2019–2020).

Examining the number of dates revealed similar results. Among students who had dated, the number of dates increased during the height of the pandemic, from 4.1 in 2019–2020 to 4.6 in 2022–2023, before declining in 2023–2024. However, the changes were entirely explained by shifts in the sample's age distribution over time; once age was accounted for, differences in number of dates across years were no longer evident. Examining results by gender revealed that in the 2020–2021, while queer women were less likely to date, those who did date reported a higher number of dates. Other groups

(including traditional-aged freshman; see Table A-5) did not report variation in number of dates over time.

4.4 Long-term relationships

As with dating, romantic relationship formation increased during the pandemic for college students surveyed, with 44% of students in 2019–2020 reporting a long-term relationship in college compared to almost 53% the following year, with occurrences also higher than pre-pandemic levels, at 49% in 2021–2022 and 53% in 2022–2023, before dropping to 46% in 2023–2024 (See Table 4). As with hooking up and dating, accounting for gender, race, and parents' education did not alter results but controlling for age did. After accounting for differences in age composition over time, most of the increase in romantic relationship formation over time was accounted for, except for the 2022–2023 academic year, when romantic relationship formation showed elevated levels for a brief period before dropping again the following year.

Examining results separately by gender found that results were mostly driven by an increase in straight cisgender women's long-term relationship formation in 2022–2023, while straight men's relationship formation rebounded this year after falling to a low point in 2021–2022. Queer men and traditional-aged freshman (see Table A-5) also had more reports of relationship formation in 2022–2023, but queer women did not have a similar pattern. Table 4 shows that the number of long-term relationships among those who ever formed one in college was largely consistent across years and groups, with a slight decline for straight women in 2020–2021.

4.5 Dating app usage and partner meeting contexts

Our final analyses examine dating app usage and partner meeting contexts to directly assess shifts to sexual fields during the pandemic. We examine dating app use by year of survey and examine partner meeting contexts by year of event or relationship formation. Dating app usage increased in 2020–2023 compared to 2019–2020, but for the most part, these results were accounted for by differences in the age composition of the sample over time, with reports of dating app use declining in the last year examined (see Table 5). Both straight women and queer men reported lower usage of dating apps in 2023–2024 compared to 2019–2020, with queer men having an especially sharp decline in app usage. Straight men also had a decline in dating app use in the last two years examined.

Despite no increase in the overall likelihood of dating app use, there was a substantial increase in the proportion of hookup, date, and romantic relationship partners

met online during the pandemic. Meeting online remained at elevated levels for hookups for three years after the start of the pandemic, although increases in meeting dates and romantic relationship partners online were more short-lived. In 2019–2020, around 22% of hookups were met online, increasing to 27.3% in 2020–2021 and 28.2% in 2022–2023, a high in our data (see Table 6). Reports of meeting hookups online dropped in the last year examined but remained elevated compared to pre-pandemic levels. Dating partners were met online around 29% of the time in 2019–2020, with meeting online peaking at over 36% in 2020–2021 before dropping in subsequent years. In 2019–2020, 20% of romantic relationship partners were met online, growing to 25.8% in 2020–2021, dropping down again the next year, and then increasing again to almost 24% in the last year examined.

Table 5: Ever used dating app in college

	2019–2020	2020–2021	2021–2022	2022–2023	2023–2024
Model 1: Clustering only	40.8	46.4	46.7	45.2	39.0
	38.2–43.4	43.9–48.9	44.3–49.0	43.8–46.5	36.5–41.5
	—	0.002	0.001	0.003	0.401
Model 2: Model 1 + age, race, parent BA, gender					
Total sample	43.5	44.8	45.1	43.8	39.5
	40.8–46.1	42.5–47.1	43.2–47.0	42.3–45.4	37.0–42.0
	—	0.387	0.342	0.831	0.038
Cis straight women	38.1	39.5	39.5	37.7	33.5
	35.1–41.1	37.3–41.7	37.2–41.2	34.3–41.2	30.9–36.0
		0.363	0.485	0.865	0.024
Cis queer women	57.9	57.9	59.8	58.8	55.4
	53.7–62.0	55.4–60.5	56.1–63.4	57.6–59.9	51.8–59.1
		0.985	0.504	0.687	0.351
Cis straight men	40.3	39.2	39.0	35.1	35.2
	35.2–45.3	35.6–42.9	35.9–42.0	32.2–37.8	31.2–37.8
		0.753	0.685	0.054	0.118
Cis queer men	78.3	72.9	68.2	72.7	60.8
	68.8–87.9	70.5–75.2	58.6–77.8	58.9–86.6	55.4–66.1
		0.276	0.175	0.485	0.005
Trans, nonbinary, other gender	62.1	67.5	64.2	67.9	59.1
	39.5–85.0	57.6–77.6	49.2–79.2	59.9–75.9	51.2–67.0
		0.673	0.883	0.618	0.813

Note: Regression-adjusted percentages in first line, 95% confidence intervals in second line, p-values in third line (ref: 2019–2020).

Meeting hookups at parties, bars, or nightclubs substantially declined, from just over 18% of meetings there in 2019–2020 to under 11% in 2020–2021 and 13.3% in 2021–2022, with occurrences not fully recovering until 2023–2024 (see Table 6). Dates followed a similar pattern, with partners met through bars and parties declining from 10.3% in 2019–2020 to 7% in 2020–2021 and then increasing again over time, fully recovering in 2023–2024. In 2020–2021, meeting hookups in dorms also declined compared to the prior year, as did meeting dates in on-campus groups or through friends or family and meeting romantic partners in class. Meeting dates in on-campus groups and meeting romantic partners in class remained depressed compared to pre-pandemic levels throughout the years examined.

Table 6: Partner meeting contexts (known meeting contexts only, by year of event)

Hookups (N = 4,374)	2019–2020	2020–2021	2021–2022	2022–2023	2023–2024
Party/bar/nightclub	18.2	10.8	13.3	14.8	21.1
	14.6–21.8	8.9–12.8	11.0–15.6	13.2–16.4	19.4–22.9
	—	0.000	0.015	0.070	0.192
Church	0.8	0.7	0.4	0.6	0.3
	0.1–1.5	0.1–1.3	0.0–0.8	0.3–0.9	0.0–0.5
	—	0.759	0.239	0.555	0.090
Class	11.1	12.8	11.6	9.3	9.6
	8.9–13.4	10.4–15.2	9.6–13.6	6.7–112.0	5.9–13.3
	—	0.265	0.745	0.289	0.413
Dating app/website	21.9	27.3	27.5	28.2	24.8
	20.0–23.8	23.6–31.0	24.5–30.4	24.6–31.8	21.7–28.0
	—	0.004	0.000	0.003	0.106
Dorm	6.7	4.2	7.6	3.8	4.8
	5.2–8.1	3.0–5.5	5.1–10.2	2.9–4.7	2.4–7.2
	—	0.019	0.494	0.001	0.216
Hometown	13.9	16.6	15.1	16.5	12.2
	11.0–16.7	14.5–18.8	11.5–18.6	13.5–19.4	10.2–14.2
	—	0.135	0.613	0.188	0.324
Through friends/family	16.3	16.0	13.9	16.1	16.1
	13.9–18.6	13.4–18.7	12.1–15.8	12.8–19.4	13.5–18.6
	—	0.877	0.160	0.947	0.910
Campus group	2.9	2.3	1.9	1.3	2.4
	2.2–3.7	1.5–3.0	1.4–2.5	0.6–2.1	1.4–3.4
	—	0.238	0.056	0.005	0.407
Work	6.0	6.6	6.0	6.3	5.4
	4.9–7.1	4.7–8.6	4.2–7.7	3.3–9.5	3.4–7.5
	—	0.571	0.994	0.809	0.676
Public place	2.1	2.4	2.7	3.2	3.0
	1.4–2.8	1.6–3.2	1.4–3.9	2.4–4.0	1.4–4.6
	—	0.607	0.489	0.069	0.221
Dates (N = 5,581)	2019–2020	2020–2021	2021–2022	2022–2023	2023–2024
Party/bar/nightclub	10.3	7.0	8.3	8.9	11.8
	8.4–12.1	6.0–8.0	7.3–9.4	7.4–10.5	9.9–13.7
	—	0.003	0.064	0.261	0.271
Church	0.9	1.0	2.3	1.1	1.2
	0.4–1.4	0.5–1.6	1.2–3.4	0.5–1.7	0.7–1.7
	—	0.788	0.027	0.602	0.468
Class	12.6	10.7	12.1	12.2	11.5
	10.2–15.0	7.2–14.2	8.7–15.4	9.6–14.7	9.7–13.4
	—	0.460	0.842	0.837	0.501
Dating app/website	29.1	36.2	33.8	31.2	31.4
	26.6–31.6	33.6–38.7	28.3–39.2	27.0–35.5	29.0–33.7
	—	0.000	0.114	0.420	0.219
Dorm	4.7	3.2	4.9	2.9	2.8
	3.2–6.1	1.9–4.4	3.7–6.1	2.3–3.6	1.8–3.8
	—	0.152	0.777	0.018	0.034
Hometown	11.2	12.2	11.3	14.6	12.1
	9.2–13.3	8.9–15.6	9.3–13.4	11.9–17.4	10.5–13.8
	—	0.606	0.952	0.041	0.537
Through friends/family	18.2	15.4	14.2	14.3	16.4
	16.0–20.4	13.5–17.3	12.1–16.4	11.8–16.7	14.6–18.2
	—	0.098	0.003	0.031	0.251
Campus group	3.3	2.0	1.9	2.3	1.9
	2.4–4.2	1.3–2.8	1.2–2.7	1.5–3.1	1.3–2.5
	—	0.036	0.021	0.097	0.013
Work	6.8	8.4	7.2	9.5	6.2
	5.2–8.4	6.9–9.8	5.7–8.8	8.0–10.9	4.2–8.1
	—	0.134	0.641	0.018	0.681
Public place	2.9	3.5	4.0	3.0	4.8
	2.1–3.8	2.1–4.8	2.9–5.1	2.1–3.9	3.9–5.7
	—	0.476	0.210	0.905	0.008

Table 6: (Continued)

Romantic relationships (N = 2,859)	2019–2020	2020–2021	2021–2022	2022–2023	2023–2024
Party/bar/nightclub	4.0	3.1	4.9	6.1	9.8
	2.5–5.4	1.8–4.4	3.7–6.0	4.0–8.3	5.9–13.6
	—	0.363	0.328	0.085	0.000
Church	1.7	1.7	1.8	1.1	1.8
	0.8–2.6	0.4–2.9	0.6–2.9	0.3–2.0	0.6–3.0
	—	0.997	0.893	0.315	0.885
Class	17.6	13.0	14.1	14.7	13.7
	14.4–20.7	10.6–15.5	11.4–16.8	12.8–16.5	12.0–15.4
	—	0.047	0.099	0.115	0.020
Dating website	20.0	25.8	19.9	22.3	23.9
	16.5–23.6	19.9–31.8	15.1–24.6	17.8–26.8	21.4–26.4
	—	0.017	0.940	0.291	0.087
Dorm	2.4	2.6	6.0	3.8	4.7
	1.3–3.4	1.9–3.3	4.2–7.8	2.5–5.1	3.4–6.0
	—	0.711	0.001	0.132	0.026
Hometown	24.6	24.0	21.3	18.1	9.4
	19.0–30.1	19.3–28.7	16.6–26.1	13.9–22.2	7.7–11.1
	—	0.821	0.327	0.037	0.000
Through friends/families	16.8	15.7	20.2	17.7	22.3
	14.5–19.2	13.0–18.4	19.0–21.5	13.7–21.7	20.7–23.9
	—	0.587	0.021	0.667	0.000
Campus group	3.2	2.2	2.7	3.4	1.6
	2.4–4.1	0.8–3.7	1.4–4.0	1.5–5.3	1.3–1.9
	—	0.323	0.579	0.870	0.000
Work	7.7	9.3	7.0	10.4	11.4
	6.6–8.8	6.2–12.4	5.6–8.4	7.8–13.1	9.6–13.2
	—	0.379	0.526	0.082	0.001
Public place	2.6	2.5	1.8	2.8	3.5
	1.8–3.4	1.6–3.4	0.7–2.8	1.8–3.9	2.3–4.8
	—	0.948	0.283	0.693	0.236

Notes: Regression-adjusted percentages in first line, 95% confidence intervals in second line, p-values in third line. Results are from random effects logistic regression models controlling for gender, race, parent has BA, age, and clustering in schools (ref: 2019–2020).

5. Discussion

Examining how romantic and sexual partnering changed among college students during the COVID pandemic sheds light on how changes to sexual fields and geographies can change the incidence and nature of sexual and romantic partnering. Findings also shed light on the importance of accounting for demographic change when examining sexual partnering. During the pandemic, the percentage of college students who reported they had hooked up in college remained mostly flat, while the likelihood that a student had formed a long-term relationship or gone on a date while in college increased temporarily. However, these trends were mostly driven by changes in the age composition of college students. National data confirmed trends we found in our data: a substantial drop in 18-year-olds attending college during the height of the pandemic. Since most students in our dataset attended college during a limited age range, and since older students are more likely to have hooked up, dated, or formed long-term relationships while in college (Kuperberg and Padgett 2016), this change in demographic composition was related to substantial changes in partnering trends among the college students surveyed.

Examination of recent and freshman reports of having hooked up revealed that percentages dropped in 2020–2021 and then rebounded briefly in 2021–2022 before dropping again afterward, never reaching pre-pandemic levels during the time under observation. In cumulative measures, after accounting for age composition changes, students attending college in 2021–2022 reported lows in percentages having hooked up, with accumulated time of exposure to fears about the pandemic and without in-person classes on many campuses that we surveyed perhaps leading to a lower accumulated likelihood of having hooked up with someone in college. As sexual fields shifted online, more students may have engaged in dating instead of hooking up because of different sex ratios in online dating and scripts associating meeting online with first going out on a public date before engaging in sexual activity (Kuperberg and Padgett 2015; Lundquist and Curington 2019). Cumulative reports of hooking up began to rise in 2022–2023, but reports of recent hookups (semester of survey) and number of hookups among traditional-aged freshman had a larger immediate drop and remained lower throughout the time period examined, with changes during COVID perhaps altering sexual expectations or scripts associated with college, leading to enduring declines in hooking up and a retreat of campus hookup culture.

Results also show a brief spike in long-term relationships in 2022–2023, with numbers subsiding afterward. Freshmen were also more likely to report dating in 2021–2022 compared to pre-pandemic levels and had a short-lasting recovery in the percent reporting hooking up that year. This could have been a backlash against the loneliness of COVID. In the case of long-term relationships, perhaps the difficulty of exiting relationships during that time prolonged some partnerships artificially. In any respect, this trend was short. By 2023–2024 romantic relationships were similar to pre-COVID trends, while the percentage of students reporting dating dropped further for everyone and went back to pre-pandemic levels for freshman. Rather than being a "period effect" of COVID, this continued depression in reports of hooking up and the drop-off in cumulative and recent reports of dating in the last year of observation may be a "cohort effect," as younger cohorts, who have been found to have less engagement in sexual activity compared to earlier cohorts, entered college (Bozick 2021). Preliminary analyses of OCSLS 2.0 data from 2024–2025 found that these trends persisted in the following year.

After taking into account the changing age structure of young adults enrolled in college (and in our study), reports of dating and romantic relationship formation and the number of dates, hookups, and relationships stayed remarkably flat over the early pandemic for those engaging in those relationships, even as college campuses closed and went virtual and many traditional meeting places for romantic and sexual partners were closed off. While reports of having been on a date in the semester students took the survey declined somewhat during the height of the pandemic, college students enrolled during

that time had similar overall college experiences when it came to romantic partnering and dating compared to those enrolled a year or two earlier or later. This lack of movement on dating and relationship formation is itself an important finding, as many of the avenues that students previously used to meet partners were unavailable or restricted during the pandemic – and as we found, meeting sexual and romantic partners in some of those places was reduced as well. Instead of reducing dating and partnering, however, students shifted to online dating, which offset declines in in-person meetings and helped stabilize engagement in dates, relationships, and to a lesser extent hookups over time.

But with physical campuses closed, older students on campus, shifts to online sexual geographies that had a different sex ratio (with more men instead of more women), and distinct sexual scripts (including meeting in person for a date before engaging sexually with a stranger) – and perhaps due to fears about disease transmission – hookup culture saw a decline during the height of the pandemic. This cumulative decline did not fully recover over the time period examined, even several years after campus closures and the sharp reduction of in-person learning in 2020–2021. Dating declined as well. These declines were somewhat hidden on campus as fewer 18-year-olds enrolled in school, with the typical 18-year-old having less experience with hookups. However traditional-aged freshman continue to report depressed engagement in and number of hookups compared to pre-pandemic levels. This decline may be indicative of a larger shift in college and young adult culture that may be sustained beyond the pandemic.

Dating app use had already substantially increased before the pandemic compared to findings from the OCSLS 1.0. In 2019–2020, with most data collected before the pandemic, frequencies were around 22% of most recent hookups and 29% of most recent dates being met online compared to 2.4% for hookups and 3.6% for dates in the OCSLS 1.0, collected in 2005–2011 (Kuperberg and Padgett 2015). As campuses closed, there was a reduction in the number of hookup, dates, and romantic relationships found on campus and an increase in the number of students finding those partners online. While we do not have results from the OCSLS 1.0 for the number of romantic relationships met online, we find an increase from 20% met online as of 2019–2020 to a peak of almost 26% of romantic relationships met online in 2020–2021. While reports of meeting online dropped in subsequent years, partners continue to meet online more commonly than prior to the pandemic. However, there were no substantial increases in overall dating app usage. This suggests that while there was no increase in new users to dating apps, students who had been using dating apps began to use them to meet partners more frequently and/or met partners in other contexts less frequently.

These changes to partner meeting contexts, both more recently and between the first and second wave of the OCSLS, have broader implications for demographic trends in sexual and romantic partnering and experiences in seeking partners in college. Research has found that sexual racism thrives in online dating, such that daters of color often face

heightened racialized sexual harassment, rejection, and othering while using dating apps (Curington, Lundquist, and Lin 2021), with the increase in online dating potentially leading to diverging partnering patterns by race. Future research should examine racial differences in these trends. Despite the imbalanced sex ratio in online dating, we did not find a decline in dating for straight men during the pandemic, with men still able to leverage their rare status in college to engage in partnering. However, hookup reports did decline at points for both straight men and women during the height of the pandemic, as they shifted to meeting partners online, a riskier venture than meeting partners in public. When meeting partners online (a social context in which men outnumber women) instead of on campus (where women outnumber men), women may have been able to better realize their preference for fewer casual sexual encounters and their stronger preference for dating and forming relationships (Kuperberg and Padgett 2016). Given that over one-third of marriages begin with a hookup (Rhoades and Stanley 2014) and that some students meet future marriage partners in college, this decline may lead to longer-term declines in marriage rates among the cohort of students who attended college during the pandemic. Conversely, flatter trends in dating and long-term relationship formation may indicate that marriages will continue at similar rates. Future research should examine how marriage rates of those who were attending college during the pandemic may differ compared to earlier or later cohorts, accounting for the unusual age composition of this cohort.

One important note is that these relationships may not operate in the same manner for queer people and that among queer people, patterns differed by gender. For instance, queer men reported fewer hookups at the height of the pandemic while queer women reported more hookups but a decline in dating. An emphasis on sexual health among queer men (Graham et al. 2017), a greater reliance on online partner-seeking (Kuperberg and Padgett 2015), and reduced on-campus LGBTQ+ activities may have contributed to these distinct patterns. Despite their lower percentages of dating in the second year examined, queer women who did date had a higher average number of date partners in that year. While some may have been more cautious, reducing overall percentages of having been on a date, those who were less cautious may have had more access to potential dates, as more students generally turned to online sources to find partners.

6. Limitations

This study had some limitations. While we sampled a large range of students, increasing the diversity of colleges compared to the first wave of the OCSLS, findings were not nationally representative of college students. Pre-COVID data collection included only one recent full semester of data, from fall 2019, with the pandemic beginning to impact

campuses in March 2020. A little over 14% of survey respondents in the 2019–2020 cohort had data collected in April, May, or June of that year, although sensitivity tests found that surveys collected later in the academic year did not differ from those collected earlier. We did not ask about romantic relationships shorter than six months; therefore we were not able to calculate overall numbers staying single in college, since some students may have formed shorter-term romantic relationships that were not captured in our data.

The main measures examined percentages having ever hooked up, dated, or formed a long-term relationship in college, but cumulative percentages do not precisely capture the potential temporal effect of the pandemic in the semesters in which the events occurred. The survey collected data about most recent hookup, date, or long-term relationship, allowing us to calculate only the date of the most recent event rather than a per-semester rate at which students hooked up, dated, or formed relationships. While we were also able to examine dating and hooking up during the current semester to get a more accurate sense of short-term changes in partnerships, this measure gives less of a sense of cumulative frequencies and prevalences of these activities and can be influenced by differences in the timing of data collection across a semester. We cannot calculate a similar measure for long-term relationships since our definition of these relationships is that they lasted at least six months (and thus began before the present semester). We examined results among traditional-aged freshman as a sensitivity test to account for this issue, but freshman have different patterns of engaging in romantic and sexual partnering compared to more advanced students (Kuperberg and Padgett 2015). Finally, we allowed students to self-define hookups and romantic relationships. While this provides many advantages in allowing us to capture the full range of activities students may define as relationships or hookups, researcher-imposed definitions may have resulted in different outcomes. There may also have been some overlap between encounters students counted as dates and those they counted as hookups.

7. Conclusion

As global climate change and population growth continue, potentially leading to future pandemics or other disasters, understanding how partnering behavior may change or persist during such events may be of sustained importance. Our findings also have important implications for the cohort of students who were attending college during the time period observed. College is often a time when students meet and settle down with future partners; changes to college sexual geographies and fields — and therefore to college students' chances of engaging in romantic relationships, dating, and hooking up — may have long-term implications for the marriage and fertility rates of this cohort. For

instance, the sustained declines we find in hooking up during the pandemic and more recent declines in dating may lead to further delayed marriage timelines and declines in marriage and childbearing rates. Increases in online dating and the increase in availability and use of online college courses since the pandemic may lead to demographic shifts in who is able to form relationships and when. We provide preliminary results of important changes in romantic relationship formation, hooking up, and dating in college over the early pandemic years. More broadly, our results speak to how partnering can change when sexual geographies shift from the college campus to online apps, providing insight into how sexual fields reorganize within those new geographies alongside the increasing digitization of romantic and sexual partnering. Data collection for this survey continues, and future research will draw upon these data to more closely examine other topics related to sexual and romantic partnering in college, including how state-level variation in abortion laws may impact sexual partnering, how attitudes and other sexual behaviors may have changed over time, and whether changes persist.

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9. Statement of authors' contributions

All authors contributed to conceptualization and writing of the original draft, revisions, and reviewing and editing drafts before submission. Kuperberg, Curington, and Lundquist contributed to project administration, survey design, data collection, and data curation and used internal noncompetitive resources to fund research assistants on this project. Kuperberg and Daniels contributed to data cleaning, data coding, and data analysis for the OCSLS 2.0 and produced tables, with Kuperberg conducting final analyses and validation by Lundquist. Kuperberg and Lundquist primarily designed the statistical analytic methods with input from Daniels and Curington. Kuperberg analyzed CPS data and produced the figure.

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Appendix

Part 1: P-values for average discrete change (ADC), cross-model difference (CMD) comparing model 1 to model 2 and gender-specific models

Table A-1: P-values for ADC, CMD for "hooked up and number of hookups in college"

Year of survey	2020–2021	2021–2022	2022–2023	2023–2024
Has hooked up				
Model 1 vs. Model 2	.000	.000	.015	.084
Model 2 differences by gender				
Cis straight women				
– Cis queer women	.925	.735	.619	.891
– Cis straight men	.147	.855	.749	.979
– Cis queer men	.954	.922	.974	.001
– Gender expansive	.706	.292	.334	.189
Cis queer women				
– Cis straight men	.224	.916	.913	.905
– Cis queer men	.896	.808	.758	.012
– Gender expansive				
Cis straight men				
– Cis queer men	.290	.891	.814	.019
– Gender expansive	.737	.387	.820	.237
Cis queer men				
– Gender expansive	.776	.307	.366	.848
Number of hookups (hooked up only)				
Model 1 vs. Model 2	.001	.000	.004	.003
Model 2 differences by gender				
Cis straight women				
– Cis queer women	.088	.914	.000	.240
– Cis straight men	.488	.404	.735	1.00
– Cis queer men	.117	.482	.409	.094
– Gender expansive	.125	.391	.792	.974
Cis queer women				
– Cis straight men	.467	.672	.007	.202
– Cis queer men	.036	.411	.064	.185
– Gender expansive	.061	.358	.628	.849
Cis straight men				
– Cis queer men	.096	.392	.496	.129
– Gender expansive	.085	.474	.709	.973
Cis queer men				
– Gender expansive	.684	.219	.482	.444

Table A-2: P-values for ADC, CMD for "dated and number of dates in college"

Year of survey	2020–2021	2021–2022	2022–2023	2023–2024
Has dated				
Model 1 vs. Model 2	.000	.000	.051	.191
Model 2 differences by gender				
Cis straight women				
– Cis queer women	.008	.064	.462	.452
– Cis straight men	.205	.884	.595	.030
– Cis queer men	.169	.745	.212	.929
– Gender expansive	.621	.769	.252	.452
Cis queer women				
– Cis straight men	.356	.624	.359	.223
– Cis queer men	.966	.809	.346	.807
– Gender expansive	.918	.538	.335	.413
Cis straight men				
– Cis queer men	.589	.903	.136	.255
– Gender expansive	.862	.715	.180	.174
Cis Queer men				
– Gender expansive	.933	.700	.537	.476
Number of dates (dated only)				
Model 1 vs. Model 2	.000	.000	.003	.018
Model 2 differences by gender				
Cis straight women				
– Cis queer women	.338	.923	.807	.804
– Cis straight men	.036	.094	.128	.418
– Cis queer men	.037	.000	.010	.001
– Gender expansive	.309	.161	.474	.760
Cis queer women				
– Cis straight men	.212	.246	.394	.390
– Cis queer men	.215	.002	.022	.004
– Gender expansive	.519	.150	.379	.641
Cis straight men				
– Cis queer men	.675	.013	.059	.032
– Gender expansive	.983	.338	.136	.969
Cis queer men				
– Gender expansive	.763	.125	.060	.094

Table A-3: P-values for ADC, CMD for "had relationship and number of relationships in college"

Year of survey	2020–2021	2021–2022	2022–2023	2023–2024
Has had relationship				
Model 1 vs Model 2	.000	.000	.027	.589
Model 2 differences by gender				
Cis straight women				
– Cis queer women	.306	.383	.025	.214
– Cis straight men	.751	.008	.010	.983
– Cis queer men	.021	.030	.123	.947
– Gender expansive	.478	.879	.112	.148
Cis queer women				
– Cis straight men	.383	.186	.685	.238
– Cis queer men	.339	.274	.006	.377
– Gender expansive	.258	.862	.511	.364
Cis straight men				
– Cis queer men	.006	.615	.000	.956
– Gender expansive	.572	.439	.616	.136
Cis queer men				
– Gender expansive	.156	.354	.054	.129
Number of relationships (had relationship only)				
Model 1 vs. Model 2	.000	.010	.160	.956
Model 2 differences by gender				
Cis straight women				
– Cis queer women	.133	.385	.001	.346
– Cis straight men	.152	.181	.158	.611
– Cis queer men	.502	.356	.072	.835
– Gender expansive	.612	.765	.181	.741
Cis queer women				
– Cis straight men	.629	.781	.236	.714
– Cis queer men	.060	.216	.889	.832
– Gender expansive	.606	.545	.011	.884
Cis straight men				
– Cis queer men	.202	.119	.370	.988
– Gender expansive	.827	.324	.028	.930
Cis queer men				
– Gender expansive	.326	.731	.026	.956

Table A-4: P-values for ADC, CMD for "has used dating apps"

Year of survey	2020–2021	2021–2022	2022–2023	2023–2024
Has used dating apps				
Model 1 vs Model 2	.000	.000	.000	.007
Model 2 differences by gender				
Cis straight women				
– Cis queer women	.705	.881	.736	.410
– Cis straight men	.490	.457	.205	.955
– Cis queer men	.308	.105	.324	.030
– Gender expansive	.804	.955	.682	.913
Cis queer women				
– Cis straight men	.808	.442	.089	.422
– Cis queer men	.392	.126	.237	.009
– Gender expansive	.763	.984	.763	.967
Cis straight men				
– Cis queer men	.509	.173	.828	.029
– Gender expansive	.688	.827	.460	.904
Cis queer men				
– Gender expansive	.520	.439	.412	.351

Part 2: Sensitivity tests examining freshman partnering (results limited to college freshman aged 18–19)

Table A-5: Hooking up and dating among college freshman age 18–19

	2019–2020	2020–2021	2021–2022	2022–2023	2023–2024
Model 2: Model 1 + age, race, parent BA, gender					
Percent hooked up in college	48.0	41.5	46.1	37.1	42.3
	43.2–52.7	34.9–48.1	42.8–49.4	29.5–44.8	36.9–47.7
		0.133	0.452	0.023	0.123
Number of hookups since starting college (if hooked up)	3.05	2.84	2.59	2.35	2.44
	2.59–3.54	2.15–3.53	2.41–2.76	2.05–2.66	2.26–2.62
		0.636	0.082	0.020	0.026
Percent dated in college	42.1	40.7	49.9	42.9	41.4
	38.1–46.0	36.4–44.9	47.3–52.4	38.0–47.6	38.8–43.9
		0.643	0.001	0.806	0.757
Number of dates since starting college (if dated)	3.09	2.96	3.36	3.19	2.95
	3.79–3.40	2.59–3.32	3.05–3.67	2.49–3.88	2.82–3.08
		0.556	0.226	0.798	0.360
Percent long-term relationship in college	25.3	26.4	30.5	31.9	25.8
	20.5–30.1	23.9–28.8	26.2–34.8	28.3–35.5	23.2–28.4
		0.684	0.124	0.052	0.858
Number long-term relationships since starting college	1.14	1.18	1.27	1.22	1.17
	1.02–1.27	1.08–1.28	1.21–1.32	1.15–1.29	1.12–1.22
		0.681	0.054	0.258	0.730
N	923	391	329	294	1,104

Note: Regression-adjusted percentages/means in first line, 95% confidence intervals in second line, p-values in third line (ref: 2019–2020).