

# What's Love Got to Do with It? Sexual Behaviors of Opposite-Sex Couples Through Emerging Adulthood

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**CONTEXT:** Sexual relationships in young adulthood may have important ramifications for individuals' physical and emotional well-being. Nonetheless, representative information about young adults' sexual activities in long-term relationships and the emotional context of such relationships is rare.

**METHODS:** A subsample of 6,421 participants in Wave 3 of the National Longitudinal Study of Adolescent Health (18–26-year-olds) who were in a sexual relationship of at least three months' duration were selected for analysis. Multiple logistic regression models were used to explore the relationship between love and various sexual activities.

**RESULTS:** Eighty percent of respondents had engaged in cunnilingus and fellatio as well as vaginal intercourse in their current relationship; this group included 22% who also had engaged in anal sex. Compared with their peers who reported that they and their partner did not love each other a lot, both males and females who reported mutually loving relationships had significantly higher odds of having given oral sex (odds ratios, 3.9 and 2.6, respectively) and having received oral sex (1.8 and 3.3); males in mutually loving relationships also had elevated odds of having had anal sex (3.1).

**CONCLUSIONS:** Most young adult couples in long-term relationships engage in a variety of sexual practices with loving partners; the direction of causality in this association and its implications for relationship building require exploration. Furthermore, programs and interventions that address health and well-being during emerging adulthood should cover issues relevant to a broad range of sexual activities, including oral and anal sex.

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Emerging adulthood is a period beyond adolescence when adult roles and relationships are being established.<sup>1,2</sup> It is a time of great transition, when many individuals develop important romantic attachments and engage in long-term sexual relationships, live with a partner or marry for the first time.<sup>1,3,4</sup> Despite the importance of these relationships, it is difficult to obtain representative information about the sexual activities of young adults or the emotional context in which these activities take place. Specifically, what types of sexual activities occur in long-term relationships, and how are these experiences related to love between partners? A better understanding of sexual behavior in the context of young adult relationships would help to guide service provision, clinical recommendations and education policy.

## SEX AND LOVE AMONG YOUNG ADULTS

Long-term relationships during emerging adulthood provide an opportunity for individuals to explore their sexuality in the context of their feelings of love for and perceptions of being loved by their partner. Important emotional developments occur in the first 3–4 months of a relationship between young adults. For example, during that period, college couples show increases in their love for each other and their provision of rewards and participation in behaviors to maintain the relationship.<sup>5</sup>

The first few months during which young adults date and are in love also are a period of self-discovery that may lead to greater feelings of ability and self-worth.<sup>6</sup> Furthermore, sexual behaviors change as relationships progress through the early months. For example, dating relationships of less than one month's duration include more frequent fellatio but less frequent cunnilingus than longer term dating relationships.<sup>3</sup>

Sexual activity is an important and well-documented component of romantic relationships, but its association with love in long-term relationships is complex.<sup>7–16</sup> One approach to understanding relationships is to use an exchange framework, which emphasizes the importance of feelings of equity in terms of perceived costs and benefits of a relationship.<sup>11,17,18</sup> In relationships in which an individual perceives inequities, such as a nonreciprocated level of love, engaging in sexual activity may be perceived as a possible tool to strengthen ties and rebalance costs and benefits. How costs and benefits are perceived may depend on gender. For example, both men and women indicate that feeling loved is an important benefit of romantic relationships, but men are more likely also to indicate that sexual gratification is a benefit.<sup>18</sup> Furthermore, cultural factors may socialize women to link love and desire more closely than men do.<sup>19,20</sup>

Love can be an important motivational force for many actions, including participation in sexual activities.

Romantic love is associated with euphoria, focused attention, feelings of dependence and the activation of brain areas involved in motivation and reward.<sup>15,21-24</sup> Thus, love represents a goal-oriented state that promotes the imperative to be with the loved one and preserve the relationship.<sup>21</sup> Sexual activity may play a role in efforts to establish and maintain such relationships.

Biology may also facilitate some of the connection between love and sexual behavior. While romantic love and sexual arousal involve different brain activation patterns,<sup>21,25,26</sup> the biological processes involved in sexual intimacy and romantic love include a common hormonal component, oxytocin.<sup>7,19,27</sup> Because the effects of oxytocin are estrogen-dependent, the biological connections between love and sexual desire may be more extensive for women than for men.<sup>19,27</sup>

Sexual activity has consequences not only for the quality of the relationship in which it occurs, but also for the sexual and reproductive health of individuals. STDs are common during young adulthood and can have significant adverse consequences for reproductive health.<sup>3,28-30</sup> Although most prevention interventions focus on casual sexual activity or new sexual partners, sexual behavior in long-term loving relationships still carries risk of infections, particularly if one partner has a viral infection or acquires an infection from a concurrent partner.

Furthermore, most research on the sexual activity of young adult couples focuses on vaginal sex, but available evidence suggests that young adults engage in a range of sexual practices. The 1992 National Health and Social Life Survey obtained comprehensive information on the sexual activities of more than 3,000 individuals, of whom about 15% were young adults (aged 18-24). Overall, 85% of the young adults had engaged in vaginal sex in the past year. Most had experienced fellatio (69% of women and 74% of men) and cunnilingus (75% and 72%, respectively) at some time, and a sizable proportion (16% of each) had had anal sex.<sup>3</sup> Similarly, in a 1991 study of Midwestern undergraduates, 17% of sexually experienced heterosexual males and 18% of females reported ever having had anal intercourse.<sup>31</sup>

In this study, we explore participation in vaginal, oral and anal sex among young adults currently in a long-term relationship with a member of the opposite sex. We also examine how these behaviors are related to love between partners, controlling for relationship type and selected characteristics of the respondent. Since we are interested in the connections between love and sexual activity, we exclude short-term relationships, which may represent "hookups" or which may last but have not yet afforded the partners the opportunity to establish a pattern of sexual behavior.

We hypothesize that respondents who report high levels of love for their partners, and who report that their partners feel high levels of love toward them, participate in a greater variety of sexual activities than those who

**TABLE 1. Percentage distribution of young adults currently in a sexual relationship of at least three months' duration, by selected characteristics, National Longitudinal Study of Adolescent Health, 2001-2002**

Characteristic	% (N=6,421)
<b>Sex</b>	
Male	44.2
Female	55.8
<b>Race/ethnicity</b>	
White	68.5
Hispanic	11.3
Black	14.0
Asian	3.4
Other	2.7
<b>Relationship type</b>	
Married	26.5
Cohabiting	26.5
Dating	47.0
<b>Loves partner</b>	
A lot	87.7
Somewhat	7.5
A little	2.9
Not at all	1.9
<b>Partner loves respondent†</b>	
A lot	88.8
Somewhat	7.2
A little	2.8
Not at all	1.3
<b>Pattern of love within relationship†</b>	
Neither partner loves the other a lot	7.7
Partners love each other a lot	84.0
Respondent loves partner a lot (not reciprocated)	3.6
Partner loves respondent a lot (not reciprocated)	4.6
<b>Total</b>	<b>100.0</b>

†As reported by respondent.

report mutually low levels of love. In addition, we hypothesize that this association is modified by the respondent's sex.

## METHODS

### Sample

We used data from Wave 3 of the National Longitudinal Study of Adolescent Health (Add Health). In Wave 1 of Add Health, professional interviewers conducted face-to-face, in-home, computer-assisted interviews with more than 20,000 students enrolled in grades 7-12 in 1994-1995. These respondents included a core nationally representative sample of about 12,000 adolescents and several supplementary samples from typically underrepresented groups, such as adolescents with disabilities; black children of highly educated parents; and adolescents of Cuban, Puerto Rican and Chinese ethnic backgrounds. In Wave 3, some 15,197 Wave 1 respondents were reinterviewed from August 2001 through April 2002, when they were 18-26 years old.

Respondents in Wave 3 were asked to list all romantic or sexual relationships they had had since the summer

**TABLE 2. Percentage distribution of young adults, by whether they had ever engaged in selected sexual activities with their current partner of more than three months, by sex**

Activity	All (N=6,421)	Females (N=3,735)	Males (N=2,686)
<b>Vaginal intercourse*</b>			
Yes	98.9	99.5	98.1
No	1.1	0.5	1.9
<b>Fellatio*</b>			
Yes	84.2	82.6	86.7
No	15.8	17.4	13.3
<b>Cunnilingus*</b>			
Yes	85.0	86.6	82.7
No	15.0	13.4	17.3
<b>Anal sex</b>			
Yes	22.7	22.6	22.9
No	77.3	77.4	77.1
Total	100.0	100.0	100.0

\*Females and males differ significantly at  $p < .05$ . Note: Percentages are weighted.

of 1995. For each listed relationship, respondents were asked if they and their partner had had sexual relations, defined as “vaginal intercourse (a man inserts his penis into a woman’s vagina), oral sex (a person puts his or her mouth on another person’s sex organs), or anal sex (a man inserts his penis into his partner’s anus or asshole).” Respondents were then asked to indicate which of these partners they had had sex with most recently, and 7,468 indicated they were still in a relationship with their most recent partner. The number of same-sex relationships was too small for meaningful analyses, and these relationships were dropped from this study. Given documented

changes in love and sexual behavior across the first few months of relationships, we excluded relationships of less than three months’ duration.

Of the 6,978 respondents with qualifying opposite-sex relationships, 92% had complete data on demographic characteristics, age at first sex, sexual activities with their current partner and love between partners. The study sample consists of these 6,421 respondents. Eligible respondents with missing data were somewhat less likely than others to be cohabiting and more likely to be black or Hispanic ( $p < .05$ ).

**Measures and Analyses**

Relationships were categorized as cohabiting or married on the basis of the respondent’s report. If the respondent was not cohabiting with or married to the partner, we categorized the relationship as dating.

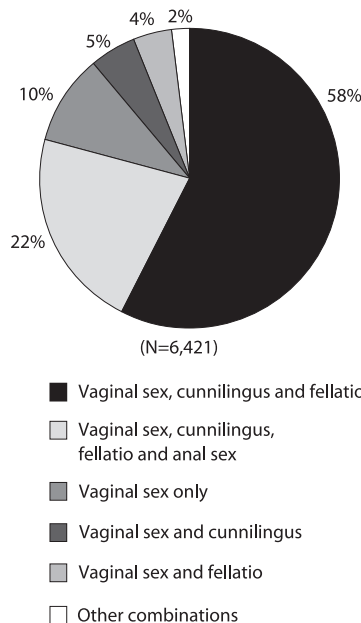
Respondents were asked whether they and their partner had ever engaged in each of four sexual activities—vaginal sex, fellatio (male receptive oral sex), cunnilingus (female receptive oral sex) and anal sex.

They also were asked “how much do you love [partner]?” and “how much do you think [partner] loves you?” Answer choices were “a lot,” “somewhat,” “a little” or “not at all.” On the basis of these questions, four categories were created to describe the pattern of love in the current relationship, as perceived by the respondent: neither partner loves the other a lot, the partners love each other a lot, the respondent loves the partner a lot (not reciprocated) and the partner loves the respondent a lot (not reciprocated).

In addition, several respondent characteristics were controlled for: age at Wave 3 (in years), age at first intercourse (in years), sex (male or female), and race and ethnicity (Hispanic, non-Hispanic black, Asian, other or non-Hispanic white). Age at first intercourse was included because of its associations with a variety of later sexual behaviors and outcomes.<sup>32,33</sup>

We used the Stata statistical package and employed the subpopulation options as recommended by the Carolina Population Center to incorporate weights, adjust for Add Health’s sampling design and provide estimates that are standardized to the U.S. Census Bureau estimates of this age-group’s demographic characteristics.<sup>34,35</sup> We first used univariate and tabular analyses to determine the weighted percentages of young adult males and females who had engaged in each sexual activity with their current partners. We then used multiple logistic regression models to determine predictors of each type of sexual activity. As almost all of the respondents had had vaginal sex in their current relationship, this outcome was not examined. Preliminary analyses showed significant interactions between respondent’s sex and love between partners, so males and females were assessed separately. Interaction terms involving respondent’s age were not significant and were dropped from our final analyses.

**FIGURE 1. Percentage distribution of young adults, by sexual activities they had ever engaged in with their current partner of at least three months**



## RESULTS

### Descriptive

Slightly more than half of respondents in our sample were female, and seven in 10 were white (Table 1, page 135); participants' average age was 22 years (range 18–26; not shown). More respondents were in dating relationships than were cohabiting or married, as would be expected for this age-group. Most reported that they loved their partners a lot (88%) and perceived that their partners loved them a lot (89%). Eighty-four percent of participants reported that they and their partners loved each other a lot; this proportion differed significantly by relationship type (76% of those in dating relationships, compared with 89% of cohabiting and 94% of married respondents—not shown).

Almost all respondents reported having had vaginal intercourse in their current relationship; 84–85% reported fellatio and cunnilingus (Table 2). In contrast, only 23% had had anal sex. Males reported a significantly higher level of fellatio than females, and females reported a significantly higher level of cunnilingus than males.

Most respondents had engaged in a broad range of sexual behaviors (Figure 1). Fifty-eight percent had had vaginal sex, cunnilingus and fellatio in their current relationship; 22% had added anal sex to that combination. Just 10% had had only vaginal sex, and smaller proportions had engaged in vaginal sex plus just one type of oral sex.\*

### Multivariable

Logistic regression models demonstrated that for both males and females, the odds that a type of sexual activity had ever occurred in a relationship were independently associated with the love pattern within the relationship (Table 3). A male had nearly twice as high odds of having received fellatio when the partners loved each other a lot as when neither partner loved the other a lot (odds ratio, 1.8). A female had significantly elevated odds of having received cunnilingus when the partners loved each other a lot or when she felt that her partner loved her (3.3 and 2.6, respectively).

A male had higher odds of having provided cunnilingus when he and his partner loved each other a lot or when he loved his partner a lot than when neither partner loved the other a lot (odds ratios, 3.9 and 5.2, respectively). A female had elevated odds of having provided fellatio when she and her partner loved each other a lot (2.6) or when she loved her partner a lot (2.0).

The odds of having had anal sex were elevated for males who said that they and their partners loved each other a lot (odds ratio, 3.1) or that they loved their partners (5.6). However for females, anal sex was not associated with the love pattern within the relationship.

Several relationship and individual factors also were significantly associated with the types of sexual activities that respondents reported. Older respondents had higher odds of having engaged in fellatio and cunnilingus than

**TABLE 3. Odds ratios from multiple logistic regression analyses assessing the likelihood that young adults had ever participated in selected sexual activities with their current partner of more than three months, by selected characteristics, according to sex**

Characteristic	Fellatio		Cunnilingus		Anal sex	
	Males	Females	Males	Females	Males	Females
<b>Pattern of love within relationship†</b>						
Neither partner loves the other a lot (ref)	1.00	1.00	1.00	1.00	1.00	1.00
Partners love each other a lot	1.80*	2.59*	3.91*	3.27*	3.09*	1.32
Respondent loves partner a lot (not reciprocated)	2.17	2.01*	5.19*	1.31	5.61*	1.08
Partner loves respondent a lot (not reciprocated)	1.28	1.25	1.51	2.57*	1.74	1.18
<b>Age (centered)</b>	1.13*	1.15*	1.11*	1.13*	1.04	1.05
<b>Age at first sex (centered)</b>	0.94	0.94*	0.99	0.89*	0.93*	0.86*
<b>Relationship type</b>						
Dating (ref)	1.00	1.00	1.00	1.00	1.00	1.00
Cohabiting	0.88	1.35	0.97	1.29	1.85*	1.53*
Married	1.12	1.44*	1.22	1.18	1.49*	1.24
<b>Race/ethnicity</b>						
White (ref)	1.00	1.00	1.00	1.00	1.00	1.00
Hispanic	0.56*	0.37*	0.52*	0.38*	0.93	1.02
Black	0.23*	0.16*	0.32*	0.23*	0.64	0.49*
Asian	1.24	1.18	1.38	1.14	0.85	1.15
Other	1.35	0.57	1.31	0.38*	1.07	0.89

\*p<.05. †As reported by respondent. Note: ref=reference group.

younger respondents; older age at first intercourse was associated with reduced odds of having participated in anal sex and, for females, oral sex. Compared with dating respondents, cohabiting females and males had higher odds of having had anal sex, married females had higher odds of having provided oral sex and married males had higher odds of having had anal intercourse. Black and Hispanic males and females had lower odds of having experienced oral sex, and black females had lower odds of anal sex, than their white counterparts.

## DISCUSSION

This study supported our hypotheses that different patterns of love between partners predict participation in a variety of types of sexual activities and that the association between love and the sexual content of the relationship is modified by the respondent's sex. Overall, reports of mutually high levels of loving between partners are associated with a wide range of sexual activities, including oral sex for males and females, and anal sex for males. Reports of loving one's partner very much are also associated with providing oral sex for that partner, whether that love is perceived to be reciprocated or not.

\*The study results are representative of young adults in long-term relationships. Results for the entire young adult weighted sample of Wave 3 of Add Health may be of interest to clinicians working with young adult populations in general. Among these 14,322 respondents, who can be considered representative of young adults in the United States, 48% did not report a current sexual relationship; 45% reported having had vaginal sex, 39% fellatio, 39% cunnilingus and 10% anal sex with a current partner of more than three months.

**Many sexual activities take place in the context of longer term, loving relationships that may not be considered risky by the individuals involved.**

This may reflect that a young adult's willingness to give pleasure to one's partner is based on how much love he or she feels for the partner. The fact that females who thought their partner loved them very much had elevated odds of reporting cunnilingus may reflect females' perception that their partner's providing oral sex is a loving or caring act.

Although we cannot assess causality with these data, the association between sexual variety and higher levels of love may contribute to building stable, rewarding relationships among young adults. Our results show that 94% of married couples report mutually high levels of love (compared with 89% of cohabiting couples and 76% of dating couples) and that even when love is controlled for, married and cohabiting couples often have higher odds of having engaged in sexual activities beyond vaginal intercourse. Thus, both love and varied sexual activity appear to be major components of committed relationships. Considering the benefits of stable and loving relationships for individuals and for families,<sup>36,37</sup> it is important to further explore the potentially positive role of sexuality in loving relationships in young adulthood, when family formation often occurs.

The findings that providing oral sex is associated with loving one's partner and that relationships that include oral sex generally include both cunnilingus and fellatio are consistent with social exchange concepts. More equitable feelings and sexual behaviors may lead to greater relationship quality in terms of satisfaction, love and commitment.<sup>11</sup> Our measures of love included perceptions of partner feelings and therefore could address perceived inequity of loving. However, our study did not measure the true feelings of the partners in question. Future research is needed to further explore the interconnections among love, commitment and sexual activities from the perspective of balancing costs and rewards in a relationship.<sup>17,38</sup> Considering the high proportion of marriages that end in divorce, a better understanding of the factors that contribute to successful relationships is important for counselors and other practitioners.

Several factors in addition to love between partners were associated with sexual activities. Older respondents generally had elevated odds of having participated in oral sex, but not anal sex. In addition, male and female respondents who were older when they had first sexual intercourse had reduced odds of having had anal sex, and females who were older at first sex had reduced odds of reporting cunnilingus and fellatio. These findings may indicate that as the amount of time that individuals have been sexually active grows, their level of comfort with a range of sexual activities increases. Alternatively, postponement of first vaginal sex may partly reflect less interest in sexual activity and, later, in diverse sexual activity. Compared with their white counterparts, black and Hispanic respondents had lower odds of oral sex, and black females had lower odds of anal sex. Racial and

ethnic differences in sexual practices may be partially due to educational differences that were not accounted for in this study. Additionally, race and ethnicity may act as a rough proxy for cultural norms.

Our findings did not support previous research indicating that married couples had less oral sex than unmarried couples.<sup>3</sup> This may partly result from the restriction of the current study sample to young adults. Relationship type was a better predictor of anal sex than of oral sex; cohabiting males and females and married males had elevated odds of anal sex. Anal sex patterns were also unusual in that, while the reported prevalence of the behavior did not differ between males and females, only males showed a strong association between love and anal sex. Additional variables, such as power dynamics, should be explored in future research to predict heterosexual anal sex, particularly for females.

These results provide helpful guidance for HIV and other STD prevention efforts, particularly considering the high prevalence of many infections among young adults and the serious consequences for fertility and reproductive health. Given how common oral and anal sex are, additional research is needed on the acceptability, proper use and efficacy of dental dams and condoms during opposite-sex oral and anal sexual activities. In particular, our findings support earlier work documenting that anal sex is a component of heterosexual behavior for many young adults, and indicate that a broad range of young women and men require protection from STDs during anal sex.<sup>31,39,40</sup> In our sample, 23% reported anal intercourse. When we account for young adults who were not eligible for inclusion in the sample, we estimate that nationally, 10% of all young adults are in a relationship of more than three months' duration with a partner with whom they have had anal sex. While the need to protect men who have sex with men from anal transmission of infection is often discussed in the public health community, the risk for women in opposite-sex couples is not as well recognized, even though a greater number of women than of men may be having receptive anal intercourse.<sup>39</sup>

This lack of attention is unfortunate, as many opposite-sex couples may consider oral and anal sex "safe" because they do not carry the risk of pregnancy.<sup>41-43</sup> Among those reporting anal sex in one clinic study, condom use by heterosexual women was much rarer (7%) than condom use by homosexual (71%) or bisexual (53%) men.<sup>44</sup> However, risks for women associated with anal sex include rectal STDs, anal cancer and greater HIV transmission risk than vaginal sex.<sup>39,43,45</sup> Despite this, clinical sexual histories often do not cover condom use during anal sex or condom use problems or questions.<sup>46</sup> A careful sexual history in a clinical setting may elicit questions from women about anal sex practices and safety, and may assist practitioners in providing appropriate health advice. Furthermore, institutions should not exclude opposite-sex relationships from education efforts regarding condom use for anal sex.

This study relies on self-reports of emotions and sexual behaviors. A respondent's understanding of a question and perceptions of privacy and of the social acceptability of various behaviors may influence self-reports.<sup>47</sup> We examined reports of relatively recent sexual experiences and used questions with clear, anatomically specific language to reduce possible misunderstandings.<sup>47</sup> To reduce potential recall errors, we restricted the analyses to whether a sexual activity had ever occurred in the relationship instead of assessing how often it occurred throughout the relationship; thus, the outcome may include couples who experimented with a behavior or engaged in it infrequently. Add Health also made use of computer-assisted self-interviewing. This technology reduces the risk of accidental disclosure to the interviewer or others and improves privacy, making it easier for respondents to report on sensitive topics such as sexual behaviors.<sup>48,49</sup> However, the data presented here may represent underreporting of more stigmatized sexual behaviors, such as anal sex. In addition, some sexual experiences may be more memorable than others (e.g., receiving oral sex versus performing it) and therefore may be more likely to be reported.

Because emerging adulthood is an important time in family formation, sexual dynamics and activity in relationships during this time are of particular interest. In addition to providing recent, extensive data on a variety of sexual activities, Wave 3 of Add Health is based on a nationally representative cohort of young adults, so the available sample size allowed detailed analyses that apply specifically to young adults. However, this study includes only sexual activities that took place in the context of a current relationship with a duration of at least three months. Activity patterns in shorter relationships may differ. In addition, some respondents may have failed to report a current sexual relationship and thus been excluded from our sample. Therefore, the estimated proportions of all young adults engaging in various activities with a current sex partner should be considered conservative.

Overall, we conclude that most young adult couples engage in a variety of sexual activities within the context of a loving relationship and, therefore, that programs that address health and well-being during emerging adulthood should cover issues relevant to a broad range of sexual activities. Oral and anal sex should not be neglected in studies of sexual behavior, clinical sexual histories and interventions to prevent STDs. It is also important to recognize that many sexual activities take place in the context of longer term, loving relationships that may not be considered risky by the individuals involved. Public health professionals need to balance an appreciation for the potentially positive roles of sexuality in relationships with effective approaches to help individuals express their sexuality safely.

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