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**QUALITIES OF ROMANTIC RELATIONSHIPS AND
CONSISTENT CONDOM USE AMONG DATING YOUNG ADULTS**

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Abstract

Emerging adulthood is marked by significant changes in interpersonal and sexual relationships with delays in marriage meaning that young adults are facing increasingly longer periods of nonmarital sexual engagement (Arnett 2000). Understanding factors that influence contraceptive use is critical because young adults experience the highest rates of unintended pregnancy and sexually transmitted infections. Drawing on the Toledo Adolescent Relationship Study (TARS) (n = 437) we examine how variations in the qualities of dating relationship are associated with consistent condom use and consider the reasons for inconsistent condom use. We find that negative relationship dynamics, such as verbal abuse, intimate partner violence, and infidelity, are associated with inconsistent condom use net of socioeconomic factors and prior contraceptive use. Positive relationship qualities, such as love, intimate self-disclosure, and trust are not associated with condom use. Young adult daters most often report that inconsistent condom use is due to relational factors (e.g., partner and I know each other well, I trust my partner, and I am not worried partner is unfaithful) (40%). Less frequent reasons included sexual health of self or partner (30%) or use of other methods (23%). Relatively rare reasons for inconsistent use are aversion to condoms (2%) or access to condoms (5%). Thus, assessments of the relationship context will move forward our understanding of young adult condom use. The results show that those young adults in the lowest quality relationships are least often effectively protecting themselves against STIs and pregnancy. These findings have implications for programs targeted at young adults.

Introduction

Emerging adulthood is a critical developmental stage in the lives of individuals between ages 18 and 24 and is marked by significant changes in interpersonal and sexual relationships (Arnett 2000). Viewed by scholars as a demographically inconsistent period in the life course, emerging adulthood is characterized by shifts in the type and length of education, increases in ages of marriages and parenthood, and increases in tolerance and normative nature of non-marital sex and cohabitation (Arnett 2012). As it relates to romantic and sexual experiences, during this life stage there are increases in sexual activity among young adults, many of whom are not married (Abma, Martinez and Copen 2010; Lefkowitz and Gillen 2006), and declines in condom use relative to the adolescent period (Harris et al. 2006). These changes are associated with young adults having the highest rates of unintended pregnancy and sexually transmitted infections (STIs) in the United States (Center for Disease Control and Prevention (CDC) 2009; Finer and Zolna 2011). Because behaviors that place young adults at risk for exposure to sexually transmitted infections (STIs) and unintended pregnancies occur within dyadic sexual relationships, understanding the importance and relevance of relationship context cannot be over-emphasized. Researchers continue to focus on the role of relationships and their association with contraceptive use among adolescents and young adults (Gibbs 2013; Kusunoki and Upchurch 2011; Manlove et al. 2011; Manning et al. 2012). Although more is known about the individual-level sociodemographic factors that are associated with contraceptive use among adolescents as well as young adults (Fortenberry et al. 2002; Manlove et al. 2007; Manning et al. 2009; and Ott et al. 2002), it is important to focus additional research attention on potentially malleable factors, such as relationship dynamics that are associated with variations in consistent use.

This study draws on recently collected data from the Toledo Adolescent Relationship Study (TARS) to explore variations in the qualities and characteristics of intimate relationships among different-sex young adults and their association with consistent condom use. A notable strength of the TARS data is its interview protocol, which includes detailed measures of a range of relationship qualities and dynamics (i.e., intimate self-disclosure, love, and violence) that may be associated with consistent contraceptive use. In addition, this study also takes into account prior contraceptive behavior during the respondents' teenage years. We move beyond prior work by assessing reasons for not consistently using condoms, including relationship considerations.

Background

This study is motivated primarily by the importance of reducing inconsistent use of condoms to avoid unintended pregnancy and lower rates of STIs among unmarried young adults. Individuals within this age group tend to explore several directions in terms of interpersonal and sexual relationships (Arnett 2000). In the U.S. young adults have high rates of nonmarital unintended childbirth (Hamilton, Martin and Ventura 2010) and are also at greater risk for STIs (CDC 2010). Research indicates that young adult women ages 20-24 years have the highest unintended childbearing rate (Finer and Henshaw 2006). Further, in the United States, teens (15-19 years) and young adults (20-24 years) account for approximately 19 million new cases of sexually transmitted diseases each year (Weinstock, Bearman and Cates 2004).

Findings on the association between relationship context and contraceptive use provide mixed results. Use of condom and other contraceptive methods is greater among youths in dating relationships compared to those in casual relationships (Manlove et al. 2007; Manning et al. 2000). Gibbs (2013) finds that adolescent males in casual relationships compared to those in going steady relationships, have reduced odds of contraceptive use at first intercourse.

The possible reason for this result is that sex among daters are often planned and associated with effective communication (Manning et al. 2009). Other studies provide evidence of greater contraceptive use in casual than dating relationships (Katz et al. 2000; Ott et al. 2002), which supports the notion that teenagers assess the sexual risk with casual relationships and act to protect themselves. We focus on young adults daters to capture the experiences of those who share a common relationship experience.

Sexual activity in dating relationships among young adults is commonplace (Kusunoki and Upchurch 2011). However, what is even more important is whether these activities are ‘sexually safe.’ To understand the sexual behaviors of young adults a key behavior – consistent condom use – must be assessed. While studies have examined contraceptive use at first or last intercourse (Magnusson, Masho and Lapane 2012; Manlove et al. 2011), it has been argued that a measure to capture safe sexual practices/behaviors during a relationship is consistency of condom use (Gillmore et al. 2011; Manning et al. 2012).

Although condom use occurs within dyadic relationships, it is important to explore factors associated with this couple level behavior. While studies have investigated contraceptive use in different types of relationships (Kaestle and Halpern 2005; Manlove et al. 2003; Manning et al. 2006), few studies theorize about specific relationship characteristics that might influence condom use. For this study Mead’s symbolic interactionist perspective (1934) is used. The underlying principle of this theoretical framework is that behaviors and their meaning emerge within specific social milieu. The symbolic interactionist framework is particularly appropriate because it draws interest to the relationship context itself. Specific hypotheses are drawn that are based on models of communication, power dynamics and health beliefs.

Prior research examines the social and demographic heterogamy in sexual relationships and their associations with contraceptive use. Partner asymmetries regarding age, race/ethnicity and educational attainment are associated with reduced condom use as well as reduced use of other contraceptive methods because partner heterogamy creates a lower comfort level when communicating about sex and contraception (DiClemente et al. 2002; Ford et al. 2001; Grady et al. 2010; Kusunoki and Upchurch 2011).

Studies explore duration of relationship as an important relationship feature. Relationship duration is likely to reduce condom use (Kusunoki and Upchurch 2011; Manning et al. 2009). More specifically, studies often use duration as a proxy for closeness in a relationship. Researchers suggest that as sexual relationships mature, there is a decline in condom use. However, the association between relationship duration and contraceptive use depends on the measurement of duration and contraceptive use as well as couples' sexual histories (Manning et al. 2009). The sawtooth hypothesis as developed by Ku and colleagues (1994), posits that condom use among young men is more prevalent in the early stages of a casual or dating relationship and declines with longer duration. If that relationship were to end and a new one established, the frequency of condom use is inversely associated with relationship duration (Fortenberry et al. 2002). The communication model provides another interpretation of relationship features and contraceptive use, which is also consistent with the sawtooth hypothesis. This model suggests that contraceptive use generally increases as partner's knowledge of each other, level of intimacy and time spent together increase (Manning et al. 2009). Consistent with a health belief approach couples in longer relationships are more likely to discontinue use of condoms because they no longer view their partner as an STD risk and therefore may switch to longer acting reversible contraceptive methods (Ku et al. 1994; Noar,

Zimmerman and Atwood 2004). Similar results are provided in Kusunoki's and Upchurch's (2011) study which finds that with greater relationship duration, there are reports of declines in condom use compared to other hormonal methods. Further, relationship duration is negatively associated with consistent contraceptive use (Manlove et al. 2003). In other studies condom use across relationship types suggest that relationship duration is positively associated with ever-use of condom and other methods of contraception (Ford et al. 2001). According to Manlove et al. (2003), knowledge of one's sexual partner over an extended period of time prior to dating is associated with an increased likelihood of consistent contraceptive use among teenagers.

Consistent with the findings on relationship duration, more subjective aspects of relationships are associated with consistency in contraceptive use. Studies find that emotional closeness and higher levels of relationship quality are associated with lower contraceptive use (Brady et al 2009; Katz et al. 2000). Quantitative and qualitative research findings also provide evidence suggesting that adolescents and young adults in more serious relationships have reduced odds of consistently using contraceptive during intercourse (Manlove et al. 2007; Gutzman and Peterson 2011). For young adults in dating or cohabiting relationships, subjective qualities such as emotional closeness are inversely associated with condom use (Santelli et al. 1996) while relationship qualities among young adults with an STD are negatively related to condom use (Katz et al. 2000). The evidence suggesting that positive relational qualities are associated with more consistent or higher contraceptive use is quite sparse. Using data from the National Longitudinal Study of Adolescent Health (Add Health), Manlove et al (2007) find a positive association between the frequency of couple activities (for example, exchanging gifts) and overall contraceptive use.

Specifically, the communication model posits that relationship conflict will reduce the likelihood of contraceptive use, especially for condoms, because of communication challenges in intensely conflictual relationships (Howard and Wang 2003). In contrast, the health model offers a competing argument which states that negative feelings and interactions arise more out of concern about the sexual partner's sexual behavior outside the present relationship, which results in more consistency in use, particularly condoms (Sheeran et al. 1999). Manning et al. (2009) report that among adolescents, negative relationship qualities such as conflict, partner's controlling behavior, mistrust, jealousy and perceived partner inferiority are inversely associated with consistent condom use. Moreover, verbal and physical violence are associated with decreased likelihood of contraceptive use (Manlove et al. 2004).

In sum, based on the sawtooth hypothesis as well as the health beliefs and communication models, we expect positive aspects of relationships to be associated with less consistent use of condoms. Consistent with the health beliefs and communication models, we hypothesize that negative relationship qualities may be associated with less consistent condom use. Condom inconsistency is more likely within relationships where there are greater concerns about partners' exclusive sexual behavior. Given gender specific motivations for condom use (Manlove et al. 2004; Scott et al. 2011), we test for differences in the influence of relational qualities on consistency in condom use.

It is important to note that while relationship duration, couple's activities and subjective aspects of relationships are significant predictors of contraceptive use, a comprehensive approach to adult relationships requires more in-depth examination of relationship qualities and dynamics. Overall, this study extends recent scholarship in the areas of contraceptive use and sexual and

reproductive health by examining young adults' relationship dynamics and their associations with sexual and reproductive health outcomes.

Current Investigation

The purpose of this research is to examine whether young adult contraceptive decisions are influenced by the qualities of their relationships. More specifically, our main research question seeks to ascertain whether there are variations in the quality and characteristics of romantic relationships associated with consistent condom use among dating young adults. This study includes a broad range of indices tapping both positive and negative qualities. Positive relationship dimensions assessed include intimate self disclosure, enmeshment, passionate love, relationship salience and partner affirmation. We also measure the receipt and provision of instrumental support, noting that romantic relationships may be associated with tangible as well as 'intrinsic' rewards (Giordano et al. 2010). The negative features of the relationship include partner mistrust, perceived partner inferiority, jealousy, verbal abuse, physical violence and infidelity. Key sociodemographic variables that are known to be correlated with consistent condom use are also accounted for in this study. Additionally, the longitudinal nature of the data provides an opportunity to control for prior consistent condom use. We expect that this is an important factor that has not been incorporated into much of the prior work on condom use patterns. We limit the analyses to unmarried individuals in dating relationships. It is important to focus on unmarried daters because cohabitation is quite distinct in terms of meaning and commitment (Manning et al. 2010; Sassler and Miller 2011). An innovation in this study is that respondents are directly asked reasons for inconsistently using condoms, allowing us to determine the extent to which inconsistency is based on specific relationship factors. The

findings from this study are salient because the sexual behaviors during this period have implications later in the life course (Scott et al. 2011).

Methods

Data

We draw on data from the Toledo Adolescent Relationships Study (TARS), a representative study of Toledo-area adolescents. A stratified random sample of students in the seventh, ninth and eleventh grades in 2000 was drawn from school enrollment records across 7 school districts and 62 schools in Lucas County, Ohio. The sociodemographic characteristics of Lucas County closely parallel those in the U.S. with respect to racial/ethnic composition, median family income, average adult level of educational levels, and average housing cost. For this study, Blacks and Hispanic adolescents were over sampled. In Ohio school enrollment records are accessible through the Freedom of Information Act. TARS relied on school registration for inclusion in the sampling frame but school attendance was not a requirement.

Four waves of data have been collected. In 2001, respondents first participated in structured in-home interviews with preloaded questionnaires on laptop computers. In addition, a paper and pencil questionnaire was administered to a parent or guardian (primarily the adolescent's mother) at the same time. Respondents were re-interviewed in 2002, 2004, and 2006. The full sample for the fourth wave was 1,321 respondents (83% of original sample).

This study relies on the fourth wave of data for both the dependent and focal independent variables; however, adolescent and parent data from prior waves are included as control variables. The analytic sample was limited to unmarried dating young adults ages 18 to 24 years (n=699). In addition, the sample was restricted to individuals who affirmatively responded to the question: "Have you ever had sexual intercourse (sometimes this is called 'making love', 'having

sex,’ or ‘going all the way’) with [partner]?’” (n=502). Finally, the sample is limited to respondents who provided valid replies to consistency of condom use questions, which resulted in a final analytic sample of 437. Further, the analysis of reasons for inconsistent condom use was limited to 279 respondents.

Measures

Dependent variable

The dependent variable, consistent condom use, is based on responses to the question, “How often do you and [partner] use a condom now?” The six response options ranged from “Every time we have sex” to “A few times.” We create a dichotomous indicator so respondents who did not reply “Every time we have sex” are coded as using condoms inconsistently.

Relationship qualities

We provide a description of relationship qualities, although some dimensions are based on one or two question items. Measures are pretested and constructs appear to be valid.

Six measures of negative relationship qualities are evaluated. *Partner mistrust*, *perceived partner inferiority* and *jealousy* are measured by respondent’s agreement to each of these items “There are times when [partner] cannot be trusted,” “[Partner] is not good enough for me,” and “When [partner] is around other girls/guys, I get jealous.” The five response options for each item range from “strongly disagree” to “strongly agree.” Higher scores on each item indicate more partner mistrust, stronger assessment of partner inferiority and greater jealousy. *Verbal abuse* is measured by combining responses to three items; “During this relationship, how many times did [partner] ridicule or criticize your values or beliefs;” “put down your physical appearance;” and “put me down in front of other people?” The five responses range from “never” to “very often;” higher scores mean higher levels of verbal abuse displayed by partner

(alpha 0.76). To measure *physical violence* we combine the following four items: “During this relationship, how many times did [partner] throw something at you,” “push, shove, or grab you,” “slapped you in the face or head with an open hand,” and “hit you?” The five responses range from “never” to “very often;” higher scores reflect more violence in the relationship (alpha 0.85). *Infidelity* is measured by the question, “How often have you cheated on a partner?” The respondents who report “never” are assigned a value of zero and those who have cheated at least once are given a value of one. Additionally, a *negative qualities scale* is created by combining eleven negative quality items. The scores for this scale range from 10-51 (alpha 0.76).

Positive relationship qualities are assessed using six measures. *Intimate self-disclosure* is measured by combining responses to three items about how often the respondent and partner discussed “something really bad that happened,” “your home life and family,” and “your private thoughts and feelings.” The five responses range from “never” to “very often.” Higher scores indicate greater disclosure (alpha 0.89). *Enmeshment* is a single item: “[Partner] and I are practically inseparable.” The response categories range from “strongly disagree” to “strongly agree,” and higher scores suggest greater enmeshment. *Passionate love* is measured by combining the responses of four items: “I am very attracted to [partner];” “the sight of [partner] turns me on;” “I would rather be with [partner] than anyone else;” and “[Partner] always seems to be on my mind.” The five responses range from “strongly disagree” to “strongly agree,” and higher scores reflect greater passionate love (alpha, 0.82). To measure *relationship salience* we use the item, “How important is your relationship with [partner]?” The five responses range from “not at all important” to “very important;” higher scores indicate greater relationship salience. *Partner affirmation* is measured by the item “[Partner] makes me feel good about myself.” The five responses range from “strongly disagree” to “strongly agree;” and higher scores indicate

greater partner affirmation. To measure *instrumental support*, we combine five items measuring the amount of support exhibited in the relationship, such as “[Partner] paid for food or snacks,” “[Partner] paid to see a movie or do some fun activity,” “[Partner] bought you clothes,” “[Partner] helped you to pay your rent or other bills,” and “[Partner] gave you a gift.” The five responses range from “never” to “very often,” and higher scores indicated greater instrumental support (alpha 0.83). A *positive qualities scale* is created that combining all fifteen items; scores range from 15 to 75 (alpha 0.86).

Relationship covariates

Although our primary focus in the current analysis is on relationship qualities, models also incorporate other basic features of these romantic relationships. *Ongoing relationship*, a dichotomous variable, measures whether the relationship was ongoing or had ended prior to the time of interview. To measure *relationship duration*, we use the question, “How long have you been/were you together?” The eight responses range from “less than a week” to “a year or more,” and answers are coded in weeks. We measure *prior consistent condom use* by dichotomizing condom consistency items in waves one through three: “How often do you and [partner] use a condom now?” Responses range from “never/a few times” to “every time we have sex.” Respondents who reply “Every time we have sex” are coded as using condoms consistently.

Controls

This study includes several key socioeconomic and demographic variables, measured at wave 1, to account for their potential confounding associations between relationship qualities and condom use. We include *respondent’s age* (measured in years at time of interview), *gender* (female =1), and dummy variables for *race/ethnicity* (Hispanic, white and black). Family-level

measures include dummy variables for *family structure*: one biological parent (single parent), one biological parent plus a stepparent or cohabiting partner (stepfamily), and other, with two biological parents as the contrast category. We measure *mother's education* by using dummy variables (less than high school, high school diploma or GED (contrast group), some education beyond high school, and four-year college degree or more). Finally, two indicators measuring gainful activity at wave 4 are included in this study. *Respondents' level of education*, using dummy variables, is assessed based on the same levels used for their mother's education. We include *employment status* based on the item "Are you currently working for pay for at least 10 hours a week?"

Reasons for inconsistent condom use

Respondents are queried about the reasons for inconsistent use of condoms. In total 24 possible response options are provided to the question "How strongly do you agree or disagree with the following reasons why you didn't use a condom every time you had sex with [partner]?" Based on these response options we offer 10 reasons for condom inconsistency. Some of the reasons are as a result of the combination of several response items while for others only one response item is used. *Condom negotiation* is measured based on two response items: "I am too embarrassed to talk about using condom" and "It is too hard to get [partner] to use a condom with me," (alpha 0.62). *Condom aversion* is based on four response items: "[Partner] doesn't want to use condoms;" "I don't want to use a condom;" "Condoms are too much trouble;" and "Condoms interfere with pleasure;" (alpha 0.67). *Sexual health knowledge of partner* is derived from four response items: "I don't have an STD or infection;" "I trust [partner] doesn't have any STDs or infections;" "I don't think I'll get an STD or infection from [partner]; and "[Partner] might think I have an STD or infection." The latter item is recoded so that the scale reflects the

direction of the three previous items (alpha 0.66). Two response items are combined to take into account *current pregnancy or desire to get pregnant* as a reason for inconsistent condom use: “I want to get [partner] pregnant,” and “[Partner] is pregnant” (alpha 0.63). We measure *relationship factors* by combining five response items: “[Partner] and I know each other really well;” “I am not worried about [partner]’s past relationship;” “I am not worried that [partner] is having sex with other people;” “I am not having sex with other people while seeing [partner];” and “I can trust [partner]” (alpha, 0.76). *Use of other birth control methods, confidence pregnancy will not occur, unavailability of condoms, and not being too eager for sex* are all reasons given for inconsistent condom use based on these items: “We are using other forms of birth control,” “I don’t think I’ll get [partner] pregnant” “Condoms are not always available,” and “I don’t want to seem too eager for sex.” The final reason for inconsistent use, *situation beyond control*, is derived from two response items: “I was drunk or high,” and “Things were out of control” (alpha 0.57). Subsequently, the 10 reasons for condom inconsistency measured by the scaled items are recoded into dichotomous (0, 1) items where (1) represents affirmative responses to strongly agree and (0) for all other responses on the likert scale. Therefore, the value of 1 for each reason given indicates poor condom negotiation skills, strong condom aversion, high perceived sexual health knowledge of partner, more committed relationship, strong desire for pregnancy and/or currently pregnant, using other contraceptives, confidence in non-pregnancy outcome, having no control of situation, condom unavailability, and strong misconception between condom availability and eagerness for sex.

Analytic Strategy

To establish bivariate comparisons, we present descriptive statistics (means or percentages) for all variables. Second, we provide a descriptive portrait of the reasons for

inconsistent condom use and present findings by gender. Logistic regression is used to estimate dating young adults' odds of consistent condom use because the dependent variable is binary in nature (N=437). First, zero-order models are estimated— individual models for each relationship quality and one model of the full set of covariates. Interaction terms are estimated to investigate whether relationship qualities are associated with consistent condom use in different or similar ways for male and female respondents (not shown). Finally, three relationship quality models are analyzed: one that includes the scaled negative relationship quality, one with the scaled positive relationship quality and one that includes both.

Results

The TARS data show that a little over a third (36.2%) of young adult daters consistently use condoms (Table 1). Young adults describe their relationships as having moderate levels of negative qualities such as partner mistrust, perceived partner inferiority and jealousy. Additionally, they report low levels of verbal abuse and violence, approximately 36% of daters report having ever cheated (Table 1). There are no statistical differences in the negative relationship scales and scores are low on average (17.2 ranging from 10 to 51). In terms of positive relationship qualities, young adults who report high levels of intimate partner disclosure, enmeshment, passionate love, relationship salience and partner affirmation in their dating relationships. They report moderate levels of instrumental support while the positive relationship qualities scale has a high mean value of 52.6 (range from 15 to 75).

Over two-thirds are in ongoing relationships and the mean durations of these relationships are less than a year (31 weeks). Almost two-thirds reported prior consistent condom use. The mean age of the sample is 20.4 and there is almost an even gender distribution. The sample is predominantly white followed by blacks and Hispanics. A little over half (51.9%) lived

with two biological parents while growing up. The modal educational category for respondents' mothers is 'some college' - more than high school level but less than a 4 year college program. Most young adults in this sample are employed.

Table 2 explores the reasons for inconsistent condom use among young adult daters. Relationship factors account for largest percentage of reasons given with 40.1% mentioning such factors. Women (43.1%) more often than men (36.5%) report relational factors. Sexual health knowledge of partner and use of other birth control methods are the second and third highest reasons provided by young adults for inconsistent condom use. Men (38.1%) more often than women (26.1%) endorse sexual knowledge of their partner as a reason for inconsistent condom use. In contrast, women (26.1%) more often than men (18.3%) indicate use of other methods as a rationale. These descriptive results highlight that from the point of view of respondents themselves, relationship factors indeed play a pivotal role in their sexual and contraceptive decision-making. It is relatively rare to report availability or aversion as reasons for not using condoms. These basic findings suggest the importance of more systematically examining the specific relationship qualities associated with consistent condom use.

Bivariate Analyses

Table 3 presents the zero order models, which indicate half of the negative relationship quality indicators (verbal abuse, physical violence and infidelity) are negatively associated with consistent condom use (odd ratios, 0.83, 0.82 and 0.54) while one positive relationship quality indicator is associated with consistent condom use. Higher scores on relationship salience account for reduced odds of condom consistency (0.78).

As expected, relationship duration is negatively associated with consistent condom use (0.83). Respondents who report prior consistent condom use are more likely to consistently use

condoms with their current partner. As age increases, the odds of consistent condom use declines (0.87). Female compared with male respondents are less likely to report consistently using condoms (0.65).

Multivariate Analyses

Associations between negative relationship qualities and consistent condom use persist in the multivariate models (Tables 4 and 5). Table 4 focuses on the negative relationship qualities. Verbal abuse (odds ratio, 0.83), physical violence (0.77) and infidelity (0.54) remain negatively associated with consistent condom use while perceived partner inferiority gains statistical significance and is also negatively associated with consistent condom use (0.76).

In all models relationship duration is negatively associated with consistent condom use while prior consistent condom use is positively associated with consistent condom use (2.87-3.20). At the individual level, being female typically continues to be negatively associated with consistent condom use. Mother's education is also associated with respondents consistent condom use.

In the multivariate models containing positive relationship qualities (Table 5) only one is associated with consistent condom use. Partner affirmation (model 5) is positively associated with consistent condom use (odds ratio, 1.51). Analyses reveal that among young adults in dating relationships those who report prior consistent condom use have elevated odds of condom consistency in all models. In five of six models, relationship duration also reduces the odds of consistent condom use (0.83-0.85). Only in model 5 (partner affirmation) female respondents have lower odds of consistent condom use.

In Table 6 scaled negative and positive relationships items are entered separately with other covariates and then both indicators are included in the same model. The negative qualities

scale is negatively associated with consistent condom use (odds ratio, 0.91). The positive qualities scale is not statistically significant (model 2). With the inclusion of both relationship quality scales the negative quality scale still remains statistically significant and reduces the odds of consistent condom use. Prior consistent condom use is a strong predictor of continued consistent condom use. The sociodemographic covariates that remain statistically significantly related to consistent condom use are age, race, and mother's education.

Given the importance of gender to the discussion of relationship dynamics and contraception, gender and relationship quality interaction models are tested. We find the association between relationship qualities and consistent condom use is generally similar for female and male respondents. One key exception is that perceived partner inferiority is negatively associated with consistent condom use only for female, but not for male respondents (not shown). Overall these findings suggest many important gender similarities in relationship quality and consistent condom use.

Discussion

The findings indicate that an association exists between relationship quality and consistent condom use among dating young adults. More specifically, it is primarily negative relationship qualities that reduce the odds of consistent condom use even after other basic relationship features (e.g., duration) and other socio-demographic characteristics are taken into account. It seems to be that negative behavioral qualities (i.e., physical violence, verbal abuse and infidelity) more so than subjective indicators (i.e., jealousy or partner mistrust) are associated with inconsistent condom use. The links between these negative relationship qualities and condom use are similar for men and women. Partner inferiority appears to have a stronger

negative influence on consistent condom use for women than for men. This may speak to some potentially consequential differential power dynamics in some dating relationships.

Women compared with men generally report lower consistency in condom use. Yet the associations between the relationship qualities and consistent condom use are largely similar for men and women. A finding not explored in previous studies is that prior consistent use is also associated with increased odds of consistent condom use. From a life course framework (Elder 1998), the inclusion of prior consistent condom use is noteworthy as the results show that respondents who engage in safe sexual behaviors during adolescence transition into adulthood with a strong likelihood of continuing this behavior.

This research provides a more in-depth understanding of contraceptive behavior among dating young adults by exploring the reasons for inconsistent condom use. We find that relationship factors account for most of the reasons for inconsistent condom use. The descriptive results for the reasons for inconsistent condom use are instructive as they can be associated with health and communication models as well as the sawtooth hypothesis (Ku et al. 1994). Almost a third of dating young adults report that sexual health knowledge of their partner was a reason for inconsistent condom use. Further, implicit in the top three reasons for inconsistent condom use is the idea that communication is critical to relationship factors such as trust, and for respondents to know their partners sexual health status and whether they are using other methods of birth control. Thus, this work explains in part why longer relationship duration is associated with lower odds of consistent condom use. In terms of gender, men and women report the same top three reasons for not consistently using condoms. However, men more often report inconsistency in condom use based on their confidence that pregnancy will not occur and the

unavailability of condoms while women often state poor condom negotiation skills as a reason for inconsistent condom use.

This study has several limitations. The generalizability of these findings may be limited due to the regional sample of young adults. It is important to replicate this study using nationally representative samples. The cross-sectional design of the TARS limits the assessment of causality of relationship factors and contraceptive use and therefore, the findings illustrate associations. Longitudinal research may be employed to address this challenge but would require capturing relationship qualities at the start of the relationship and measuring contraceptive use later. Third, sexual communication is a key mechanism in understanding relationship quality (Sprecher, Christopher and Cate 2006); thus, future research should investigate this mechanism and its possible interaction with negative and positive relationship qualities. Additionally, it is recommended that future research examine relationship quality and the use of other methods of contraception among young dating adults.

The results provide a clearer understanding of risk that young adults face when relationship qualities are analyzed. The period of nonmarital sexual engagement among young adults is increasing (Cohen and Manning 2010; Sassler 2010) and as such young adults appear to be at greater sexual risk. The findings suggest especially troubling or negative relationship qualities may lessen safe sexual practices among daters. In light of these findings it is recommended that future research examine relationship quality and the use of other methods of contraception as this may vary by relationship status. Nonetheless, this study makes important contributions to the family, emerging adulthood and contraception literatures. We add to the well-argued demographic position of measuring relationship quality using duration and find that during this period of emerging adulthood, the meanings, expectations and qualities of

relationships vary. Therefore, it is important to continue to explore variations in the quality and characteristics of romantic relationships and how these influence consistent condom use among unmarried young adults.

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Table 1. Selected characteristics of dating young adults who have had intercourse with their current unmarried partners, Toledo Adolescent Relationships Study (N=437)

	<i>Mean or % (N=437)</i>
Consistent condom use	36.2
Relationship qualities	
Negative scale (range, 10-51)	17.2
Partner mistrust (range, 1-5)	2.3
Perceived partner inferiority (range, 1-5)	2.1
Jealousy (range, 1-5)	3.2
Verbal abuse (range, 3-15)	4.3
Violence (range, 4-20)	4.9
Infidelity	35.7
Positive scale (range, 15-75)	52.6
Intimate self disclosure (range, 3-15)	11.6
Enmeshment (range, 1-5)	3.1
Passionate love (range, 4-20)	15.8
Relationship salience (range, 1-5)	4.2
Partner affirmation (range, 1-5)	4.1
Instrumental support (range, 5-25)	13.7
Relationship	
Ongoing relationship	67.7
Duration (in weeks, 0.5-78)	31.3
Prior consistent condom use	65.3
Respondent	
Age (range, 18-24)	20.4
Gender	
Male	49.0
Female	51.0
Race/Ethnicity*	
Hispanic	9.2
White	63.8
Black	24.7
Family structure	
Single parent	23.4
Two biological parents	51.9
Stepfamily	12.1
Other	12.6
Mother's education	
<high school	11.0
High school	31.6
>high, <four-year college	32.9
>= four-year college degree	24.5
Education	
<high school	15.6
High school (ref.)	27.0
>high, <four-year college	52.0
>= four-year college degree	5.4
Employment	65.2

All qualities are coded so that higher scores indicate more of that quality, be it positive or negative. Note: Data are means for characteristics showing a range and percentages for others. Note: * an 'other' race/ethnicity category is excluded (2.3% of daters).

Table 2. Reasons for inconsistent condom use among dating young adults, Toledo Adolescent Relationships Study (N=279)

<i>Reasons</i>	<i>Total</i>	<i>Men</i>	<i>Women</i>
Relationship factors	40.1	36.5	43.1
Sexual health knowledge of partner	31.5	38.1	26.1
Use of other birth control methods	22.6	18.3	26.1
Confidence pregnancy will not occur	10.4	16.7	5.2
Condom unavailability	4.7	5.6	3.9
Currently pregnant/or desire for pregnancy	3.2	3.2	3.3
Condom aversion	2.2	1.4	1.3
Situation beyond control	2.2	2.4	2.0
Misperception about condom availability and eagerness for sex	1.8	2.4	1.3
Poor condom negotiation skills	1.4	0.8	2.0

Note: multiple responses are allowed, percentages do not sum to 100.

Table 3. Odds ratios from zero order logistic regression analyses assessing the likelihood of consistent condom use among dating young adults, by selected characteristics (N=437)

	<i>Odds ratio</i>
Relationship qualities	
<i>Negative</i>	
Partner mistrust	0.89
Perceived partner inferiority	0.82
Jealousy	0.93
Verbal abuse	0.83**
Violence	0.82**
Infidelity	0.54**
<i>Positive</i>	
Intimate self disclosure	0.95
Enmeshment	0.94
Passionate love	0.99
Relationship salience	0.78*
Partner affirmation	1.25†
Instrumental support	0.96†
Relationship	
Ongoing relationship	0.99
Duration	0.83*
Prior consistent condom use	3.40***
Respondent	
Age	0.87*
Female	0.65*
Race/Ethnicity	
Hispanic	0.48†
White (ref.)	1.00
Black	1.51†
Family structure	
Single parent	1.39
Two biological parents (ref.)	1.00
Stepfamily	0.89
Other	0.76
Mother's education	
<high school	1.29
High school (ref.)	1.00
>high, <four-year college	1.09
>= four-year college degree	1.32
Education	
<high school	0.75
High school (ref.)	1.00
>high, <four-year college	1.08
>= four-year college degree	1.01
Employment	1.13

*p<.05. **p<.01. ***p<.001. †p<.10. All qualities are coded so that higher scores indicate more of that quality, be it positive or negative. Notes: ref=reference group. Characteristics without a reference

Table 4. Odds ratios from models including negative relationship qualities in logistic regression analyses assessing the likelihood of consistent condom use among dating young adults (N=437)

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>
Relationship qualities						
<i>Negative</i>						
Partner mistrust	0.85					
Perceived partner inferiority		0.76*				
Jealousy			0.96			
Verbal abuse				0.83**		
Violence					0.77***	
Infidelity						0.53*
Relationship						
Ongoing relationship	1.16	1.03	1.32	1.19	1.33	1.31
Duration	0.85*	0.83*	0.85*	0.86*	0.86*	0.83**
Prior consistent condom use	3.20***	3.20***	3.20***	3.20***	3.01***	2.87***
Respondent						
Age	0.87†	0.88	0.87†	0.87†	0.86*	0.89
Female	0.68†	0.74	0.66†	0.64*	0.63**	0.61*
Race/Ethnicity						
Hispanic	0.40*	0.50	0.52	0.49	0.56	0.49
White (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Black	1.57	1.61†	1.48	1.46	1.69†	1.65†
Family structure						
Single parent	1.42	1.37	1.38	1.39	1.45	1.43
Two biological parents (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Stepfamily	0.87	0.88	0.87	0.94	1.05	0.92
Other	0.68	0.65	0.67	0.63	0.65	0.74
Mother's education						
<high school	2.30	2.34*	2.19*	2.16*	2.42*	2.18
High school (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
>high, <four-year college	1.32	1.31	1.31	1.29	1.36	1.26
>= four-year college degree	1.45	1.43	1.41	1.43	1.54	1.34
Education						
<high school	0.77	0.75	0.72	0.73	0.76	0.74
High school (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
>high, <four-year college	1.16	1.15	1.17	1.19	1.18	1.16
>= four-year college degree	1.24	1.23	1.23	1.18	1.30	1.34
Employment	1.24	1.32	1.29	1.23	1.57	1.26

*p<.05. **p<.01. ***p<.001. †p<.10. All qualities are coded so that higher scores indicate more of that quality, be it positive or negative. Notes: ref=reference group. Characteristics without a reference group is shown were measured as continuous variables.

Table 5. Odds ratios from models including positive relationship qualities in logistic regression analyses assessing the likelihood of consistent condom use among dating young adults (N=437)

<i>Characteristic</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>
Relationship qualities						
<i>Positive</i>						
Intimate self disclosure	0.97					
Enmeshment		1.01				
Passionate love			1.03			
Relationship salience				0.78†		
Partner affirmation					1.51**	
Instrumental support						0.98
Relationship						
Ongoing relationship	1.35	1.32	1.26	1.48	1.21	1.35
Duration	0.85*	0.84*	0.83*	0.89	0.83*	0.85*
Prior consistent condom use	3.20***	3.20***	3.20***	3.40***	3.34***	3.20***
Respondent						
Age	0.87†	0.88†	0.88	0.87†	0.88	0.88†
Female	0.69	0.66†	0.66	0.69	0.61*	0.69
Race/Ethnicity						
Hispanic	0.51	0.51	0.49	0.52	0.50	0.51
White (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Black	1.44	1.46	1.51	1.39	1.68†	1.47
Family structure						
Single parent	1.39	1.40	1.40	1.40	1.51	1.38
Two biological parents (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Stepfamily	0.86	0.87	0.86	0.88	0.88	0.86
Other	0.66	0.67	0.68	0.67	0.68	0.67
Mother's education						
<high school	2.21*	2.20*	2.21*	2.12†	2.08†	2.21*
High school (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
>high, <four-year college	1.33	1.30	1.28	1.35	1.25	1.30
>= four-year college degree	1.41	1.40	1.40	1.38	1.41	1.40
Education						
<high school	0.72	0.72	0.73	0.78	0.72	0.73
High school (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
>high, <four-year college	1.17	1.17	1.16	1.20	1.14	1.17
>= four-year college degree	1.27	1.25	1.20	1.34	1.13	1.24
Employment	1.28	1.28	1.29	1.28	1.28	1.27

*p<.05. **p<.01. ***p<.001. †p<.10. All qualities are coded so that higher scores indicate more of that quality, be it positive or negative. Notes: ref=reference group. Characteristics without a reference group is shown were measured as continuous variables.

Table 6. Odds ratios from models including scales of relationship qualities in logistic regression analyses assessing the likelihood of consistent condom use among dating young adults (N=437)

<i>Characteristic</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>
Relationship qualities			
Negative	0.91***		0.90***
Positive		1.01	0.98
Relationship			
Ongoing relationship	1.04	1.32	1.10
Duration	0.86*	0.84*	0.89
Prior consistent condom use	3.01***	3.20***	3.02***
Respondent			
Age	0.87†	0.88†	0.86†
Female	0.60*	0.66†	0.65†
Race/Ethnicity			
Hispanic	0.53	0.51	0.56
White (ref.)	1.00	1.00	1.00
Black	1.77*	1.46	1.76*
Family structure			
Single parent	1.38	1.40	1.36
Two biological parents (ref.)	1.00	1.00	1.00
Stepfamily	1.01	0.86	1.02
Other	0.66	0.67	0.65
Mother's education			
<high school	2.34*	2.19*	2.37*
High school (ref.)	1.00	1.00	1.00
>high, <four-year college	1.36	1.30	1.39
>= four-year college degree	1.52	1.40	1.51
Education			
<high school	0.76	0.72	0.77
High school (ref.)	1.00	1.00	1.00
>high, <four-year college	1.17	1.17	1.18
>= four-year college degree	1.19	1.24	1.22
Employment			
	1.21	1.28	1.19

*p<.05. **p<.01. ***p<.001. †p<.10. All qualities are coded so that higher scores indicate more of that quality, be it positive or negative. Notes: ref=reference group. Characteristics without a reference group is shown were measured as continuous variables.