

# Relationship Types and Contraceptive Use Within Young Adult Dating Relationships

**CONTEXT:** Although expanding research has found that relationship characteristics can shape contraceptive use among young adults, limited research has examined how relationship characteristics intersect to form distinct types of relationships and how relationship types are linked to contraceptive use.

**METHODS:** Data from the 2002–2005 rounds of the National Longitudinal Survey of Youth 1997 cohort were used to examine contraceptive use in 3,485 young adult dating relationships. Latent class analysis was employed to develop a typology of relationships using measures of relationship structure (duration) and quality (intimacy, commitment and conflict). Multinomial logistic regression analyses were used to estimate associations between relationship type and contraceptive use and method choice at last sex.

**RESULTS:** Four types of relationships were identified, two shorter term and two longer term, differentiated by levels of intimacy, commitment and conflict. Young adults in longer term relationships with greater conflict and lower intimacy and commitment were less likely than those in other long-term relationships to use hormonal and dual methods versus no method (relative risk ratios, 0.6–0.7). Hormonal method use, versus no method use or condom use, was more prevalent in short-term relationships with greater intimacy and commitment and lower conflict than in other short-term relationships (1.7 and 1.9, respectively).

**CONCLUSIONS:** Classifying short-term relationships as “casual” or long-term ones as “serious” may ignore heterogeneity within these categories that may have implications for contraceptive use. Future qualitative research could provide a better understanding of relationship types and couples’ fertility intentions and access to and use of contraceptives.

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The field of “emerging adulthood” has identified the late teenage years and early 20s as a unique developmental stage, when many individuals are sexually active but not yet in a committed relationship, and instead are moving in and out of less committed dating relationships.<sup>1–3</sup> As a result, emerging adulthood is also a stage characterized by high rates of unintended and nonmarital childbearing and STDs.<sup>4,5</sup> Avoiding these outcomes requires the consistent and correct use of effective contraceptives, including the use of condoms for STD prevention, hormonal methods for pregnancy prevention and dual methods (condoms and hormonal contraceptives together) for both. However, despite recent increases in contraceptive use, many young adults fail to use effective methods, and some do not use contraceptives at all.<sup>6</sup>

An expanding research base has found that decisions about contraception are often made within the relationship dyad.<sup>7–10</sup> Some of this research (especially research on condom use) has focused on single-item measures of relationship context, such as relationship duration, which is used as a proxy for perceived relationship seriousness.<sup>10</sup> Other studies, focusing on adolescents<sup>9,11,12</sup> and young adults,<sup>7,8</sup> have found that several dimensions of relationships, as well as partner characteristics, are associated with contraceptive and condom use and consistency. While it is useful

to examine the independent associations that individual relationship characteristics have with contraceptive and condom use, some research suggests that many of these characteristics coalesce into meaningful relationship categories, which, in turn, are linked to contraceptive use.<sup>7,9</sup>

In the study presented here, we sought to build on this research by using data from the National Longitudinal Survey of Youth 1997 cohort to identify the ways in which characteristics of the relationship dyad are linked to contraceptive use and method choice. Our goal was to provide a better understanding of contraceptive use within young adult dating relationships, information that is critical to policymakers and practitioners focused on improving the reproductive health of this high-risk population.

## BACKGROUND

### Correlates of Contraceptive Use

A large body of research has linked a broad range of individual and partner characteristics to contraceptive use and method choice among teenagers and young adults. At the individual level, socioeconomic characteristics (of respondents or their families), demographic characteristics (such as race or ethnicity and age) and behaviors (such as a respondent’s sexual history) have all been linked to contraceptive use. For example, lower educational attainment

and being unemployed and not enrolled in school have been linked to reduced use of contraceptives, particularly hormonal methods.<sup>8,13</sup> Additionally, a younger age at first sex is associated with reduced contraceptive use,<sup>14</sup> as is already having had a child.<sup>8</sup> At the partner level, relationship asymmetries with respect to age and race or ethnicity, low partner educational attainment, and partner disengagement from school and work have been linked to less contraceptive use and consistency.<sup>7,8,11,15,16</sup>

However, much of the variability in contraceptive use remains unexplained even once these individual and partner characteristics are taken into account. Thus, an expanding body of research has begun to examine how characteristics of the relationship dyad are linked to contraceptive use. Often drawing from life-course theory, which argues that behavior cannot be understood independently of the social relationships within which the individual is embedded,<sup>17,18</sup> this research has linked various structural and behavioral dimensions of romantic and dating relationships to contraceptive use. The four dimensions of relationships most consistently identified are duration of the relationship and levels of intimacy, commitment and conflict.<sup>19</sup>

It is well established that condom use declines as relationship duration increases.<sup>10</sup> The sawtooth hypothesis posits that as relationships become more serious over time and couples no longer perceive themselves to be at risk of acquiring and transmitting STDs, condom use (or consistent condom use) declines and hormonal method use increases; the pattern is then repeated in each new relationship.<sup>10,20,21</sup> Thus, longer relationship duration is generally associated with increased hormonal method use. However, over time, this association may change. For example, some research has found that very long relationship duration (four or more years) is associated with reduced pill use.<sup>13</sup> Also, reflecting the transition from condoms to hormonal methods in more serious relationships,<sup>21,22</sup> high levels of emotional closeness and relationship commitment are consistently associated with reduced condom use<sup>20,23–25</sup> and greater hormonal use<sup>10,26</sup> among teenagers and young adults. Notably, in one study, individuals in more serious relationships, but not those in casual relationships, reported less condom use when the female partner was using hormonal methods.<sup>21</sup>

Research has also found that relationship conflict is associated with reduced condom use among young adults<sup>27</sup> and female teenagers,<sup>9</sup> and with reduced contraceptive use, particularly condom and dual method use, among young adults.<sup>28</sup> Conflict in a relationship could be symptomatic of power differentials or a lack of communication, both of which have been linked to lower levels of contraceptive use.<sup>9,29</sup>

## Interactions Between Relationship Dimensions

Most of the research discussed above examined the links between individual relationship characteristics and contraceptive use. However, the context of any social relationship, including romantic relationships, is made up of multiple dimensions that are correlated with one another and that interact with each other in important ways. To date, few studies have examined how the characteristics of romantic relationships may group together to influence contraceptive use. In this article, we attempt to fill this gap by identifying underlying relationship classes, defined by the important dimensions of relationships described above, and by exploring how these classes are linked to contraceptive use and method choice within young adult dating relationships. Our work builds on two studies that have combined several relationship characteristics into indices<sup>9</sup> or relationship typologies<sup>7</sup> to examine their association with contraceptive use.

In the first study, which used a local-area sample of adolescents in Ohio, Manning and colleagues<sup>9</sup> grouped relationship characteristics into one index of positive attributes (such as intimate self-disclosure, passionate love and relationship salience) and one index of negative attributes (such as conflict and nonexclusivity). They found that high scores on either index were associated with reduced condom consistency. Descriptive analyses also suggested that a combination of high positive and high negative scores was associated with less condom consistency.

In the second study, Kusunoki and Upchurch<sup>7</sup> used nationally representative data on adolescent and young adult relationships to examine the association between relationship characteristics and contraceptive use at last sex. They used cluster analysis to create a relationship typology for dating and cohabiting relationships based on self-assessed relationship type (sex-only, dating, cohabiting) and three structural attributes: duration of the relationship, duration of the presexual relationship and frequency of intercourse within the relationship. They found heterogeneity in contraceptive use within self-assessed relationship type. For example, in dating relationships, frequency of sexual intercourse was inversely associated with condom use and dual method use; in more casual “hook-up” relationships, duration of the presexual relationship was positively associated with condom and hormonal method use.<sup>7</sup>

We extended the work in these studies by using longitudinal data on young adult dating relationships to examine whether comparable relationship types emerge in latent class analyses.\* Building on Kusunoki and Upchurch,<sup>7</sup> we tested whether there was heterogeneity within shorter term and longer term relationships, and assessed how heterogeneity was associated with contraceptive use and method choice at last sex. However, instead of relying solely on self-reported relationship type and structural measures of the relationship, we captured additional relationship characteristics and created classes based on measures of relationship duration, intimacy, commitment and conflict. Drawing on the work of Manning and colleagues,<sup>9</sup>

\*Latent class analysis is a statistical technique for examining relationships in data by identifying a set of mutually exclusive unobserved subgroups that account for the distribution of cases occurring within a cross-tabulation of discrete variables—here, relationship characteristics (source: McCutcheon A, *Latent Class Analysis*, Beverly Hills, CA: Sage, 1987).

we examined whether relationship types that included both positive and negative attributes emerged and whether they were associated with especially low levels of condom or contraceptive use, which might be expected given the authors' finding of lower condom consistency among these relationships. Our analyses differentiate between method types because reasons for using a condom (which provides protection against STDs) may differ from reasons for using hormonal methods and may be unique to a given relationship.<sup>21</sup> Focusing on only one method or combining methods into a general measure of contraceptive use may ignore this important variation.

### Hypotheses

Consistent with a life-course perspective and with the research by Manning et al.<sup>9</sup> and Kusunoki and Upchurch,<sup>7</sup> we hypothesized that dating couples would be sorted into several classes based on multiple dimensions of their relationship. Some of these classes would include both positive and negative attributes. Also, consistent with the sawtooth hypothesis, we posited that casual, short-term relationships, marked by lower intimacy and commitment, would be associated with greater condom use. By contrast, we expected that relationships with greater intimacy, commitment and duration would be associated with greater hormonal method use. Given that levels of condom use tend to be relatively high in longer term casual relationships even when the women are using hormonal methods,<sup>21</sup> we anticipated greater dual method use in longer, casual relationships, as well as in relationships that have high levels of intimacy and commitment but are of comparatively short duration. In addition, we hypothesized that relationship classes characterized by high levels of conflict would be associated with reduced use of any method.

## METHODS

### Data and Sample

We used data from the National Longitudinal Survey of Youth 1997 cohort, a nationally representative sample of 8,984 youth aged 12–16 at baseline.<sup>30</sup> The survey collects information on respondents' romantic partners and sexual experiences, as well as family background and demographic characteristics. We focused on sexually active individuals in current dating relationships because our key measures of intimacy, commitment and conflict were available only for respondents in such relationships (those who were cohabiting, married or no longer with their dating partner were not asked the relevant questions). Although respondents were interviewed every year starting in 1997, we primarily used data from 2002–2005 (Rounds 6–9) because respondents were not asked about their dating partners until Round 6 and several of our measures of interest were not collected after Round 9. We also used data from previous rounds and baseline for time-invariant individual and family background control measures.

In each round, participants were asked "Since [date of last interview], have you been in a dating relationship in

which you thought of yourself as part of a couple?" We considered respondents to be in a dating relationship if they answered yes and if the partner was a current dating partner, as opposed to a spouse, cohabiting partner or former partner. Same-sex dating relationships and those in which the respondent had previously cohabited with the partner were excluded. Overall, 4,013 respondents reported a current dating relationship during 2002–2005. Of the remaining respondents, 553 were not in the sample during the rounds of interest, 1,876 were cohabiting or married, and 2,542 had no current dating relationships. Respondents in our sample were aged 18–26.

Respondents included in the sample and those who reported no relationships reported generally similar social and demographic characteristics, suggesting that our sample is fairly representative of young adults who are unmarried and not cohabiting; the only differences between the two groups were that those reporting no current dating relationship were more likely to be male and marginally less likely to be black. On the other hand, respondents who were not included because they were cohabiting or married differed from those who were dating in several ways: They were more likely to be female and Hispanic, and they were less likely to be black, to have lived with two biological or adoptive parents at baseline and to have a parent with at least some college experience. They also had a marginally lower average age at first sex.

From these data, we created a relationship-level file, in which each record represented a relationship, for a total of 4,574. We then removed 19 relationships with missing data on contraceptive use at last sex and 16 relationships in which the respondent reported using methods that did not fit into our contraceptive method typology, described below. We also removed 386 relationships in which the respondents were not having sex with their dating partner. Although a respondent could have up to four records if he or she was currently dating a different partner at each interview date, more than 85% contributed just one relationship.\* Because we could not look at multiple relationships for the majority of respondents, we focused on respondents' most recent dating relationship and dropped 538 relationships that did not meet this criterion, leaving us with one relationship per respondent. Finally, we removed 130 relationships in which respondents said they were trying to get pregnant with their partner. Our final sample consisted of 3,485 unique relationships (1,804 from female respondents and 1,681 from male respondents).

### Measures

•**Dependent variables.** Our dependent variable of interest was a four-level measure of the type of contraceptive used at last sex: no method (including withdrawal and natural

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\*Respondents may have contributed only one relationship because they dated one partner across multiple rounds or because they had short relationships between survey dates that were no longer current at the time of the interview.

family planning methods, which were reported by 2% of respondents); condom only; hormonal or long-acting method only; or dual method (condom and hormonal or long-acting method).

•**Relationship characteristics.** We created six three-level categorical relationship variables for our latent class analysis. We chose three-level variables because having all variables on the same metric helps latent class analysis models converge<sup>31</sup> and, in our data, the three-level categorical variables provided better model fit than two-level variables. We set our category cut points on the basis of previous research, but also to maintain a relatively even distribution across levels in our sample.

Relationship duration was measured by the total number of months elapsed from the date the relationship began to the date of last sex. Responses were categorized as six months or less, seven months to one year or more than one year. Also, we included a variable measuring the length of the couple's relationship prior to the first time they had sex (the presexual relationship). The categories indicated that the couple had had sex before or during the month the relationship started, had dated for 1–3 months prior to having sex or had dated for four or more months prior to having sex.

Intimacy was assessed with two questions about how close respondents felt to their partner and how much they thought their partner cared about them. Responses for each ranged from 0 to 10 (high scores indicate high caring or closeness). Because these two variables were moderately correlated ( $r=0.66$ ), and because a large proportion of respondents reported very high levels of closeness and caring, we averaged these measures and combined scores into one measure indicating low intimacy (a score of 7 or less), medium intimacy (a score of 8 or 9) or high intimacy (a score of 10).

Relationship commitment was based on two measures. The first was a 0–10 scale in which respondents rated the likelihood that they and their partner would be together in six months. A score of zero indicated no chance; a 10 indicated 100% likelihood. We categorized this likelihood as low (less than 6), medium (6–9) or high (10). For the second measure of commitment, we included a variable for whether the couple had discussed marriage or cohabitation; responses were categorized as talked about neither, talked about cohabitation or talked about marriage. (Respondents who reported having discussed both cohabitation and marriage were included in the marriage category.)

Respondents rated the level of conflict in their relationship on a 0–10 scale. Responses skewed toward the lower end of the scale, so we categorized them as low conflict

(a score of 0–2), medium conflict (3–5) or high conflict (6–10).

•**Control variables.** We included a number of family and individual controls associated with contraceptive use. Time-invariant characteristics measured at Round 1 were gender, race or ethnicity (white, black, native-born Hispanic and foreign-born Hispanic\*), whether either of the respondent's parents had completed some college or more, and whether the respondent had lived with two biological or adoptive parents at baseline. We also included a measure of the respondent's age at first sex. Time-varying characteristics measured at the time of last sex with the dating partner were the respondent's age, whether the respondent had completed some college or more, whether the respondent was neither enrolled in school nor employed, the number of sexual partners in the past year (capped at 10), whether the respondent had used hormonal methods prior to the current relationship and whether the respondent had children. Fifteen percent of the sample had had a child, but only 2% had had a child with the current partner. Therefore, for class creation, having had a child was considered an individual-level control, rather than a relationship-level characteristic.†

Also, we controlled for several important partner characteristics. We included a measure of whether the partner was of a different race or ethnicity than the respondent, as well as a continuous measure of age difference between the respondent and his or her partner (where a positive value indicates the partner is older). Two variables measured whether the partner had completed some college or more and whether the partner was neither enrolled in school nor employed. Ideally, these two characteristics would be measured at the time of last sex; however, the relevant questions were based on the beginning of the relationship.

## Analysis

We conducted a latent class analysis in Mplus to identify relationship classes.<sup>31</sup> We tested whether gender was a significant predictor of relationship class membership and found that it was not. Therefore, we conducted the class creation on the full sample of males and females. In conducting the latent class analysis, we compared the fit indices (entropy, the Bayesian information criterion, the sample-size adjusted Bayesian information criterion and the Akaike information criterion) for one- to five-class models to identify the appropriate number of classes. We then conducted descriptive and bivariate analyses to examine the average contraceptive patterns and partner and individual characteristics across classes, which we tested for differences using *t* tests.

In multivariate analyses, we examined the association between relationship class and contraceptive use, net of partner, family and individual characteristics. Using logistic regression, we modeled contraceptive use versus nonuse (results not shown); using multinomial logistic regression, we modeled the four-category contraceptive method type. Regressions were run in Stata 11 and incorporated

\*Eighteen respondents reported another race or ethnicity; these were included with whites.

†We ran a latent class analysis model that included a three-level child variable (no child, child with current partner, child with other partner), and the results were unchanged.

household clustering and probability weighting variables. We ran the regression models four times, each time using a different relationship class as the reference group, in order to compare all of the classes. All associations presented were significant at  $p < .05$ . We ran interaction analyses to test whether the associations between relationship class and contraceptive use differed for males and females, and found no meaningful differences.

## RESULTS

### Relationship Types

Model fit improved as the number of classes increased up to four, but then decreased with the five-class solution. Our final four-class model had an entropy of 0.69. (Entropy measures the average classification accuracy in the assignment of observations to classes; 1.00 denotes 100% accuracy.) Reviewing the distributions of our relationship measures, we identified two types of shorter term relationships and two types of long-term relationships, and created a label for each relationship type based on levels of duration, intimacy, commitment and conflict.

•**Short-term/casual.** The short-term/casual relationship class combined short relationship duration with relatively low levels of intimacy and commitment. Nine in 10 of these relationships were of six months' or shorter duration, and almost two-thirds of couples had had sex before or in the same month they started dating (Table 1). Couples in the short-term/casual class reported the lowest levels of intimacy (78% were low on this measure) and commitment (77% reported a low likelihood that they and their partner would be together in six months, and only 9% had discussed marriage). Forty percent reported low levels of conflict.

•**Short-term/rosy outlook.** The short-term/rosy outlook class combined short-term relationship duration and sex early on in the relationship with higher levels of intimacy and commitment and lower levels of conflict than found in short-term/casual relationships. Most couples had been together for six months or less (64%), and had had sex within the first month of dating (57%). In contrast to couples in the short-term/casual class, most reported medium (71%) or high (29%) levels of intimacy. Couples in this class also appeared to be positive about their future. The vast majority reported a medium or high likelihood that they and their partner would be together in six months (92%), and 60% had talked about either marriage or cohabitation. Also, they reported less conflict than couples in the short-term/casual class—58% reported low levels of conflict.

•**Long-term/cloudy outlook.** Long-term/cloudy outlook relationships were longer in duration than those in other classes but had high levels of conflict and relatively low levels of intimacy and commitment. The proportion of couples who had been together for more than one year was higher in the long-term/cloudy outlook class than in any other class (85%); 69% of couples in this class had waited at least one month to have sex. Only 21% of couples

**TABLE 1. Percentage distribution of young adult dating relationships, by selected relationship characteristics, according to relationship class, National Longitudinal Survey of Youth 1997 cohort, 2002–2005**

Characteristic	Short-term/ casual (N=505)	Short-term/ rosy outlook (N=708)	Long-term/ cloudy outlook (N=1,015)	Long-term/ serious (N=1,257)
<b>Weighted % of sample</b>	<b>15.1</b>	<b>21.8</b>	<b>26.7</b>	<b>36.4</b>
<b>Relationship duration</b>			**	***
≤6 months	88.0	64.3	2.9	16.1
7 months to 1 year	10.5	30.7	11.9	15.6
>1 year	1.5	5.0	85.3	68.3
<b>Length of presexual relationship</b>		*	**	**
Sex before/in first month of dating	63.0	56.9	30.6	30.2
1–3 months	34.6	39.1	38.8	42.2
≥4 months	2.4	4.1	30.6	27.6
<b>Intimacy†</b>		*	**	***
Low	77.6	0.7	29.1	0.1
Medium	22.1	70.5	50.1	13.0
High	0.3	28.7	20.7	87.0
<b>Likelihood of being with partner in six months‡</b>		*	**	***
Low	76.9	8.1	38.1	0.2
Medium	21.8	70.1	55.2	4.9
High	1.3	21.8	6.7	94.9
<b>Discussed cohabitation/marriage</b>		*	**	***
Neither	72.8	38.5	18.5	5.9
Cohabitation	18.0	21.2	12.1	5.6
Marriage	9.3	40.2	69.4	88.6
<b>Conflicts</b>		*	**	***
Low	39.8	57.8	15.6	59.1
Medium	36.6	18.5	45.8	20.9
High	23.6	23.7	38.6	20.1
Total	100.0	100.0	100.0	100.0

\*Differs from short-term/casual at  $p < .05$ . \*\*Differs from short-term/rosy outlook at  $p < .05$ . \*\*\*Differs from long-term/cloudy outlook at  $p < .05$ . †On a scale of 0–10 (≤7=low, 8–9=medium and 10=high). ‡On a scale of 0–10 (<6=low, 6–9=medium and 10=high). §On a scale of 0–10 (0–2=low, 3–5=medium and 6–10=high). Notes: Percentages are weighted. Percentages may not total 100.0 because of rounding.

reported high levels of intimacy. While two-thirds of respondents reported discussing marriage, fewer than one in 10 reported a high likelihood that they and their partner would be together in six months. Eighty-four percent had medium or high levels of conflict.

•**Long-term/serious.** Couples in the long-term/serious class demonstrated higher levels of intimacy than couples in the long-term/cloudy class and appeared to be more positive about the future of their relationship. Most (87%) reported high levels of intimacy, nearly all (95%) reported a high likelihood that they and their partner would be together in six months, and the great majority (89%) had discussed marriage. They also reported less conflict than couples in other long-term relationships—59% reported low levels of conflict.

### Descriptive and Bivariate Results

•**Contraceptive use.** Nonuse of contraceptives (which included use of withdrawal and natural family planning methods) was quite common in these relationships; reports of nonuse ranged from 30–31% in long-term/cloudy outlook and short-term/casual relationships to 22% in

**TABLE 2. Percentage of young adult dating relationships, by contraceptive use at last sex and selected background characteristics, according to relationship class**

Characteristic	Short-term/ casual	Short-term/ rosy outlook	Long-term/ cloudy outlook	Long-term/ serious
<b>Contraceptive used at last sex</b>				
None†	30.0	23.5	30.9	21.9*,***
Condom only	33.4	27.0*	26.1*	23.3*,***
Hormonal only	17.5	26.4*	23.7*	29.5*,***
Dual method	19.2	23.1	19.3	25.3*,***
<b>Partner</b>				
≥some college	54.7	54.3	41.7**,**	47.1**,**
Not employed/enrolled	7.9	5.2	5.8	3.7*,***
Different race or ethnicity	23.7	21.4	20.2	17.0**,**
Different age				
Partner <3 years younger	9.4	12.8	7.8**	9.2**
Partner within 3 years	61.4	62.3	68.8**,**	68.8**,**
Partner ≥3 years older	29.1	25.0	23.4*	22.1*
<b>Family and individual</b>				
Male	50.6	52.1	47.2	45.9**
≥some college	48.1	56.1*	55.7*	60.6*,***
Not employed/enrolled	14.6	9.6*	15.9**	10.3*,***
Race/ethnicity				
White‡	74.3	76.3	64.2**,**	71.9**,***
Black	14.8	12.6	21.9*,**	16.1**,***
Native-born Hispanic	8.0	9.7	10.9*	10.0
Foreign-born Hispanic	3.1	1.4*	3.1**	2.0
Parent completed ≥some college§	61.6	64.7	59.8	63.6
Lived with two biological/ adoptive parents§	50.2	56.3*	55.7	60.5*,***
Age at first sex				
≤14	23.0	16.1*	21.3**	15.8*,***
15–17	52.6	53.4	53.3	53.7
≥18	24.4	30.5*	25.5**	30.5*,***
Current age				
18–19	16.1	16.9	16.0	15.2
20–21	36.8	37.8	34.9	35.9
22–26	47.2	45.3	49.1	48.9
>1 sex partner in past year	77.8	57.7*	33.2**,**	26.3**,***
Ever had a child	13.6	9.5*	21.8**,**	12.5**,***
Ever used hormonal method	40.2	41.7	40.2	39.6

\*Differs from short-term/casual at  $p < .05$ . \*\*Differs from short-term/rosy outlook at  $p < .05$ . \*\*\*Differs from long-term/cloudy outlook at  $p < .05$ . †Includes use of withdrawal and natural family planning methods. ‡Includes 18 relationships of respondents who listed their race as "other." §Measured in Round 1 (1997). Note: Percentages are weighted.

long-term/serious ones (Table 2). As hypothesized, couples in the short-term/casual class had the highest level of condom use (33%) and lowest level of hormonal method use (18%). Couples in the long-term/cloudy outlook class had a higher level of condom use (26%) and lower level of hormonal use (24%) than those in the long-term/serious class (23% and 30%, respectively). Finally, couples in the long-term/serious class had a higher level of dual method use (25%) than those in the short-term/casual and long-term/cloudy outlook classes (19% for both).

**•Partner and respondent characteristics.** The short-term classes had a higher proportion of respondents with partners who had obtained at least some college education than the two long-term classes. The short-term classes also had slightly lower proportions of respondents with partners who were the same age and race or ethnicity as themselves.

The short-term/casual class had the lowest proportion of respondents with some college education or more. The proportion of whites in the long-term/cloudy outlook

class was relatively low, and the proportion of blacks was relatively high, compared with the proportions in other classes. The long-term/serious and short-term/rosy outlook classes had lower proportions of respondents who became sexually active before age 15 than the other two relationship classes (and higher proportions who reported waiting until they were 18 or older). The majority of those in the short-term classes had had more than one sex partner in the prior year (78% of the casual class and 58% of the rosy outlook class); as to be expected, the proportions were smaller in the two longer term classes (33% of the cloudy outlook class and 26% of the serious class). Interestingly, although only 15% of couples in the long-term/cloudy outlook class had been together for less than a year, 33% reported more than one sexual partner, suggesting infidelity within these relationships or an "on-again, off-again" nature. Finally, the proportion of respondents who had had a child was highest in the long-term/cloudy outlook class (22%).

**Multivariate Results**

**•Relationship types.** In general, couples in long-term/serious relationships had a greater likelihood of hormonal and dual method use than couples in other relationship classes (Table 3). For example, compared with those in the short-term/casual class, couples in long-term/serious relationships had 2.0 times the relative risk of using hormonal methods, rather than no method; compared with those in the long-term/cloudy outlook class, they had 1.5 times the relative risk. Similarly, couples in the long-term/serious class had 1.6 times the relative risk of using dual methods of those in the long-term/cloudy outlook class. Couples in the long-term/serious class were also more likely than others to use hormonal or dual methods rather than condoms. Compared with couples in the short-term/casual class, they had a lower relative risk of using dual methods versus a hormonal method alone (0.7). In logistic analyses (not shown), we found that couples in the long-term/serious group had higher odds than their counterparts in the long-term/cloudy outlook class of using any form of contraception.

Overall, couples in the long-term/cloudy outlook class had lower levels of contraceptive use than those in other relationship classes. Compared with those in the short-term/casual class, couples in the long-term/cloudy outlook group had a lower relative risk of using a condom rather than no method (0.7), a higher relative risk of using a hormonal method rather than a condom (2.1), and a reduced relative risk of using dual methods rather than a hormonal method alone (0.6). The only significant difference between the long-term/cloudy outlook and short-term/rosy outlook classes was for dual method use versus no method (0.7), although logistic regressions found that long-term/cloudy outlook couples had lower odds of any contraceptive use than the short-term/rosy outlook class (not shown). Finally, compared with couples in the long-term/serious class, couples in the long-term/cloudy outlook class had a lower relative risk of using dual methods or a hormonal method

**TABLE 3. Relative risk ratios from multinomial logistic regression analysis assessing likelihood of use of specific contraceptive methods at last sex in young adult dating relationships**

Characteristic	Condom vs. none	Hormonal vs. none	Dual vs. none	Hormonal vs. condom	Dual vs. condom	Dual vs. hormonal
<b>RELATIONSHIP CLASS</b>						
<b>Comparison 1: Long-term/serious</b>						
Vs. short-term/casual	0.74	1.99***	1.36	2.67***	1.82***	0.68*
Vs. short-term/rosy outlook	0.87	1.21	1.10	1.39*	1.27	0.91
Vs. long-term/cloudy outlook	1.14	1.48**	1.59***	1.30	1.40*	1.07
<b>Comparison 2: Long-term/cloudy outlook</b>						
Vs. short-term/casual	0.65**	1.34	0.85	2.05***	1.30	0.64*
Vs. short-term/rosy outlook	0.76	0.81	0.69*	1.07	0.91	0.85
Vs. long-term/serious	0.88	0.67**	0.63***	0.77	0.71*	0.93
<b>Comparison 3: Short-term/casual</b>						
Vs. short-term/rosy outlook	1.16	0.61*	0.81	0.52***	0.70*	1.33
Vs. long-term/cloudy outlook	1.53**	0.75	1.17	0.49***	0.77	1.57*
Vs. long-term/serious	1.34	0.50***	0.74	0.37***	0.55***	1.46*
<b>Comparison 4: Short-term/rosy outlook</b>						
Vs. short-term/casual	0.86	1.65*	1.23	1.92***	1.44*	0.75
Vs. long-term/cloudy outlook	1.31	1.23	1.45*	0.94	1.10	1.18
Vs. long-term/serious	1.15	0.83	0.91	0.72*	0.79	1.10
<b>CONTROLS</b>						
<b>Partner</b>						
≥some college	1.01	1.39**	1.22	1.37**	1.21	0.88
Not employed/enrolled	0.74	0.56*	0.60*	0.76	0.81	1.08
Different race/ethnicity	1.17	0.75*	0.87	0.65**	0.74*	1.15
Older	0.97*	0.98	0.97*	1.01	0.99	0.98
<b>Family and individual</b>						
Male	1.15	0.76*	0.86	0.67***	0.75*	1.12
≥some college	1.44**	1.88***	1.40**	1.30*	0.97	0.74*
Not employed/enrolled	0.86	0.58**	0.70*	0.67*	0.81	1.22
<b>Race/ethnicity</b>						
White† (ref)	1.00	1.00	1.00	1.00	1.00	1.00
Black	1.31*	0.44***	0.96	0.34***	0.73*	2.18***
Native-born Hispanic	1.07	0.74	0.62**	0.69*	0.58**	0.84
Foreign-born Hispanic	1.30	0.60	0.76	0.46**	0.58	1.27
Parent completed ≥some college‡	1.03	1.51***	0.97	1.46**	0.94	0.64***
Lived with two biological/adoptive parents‡	1.09	1.02	1.08	0.93	1.00	1.07
Age at first sex	1.06*	1.00	1.07*	0.94*	1.01	1.07*
Current age	0.94*	0.91**	0.87***	0.98	0.93*	0.95
No. of sexual partners in past year	0.92**	0.95	0.88***	1.03	0.96	0.93*
Ever had a child	0.57***	0.57***	0.53***	0.99	0.93	0.94
Ever used hormonal method	0.92	1.93***	1.71***	2.09***	1.86***	0.89

\*p<.05. \*\*p<.01. \*\*\*p<.001. †Includes 18 relationships of respondents who listed their race as "other." ‡Measured in Round 1 (1997).

rather than no method (0.6 and 0.7, respectively), and of using dual methods rather than condoms (0.7).

Overall, couples in the short-term/casual class showed a preference for condoms when compared with those in other relationship classes. They were more likely than couples in the long-term/cloudy outlook class to use condoms over no method (relative risk ratio, 1.5), and were less likely than couples in the short-term/rosy outlook and long-term/serious classes to use hormonal methods versus nothing (0.6 and 0.5, respectively). These couples were less likely than couples in any other class to use a hormonal method over a condom (0.4–0.5), and were less likely than couples in the short-term/rosy outlook and long-term/serious classes to use dual methods rather than a condom alone (0.7 and 0.6, respectively). Compared with couples in the longer term classes, those in the short-term/casual class had a higher relative risk of using dual methods versus a hormonal method alone (1.5–1.6).

Couples in the short-term/rosy outlook class had a higher likelihood of hormonal use than their counterparts in the short-term/casual class, and a higher likelihood of condom use than those in longer term classes. When compared with those in the short-term/casual class, couples in the short-term/rosy outlook class had a greater relative risk of using a hormonal method rather than no method or a condom alone (relative risk ratios, 1.7 and 1.9), and a greater relative risk of using dual methods instead of a condom alone (1.4). They had a higher risk than long-term/cloudy outlook couples of using dual methods versus no method (1.5), and a lower relative risk than those in the long-term/serious class of using a hormonal method versus a condom (0.7).

•**Controls.** Regardless of relationship type, couples in which the partner had at least some college education were more likely than others to use hormonal methods versus no method (relative risk ratio, 1.4). However, couples in

**Relationship context and characteristics have an important association with contraceptive use behaviors in young adulthood.**

which the partner was not employed or enrolled in school had a reduced relative risk of using hormonal or dual methods versus no method (0.6 for both). Having a partner of a different race or ethnicity was associated with a reduced risk of using hormonal methods rather than no method (0.8), and having an older partner was associated with a reduced risk of condom and dual method use versus no method (0.97 for both).

Net of relationship and partner characteristics, individual characteristics positively associated with use of various contraceptives, rather than no method, were having some college education or more, having a parent who had completed some college education or more, age at first sex and prior hormonal method use. Individual characteristics that were negatively associated with contraceptive use were male gender, not being employed or enrolled in school, Hispanic ethnicity, age, number of sexual partners in the past year and having a child. Black young adults had a higher relative risk than whites of using a condom rather than no method, but a lower relative risk of using a hormonal method versus no method.

**DISCUSSION**

Results of our latent class analyses suggest that young adult dating relationships are marked by heterogeneity with respect to relationship quality and structure. We identified two types of short-term relationships—casual ones, with relatively low levels of intimacy and commitment, but also ones with higher levels of these characteristics and thus a rosier outlook. These results support Kusunoki and Upchurch’s research identifying varying levels of partner intimacy among less serious relationships.<sup>7</sup> However, we also identified two classes of longer term relationships—serious ones, with high levels of intimacy and commitment; and ones with a cloudy outlook, characterized by greater conflict and less commitment and intimacy. These findings suggest that classifying short-term relationships as “casual” or long-term relationships as “serious” may ignore heterogeneity within these relationship categories.

As hypothesized, relationship types were associated with contraceptive method use, net of important individual and partner characteristics. Prior research has found greater contraceptive use, especially greater hormonal method use (and declining condom use), in longer relationships.<sup>21,22</sup> This research often equates increased relationship duration with relationship seriousness and commitment. However, we found that young adults in long-term dating relationships with a cloudy outlook had lower odds of using any method, especially hormonal and dual methods, than those in long-term serious relationships. These results extend Manning et al.’s finding of less condom use consistency in relationships that have a mix of positive and negative characteristics.<sup>9</sup>

Heterogeneous contraceptive outcomes within longer term relationships may also help explain lower contraceptive consistency in longer adolescent relationships, despite greater odds of ever-use of contraceptives.<sup>32,33</sup> Previous

research has interpreted this finding by positing that couples are willing to occasionally forgo contraceptive use in more serious relationships;<sup>32,34</sup> however, our results suggest that reduced contraceptive use may be concentrated in longer term relationships characterized by higher conflict and lower commitment.

Some previous research suggests that relationship types similar to the long-term/cloudy outlook class may be disproportionately capturing on-again, off-again relationships.<sup>35</sup> Young adults in these relationships may have already transitioned away from condoms, as the sawtooth hypothesis posits; yet, if relationship turmoil causes them to doubt that they have a future with their partner, they may not make the switch to, or stay with, longer acting methods. Also, one in five long-term/cloudy outlook relationships included children—the highest proportion among all relationship classes—and many of these children were from the respondent’s previous relationship. Prior research suggests that young adults with children from previous unions may face additional challenges to building and maintaining new long-term romantic relationships.<sup>36,37</sup> Moreover, the low odds of contraceptive use in these relationships may lead to multiple-partner fertility, which has negative implications for mothers and their children.<sup>36–38</sup>

We also found heterogeneity in short-term relationships. As expected, young adults in short-term/casual relationships were more likely to rely on condoms, while those in short-term/rosy outlook relationships were more likely to use hormonal methods. Measures of relationship intimacy and commitment differentiated hormonal method use among short-term relationships (and long-term ones, as well). Less intimacy and commitment may reflect (or lead to) relationship mistrust, which has been linked to higher levels of condom use,<sup>39</sup> while greater intimacy and commitment have been linked to higher levels of hormonal method use.<sup>10,20,24,26</sup>

**Limitations**

This study has some limitations as a result of the data available on young adult relationships. Because most of the measures were unique to dating relationships, we excluded cohabiting relationships and casual sex partners. Therefore, we may not have captured the full spectrum of young adult sexual experiences. A focus on dating relationships, however, helps address some of the relationship groups with the highest levels of unintended pregnancy and STDs. We also limited our analyses to current relationships because measures of intimacy, commitment and conflict were not available for previous partners. As a result, we may have missed some short-term relationships that occurred between interviews. Limiting the data to current relationships also resulted in very few respondents’ contributing more than one relationship to the sample; this meant we could not conduct a multilevel analysis (which would allow for a better understanding of how individuals may behave differently across relationships). It also meant that for respondents who reported different relationships in different



survey rounds, we could use only the most recent one. In addition, because partner educational attainment was measured at the beginning of the relationship, it may be underestimated for some of those in longer term relationships. Also, we had to assume that the partner's employment and enrollment status at the beginning of the relationship and at the time of last sex were the same. A final limitation is the use of dating relationships that occurred between 2002 and 2005; our analysis may not accurately reflect the dating experiences of young adults today.

## Conclusion

Our analyses indicate that relationship context and characteristics have an important association with contraceptive use behaviors in young adulthood, an age when rates of unintended pregnancy and STDs are high.<sup>5</sup> These findings, paired with troublingly high rates of contraceptive nonuse among young adults across all types of dating relationships, suggest that young adult couples could benefit from pregnancy and STD prevention programs. However, despite extensive evaluations of pregnancy prevention curricula for school-age teenagers,<sup>40</sup> very few programs have been evaluated among young adult populations.<sup>41</sup> Additionally, our analyses of the long-term/cloudy outlook relationships suggest that those least likely to sustain a committed relationship have the lowest odds of contraceptive use, and may be at the greatest risk of unintended pregnancy. Future research—particularly using qualitative methods—could lead to a better understanding of these long-term, low-commitment relationships, of the couples' fertility intentions and of how to improve their access to, and use of, effective methods of contraception.

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