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Tara D. Warner
Wendy D. Manning
Peggy C. Giordano
Monica A. Longmore

Department of Sociology and
Center for Family and Demographic Research

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Tara D. Warner

Wendy D. Manning

Peggy C. Giordano

Monica A. Longmore

Department of Sociology and

Center for Family and Demographic Research

Bowling Green State University

Bowling Green, OH

222 Williams Hall

Bowling Green, OH 43402

twarner@bgsu.edu

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ABSTRACT

Research links sex ratios with the likelihood of marriage and divorce; however, whether sex ratios similarly influence precursors to marriage, such as transitions in and out of dating or cohabiting relationships, is unknown. Utilizing data from the Toledo Adolescent Relationships Study (TARS) and the 2000 Census, this study assesses whether sex ratios influence the formation and stability of young adults' romantic relationships. We find that relationship formation is unaffected by the presence of alternative partners; however, the number of dating partners, the likelihood of cohabitation, and the odds of cheating are influenced with the effects varying by gender. It appears that sex ratios influence not only transitions in and out of marriage, but also the process through which individuals search for and evaluate partners prior to marriage.

Prior studies have found that the sex ratio, broadly defined as the ratio of males to females in a particular geographic unit, is associated with the likelihood of marriage and the risk of divorce. These behaviors are the end result of a matching process whereby individuals search for, find, and evaluate current and potential partners—what Cherlin (2009) refers to as a coming and going of partners characteristic of intimate relationships in America. Research links marriage market characteristics to entry into and out of marriage (e.g., Blau, Kahn, & Waldfogel, 2000; South & Lloyd, 1992). For example, a shortage of men relative to women in the marriage market has been associated with lower rates of marriage, higher rates of divorce, and higher rates of nonmarital child-bearing (Lichter, McLaughlin, Kephart, & Landry, 1992; South & Lloyd, 1992). The underlying explanation is that the sex ratio represents the availability of opportunities for individuals to form relationships (Fossett & Kiecolt, 1991; South, Trent, & Shen, 2001).

Despite evidence from these studies, research has yet to examine thoroughly the effect of sex ratios on behaviors *preceding* the decision to marry or divorce—e.g., transitions in and out of dating or cohabiting relationships—for both men and women. Furthermore, studies show the influence of neighborhood characteristics on nonmarital intimate behaviors of young adults, such as multiple and short-term sexual partnering and early parenthood (e.g., Billy & Moore, 1992; Browning, Burrington, Leventhal, & Brooks-Gunn, 2008; Browning & Olinger-Wilborn, 2003; South & Baumer, 2000), but often ignore the effect of sex ratios. The current study bridges research on sex ratios and marriage with that on neighborhoods and early adult relationships by analyzing the effect of sex ratios (i.e., available partners) on the formation and stability of nonmarital intimate relationships among young adults. This topic is particularly relevant for emerging adults because "[e]stablishing satisfying, long-term intimate relationships is one of the main challenges of early adulthood" (Amato & Booth, 1997:84; Arnett, 2004) given the role of

dating (Longmore, Manning, & Giordano, 2001) and cohabitation (Manning, Longmore, & Giordano, 2007) in the progression of intimate unions. Because many determinants of union formation and stability vary between men and women (Smock & Manning, 1997; South & Crowder, 2000; Teachman, Polonko, & Leigh, 1987), we explore differential effects of sex ratios using gender-stratified analyses. Our work reflects current family formation trends by relying on recently collected data and extends past research examining neighborhood effects on young adult relationships by exploring these associations within a population not limited to socioeconomically disadvantaged individuals.

BACKGROUND

Sex Ratios and Marriage: Union Formation and Dissolution

The marriage market is often characterized in terms of the sex ratio—the number of men relative to women (Fossett & Kiecolt, 1991), which represents the availability of opportunities for individuals to form relationships (South et al., 2001).[1] One explanation for the effect of marriage market characteristics is the marital search model (Becker, 1981; Oppenheimer, 1988), which posits that individuals search for mates in specific areas, with the probability of marriage highest when the number of potential partners is greatest. Here, the sex ratio simply represents the availability of potential mates, and markets are deemed favorable or unfavorable based on the distribution of males and females in the population. That is, a market characterized by an excess of women would be considered favorable for men, but unfavorable for women. The marital search process has been compared to job search processes, since both "…involve gathering information about the distribution of opportunities and then choosing the best available opportunity, given one's own qualifications and attractiveness" (Harknett, 2008:556). In

unfavorable markets, because choices are limited, individuals may lower their standards for potential partners, prolonging (or postponing) entry into relationships. Studies examining women's union formation behavior often support this explanation—in fact, most of the research on marriage markets has focused exclusively on women, although the search model predicts similar behavior for men and women. Consistent with a focus on the absolute availability of partners, these studies (e.g, Lichter, LeClere, & McLaughlin, 1991; Lichter et al., 1992; South & Lloyd, 1992) have found that shortages of men are associated with lower marriage rates, and a greater availability of men are associated with higher rates of marriage among women.

An implicit assumption of the marital search perspective is that men and women equally value and seek out marriage. Thus, it posits a positive, linear relationship between the number of available partners and the odds of marriage; however, evidence suggests that women may have greater desires for marriage than men (Bulcroft & Bulcroft, 1993; Sprecher, Sullivan, & Hatfield, 1994; Thornton & Young-Demarco, 2001). Thus, a second explanation for the effect of marriage market characteristics—the imbalanced sex ratio perspective (Guttentag & Secord, 1983)—is important to consider. This perspective, rooted in economic principles of exchange theory (Baumeister & Vohs, 2004; see also Uecker & Regnerus, 2010), applies a gendered lens to the effect of market characteristics, suggesting greater bargaining power for the sex in short supply and focusing on conflicting goals between men and women (Guttentag & Secord, 1983). Relationship formation is determined by the sex with the greatest dyadic power, as this facilitates the maximization of rewards and minimization of costs. For instance, because women are more often financially dependent on spouses, they are expected to use their bargaining advantage (when they are in short supply) to marry higher-status mates. Therefore, the imbalanced sex ratio

perspective (like the marital search perspective) predicts a linear, positive effect of sex ratio on women's likelihood of marriage (Kiecolt & Fossett, 1997).

Conversely, given men's weaker economic incentives to marry (Albrecht & Albrecht, 2001), coupled with their desire to avoid or delay marriage, the imbalanced sex ratio perspective suggests that when men have bargaining advantage, there is less need for them to commit to relationships, and they experience a lower likelihood of marriage in favor of nonmarital relationships (Uecker & Regnerus, 2010). Kiecolt and Fossett (1997) suggest men's odds of marriage are actually low in two circumstances. First, men's marriage odds are low when women are plentiful because men are able to secure sexual relationships without marital commitment. Second, based on the marital search model, men's odds of marriage are also low when women are scarce because men are constrained by fewer choices. Thus, Kiecolt and Fossett (1997) posit a curvilinear effect of sex ratio on men's odds of marriage, with marriage occurring most often among men in markets with balanced sex ratios and least often when available partners are plentiful or scarce. Lloyd and South (1996:1099), however, suggest that men's odds of marriage are *highest* when women are scarce—in unfavorable markets, men are "motivated to commit to marriage in order to maintain a relationship with an opposite sex partner." Therefore, there may be a linear and negative effect of partner availability on men's odds of marriage, with the odds highest when women are scarce and lowest when they are plentiful.

Despite these theorized differences in the effect of market characteristics on men's and women's behavior, few studies have empirically examined gender differences in the effect of sex ratios on union formation. Two studies by Fossett and Kiecolt (1990, 1993) (both focused on African Americans) support expectations of the imbalanced sex ratio explanation at the aggregate level—the sex ratio was positively related to marriage for women and showed a

curvilinear pattern for men. Marriage rates were lowest where there was either a surplus of women or a deficit of women, but highest where sex ratios were balanced. Similarly, Albrecht and Albrecht (2001), using data from the 1990 U.S. Census, found that the proportion of men married was lower in counties with a surplus of women compared to counties with more balanced sex ratios. It should be noted that all of these studies examined aggregate data from the U.S. Census (as compared to individual-level data). The one study to examine sex ratio effects on *men's* marital behavior at the individual level (Lloyd & South, 1996) supported the marital search perspective, finding that men had higher odds of marriage in markets where women were plentiful.

Both marital search and the imbalanced ratio perspectives suggest a linear, positive relationship between partner availability and women's union formation behavior; therefore, the only way to distinguish the two perspectives is to examine men's behavior, given the possible varied effects (negative and linear, curvilinear) of partner availability on men's union formation. A contribution of the current study is that we explore the effect of sex ratios on the behaviors of women *and* men. To date, there are no studies examining the effect of imbalanced sex ratios on dating or sexual relationships of both men and women—thus an additional contribution of this study is our focus on intimate relationships occurring prior to marriage.

While marriage market characteristics are important for entry in to marriage, they are also implicated in marital stability, as demonstrated in studies of divorce. Sex ratio explanations have been integrated into work on marital dissolution, with unbalanced sex ratios representing greater potential opportunities for sexual infidelity. Sexual infidelity is one of the strongest predictors of divorce (e.g., Amato & Previti, 2003; Amato & Rogers, 1997). A particularly relevant characteristic of couples' local context is the number of spousal alternatives present, measured in

terms of sex ratios. Unions often end because one partner finds a more attractive mate (or perceives a high probability of doing so), and the opportunities for finding a more attractive mate are a product of the sex ratio—the distribution of men and women in the population (South et al., 2001).

Consistent with the exchange perspective (see, Sabatelli & Cecil-Pigo, 1985; Sprecher, 2001), past research has shown that perceptions of alternative partners (regardless of the actual presence of alternatives) are a risk factor for union dissolution (e.g., Felmlee, Sprecher, & Bassin, 1990; Udry, 1981), as is the actual availability of alternative partners (South & Lloyd, 1995; South et al., 2001). Partner availability has even been associated with the risk of divorce above and beyond individual- and couple-level risk factors (e.g., age at marriage, number of children, and metropolitan residence) (South et al., 2001). Thus, the sex ratio of one's marriage market influences both the formation of new unions and the stability and dissolution of existing unions.

Romantic Relationships in Emerging Adulthood

Marriage is the capstone of a dynamic searching, sorting, and selecting process (Cherlin, 2009). This process, ubiquitous in the lives of adolescents and emerging adults, is reflected in dating behavior, and given the link between cohabitation and marriage in terms of mate selection (Blackwell & Lichter, 2000; Guzzo, 2006; Manning et al., 2007), dating, like cohabitation, is a stage in the sorting and selecting process—another part of what Guzzo (2006) refers to as the "relationship spectrum." The formation of intimate relationships is an important life course process and a key developmental task during emerging adulthood (Amato & Booth, 1997; Arnett, 2004; Meier, Hull, & Ortyl, 2009; Settersten, Furstenberg, & Rumbaut, 2005). The

increasing age at marriage has resulted in a significant proportion of young adults with upwards of 10 years of relationship experience prior to marriage. Therefore, it is important to draw on recently collected data to explore the influence of sex ratios on relationship formation patterns.

Moreover, given the rising prevalence of premarital cohabitation over the past several decades, many marriages involve a double selection process—selection into cohabitation then selection into marriage (Blackwell & Lichter, 2000; see also, Manning & Smock, 2002). While most research on market characteristics focuses on marital behavior, two studies have tested the effect of sex ratios on cohabitation. Using data from the National Survey of Families and Households, Raley (1996) did not find a significant effect of mate availability (sex ratio) on cohabitation. Guzzo (2006), analyzing women in the 1995 National Survey of Family Growth, found a sex ratio benefitting women (i.e., greater availability of male partners) was not associated with higher odds of cohabitation compared to staying single. However, because both studies limited their analyses to women's behavior, it remains unclear whether the sex ratio would similarly affect men's decisions to cohabit.

Given that sex ratios influence marriage behaviors, and marriage is an end-stage of the dating process, we expect that sex ratios exert an effect earlier in the selection process, prior to marriage. Yet research has not directly examined sex ratios and dating behavior. Research examining neighborhood effects on young adult sexual and romantic relationship behavior has consistently found that disadvantaged neighborhoods, which often have fewer men relative to women, are characterized by multiple sexual partnering (by men) and early nonmarital fertility (e.g., Anderson, 1999; Browning & Olinger-Wilborn, 2003; South & Baumer, 2000), consistent with the growing trend of non-relationship (e.g., "hook-up") sex (see Manning, Giordano, & Longmore, 2006; Manning, Longmore, & Giordano, 2005). This evidence is supportive of

imbalanced sex ratio explanations if men, when the sex in short supply, are delaying commitment to a single partner. It is noteworthy that although the imbalanced sex ratio perspective characterizes men as valuing sex over commitment, it is unknown if adolescent and young adult males hold similar values. In fact, recent research has documented that men are frequently as emotionally invested in relationships as their female counterparts (e.g., Giordano, Longmore, & Manning, 2006; Rostosky, Welsh, Kawaguchi, & Galliher, 1999). Our work builds on and contributes to this research by directly considering how sex ratios influence dating and cohabitation among men and women in emerging adulthood.

CURRENT INVESTIGATION

Decisions about partnering with the opposite sex begin much earlier than decisions to marry. Drawing from the search and exchange perspectives, the current study broadens our understanding of how sex ratios influence relationship patterns in emerging adulthood. Specifically, we assess whether two approaches to the sex ratio, the marital search perspective and the imbalanced sex ratio perspective, apply to young adult relationship patterns. We examine two measures of relationship formation (currently dating, currently cohabiting) and three measures of stability (number of dating partners, relationship volatility, cheating), to assess, specifically: (1) Does partner availability, captured by the sex ratio, facilitate pre- and/or non-marital union formation among young adults, and do these effects vary by gender?; and (2) Do available alternative partners affect young adults' relationship stability, and does this effect vary by gender?

We move beyond prior studies in five key ways. First, we extend past research by examining the effect of sex ratios on the dating and mating behavior of young adults, as prior

studies have not examined the effect of sex ratios on the relationship behavior of male and female *young adults*. Second, our study explicitly considers a key mechanism (relationship alternatives) that is implicitly part of prior studies on marriage markets. Prior work implies that sex ratios influence marital dissolution because they signify "exposure" to relationship alternatives. We test if the sex ratio influences whether young adults have *actually cheated* on their romantic partner. Third, we extend our analyses to the relationship behaviors of *both* young women and men; the vast majority of past research has focused exclusively on women. Fourth, given the continued increase in the age at first marriage and growth in cohabitation, it is important to rely on recent data. We draw on data collected in 2006, reflecting recent family formation trends. Finally, we include several measures associated with relationship formation and stability, such as attitudes and relationship commitment, to test whether sex ratios matter net of important individual and relationship characteristics.

DATA AND METHODS

The current study utilizes survey data from the Toledo Adolescent Relationships Study (TARS) merged with 2000 Census data. TARS is a longitudinal study exploring adolescents' and young adults' relationships with parents, peers, and romantic partners and examining dating, cohabitating, and marital relationships in adolescence and emerging adulthood. The TARS has advantages over other datasets for this analysis. For example, because the majority of respondents reside in the greater Toledo Metropolitan Area, we can examine variation in the effect of sex ratios on patterns of behaviors occurring *within* a larger Labor Market Area (LMA). Additionally, while previous studies (e.g., South et al., 2001) analyzed the effect of sex ratios on the risk of divorce, or assessed (among divorced persons) whether a divorce was preceded by sexual infidelity (South & Lloyd, 1995), TARS directly asked respondents if they cheated on

their dating partner. This assessment of cheating allows us to explicitly gauge the impact of sex ratios on the mechanism (i.e., relationship alternatives) of union dissolution often implied in past research. This direct assessment of cheating is not available in other datasets examining adolescents and young adults, such as the National Longitudinal Study of Adolescent Health (Add Health), which only asks respondents if they suspected their *partner* had been sexually non-exclusive. Although previous analyses of Add Health (e.g., Ford, Sohn, & Lepkowski, 2002) use respondents' reports of the dates of their past sexual relationships to gauge concurrency, our direct measure is likely less subject to problems of recall bias.

The sample for the TARS was drawn from the enrollment records of registered students in the 7th, 9th, and 11th grades in Lucas County, Ohio (n = 1,321), a largely urban metropolitan area that includes the city of Toledo (students need not be attending school to participate). A stratified, random sample was obtained. Interviews were conducted primarily in respondents' homes using laptop computers preloaded with the survey questionnaire. Respondents were ages 12-19 at Wave 1 (2001), 13-20 at Wave 2 (2002), 15-22 at Wave 3 (2004), and 17-24 at Wave 4 (2006). Respondents' primary caregiver was also interviewed at Wave 1.

Contextual data from the 2000 U.S. Census were appended to the TARS data. Respondents' addresses were geocoded (physical addresses were matched to their corresponding block group and tract number) using GeoLytics® GeocodeDVD software. The current analyses use data from Wave 4, with contextual data matched to respondents' Wave 4 residence, measured at the census tract level (n = 1,092). The analytic sample excludes married individuals (n=66), those who did not identify their sexual orientation as mostly heterosexual or 100% heterosexual (n=41)[2], and six respondents residing on military bases (exclusion criteria not mutually exclusive), leaving 981 respondents. We then exclude an additional 24 respondents

whose sex ratios were extreme outliers (discussed below). Survey questions relating to relationship stability were asked only of respondents who reported having a dating partner within the previous two years. Therefore, to maintain a consistent sample size across all analyses, we further subset the remaining 957 cases to the 826 respondents reporting dating during the past two years—thus these respondents were all similarly at risk for experiencing the outcomes of interest (as opposed to respondents who had never dated during the past two years). We note that analyses executed on the full sample of respondents, where applicable, produced results similar to those presented below. Because listwise deletion is less likely than mean substitution to bias the sample when the proportion of missing information is low (Allison, 2001), we also exclude 38 respondents missing information on key independent variables (discussed below). The final analytic sample includes 788 respondents (402 women, 386 men).

Measures

Dependent variables. We analyze behavioral indicators of union formation (currently dating, currently cohabiting) and stability (number of dating partners, relationship volatility, cheating). *Currently in a romantic relationship* is a dummy variable coded 1 for respondents answering affirmatively to the question: "Is there anyone you are currently dating—that is, someone you like who likes you back?" (respondents otherwise coded 0). We refer to this as currently in a romantic relationship, rather than currently dating, because the measure gauges union formation and captures respondents who are dating as well as those cohabiting. Analyses assessing *ever* in a relationship and models excluding cohabiters produced substantively similar results; however, to maintain consistent sample sizes across all models, analyses are executed on the analytic sample described above. *Currently cohabiting* is a dummy variable coded 1 for respondents currently living with a romantic partner (respondents who had never cohabited or

were not currently cohabiting are coded 0). Analyses modeling *ever cohabited* produced substantively similar results.

With regard to union dissolution, *number of romantic partners*, a continuous measure, is the number of persons a respondent reported dated during the past two years. *Relationship volatility* is measured as the number of times respondents reported breaking up with their current or most recent romantic partner (note, this measure refers to break-ups with the *same* partner). Because these two measures were highly skewed, we truncated the values at their race- and gender-specific 95th percentiles. *Cheating* is based on responses to the question: "Since your relationship started, how often have you gotten physically involved ("had sex") with other girls/guys?" Original response options (ranging 1 = never to 5 = very often) were collapsed into a dummy variable coded 1 for respondents, indicating any frequency other than "never."[3]

Independent variables. Our key independent variable is the proportion of available partners in respondents' immediate market, defined as their Census tract. This is consistent with Fossett and Kiecolt's (1991) characterization of marriage markets as local, and their note that individuals meet and choose potential mates from within their community (or a nearby community). Focusing on adolescents and young adults requires examining sex ratios in smaller units of analysis because their circles of interaction (e.g., social networks) are dense with age mates and smaller compared to adults' networks (e.g., counties or Labor Market Areas [LMA]). While census tracts may underbound the market for adults (Fossett & Kiecolt, 1991), they may be a more appropriate unit of analysis for adolescents and young adults than the county or LMA.

Because there is no single established method for calculating the sex ratio, we explored several operationalizations, using model fit to refine our measure. Based on the age of our

sample and the range of dating partner ages (reported by respondents), we focused our sex ratio on the 16-34 year old age range—although our respondents were ages 18 to 24, approximately 9% of them reported a dating partner younger than 18 and about 15% reported a partner older than 24. Given that many prior studies on marriage markets have used race-specific sex ratios (Fossett & Kiecolt, 1991; Harknett, 2008; Lichter et al., 1991), we explored two possible calculations of a race-specific sex ratio, first limiting our analyses to Black and White respondents and then using a sex ratio calculated separately for Whites and non-Whites (applied to the full analytic sample). Both measures were problematic—model fit was poor and in some models, the estimates were unstable (e.g., models estimated extremely large confidence limits for the sex ratio coefficient). We believe model fit was compromised when using race-specific sex ratios partly because the TARS data contain relatively few minorities (given the overall sample size), but more importantly, age-, gender-, and race-specific population sizes are at times not available in the Census (Summary File 3) at such a small geographical unit (the census tract). Cases were excluded from analyses if their tract-level race-specific population size was recorded as zero or missing, because their sex ratio could not be calculated. This was particularly problematic for non-White populations. For example, age- and race-specific tract-level Census data were missing, and sex ratios unable to be calculated for 1.6% of White respondents, and 4.6% of Black respondents. Therefore, to retain as many cases as possible and maximize model fit, we use sex ratios that are not race-specific. This may be perceived as a limitation of our analyses, but we believe this is a reasonable approach, especially given that studies suggest less racial homophily in adolescent/young adult dating and cohabiting relationships than in marriage (Blackwell & Lichter, 2000, 2004; Joyner & Kao, 2005).

We modified the traditional sex ratio (the proportion of men to women) in order to facilitate simultaneous examination of men and women. In its original metric, the sex ratio ranges from 0 to 1, where smaller numbers mean greater numbers of women relative to men, thus favorable markets for men, and 1 to positive infinity, with larger numbers indicating greater numbers of men relative to women, thus favorable markets for women. This range has not been problematic for the vast majority of past research, which focuses on the behavior of *either* women or men; however, our analyses examine *both* women and men. Therefore, we calculated a sex ratio with directionally consistent scores reflecting partner availability for men and women. For women, partner availability is calculated as the traditional sex ratio: the proportion of males in the census tract age 16-34 to females in the census tract age 16-34 multiplied by 100; however, the *inverse* of this formula is used to estimate available partners for males (the proportion of females relative to males). This results in an indicator directionally consistent across gender; that is, higher scores (ratios of 100 and above) represent greater alternatives for *both* men and women. Extreme outliers (values above the gender-specific 99th percentile and below the 1st percentile) are removed (so as not to bias the results), and the resulting measure ranges from 43.3 to 152.8, with a mean of 100.3.

As discussed above, one interpretation of the imbalanced sex ratio perspective suggests a curvilinear effect of sex ratio on men's relationship formation behavior (Fossett & Kiecolt, 1990). South's (1995; 1992) research on union dissolution also found a curvilinear effect of the sex ratio for both men and women, because extreme low and high values of the sex ratio reflect favorable markets for one of the partners and thus an increased risk of union dissolution. To test for this nonlinearity in the effects of sex ratio, our models include the sex ratio squared. Because

multicollinearity was problematic in models including both the sex ratio and its square, we grand mean-center the sex ratio (and square this mean-centered variable).

The sex ratio is our key indicator of interest; however, we also include several individual and relationship-specific characteristics that may be relevant for respondents' relationship behavior. Respondents' *race/ethnicity* is measured via dummy variables for Black, Hispanic, and Other (Asian, Pacific Islander, Alaskan Native) race, with White as the reference category. *Age* is a continuous measure ranging from 17-24. *Work status* is measured by dummy variables for work (respondents who were working either full or part-time and not in school) and school (respondents who were in school and may or may not have been working). Respondents who were idle (neither working nor in school) are the reference category. Whether the respondent had a *child* is a dummy variable coded 1 for respondents who reported having a child at any wave and zero if childless. Respondents' childhood *family structure* (taken from the baseline interview) is a series of dummy variables for two biological parents (reference), one biological parent, stepparent, and any other family structure. *Mother's education*, derived from the wave 1 parent interview, is used as a proxy for respondents' family of origin socioeconomic status. It is measured via dummy variables for less than high school and more than high school; a third dummy variable is included to retain respondents who were missing on this measure (n=72, 8.7%)—high school graduate is the reference category.

Respondents' behaviors and attitudes relating to sex and sexual exclusivity may influence their relationship patterns, net of, or instead of the characteristics of their dating/marriage markets. To control for this, we include measures tapping respondents' sexual impulsivity and cheating propensity. *Sexual impulsivity* is a mean scale of responses to three items (alpha = 0.54): "I only have sex for fun" (responses range 0 = strongly disagree to 4 = strongly agree);

"How often do you find yourself sexually attracted to someone you barely know?" (responses range 0 = never to 4 = very often); and "How important is it for you to be sexually exclusive (in general)?" (original response options reverse-coded to range from 0 = important to 4 = not important). Respondents were asked the extent to which they agreed or disagreed with nine hypothetical situations in which they might cheat on a romantic partner (e.g., I might cheat on my partner if I no longer loved my partner, …my partner cheated first, …I was drunk or using drugs, …we had a fight, etc.). Response options range from 0 = strongly disagree to 4 = strongly agree; *cheating propensity* is a mean scale of these nine items (alpha = 0.94). Although all twelve items were correlated, a factor analysis indicated a two-factor solution; therefore we retain the items as two separate scales reflecting sexual impulsivity and cheating propensity.

Certain characteristics of a romantic relationship may be associated with stability; we control for such characteristics to identify any real effects of the sex ratio. In addition to individual sexual impulsivity and cheating propensity, the analyses modeling relationship stability (number of dating partners, relationship volatility, and cheating) include a scale assessing *relationship commitment*. This is a mean scale of survey questions asked in reference to respondents' current or most recent romantic partner: "How often do you and your partner spend time alone in a typical week?" (responses range 0 = never to 3 = 5 or more times); "How important is your relationship with your partner?" (0 = not important to 4 = very important); and "In your relationship, how important is being faithful?" (0 = not important to 4 = very important) (alpha = 0.71). As noted in the analytic sample description, 38 respondents were missing information on these three items. Although we could have assigned the mean response for each item, all 38 of these respondents were not currently in a relationship, thus, the mean response may not be an accurate reflection of the characteristics of their previous relationship. Therefore,

we chose the more conservative approach—excluding these cases from the analyses; however, supplemental analyses (not shown) including these respondents (by assigning them the mean) produced substantively similar results.

Analyses. We use logistic regression to model current relationship status (dating, cohabiting) and cheating, Poisson regression for the number of respondents' dating partners in the past two years, and negative binomial regression for the number of times respondents have broken up with a partner (because this measure is overdispersed). All analyses are stratified by gender and robust standard errors are used to adjust for clustering within census tracts. We estimate a marital search model (sex ratio only), an imbalanced sex ratio model testing for a nonlinear effect of the sex ratio (by including the sex ratio squared), and a model combining sex ratio, sex ratio squared, and all individual, demographic, and attitudinal characteristics. For parsimony, we present the multivariate model retaining the sex ratio squared when its inclusion significantly contributed to model fit.

RESULTS

The modified sex ratio, prior to mean-centering, has a mean of 96.01 for female and 104.76 for male respondents, indicating more favorable markets for men, in general. Additional descriptive statistics are displayed in Table 1. The mean age of respondents is 20, and approximately 65% of respondents are White. Almost 25% of female and 14% of male respondents report having a child. Slightly more women than men are currently in school, while slightly more men than women are currently working. Over half of respondents report having lived with two biological parents. Respondents, on average, score low on sexual impulsivity and cheating propensity, although men score higher than women on both scales. Women score

slightly higher on relationship commitment.

In terms of union formation, 76% of women and 62% of men report currently being in a romantic relationship. One-fourth of women are currently cohabiting with a romantic partner, while only about 16% of men are cohabiting. Regarding union instability and dissolution, the mean number of dating partners during the past two years is 1.8 for women and 2.7 for men. Respondents broke up with their current or most recent romantic partner once on average. Approximately 14% of women and 23% of men had cheated on their current or most recent partner.

[Table 1 here]

Consistent with the marital search and imbalanced sex ratio perspectives, the multivariate analyses assess how the availability of potential partners, as represented in a modified sex ratio, affects young adults' union formation and stability. We explore two measures of union formation: currently being in a romantic relationship and currently cohabiting. As Table 2 illustrates, the availability of partners does not influence the odds of currently being in a romantic relationship for men or women (the nonlinear term is also not significant and is not reported in the table). Older respondents are more likely than younger respondents to currently be in a romantic relationship. Black men, as well as men with children, have higher odds of being in a romantic relationship compared to White men and men without children. Sexual impulsivity is negatively related to relationship formation for both men and women.

[Table 2 here]

As Table 3 shows, the sex ratio does not influence the odds of currently cohabiting for women or men in the bivariate model. However, in the model controlling for individual

characteristics (demographics and attitudes), the sex ratio is positively associated with the odds of cohabiting for women (Table 3, Model 3A) and negatively associated with the odds of cohabiting for men (Table 3, Model 3B). That is, women are *more likely* to cohabit in favorable markets, while men are *less likely* to cohabit in favorable markets. This is consistent with the imbalanced sex ratio perspective, which posits that women will be more likely to establish unions in markets where they are the sex in short supply, and men will be less likely to establish unions when in markets with greater partner availability. The squared term is not significant for either women or men, suggesting that the relationship between partner availability and odds of cohabiting is linear. This is consistent with our interpretation of the imbalanced sex ratio perspective stated above. That is, if we recognize the conflicting goals between men and women regarding relationship formation, the association between partner availability and union formation for men may be the opposite of its effect for women—negative and linear (for men) compared to positive and linear (for women). This is illustrated in Figure 1, which shows that men's odds of cohabiting are highest in markets least favorable to them (markets with more men than women), while women's odds of cohabiting are highest in markets most favorable to them (markets with fewer women than men). Men's odds of cohabiting decrease as their markets become more favorable (as the number of women relative to men increase). Conversely, women's odds of cohabiting increase as their markets become more favorable. The effect of sex ratio does not become significant until the final model (Models 3A and 3B); supplemental analyses indicated that age suppresses the effect of sex ratio, which is not surprising given that the odds of cohabitation are greater at older ages. These relationships are consistent in analyses exploring the odds of *ever* cohabiting (not shown).

[Table 3 and Figure 1 here]

Regarding union stability, Table 4 shows no significant effect of sex ratio on the number of dating partners for women at the bivariate level; however, there is a small negative nonlinear effect in the multivariate model. This suggests that for women, the number of dating partners increases along with the number of potential partners in their market up to a certain threshold point, at which their number of dating partners decreases as the market becomes more favorable. As Figure 2 illustrates, the sex ratio is positively associated with the number of dating partners for women in markets characterized by sex ratios below the mean. For women in markets at and above the mean (indicating an approximately balanced market), the sex ratio is negatively associated with their number of dating partners. Among male respondents, the effect of sex ratio on number of dating partners is linear, positive, and significant (Table 4 and Figure 2). Men have more dating partners in favorable markets. This effect remains significant even after controlling for demographic and attitudinal measures. Sexual impulsivity is positively associated with number of dating partners for both men and women. Cheating propensity is also positively associated, but only among men, and relationship commitment is negatively associated with number of partners among women.

[Table 4 and Figure 2 here]

Table 5 shows that for women, the sex ratio is negatively associated with relationship volatility, and the effect is nonlinear (Table 5, Model 2A). Women break up with romantic partners *less* often when in favorable markets. The effect remains negative but is no longer statistically significant after controlling for demographics, attitudes, and relationship characteristics (Model 3A). Further analyses (not shown) indicate that the effect of sex ratio on the relationship volatility can be explained by race—Black women are less likely to be in favorable markets but break up with their romantic partners more frequently. Partner availability

is negatively associated with relationship volatility among men (Table 5, Model 3B), and this relationship trends towards significance ($p = 0.079$). This may seem counterintuitive, given the positive association between partner availability and number of dating partners among men; however, this measure concerns breaking up (and potentially reconciling and breaking up again) *with the same partner*. When in favorable markets, men may not break up and get back together with the same partner—they may simply break up and form a relationship with a new partner. Additionally, among men, sexual impulsivity is positively associated with relationship volatility. No demographics, attitudes, or relationship characteristics appear to be associated with volatility among women.

[Table 5 here]

Lastly, for both men and women, cheating is highest when sex ratios are imbalanced—when alternative partners are extremely plentiful, or extremely scarce (Table 6). Among men, the effect of the sex ratio is suppressed by sexual impulsivity, relationship commitment, and being in school (Model 3B). Figure 3 illustrates the curvilinear effect of sex ratio on cheating. The odds of cheating are lowest when the sex ratio is just slightly above its mean and increase as the imbalance increases, particularly for men. Sexual impulsivity and cheating propensity are positively associated with the odds of cheating for both men and women, and relationship commitment is negatively associated.

The increase in the odds of cheating with increases in available partners is consistent with the work of South and colleagues (1992); however, the increased odds of cheating in *unfavorable* markets may appear counterintuitive. Perhaps in markets with few alternatives, individuals may cheat on dating partners instead of ending an unsatisfactory relationship—that is, cheating may

be part of the sorting, searching, and selecting process when individuals are faced with limited available partners. This could particularly be the case for young adults, given the developmental importance of romantic relationships in emerging adulthood. Although we do not have information on the motivations for cheating (and therefore recognize these assertions as speculative), given the importance of romantic relationships during this life course stage, persons may wish to be romantically involved, but also remain active participants in their respective markets (Farber, 1987; South et al., 2001). Individuals in constrained markets may remain interested in the few alternative partners available to them while simultaneously wary of ending an established relationship.

[Table 6 here]

DISCUSSION

The present study explores the effect of sex ratios on the formation and stability of romantic relationships among young adults. We consider theoretical expectations of both the marital search and imbalanced sex ratio perspectives. Additionally, we examine the romantic relationship behavior of both young men and women. We use a modified sex ratio, which is directionally consistent across genders, where higher values represent more potential partners.

Analyses indicate that men and women are not influenced by the sex ratio in terms of forming romantic partnerships; however, the sex ratio does influence their odds of cohabiting. Men are less likely to cohabit in markets characterized by available partners. This is consistent with the imbalanced sex ratio perspective, which suggests that when men have more available partners, they tend to delay union formation, believing it unnecessary to commit to a single partner (Guttentag & Secord, 1983; Lloyd & South, 1996; Wilson, 1996). Consistent with both

marital search and imbalanced sex ratio perspectives (Becker, 1981; Oppenheimer, 1988), women are more likely to cohabit in markets favorable to them.

The sex ratio appears to influence patterns of relationship stability, and the effects differ between men and women. We find that women have less volatile relationships with their partners in markets where they have more alternatives. This negative relationship between sex ratios and relationship volatility may indicate selectivity among women—that is, they may choose the best partner among many choices. The sex ratio is not associated with the number of partners women report dating. In contrast, men report more romantic partners in favorable markets. Interestingly, men break up with their partners less frequently in favorable markets, but rather than reflecting relationship stability, this may reflect a single break up signifying the end of a relationship, rather than the continuation of a volatile relationship.

The current analyses add to past research focused primarily on the effects of sex ratios on the behavior of married individuals (e.g., South & Lloyd, 1995). A key assumption of prior work is that imbalanced sex ratios influence union dissolution because these social contexts facilitate sexual infidelity. We explore these assumptions by focusing on the nonmarital unions formed by young adults and by measuring cheating behaviors directly. Results indicate that imbalanced sex ratios are associated with cheating for both men and women. The sex ratio matters in markets in which the imbalance is extreme, such that available partners are either plentiful or scarce. Our results show, in terms of cheating, men are more strongly influenced by the sex ratio of their markets than are women.

Taken together, we find that sex ratios do matter and have effects on relationship formation and stability net of traditional predictors. It may be important to include measures of

sex ratio in future work on young adult relationship patterns. It is also important to consider additional measures of social context, such as the normative climate, which may capture young adults' overarching attitudes toward intimate relationships.

There are a few limitations to the study worth noting. The study is based on adolescents and young adults in a one geographic area and does not represent the national experience. We hope future studies can assess the influence of sex ratios on young adult relationships in a national context. In addition, we do not consider the effect of quality of partners. Our analyses are limited to the behaviors of men and women in early adulthood and in some cases the characteristics of a "high quality" dating partner may not be as easily measured as a high quality parent or spouse (Harknett, 2008). In addition, there are several possible methods for measuring sex ratios. Our indicators are based on sex ratios computed from all individuals ages 16-34, rather than unmarried individuals. However, our operationalization of the "dating market" is consistent with Farber's (1987) notion that even married individuals are "permanently available" and perpetually on the market for alternatives. Finally, the purpose of our analyses was not to explain race and ethnic differences in young adult relationship patterns. Prior work on marriage markets has centered around explaining race differences in union formation and stability. Our study represents an important first step, but additional studies exploring race and ethnic differences in the effects of sex ratios on emerging adult relationship behaviors are warranted.

Notwithstanding these limitations, this paper broadens the scope of the influence of demographic context beyond marriage to a consideration of nonmarital relationships. There is relatively little theoretical attention to the nonmarital relationship formation and stability among emerging adults. This is an increasingly important omission as the path to marriage becomes long and winding, often including cohabitation and a series of dating partners; in fact, the early

adult years may be characterized as a "relationship-go-round" akin to Cherlin's (2009) marriage-go-round. Taken together, these results showcase that the sex ratio matters not only for transitions in and out of marriage, but also for the process of searching for and evaluating partners prior to marriage.

Notes:

[1] Although much of the research on marriage markets focuses on understanding race differences in union formation and fertility (Lichter et al., 1991 and McLaughlin 1991; Lichter et al., 1992; Teachman et al., 1987), the current investigation does not focus on race differences due to data limitations. We expand on this in the Measures section and address the implications in the Discussion section.

[2] It may be appropriate to include individuals identifying as bisexual, partly homosexual or 100% homosexual, given that sexual orientation is not a fixed state (particularly at this stage in the life course) (Savin-Williams, 2001). However, both the marital search and imbalanced sex ratio perspectives are theories regarding the demographic availability of opposite sex partners, and therefore are, fundamentally, theories of heterosexual relationship behavior. Because we had no *a priori* reason to expect the availability of opposite sex partners to influence the behaviors of individuals who did not identify as primarily heterosexual, and for conceptual clarity and consistency with recent past research (Harknett, 2008; Raley & Sullivan, 2010; Uecker & Regnerus, 2010), we excluded sexual minorities from the analyses and focus on heterosexual relationships in the results presented below.

[3] It may be more appropriate to refer to this as sexual nonexclusivity. Cheating implies behavior by one partner that the other partner is unaware of, and we do not have measures of whether respondents' partners were aware of their infidelity. However, for the sake of parsimony, we use the term cheating.

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Table 1. Sample Descriptives, Percentages, and Means (Standard Deviations), Toledo Adolescent Relationships Study (TARS), Wave 4[a]

	Full Sample (n=788)	Range	Females (n=402)	Males (n=386)
Independent Variables				
Market Characteristics				
Sex ratio: Partner availability[b]	100.30 (14.45)	43.25-152.83	96.01 (13.36)	104.76 (14.21)
Individual Characteristics				
Demographics				
Age[c]	20.34 (1.77)	17-24	20.34 (1.80)	20.33 (1.74)
White[d]	64.72%		65.92%	63.47%
Black	21.32%		19.65%	23.06%
Hispanic	10.41%		10.20%	10.62%
Other race/ethnicity	3.55%		4.23%	2.85%
Has child	19.29%		24.87%	13.99%
Employment status				
Idle[d]	23.60%		23.38%	23.83%
Working	38.32%		37.06%	39.64%
School	38.07%		39.55%	36.53%
Family Structure				
Two biological parents[d]	53.68%		51.24%	56.22%
One biological parent	23.98%		24.63%	23.32%
Stepparent	17.64%		18.66%	16.58%
Other family structure	4.70%		5.47%	3.89%
Family Socioeconomic Status				
Mother < high school education	9.26%		10.20%	8.29%
Mother high school education[d]	29.06%		30.10%	27.98%
Mother > high school education	53.17%		50.75%	55.70%
Missing mother education	8.50%		8.96%	8.03%
Attitude and Relationship Scales				
Sexual Impulsivity	1.03 (0.70)	0-4	0.69 (0.50)	1.39 (0.74)
Cheating Propensity	1.21 (0.94)	0-4	0.98 (0.84)	1.45 (0.98)
Relationship Commitment	2.96 (0.72)	0-4	3.08 (0.68)	2.84 (0.74)
Dependent Variables				
Union Formation				
Currently in romantic relationship	68.91%		75.87%	61.66%
Currently cohabiting	20.56%		25.37%	15.54%
Union Instability				
Number of dating partners	2.26 (2.04)	1-15	1.84 (1.13)	2.68 (2.61)
Relationship volatility (break-ups)	1.03 (1.31)	0-5	1.05 (1.34)	1.02 (1.28)
Cheated on partner	18.78%		14.43%	23.31%

Notes:
[a]Ranges and standard deviations not shown for dummy variables.
[b]For males, we use an inverse of the traditional sex ratio so that the measure is directionally consistent across genders, with high scores reflecting greater partner availability for both groups.
[c]Variable is mean-centered in multivariate analyses.
[d]Indicates reference category.

Table 2. Sex Ratio Imbalance and Union Formation: Currently in a Romantic Relationship, Odds Ratios

	Females (n=402)			Males (n=386)		
	Model 1A	Model 2A	Model 3A	Model 1B	Model 2B	Model 3B
	Exp(β)	Exp(β)	Exp(β)	Exp(β)	Exp(β)	Exp(β)
Intercept	4.242***	3.186***	5.708***	1.624***	1.537***	1.375
Market Characteristics						
Sex ratio[a,b]	1.008	1.008	1.011	1.023†	1.011	1.009
Sex ratio squared[c]		1.000	—		1.000	—
Individual Characteristics						
Demographics						
Age[b]			1.183*			1.191**
White			—			—
Black			0.831			2.738**
Hispanic			0.848			1.248†
Other race			1.383			0.758
Has child			0.847			3.786**
Employment status						
Idle			—			—
Working			0.544†			0.931
School			0.668			0.994
Family Structure						
Two biological parents			—			—
One biological parent			1.171			0.978
Stepparent			1.340			2.183*
Other family structure			1.704			0.322
Family Socioeconomic Status[d]						
Mother < HS education			0.675			0.619
Mother HS education			—			—
Mother > HS education			0.838			0.653
Attitude Scales						
Sexual Impulsivity			0.366***			0.469***
Cheating Propensity			1.106			0.929
-2 Log Likelihood	443.391	443.310	417.092	511.098	510.404	447.942

Notes: † $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$, two-tailed significance tests adjusted for clustering within census tracts.

[a]For males, we use an inverse of the traditional sex ratio so that the measure is directionally consistent across genders, with high scores reflecting greater partner availability for both groups.

[b]Indicates variable is mean-centered.

[c]Coefficient for sex ratio squared is only shown in models where it contributed significantly to the explanatory power of the model.

[d]Model also controls for missing mother's education.

Table 3. Sex Ratio Imbalance and Union Formation: Currently Cohabiting with Romantic Partner, Odds Ratios

	Females (n=402)			Males (n=386)		
	Model 1A	Model 2A	Model 3A	Model 1B	Model 2B	Model 3B
	Exp(β)	Exp(β)	Exp(β)	Exp(β)	Exp(β)	Exp(β)
Intercept	0.342***	0.330***	0.169***	0.182***	0.196***	0.132***
Market Characteristics						
Sex ratio[a,b]	1.008	1.008	1.022*	0.990	0.992	0.977*
Sex ratio squared[c]		1.000	—		1.000	—
Individual Characteristics						
Demographics						
Age[b]			1.266**			1.594***
White			—			—
Black			0.520			1.504
Hispanic			1.079			3.969*
Other race			0.127			1.494
Has child			4.090***			3.012*
Employment status						
Idle			—			—
Working			1.013			0.694
School			0.794			0.650*
Family Structure						
Two biological parents			—			—
One biological parent			0.869			2.206†
Stepparent			2.920***			1.524
Other family structure			0.835			1.142
Family Socioeconomic Status[d]						
Mother < HS education			0.961			0.526
Mother HS education			—			—
Mother > HS education			1.216			0.674
Attitude Scales						
Sexual Impulsivity			0.392**			0.847
Cheating Propensity			0.978			0.752
-2 Log Likelihood	454.439	453.952	379.182	332.226	331.595	264.869

Notes: † $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$, two-tailed significance tests adjusted for clustering within census tracts.

[a]For males, we use an inverse of the traditional sex ratio so that the measure is directionally consistent across genders, with high scores reflecting greater partner availability for both groups.

[b]Indicates variable is mean-centered.

[c]Coefficient for sex ratio squared is only shown in models where it contributed significantly to the explanatory power of the model.

[d]Model also controls for missing mother's education.

Table 4. Sex Ratio Imbalance and Union Stability: Number of Dating Partners, Past 2 Years, Poisson Regression Coefficients

	Females (n=402)			Males (n=386)		
	Model 1A	Model 2A	Model 3A	Model 1B	Model 2B	Model 3B
	β	β	β	β	β	β
Intercept	0.610***	0.634***	0.643***	0.977***	0.960***	1.004***
Market Characteristics						
Sex ratio[a,b]	0.003	0.002	0.002	0.010**	0.009*	0.007*
Sex ratio squared[c]		-0.0001	-0.0003*		0.000	—
Individual Characteristics						
Demographics						
Age[b]			-0.023			-0.124***
White			—			—
Black			0.262**			-0.053
Hispanic			0.149			0.308*
Other race			-0.091			-0.540**
Has child			-0.114			0.066
Employment status						
Idle			—			—
Working			0.039			-0.007
School			-0.011			-0.034
Family Structure						
Two biological parents			—			—
One biological parent			0.039			0.155
Stepparent			-0.024			0.164
Other family structure			-0.332*			0.005
Family Socioeconomic Status[d]						
Mother < HS education			-0.140			-0.270
Mother HS education			—			—
Mother > HS education			-0.120†			-0.181
Attitude and Relationship Scales						
Sexual Impulsivity			0.148**			0.218**
Cheating Propensity			-0.029			0.131*
Relationship Commitment			-0.199***			-0.054
Log Likelihood	-287.437	-286.771	-264.268	-2.2221	-1.750	74.029

Notes: † $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$, two-tailed significance tests adjusted for clustering within census tracts.

[a]For males, we use an inverse of the traditional sex ratio so that the measure is directionally consistent across genders, with high scores reflecting greater partner availability for both groups.

[b]Indicates variable is mean-centered.

[c]Coefficient for sex ratio squared is only shown in models where it contributed significantly to the explanatory power of the model.

[d]Model also controls for missing mother's education.

Table 5. Sex Ratio Imbalance and Union Stability: Relationship Volatility (Number of Times Broken Up With Romantic Partner), Negative Binomial Regression Coefficients[1]

	Females (n=402)			Males (n=386)		
	Model 1A	Model 2A	Model 3A	Model 1B	Model 2B	Model 3B
	β	β	β	β	β	β
Intercept	0.041	-0.049	-0.097	0.016	0.003	-0.620**
Market Characteristics						
Sex ratio[a,b]	-0.011*	-0.009*	-0.004	-0.004	-0.005	-0.009*
Sex ratio squared[c]		0.0004**	0.000		0.0001	—
Individual Characteristics						
Demographics						
Age[b]			0.005			-0.020
White			—			—
Black			0.560***			0.291†
Hispanic			0.309			0.061
Other race			-0.178			0.184
Has child			0.080			0.242
Employment status						
Idle			—			—
Working			0.035			0.275
School			-0.232			0.225
Family Structure						
Two biological parents			—			—
One biological parent			0.231			0.086
Stepparent			0.230			0.300†
Other family structure			-0.188			0.472
Family Socioeconomic Status[d]						
Mother < HS education			0.003			-0.012
Mother HS education			—			—
Mother > HS education			-0.238†			0.241
Attitude and Relationship Scales						
Sexual Impulsivity			0.082			0.538***
Cheating Propensity			0.102			-0.094
Relationship Commitment			0.009			0.137
Log Likelihood	-362.343	-360.124	-340.212	-359.713	-359.656	-339.097

Notes: † $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$, two-tailed significance tests adjusted for clustering within census tracts

[a]For males, we use an inverse of the traditional sex ratio so that the measure is directionally consistent across genders, with high scores reflecting greater partner availability for both groups.

[b]Indicates variable is mean-centered.

[c]Coefficient for sex ratio squared is only shown in models where it contributed significantly to the explanatory power of the model.

[d]Model also controls for missing mother's education.

Table 6. Sex Ratio Imbalance and Union Stability: Cheating on a Romantic Partner, Odds Ratios[1]

	Females (n=402)			Males (n=386)		
	Model 1A	Model 2A	Model 3A	Model 1B	Model 2B	Model 3B
	Exp(β)	Exp(β)	Exp(β)	Exp(β)	Exp(β)	Exp(β)
Intercept	0.169***	0.139***	0.059***	0.301***	0.276***	0.143***
Market Characteristics						
Sex ratio[a,b]	1.011	1.010	1.004	1.016	1.010	0.992
Sex ratio squared[c]		1.001**	1.001*		1.000	1.001*
Individual Characteristics						
Demographics						
Age[b]			1.095			1.028
White			—			—
Black			1.964			1.247
Hispanic			3.335*			0.699
Other race			0.569			2.664
Has child			0.443†			2.759*
Employment status						
Idle			—			—
Working			1.091			0.698
School			0.835			0.207**
Family Structure						
Two biological parents			—			—
One biological parent			2.497*			1.455
Stepparent			2.647*			2.933**
Other family structure			0.681			5.145†
Family Socioeconomic Status[d]						
Mother < HS education			0.638			1.096
Mother HS education			—			—
Mother > HS education			0.791			0.831
Attitude and Relationship Scales						
Sexual Impulsivity			2.189**			4.202***
Cheating Propensity			2.529**			2.775***
Relationship Commitment			0.650†			0.573*
-2 Log Likelihood	330.977	325.094	248.648	415.784	414.223	242.120

Notes: † $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$, two-tailed significance tests adjusted for clustering within census tracts.

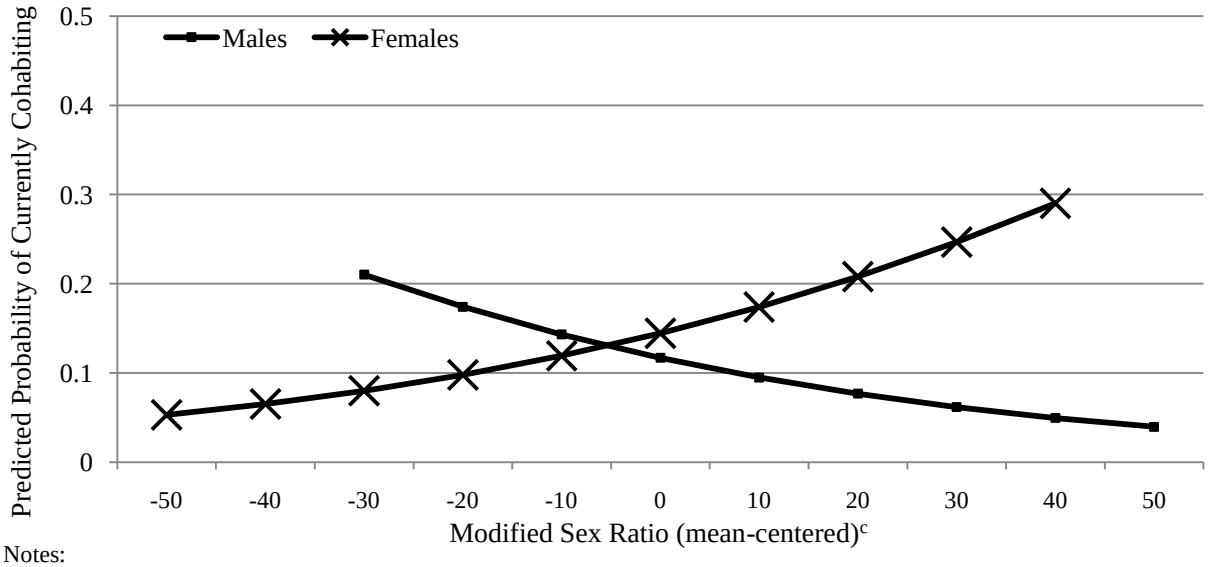
[a]For males, we use an inverse of the traditional sex ratio so that the measure is directionally consistent across genders, with high scores reflecting greater partner availability for both groups.

[b]Indicates variable is mean-centered.

[c]Coefficient for sex ratio squared is only shown in models where it contributed significantly to the explanatory power of the model.

[d]Model also controls for missing mother's education.

Figure 1. The Association Between Sex Ratio Imbalance and Currently Cohabiting Among Young Adults, Predicted Probabilities by Gender[a,b]



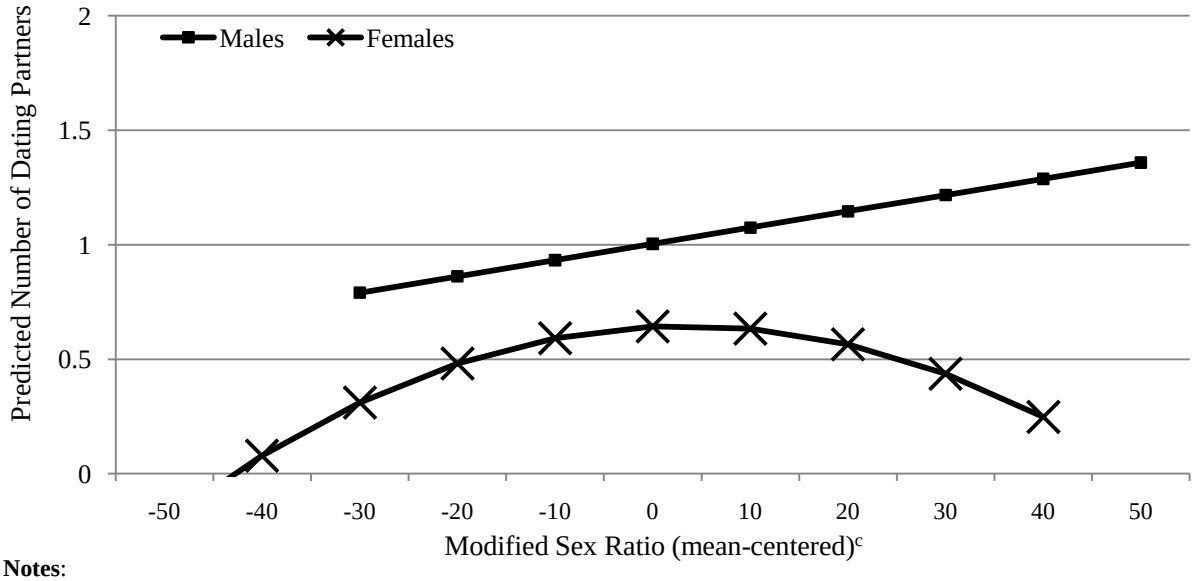
Notes:

[a]Estimates taken from full models (3A and 3B, Table 3) with all other covariates held constant (dummy variables at zero and mean-centered continuous variables at their mean).

[b]Plots based on gender-specific ranges of sex ratio that were observed in the data--these ranges differed by gender.

[c]Modified sex ratio calculated as proportion of 16-34 year old males to females (for female respondents) and proportion of females to males (for male respondents).

Figure 2. The Association Between Sex Ratio Imbalance and Number of Dating Partners Among Young Adults, Predicted Counts by Gender[a,b]



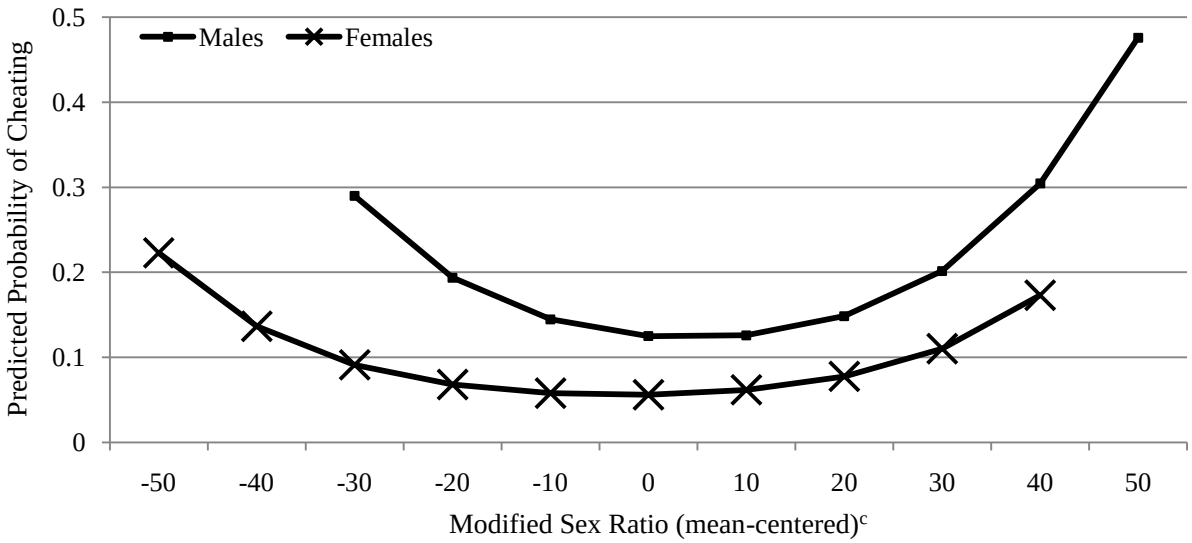
Notes:

[a]Estimates taken from full models (3A and 3B, Table 4) with all other covariates held constant (dummy variables at zero and mean-centered continuous variables at their mean).

[b]Plots based on gender-specific ranges of sex ratio that were observed in the data--these ranges differed by gender.

[c]Modified sex ratio calculated as proportion of 16-34 year old males to females (for female respondents) and proportion

Figure 3. The Assocation Between Sex Ratio Imbalance and Cheating Among Young Adults, By Gender, Predicted Probabilities[a,b]



Notes:
[a]Estimates taken from full models (3A and 3B, Table 6) with all other covariates held constant (dummy variables at zero and mean-centered continuous variables at their mean).
[b]Plots based on gender-specific ranges of sex ratio that were observed in the data--these ranges differed by gender.
[c]Modified sex ratio calculated as proportion of 16-34 year old males to females (for female respondents) and proportion of females to males (for male respondents).