Relationship Qualities and Consistent Condom Use among Unmarried Young Adults

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Introduction

Young adulthood is seen as 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). During this stage there have been 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 have been linked to young adults having the highest rates of unintended pregnancy and sexually transmitted infections (STIs) in the United States (CDC 2009; Finer and Zolna 2011). Behaviors that place young adults at risk for exposure to STIs and unintended pregnancies occur within some form of dyadic sexual relationship. Therefore, understanding the importance and relevance of relationship context cannot be over-emphasized. Novel research has begun to focus on the role of relationships and its association with contraceptive use among adolescents and young adults (Kusunoki and Upchurch 2010; Manning et al. 2012; and Manlove et al. 2011). 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), further exploration is warranted as it regards the mechanisms at play in relationships involving young adults.

This study draws on recently collected data from the Toledo Adolescent Relationship Study to explore variations in relationship qualities among unmarried young adults and its association with consistent condom use. A notable strength of the TARS data is its interview protocol that includes, among other things, important relationship qualities and dynamics (i.e., intimate self disclosure, levels of 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. Finally, the data includes a series of questions about reasons for not consistently using condoms. The respondents in this study comprise different sex couples.

Background

This study is motivated mainly by the importance of reducing inconsistent use of condoms to avoid unintended pregnancy and lower rates of STIs among unmarried young adults. During the stage of young adulthood individuals are transitioning between adolescence and adulthood and

2

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) coupled with being at greater risk for STIs (CDC 2010).

Sexual activity in dating relationships among unmarried young adults is common place (Kusunoki and Upchurch 2010) and also appears to be frequent among cohabitors (Yabiku and Gager 2009). 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 some form of dyadic relationship, even more important are the factors associated with this consistent couple level behavior. Studies have investigated contraceptive use in different types of relationships (Manlove et al. 2003; Kaestle and Halpern 2005; Manning et al. 2006) while others find that relationship duration reduces condom use (Kusunoki and Upchurch 2010; Manning et al. 2009). Recent work has targeted relationship qualities and finds that relationship violence or abuse is related to consistent contraceptive use (Manlove et al. 2004) while Manning and colleagues (2009) find both negative and positive relationship qualities are associated with condom use among adolescents.

This study extends recent scholarship in the area of contraceptive sexual health and relationship context by examining the variation in both positive and negative relationship qualities among unmarried young adults in dating and cohabiting relationships. A more informed understanding of unmarried individuals' relationship qualities will further provide insights into their sexual health behaviors.

Current Investigation

The purpose of this research is to examine whether and how young adult contraceptive decisions are influenced by relationship qualities. First, this study includes a broad range of relationship quality items including both positive and negative qualities as well as key sociodemographic variables that correlate with consistent condom use. Second, the longitudinal nature of the data provides an opportunity to control for prior condom inconsistency use. We expect this is an

important factor that has not been incorporated into prior work on inconsistent condom use. Third, we address whether relationship qualities have similar or different influences on consistent condom use among men and women. Prior work suggests there are gender specific motivations for condom use (Manlove, Ryan and Franzetta 2004; Scott et al. 2011) and as a result there may be distinct patterns of condom use for men and women. Fourth, unmarried individuals in dating and cohabiting relationships were examined during early adulthood. This is important owing to the fact that cohabitation is now a normative step into adulthood (Manning et al. 2010; Sassler and Miller 2011) and that sexual behaviors during this period have implications later in the life course (Scott et al 2011). Finally, we assess the reasons for not consistently using condoms and discern the extent to which they are based on relationship factors.

Methods

Data

We draw on data from the Toledo Adolescent Relationships Study (TARS), a representative study of Toldeo-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. Enrollment records were 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 were included as control variables. The analytic sample was limited to unmarried young adults aged 18 to 24 years (n=1068). The sample was then limited to respondents who reported being in either dating or

cohabiting relationships (n=920). 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=705). Finally, the sample was limited to respondents who responded to the question, "How often do you and [partner] use a condom now?" which resulted in a final analytic sample of 602.

Measures

Dependent variable - The dependent variable is consistent condom use. This was based on young adults' 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". The response options were recoded to create a dichotomous variable with a value of one assigned to young adults who reported using a condom "every time we have sex" and zero for all other responses.

Respondents who inconsistently used condoms were queried about the reasons for inconsistent use. In total 24 possible response options were 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]?" These response options were recoded into 10 dichotomous (0,1) items where (1) represented affirmative responses to strongly agree and (0) for all other responses on the likert scale. *Condom negotiation* was 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." *Condom aversion* was 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." *Health* was 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 was recoded to that the scale reflected the direction of the three other items. Two response items were summed 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." *Relational* facto*r* was measured by summing 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]." *Use of other birth control methods*,

confidence pregnancy will not occur, *unavailability of condoms*, and *not being too eager for sex* were 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,* was derived from two response items: "I was drunk or high", and "Things were out of control." Scores of one indicated an affirmative response to the ten reasons for condom inconsistent use.

Relationship qualities - In this study a multidimensional description of relationship qualities were analyzed, although there were one or two items for some dimension. Measures were pretested in order to ensure validity of key constructs.

Six measures of negative relationship qualities were evaluated. *Partner mistrust*, perceived partner inferiority and jealousy were measured by respondent's agreement with one statement ("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 ranged from "strongly disagree" to "strongly agree". Higher scores on each item meant more partner mistrust, stronger assessment of partner inferiority and greater jealousy. *Verbal abuse* was measured by summing responses to three questions: "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 ranged from "never" to "very often"; higher scores indicated higher levels of verbal abuse displayed by partner (Cronbach's alpha, 0.78). *Physical violence* was measured by the summation of four questions: "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 ranged from "never" to "very often"; higher scores meant more violence in the relationship (0.86). A dichotomous measure of *nonexclusivity agreement* was based on responses to one question about how much does the respondent agree with the statement – I expected [partner] to be sexually exclusive. Responses to "strongly agree" were coded yes while all other response options were coded zero. Additionally, a *negative qualities scale* was created by summing all eleven negative quality items. The scores for this scale ranged from 10-51 (Cronbach's alpha, 0.80).

Positive relationship qualities were assessed using six measures. The construct of *intimate self disclosure* was measured by summing responses to three questions 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 ranged from "never" to "very often". Higher scores indicated more disclosure (Cronbach's alpha, 0.89). *Enmeshment* was measured using the item "[Partner] and I are practically inseparable." The response categories ranged from "strongly disagree" to "strongly agree"; higher scores indicated greater enmeshment. *Passionate love* was measured by summing the responses to four statements: "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 ranged from "strongly disagree" to "strongly agree"; higher scores meant stronger indication of love (Cronbach's alpha, 0.83). *Relationship salience* was measures based on the response to the question "How important is your relationship with [partner]?" The five responses ranged from "not at all important" to "very important"; higher scores indicated greater relationship salience. Partner affirmation was measured by the item "[Partner] makes me feel good about myself." The five responses ranged from "strongly disagree" to "strongly agree"; higher scores indicated greater partner affirmation. *Instrumental support* was measured by summing responses to five statements: "[Partner] paid for food of 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 ranged from "never" to "very often"; higher scores indicated more instrumental support (Cronbach's alpha, 0.84). A *positive qualities scale* was created that summed all fifteen items; scores ranged from 15 to 75 (Cronbach's alpha, 0.87).

In addition to the relationship qualities, four additional relational variables were included in the study. *Relationship status* was based on unmarried young adults' report of being in dating or cohabiting relationships. *Ongoing relationship*, a dichotomous variable, measured whether the relationship was ongoing or had ended at time of interview. *Relationship duration* was measured with the question "How long have you been/were you together?" The eight responses ranged from "less than a week" to "a year or more," and answers were coded in weeks. *Prior inconsistent condom use* was measured based on the dichotomization of condom consistency items in waves one through three: "How often do you and [partner] use a condom

now?" Responses ranged from "never/a few times" to "every time we have sex". Affirmative responses to "every time we have sex" were coded as one while all other responses were assigned a value of zero.

This study includes several key socioeconomic and demographic variables to account for their potential confounding associations between relationship qualities and condom use. These variables included *respondent's age* (measured in years at time of interview), *gender*, and *race/ethnicity* (Hispanic, white and black). Family-level measures included *family structure* as reported by the respondent (single parent, two biological parents, stepfamily and other) and *mother's education* as reported in the parent's questionnaire (less than high school, high school diploma or GED, some education beyond high school, and four-year college degree or more). Finally, two indicators measuring gainful activity were included in this study. *Respondents' level of education* was assessed based on the same levels used for their mother's education. *Employment status* was a yes-no variable based on the question "Are you currently working for pay for at least 10 hours a week?"

Analytic Strategy

Logistic regression was used to estimate unmarried young adults' odds of consistent condom use versus inconsistent or no condom use. First, zero-order models were estimated – individual models for each relationship quality and one model of the full set of covariates. Interaction terms were estimated to investigate whether relationship qualities were associated with consistent condom use in different or similar ways for males and females (not shown). Finally, three relationship quality models were analyzed: one that included the scaled negative relationship quality, one with the scaled positive relationship quality and one that included both.

Results

The TARS data showed that nearly 30% of young unmarried adults in a relationship with their current or recent partner consistently used condoms (Table 1). Young adults described their relationships as having moderate levels of negative qualities such as partner mistrust, perceived partner inferiority and jealousy. They reported low levels of verbal abuse and violence while a little over a third (37%) of young unmarried adults reported having had a nonexclusivity agreement (Table 1). The negative relationship scale had a mean of 17.3 (range from 10 to 51). In terms of positive relationship qualities, young adults had high levels of intimate partner

disclosure, enmeshment, passionate love, relationship salience and partner affirmation. They reported moderate levels of instrumental support while the positive relationship qualities scale had a mean of 54.1 (range from 15 to 75).

Almost three-quarters of young adults were currently or recently in dating relationships as well as in ongoing relationships. The mean duration of these relationships was less than a year, about 41 weeks. A little over 27% of respondents had been cohabiting in the current or most recent relationship while 40% respondents were previous inconsistent condom users.

The mean age of the respondents in the sample was 20.6, and approximately 56% were female. Approximately 61% of young adults were white, a quarter were black (25.4%) while almost 12% were Hispanic. Nearly half (47.5%) of young adults lived with two biological parents while growing up and approximately one-fourth (24.6%) lived with a single parent. Almost 45% of respondents' mothers reported having no more than a high school education. Conversely, over half (55.4%) of young adults had attained some level of education beyond high school. Most young adults (70.6%) in this sample were employed.

Bivariate Analyses

Table 2 presented the zero order models which indicated that half of the negative relationship quality indicators (verbal abuse and physical violence) were negatively associated with consistent condom use (odd ratios, 0.86, 0.82) while non-exclusivity agreement was positively associated with consistent condom use (1.34). Four of six positive relationship quality indicators were associated with reduced odds of consistent condom use: intimate self disclosure (0.94), enmeshment (0.86), relationship salience (0.73) and instrumental support (0.92).

Young adults in dating relationships were more likely than those in cohabiting relationships to use condoms consistently (odds ratio, 4.1). Relationship duration was negatively linked to consistent condom use (0.76). Respondents who had prior inconsistent condom use were .74 times less likely to consistently use condoms with their recent or current partner. As age increased, the odds of consistent condom use declined (0.85). Females were less likely to consistently use condoms (0.60) and Hispanics had lower odds than whites of consistently using condoms.

Multivariate Analyses

Associations between negative relationship qualities and consistent condom use persisted in the multivariate models (Table 3). The first set of models focus on the negative relationship qualities. Verbal abuse (odds ratio, 0.87) and physical violence (0.82) remained negatively associated with consistent condom use while partner mistrust also gained statistical significance and was negatively associated with consistent condom use (0.86).

Of the relationship level variables, dating (in all models) compared to cohabiting was positively associated with consistent condom use (odds ratios, 2.5 -2.7). As expected prior inconsistent condom use (in all models) was negatively associated with consistent condom use (0.30-0.32), likewise relationship duration was negatively associated with consistent condom use (0.83-0.85). At the individual level, gender (models 3, 4, 5and 6) was negatively associated with consistent condom use. Race/ethnicity was also associated with consistent condom use such that Hispanics (in all models) compared to whites had lower odds of consistent condom use (0.39-0.42).

In the multivariate models containing positive relationship qualities (Table 4) only one relationship quality indicator was associated with consistent condom use. Relationship salience (model 4) was negatively associated with consistent condom use (odds ratio, 0.78). Analyses of relationship level variables revealed that young adults in dating compared to cohabiting relationships had increased odds of consistent condom use (odds ratios, 2.58-2.70). Prior inconsistent use and duration were negatively associated with current condom consistency in all models. In four of six models, females had lower odds of consistent condom use. Hispanics compared to whites had lower odds of consistent condom use in all models (0.39-0.40).

In Table 5 scaled negative and positive relationships items were entered separately with other covariates and then both indicators were included in the same model. The negative qualities scale was negatively associated with consistent condom use (odds ratio, 0.93). Although the positive qualities scale predicted lower odds of consistent condom use, it was not statistically significant (model 2). Yet, the inclusion of both relationship qualities scale showed that both negative and positive relationship qualities were negatively associated with consistent condom use. We will explore further the suppression of positive relationship qualities. The covariates

that remained statistically significant were dating, prior inconsistent condom use and Hispanic with odds ratios of 2.5, 0.31 and 0.44 respectively.

Gender and relationship quality interaction models were tested. We find that the association between positive relationship qualities and consistent condom use is similar for females and males, except for partner affirmation indicator, which was positively associated with consistent condom use only for females (not shown). Negative relationship quality, more specifically, partner mistrust was negatively associated with consistent condom use only among females and not males. These findings suggest many important gender similarities in relationship quality and consistent condom use.

The final set of analyses focus on the reasons for not using condoms consistently (Table 6). We are in the process of establishing meaningful categories. Overall, it appears that 45% select relational, 35% health, and 25% choose other methods of birth control as reasons. We will explore how sociodemographic indicators are related to these reasons for inconsistent condom use as well as positive and negative relationship qualities.

Discussion

The findings indicate that an association exists between relationship quality and consistent condom use among unmarried young adults. More specifically, both negative and positive relationship qualities reduce the odds of consistent condom use even after relationship covariates and other socio-demographic characteristics were taken into account. Relationship duration and prior inconsistent use were linked to lower odds of consistent condom use. The inclusion of prior inconsistent condom use is noteworthy as the results show that respondents who engage in risky sexual behavior during adolescence transition into adulthood with a strong likelihood of continuing this behavior. Females reported lower consistent of condom use in dating and cohabiting relationships than males. Among unmarried respondents, Hispanics compared to whites are at greater sexual risk as they are less likely to consistently use condoms with their partner, even when positive and negative relationship qualities are considered.

In terms of positive relationship indicators relationship salience proved to be the only positive relationship quality associated with consistent condom use in the multivariate model. At the bivariate level greater instrumental support was tied to lower odds of consistent condom use. It is possible that instrumental support is a proxy for power and control dynamics and requires

further exploration. The overall indicator of positive relationship qualities was negatively associated with consistent condom use. Therefore, being in a high quality relationship may place young adults at greater sexual risk.

As expected young adults in relationships with higher scores on negative qualities had less consistent condom use- at the multivariate level respondents whose relationship had greater levels of mistrust, verbal abuse and violence were negatively associated with consistent condom use. The summary indicator of negative qualities is associated with lower odds of consistent condom use even when the positive qualities and sociodemographic indicators are included in the model.

Unmarried young adults in dating relationships had higher odds of consistency of condom use compared to those in cohabiting relationships. This association persists regardless of the relationship qualities they exhibited. This finding may be indicative of differences in sexual health communication between partners in both types of relationship. We will further explore whether the qualities have a similar influence on condom use for cohabiting and dating respondents.

This study had 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 limited the assessment of causality and therefore, the findings illustrated associations. Longitudinal research may be employed to address this challenge but would require capturing relationship qualities at the start of the relationship and measure contraceptive use later. Third, sexual communication is a key mechanism in understanding relationship quality (Sprecher, Christopher and Cate, 2006) so future research should investigate this mechanism and its possible interaction with negative and positive relationship qualities.

The results provided a clearer understanding of risk that young adults face when relationship qualities were 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 greater sexual risks. The findings suggest that negative and positive relationship qualities may lessen safe sexual practices. In light of these findings it is recommended that future research examine relationship quality and the use of other methods of contraception. Second, research

examining the motivations for consistent condom use should also be explored. The next step is to determine how negative and positive relationship qualities are tied to reasons for inconsistent condom use.

References

Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55, 469–480.

Abma, J. C., Martinez, G. M., & Copen, C. E. (2010). Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, National Survey of Family Growth 2006–2008. *Vital Health Statistics, 23,* 1–57.

Centers for Disease Control and Prevention (CDC), (2009). Trends in reportable sexually transmitted diseases in the United States, 2007: national surveillance data for chlamydia, gonorrhea, and syphilis, Atlanta: CDC.

Centers for Disease Control and Prevention. (2010). *Youth risk behavior surveillance survey - United States,* 2009 Atlanta, GA: U.S. Department of Health and Human Services

Cohen, J. A., & Manning, W. D. (2010). The relationship context of premarital serial cohabitation. *Social Science Research, 39,* 766–776.

Finer, L. B & Zolna, M. R. (2011). Unintended pregnancy in the United States: incidence and disparities, 2006, *Contraception*, 2011, 84(5):478–485.

Fortenberry, J. D., Wanzhu, T., Harezlak, J., Katz, B. P., & Orr, D. P. (2002). Condom use as a function of time in new and established adolescent sexual relationships. *American Journal of Public Health*, 92(2), 211–213.

Gillmore, M. R., Chia-Chen Chen, A., Haas, S. A., Kopak, A. M., & Robillard, A. G. (2011). Do Family and Parenting Factors in Adolescence Influence Condom Use in Early Adulthood in a Multiethnic Sample of Young Adults? *Journal of Youth Adolescence*, 40: 1503-1518.

Hamilton, B. E., Martin, J. A., & Ventura, S. J. (2010). *Births: Preliminary data for 2008.* National Vital Statistics Report, 57(12). Hyattsville, MD: National Center for Health Statistics.

Harris, K. M., Gordon-Larsen, P., Chantala, K., & Udry, J. R. (2006). Longitudinal trends in race/ethnic disparities in leading health indicators from adolescence to young adulthood. *Archives of Pediatrics and Adolescent Medicine*, 160(1), 74–81.

Kaestle, C & Halpern, C. (2005). Sexual Activity Among Adolescents in Romantic Relationships with Friends, Acquaintances, or Strangers. *Archives of Pediatrics and Adolescent Medicine* 159:849-853.

Kusunoki, Y., & Upchurch, D. M. (2011). Contraceptive method choice among youth in the United States: The importance of relationship context. Demography, 48(4), 1451-1472.

Lefkowitz, E., & Gillen, M. (2006). Sex is just a normal part of life: Sexuality in emerging adulthood''. In J. J. Arnett & J. L. Tanner (Eds.), Emerging adults in America: Coming of age in the 21st century (pp. 235–255). Washington, DC: American Psychological Association.

Magnusson, B. M., Masho, S. W., & Lapane, K. L. (2012). Early Age At First Intercourse and Subsequent Gaps in Contraceptive Use. *Journal of Women's Health*, 21(1): 73-79.

Manlove, J., Ryan, S., & Franzetta, K. (2003). Patterns of Contraceptive Use Within Teenagers' First Sexual Relationships. *Perspectives on Sexual and Reproductive Health*, 35(6), 246-255.

Manlove, J., Ryan, S. & Franzetta, K. (2004), Contraceptive Use and Consistency in U.S. Teenagers' Most Recent Sexual Relationships. *Perspectives on Sexual and Reproductive Health*, 36: 265–275.

Manlove, J., Ryan, S., & Franzetta, K. (2007). Contraceptive use patterns across teens' sexual relationships: The role of relationships, partners, and sexual histories. *Demography*, 44(3), 603–621.

Manlove, J., Welti, K., Barry, M., Peterson, K., Schelar, E. & Wildsmith, E. (2011). Relationship Characteristics and Contraceptive Use Among Young Adults. *Perspectives on Sexual and Reproductive Health*, 43: 119–128.

Manning, W. D., Cohen, J. A., & Smock, P. J. (*2010*). The role of romantic partners, family, and peer networks in dating couples' views about cohabitation. *Journal of Adolescent Research*, 26, 115–149.

Manning, W. D., Giordano, P. C., & Longmore, M. A. (2006). Hooking up: The relationship contexts of "nonrelationship" sex. *Journal of Adolescent Research*, 21, 459-483.

Manning, W. D., Flanigan, C. M., Giordano, P. C., & Longmore, M. A. (2009). Adolescent dating relationships and consistency of condom use. *Perspectives on Sexual and Reproductive Health*, 41(3), 181–190.

Manning, W. D., Giordano, P. C., Longmore, M. A., & Flanigan, C. M. (2012). Young Adult Dating Relationships and the Management of Sexual Risks. *Population Research and Policy Review*, 31(2), 165-185.

Ott, M., Alder, M., Millstrein, N., Tschann, S., & Ellen, J. (2002). The Trade-Off Between Hormonal Contraceptives and Condoms Among Adolescents. *Perspectives on Sexual and Reproductive Health* 34(1): 6-14.

Sassler, S. (2010). Partnering across the life course: sex, relationships, and mate selection. *Journal of Marriage and Family, 72* (3), 557–575.

Sassler, S. & Miller, A. J. (2011), Class Differences in Cohabitation Processes. *Family Relations*, 60: 163–177.

Scott, M. E., Wildsmith, E., Welti, K., Ryan, S., Schelar, E. & Steward-Streng, N. R. (2011). Risky Adolescent Sexual Behaviors and Reproductive Health in Young Adulthood. *Perspectives on Sexual and Reproductive Health*, 43: 110–118.

Sprecher , S. , Christopher , F. S. , & Cate , R. (2006). Sexuality in close relationships . In A. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook on personal relationships* (pp. 463 – 482). New York : Cambridge University Press .

Yabiku, S. T. & Gager, C. T. (2009), Sexual Frequency and the Stability of Marital and Cohabiting Unions. *Journal of Marriage and Family*, 71: 983–1000.

Table 1. Selected characteristics of young adults who have had intercourse with their current unmarried partners, Toledo Adolescent Relationships Study

Characteristic	Mean or % (N=602)
Consistent condom use	29.6
Relationship qualities	
Negative scale (range, 10-51)	17.3
Partner mistrust (range, 1-5)	2.2
Perceived partner inferiority (range, 1-5)	2.1
Jealousy (range, 1-5)	3.2
Verbal abuse (range, 3-15)	4.4
Violence (range, 4-20)	5.1
Non-exclusivity agreement	37.2
Positive scale (range, 15-75)	54.1
Intimate self disclosure (range, 3-15)	11.8
Enmeshment (range, 1-5)	3.1
Passionate love (range, 4-20)	16.0
Relationship salience (range, 1-5)	4.3
Partner affirmation (range, 1-5)	4.1
Instrumental support (range, 5-25)	14.8
Relationship	
Relationship status	
Dating	72.6
Cohabiting	27.4
Ongoing relationship	74.1
Duration (in weeks, 0.5-78)	41.3
Prior inconsistent condom use	40.0
Respondent	
Age (range, 18-24)	20.6
Gender	
Male	44.5
Female	55.5
Race/Ethnicity*	
Hispanic	11.8
White	61.0
Black	25.4
Family structure	
Single parent	24.6
Two biological parents	47.5
Stepfamily	14.3
Other	13.6
Mother's education	
<high school	12.3
High school	32.6
>high, <four-year college	34.7
>= four-year college degree	20.4
Education	
<high school	16.8
High school (ref.)	27.8
>high, <four-year college	50.2
>= four-year college degree	5.2
Employment	66.3

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 (1.8%).

Table 2. Odds ratios from zero order logistic regression analyses assessing the likelihood of consistent condom use among unmarried young adults, by selected characteristics

Characteristic	_Odds ratio_
Relationship qualities	
Negative	
Partner mistrust	0.90
Perceived partner inferiority	0.94
Jealousy	0.92
Verbal abuse	0.86**
Violence	0.82***
Non-exclusivity agreement	1.34†
Positive	
Intimate self disclosure	0.94†
Enmeshment	0.86†
Passionate love	0.96
Relationship salience	0.73***
Partner affirmation	1.09
Instrumental support	0.92***
Relationship	
Dating	4.1***
Ongoing relationship	0.76
Duration	0.76***
Prior inconsistent condom use	0.26***
Respondent	
Age	0.85**
Female	0.60**
Race/Ethnicity	
Hispanic	0.35**
White (ref.)	1.00
Black	1.17
Family structure	
Single parent	1.15
Two biological parents (ref.)	1.00
Stepfamily	0.74
Other	0.72
Mother's education	
<high school	0.94
High school (ref.)	1.00
>high, <four-year college	0.97
>= four-year college degree	1.50†
Education	
<high school	0.80
High school (ref.)	1.00
>high, <four-year college	1.03
>= four-year college degree	0.97
Employment	1.12

*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 3. Odds ratios from models including negative relationship qualities in logistic regression analyses assessing the likelihood of consistent condom use among unmarried young adults

Characteristic	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Relationship qualities						
Negative						
Partner mistrust	0.86†					
Perceived partner inferiority		0.86				
Jealousy			0.94			
Verbal abuse				0.87*		
Violence					0.82**	
Non-exclusivity agreement						1.07
Relationship						
Dating	2.69***	2.72***	2.69***	2.65***	2.52***	2.63***
Ongoing relationship	1.17	1.15	1.32	1.22	1.34	1.34
Duration	0.83**	0.83**	0.84**	0.85*	0.84*	0.83**
Prior inconsistent condom use	0.31***	0.30***	0.31***	0.31***	0.32***	0.31***
Respondent						
Age	0.92†	0.93	0.92	0.92	0.91	0.92
Female	0.71	0.73	0.68†	0.66*	0.58**	0.70†
Race/Ethnicity						
Hispanic	0.40*	0.39*	0.41*	0.40*	0.42*	0.40*
White (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Black	1.16	1.13	1.11	1.08	1.19	1.08
Family structure						
Single parent	1.25	1.23	1.22	1.24	1.27	1.22
Two biological parents (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Stepfamily	0.84	0.84	0.84	0.88	0.95	0.83
Other	0.74	0.70	0.72	0.70	0.70	0.71
Mother's education						
<high school	1.44	1.44	1.40	1.36	1.62	1.39
High school (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
>high, <four-year college	1.05	1.04	1.05	1.03	1.08	1.04
>= four-year college degree	1.10	1.08	1.08	1.07	1.13	1.07
Education						
<high school	0.83	0.81	0.78	0.79	0.80	0.78
High school (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
>high, <four-year college	0.91	0.90	0.92	0.93	0.94	0.93
>= four-year college degree	1.02	1.01	1.01	0.99	1.05	1.06
Employment	1.22	1.30	1.28	1.24	1.19	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 4. Odds ratios from models including positive relationship qualities in logistic regression analyses assessing the likelihood of consistent condom use among unmarried young adults

Characteristic	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Relationship qualities						
Positive						
Intimate self disclosure	0.97					
Enmeshment		0.96				
Passionate love			0.99			
Relationship salience				0.78*		
Partner affirmation					1.23	
Instrumental support						0.97
Relationship						
Dating	2.67***	2.63***	2.66***	2.58***	2.70***	2.50***
Ongoing relationship	1.34	1.35	1.36	1.50†	1.26	1.40
Duration	0.84*	0.84**	0.84**	0.88†	0.83**	0.84*
Prior inconsistent condom use	0.30***	0.31***	0.31***	0.29***	0.30***	0.30***
Respondent						
Age	0.92	0.92	0.92	0.91	0.93	0.92
Female	0.72†	0.70†	0.70†	0.73	0.66*	0.75
Race/Ethnicity						
Hispanic	0.40*	0.40*	0.40*	0.39*	0.40*	0.40*
White (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Black	1.07	1.09	1.07	1.03	1.15	1.12
Family structure						
Single parent	1.23	1.22	1.22	1.22	1.27	1.21
Two biological parents (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
Stepfamily	0.83	0.82	0.83	0.83	0.85	0.83
Other	0.71	0.71	0.71	0.70	0.73	0.71
Mother's education						
<high school	1.41	1.40	1.40	1.35	1.35	1.42
High school (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
>high, <four-year college	1.06	1.05	1.05	1.08	1.01	1.05
>= four-year college degree	1.08	1.07	1.07	1.06	1.06	1.06
Education						
<high school	0.79	0.79	0.79	0.84	0.78	0.80
High school (ref.)	1.00	1.00	1.00	1.00	1.00	1.00
>high, <four-year college	0.93	0.92	0.93	0.95	0.90	0.92
>= four-year college degree	1.06	1.03	1.05	1.12	0.98	1.03
Employment	1.27	1.27	1.27	1.27	1.27	1.25

*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 scales of relationship qualities in logistic regression analyses assessing the likelihood of consistent condom use among unmarried young adults

Characteristic	Model 1	Model 2	Model 3
Relationship qualities			
Negative	0.93**		0.92***
Positive		0.99	0.97*
Relationship			
Dating	2.72***	2.57**	2.53**
Ongoing relationship	1.11	1.42	1.23
Duration	0.85*	0.85*	0.89
Prior inconsistent condom use	0.32***	0.30***	0.31***
Respondent			
Age	0.92	0.92	0.91
Female	0.63*	0.74	0.72
Race/Ethnicity			
Hispanic	0.41*	0.41*	0.44†
White (ref.)	1.00	1.00	1.00
Black	1.22	1.08	1.23
Family structure			
Single parent	1.25	1.21	1.23
Two biological parents (ref.)	1.00	1.00	1.00
Stepfamily	0.93	0.82	0.94
Other	0.71	0.70	0.68
Mother's education			
<high school	1.50	1.41	1.54
High school (ref.)	1.00	1.00	1.00
>high, <four-year college	1.07	1.06	1.12
>= four-year college degree	1.13	1.07	1.13
Education			
<high school	0.82	0.79	0.84
High school (ref.)	1.00	1.00	1.00
>high, <four-year college	0.91	0.93	0.92
>= four-year college degree	0.95	1.06	0.97
Employment	1.23	1.26	1.20

*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. Reasons for inconsistent condom use among unmarried young adults, Toledo Adolescent Relationships Study

Reasons	*% (N=424)*
Condom negotiation	1.4
Condom aversion	3.1
Health	35.1
Relational	45.5
Desire for pregnancy/pregnant	5.7
Use of other methods of birth control	24.8
Confidence pregnancy will not occur	9.4
Situation beyond control	2.1
Condom unavailability	3.8
Misperception about condom availability and eagerness for sex	1.9

Note: multiple responses are allowed, percentages do not sum to 100. All reasons are coded into dummy variables so that a score of 1 represents: poor condom negotiating skills; condom aversion; good health knowledge of partner and self; strong relationship; desire for pregnancy or currently pregnant; use of other birth control methods; confidence pregnancy will not occur; situation beyond control; condom not available; and not using condoms due to its link to eagerness for sex.