



Do young men's reports of hormonal and long-acting contraceptive method use match their female partner's reports? ☆

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ABSTRACT

Objective: To assess whether young men's reports of hormonal and long-acting contraceptive methods match their female partner's reports.

Study design: We analyzed a sample of 1096 heterosexual couples (aged 18–26) from the National Longitudinal Study of Adolescent to Adult Health Romantic Pair subsample. We compared male and female partner reports of hormonal/long-acting method use using class of method (hormonal/long-acting) rather than type (e.g., intrauterine device). Regression analyses linked men's reports of individual and relationship characteristics with alignment of reporting.

Results: Sixteen percent of young men reported hormonal/long-acting method use at last sex differently than their female partner, that is, had a mismatched report. Men who had fewer lifetime sexual partners, had greater relationship satisfaction, believed their partner was monogamous and had a matched report of condom use at last sex were more likely to match their partner's report of hormonal/long-acting contraceptive use. Men living with children (from either partner) were less likely to have a matched report. Hispanic men were more likely to have a matched report than black men.

Conclusions: Men are an increasingly important part of pregnancy prevention efforts. Pregnancy prevention and healthy relationship programs that incorporate communication skills may also indirectly improve young men's knowledge of their partner's contraceptive use and engagement in contraceptive decision making.

Implications: Analyses showed that nearly two thirds of the 16% of young men that did not accurately report their partner's hormonal/long-acting method use at last sex underreport method use. Men at increased risk of misreporting may benefit the most from targeted pregnancy prevention programs.

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1. Introduction

Efforts to reduce teen and unintended pregnancies in the United States mainly target young women. However, decisions about sexual behavior, including contraceptive use, often depend on the input of both sexual partners [1,2]. Although programs acknowledge that men play an important role in reducing teen or unintended pregnancy [3], relatively little is known about men's knowledge of their partner's contraceptive use, particularly for unmarried men.

A recent national study found that 5% of sexually active men reported not knowing their partner's contraceptive method at last sex; those with a new partner and for whom it had been more than 3 months since last sex had the hardest time reporting [4]. However, this study was based on men's reports only and may miscount men who mistakenly think they know if their partner used a method and what it was.

A better assessment of knowledge requires responses from both partners, but limited couple-level data are available. Although a small body of research has examined the alignment of male and female reports of contraceptive use, these reports come from separate samples of men and women (not couples) [5–7]. One study, examining couples' reports of condom use, found that approximately 30% of females and males reported using a condom in the last 4 weeks [1]. However, this study did not directly compare partner reports within a couple.

In this paper, we use data from an underutilized couple-level data set to document how well men's reports of highly effective contraceptive use (hormonal and long-acting methods) matched their female partner's reports. Additionally, we note whether they over- or underreport their partner's method use (relative to their partner's report). We posit that men's reports of their partner's hormonal/long-acting method use [pill, ring, injectable, intrauterine device (IUD) or implant] may be particularly susceptible to mismatched reporting because these are female-controlled methods.

Couples' reports of contraceptive use can match in two ways: (1) both report using a method, and (2) both report not using a method.

☆ Conflicts of interest: none.

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We posit that characteristics linked to increased individual reports of using a hormonal or long-acting method will also be linked to increased matched reports of using a method (and may be negatively associated with matched reports of not using a method). Additionally, since positive relationship dynamics are linked to better communication within a relationship [8], we expect that couples with positive relationship dynamics will be more likely to have matched reports of use or nonuse.

A second aim is to identify links between a range of individual and relationship characteristics, as reported by men, and matched reporting of contraceptive use. We expect some individual and background factors — including higher socioeconomic status, education, race/ethnicity (white and Hispanic versus black), family structure (living together versus not) — to be positively linked to men's (and women's) reported use of contraception because they are linked to use of contraception more generally [5,9]. For the same reasons, we expect that characteristics of the relationship — such as more intimacy and trust, longer relationship duration [10], less relationship conflict (including intimate partner violence) [11,12] and no problem drinking [13,14] — will also be linked to a greater likelihood of matched reporting. A mechanism linking these factors to matched reporting is likely communication. Research finds that, within couples, communication about sex and use of contraception varies by a range of individual and relationship characteristics, including older age at first sex, non-Hispanic black race/ethnicity, longer length of presexual relationship and greater relationship satisfaction [15,16].

2. Material and methods

2.1. Data and analytic sample

We used data from the National Longitudinal Study of Adolescent to Adult Health (Add Health) Romantic Pair subsample [17]. Add Health is a nationally representative sample of US adolescents in grades 7 through 12 in 1994–1995. The Romantic Pair subsample includes roughly 1500 original heterosexual Add Health respondents in a relationship for at least 3 months (and their married, cohabiting or dating partners) interviewed in 2001/2002 (between ages 18 and 26). Our analytic sample consisted of 1096 heterosexual couples “at risk” of pregnancy, excluding 194 couples without weights (i.e., not representative of couples eligible for inclusion in the Romantic Pairs sample; see analytic plan), 47 who were pregnant, 84 not sexually active, 79 “other” ethnicity men and 11 couples with missing data on key characteristics. Analyses were exempt from Institutional Review Board review. Our sample includes 66 respondents who reported they were in a relationship and their partners reported they were not (they “disagreed”).

2.2. Measures

2.2.1. Dependent variable

We created a three-category measure to assess matched reports of a hormonal/long-acting birth control method (pill, ring, injectable, IUD or implant) at last sex: (1) matched, both partners reported using hormonal/long-acting methods; (2) matched, both partners reported no use of hormonal/long-acting methods; and (3) mismatched, one partner reported using a hormonal/long-acting method and the other did not. Within the broad hormonal/long-acting category, we did not match on specific method, that is, some men were categorized as “matched” even if they did not report the exact same type of method as their partner (e.g., a man reported pill use and his partner reported an injectable). We took this approach because a male partner may know that his female partner is using a female-controlled hormonal/long-acting reversible contraception (LARC) method but not which one. Additionally, pregnancy risk is fairly comparable across hormonal/LARC methods.

2.2.2. Independent variables

Individual characteristics included the male's age (continuous); race/ethnicity [white, black (reference (r)) and Hispanic]; having at least some college education; parents' education [did not complete high school (r), high school degree, more than high school]; living with both biological parents in adolescence; age at first sex [≤ 14 (r), 15–18 years old, ≥ 19]; and number of lifetime sexual partners (0 = three or more; 1 = one or two). *Relationship characteristics* included relationship status [married, cohabiting, dating (r) or not in a relationship/“disagree”]; relationship duration (in months); lives with children (from either partner); male partner very satisfied with the relationship; no problem drinking; no relationship violence, defined as experiencing (14% of the sample) or perpetrating (14% of the sample) violence or sexual insistence; and the male's perception his partner was monogamous.

2.2.3. Control variables

A quarter (25%) of couples were interviewed on the same day; however, 33% were interviewed within 1 week of one another, 25% between a week and a month apart and 16% more than a month apart. We included a continuous measure of the days between partner interviews as a control. We also controlled for couples' matched reports of using a condom at last sex (1 = matched; 0 = mismatched), as matching on condom use may be associated with matching on hormonal/LARC use. For example, a female partner may not disclose use of a hormonal/long-acting method to convince her partner to use a condom.

2.3. Analytic plan

We conducted bivariate and multivariate analyses to describe how well male reports of hormonal/long-acting contraceptive use matched their female partner's. For the bivariate analyses, zero-order multinomial logistic regression identified significant differences in matched reporting across characteristics. We then used a multinomial logistic regression model to look at the joint association between all the independent measures and matched reporting compared to mismatched reporting. We ran all analyses in Stata and weighted the data to be representative of couples eligible for inclusion in the Romantic Pair subsample. We used multiple imputation (with all predictors, controls and dependent variables) to address missing data. All variables in our model had less than 5% missing except: male's parents' education (12%), male lived with both biological parents during high school (13%) and male thought his female partner was monogamous (8%).

3. Results

3.1. Sample characteristics

Table 1 shows the distribution of our sample across our independent and control variables. Of note, just over 40% of men were in dating relationships, with just over 25% each married and cohabiting. Relationships were quite long in duration (more than 3 years, on average), and one quarter of men lived with a child in the household. Most men reported being highly satisfied in their relationship, believed their partner was monogamous, did not have a drinking problem and had not engaged in relationship violence. Men in the sample were 16.4 years old, on average, when they first had sex, and two thirds reported having three or more lifetime sexual partners.

3.2. Descriptive and multivariate results

As shown in Table 2, 16% of young men's reports about using a hormonal/long-acting method the last time they had sex did not match their female partner's reports. Over 5% reported their partner used a hormonal/long-acting method when their partner did not report doing so, while 11.1% reported no hormonal/long-acting method use when their partner did. About two fifths (39.4%) of men and their

Table 1

Individual and relationship characteristics of couples in the analytic sample of the Add Health Romantic Pairs study (N = 1096)

	[%, mean (SD)]
Individual male characteristics	
Race	
Black (r)	19%
White	70%
Hispanic	11%
Age	23.2 (3.2)
Education	
HS degree or less (r)	51%
Has at least some college/enrolled	49%
Parents' education	
Less than a HS degree (r)	11%
HS degree	40%
Has at least some college	50%
Lived with two biological parents during high school	60%
Age at first sex	16.4 (2.4)
Number of lifetime partners	
1 or 2	34%
3 or more (r)	66%
Static relationship characteristics	
Relationship duration (in months)	37.9 (26.8)
Relationship status	
Married	26%
Cohabiting	26%
Dating (r)	42%
"Disagreed" about being in a relationship ^a	6%
Children in the household	24%
Dynamic relationship characteristics	
Very satisfied with relationship	73%
No problem drinking	80%
No relationship violence	72%
Believes partner is monogamous	87%
Control variables	
Time between partner interviews (in days) ^b	16.2(27.9)
Male does not match partner report of using condoms	20%

^a This category denotes that the male respondent said that he was not in a relationship with the Add Health participant who identified him as her partner (i.e., reports about being in a relationship did not match).

^b Range = 0–199 days. Twenty-seven percent (n = 291) were interviewed on the same day, and 65% (n = 707) were interviewed within a week of their partner.

partners both reported using a hormonal/long-acting method the last time they had sex, while just over 44% both reported not using hormonal or long-acting methods the last time they had sex.¹

Table 3 shows results from the multinomial analyses modeling matched reports of hormonal/LARC use at last sex. Models 1 and 2 report relative risk ratios comparing young men with a matched report to those with a mismatched report, while models 3 and 4 compare young men with a matched report of nonuse to those with a mismatched report.

Models 1 and 3 show results from the zero-order, unadjusted models. As shown in model 1, men with at least some college/college-enrolled, with one or two lifetime sexual partners, with matched reports of condom use, who were very satisfied in their relationship and who believed their partner was monogamous were more likely to have a matched report of hormonal/LARC use than the comparison groups. Men not in a relationship and living with children were less likely to have a matched report of hormonal/LARC use than the comparison groups. Model 3 shows that Hispanic men, married men and men who matched their female partner's report of condom use at last sex were more likely than the reference groups to have a matched report of not using hormonal/LARC methods at last sex. Men who first had sex at ages 15–18 and those not in a relationship were less likely than the reference groups.

Models 2 and 4 show results from the full, adjusted models; several measures remain significantly associated the likelihood of having a

¹ As a separate analysis, we matched specific method use among couples in which both partners reported using a hormonal or long-acting method (Table A1). Of the 398 couples who reported hormonal or long-acting method use, 96% reported using the same specific method.

Table 2

Percentage of males in the Add Health Romantic Pairs sample who (mis)match their female partner's reports of hormonal/LARC use

Hormonal/LARC use	%
% males mismatched partner	16.1
% male reported use	5.1
% male did not report use	11.1
% males matched partner	83.9
% contraception reported	39.4
% contraception not reported	44.5

"Males mismatched partner" indicates the male either reported use when his female partner reported nonuse or reported nonuse when his female partner reported use. "Males matched partner" indicates the male and female within a couple either both reported using a hormonal/LARC method or both reported not using a hormonal/LARC method.

matched report of hormonal/LARC use. Men with one or two lifetime sexual partners, who believed their partner was monogamous and with matched reports of condom use were more likely than the comparison groups to have a matched report of using a hormonal/long-acting method. Men who lived with children were less likely than the reference groups to have a matched report. As seen in model 4, Hispanic men were more likely than non-Hispanic black men to have a matched report of not using a hormonal/long-acting method, as were men who had a matched report of condom use.

4. Discussion

Men are central to contraceptive decision-making within romantic relationships, and in this analysis, we find high levels of matched reporting of hormonal/LARC use within couples (84%). Consistent with expectations, several individual- and relationship-level factors are associated with having a matched report.

Higher reports of matched nonuse among Hispanic men may reflect varying pregnancy intentions. In the early 2000s, young Hispanic women had higher fertility rates, on average, than other women [18]. Thus, more matched reports of contraceptive nonuse among Hispanics may partly reflect a higher prevalence of trying to get pregnant (something we cannot measure with these data). In addition, having more sexual partners is linked to a lower likelihood of matched reports of hormonal/LARC use, suggesting that sexual risk-taking is linked not only to reduced hormonal contraceptive use [19] but also perhaps to limited communication about contraception. In contrast, men who lived with children were less likely to have a matched report, perhaps because couples with children tend to report lower hormonal method use overall [9].

We also found that, consistent with expectations [14,15], positive relationship dynamics (increased relationship satisfaction) were linked to matched reports. Moreover, men who thought their partner was monogamous also had a greater likelihood of having a matched report, consistent with research linking trust with contraceptive use [20]. Finally, couples with matched reports of condom use were more likely to match on reports of hormonal/LARC use, which may reflect better recall of and communication among these couples about contraceptive use more generally.

Many young men (16%) did not know their partner's LARC/hormonal contraceptive status even though these couples had been together, on average, for just over 3 years. Five percent of men overreported contraceptive use, that is, they reported their partner used a hormonal/long-acting method of birth control when she reported otherwise. These couples were clearly at an increased risk of unintended pregnancy, at least from the males' perspective. Conversely, 11% of men underreported contraceptive use, that is, they reported no hormonal/LARC use when their partner did. Importantly, 20% of the sample were also mismatched on reported condom use. However, it is likely that mismatch on reported condom use is due to misremembering whether a condom was used at last sex in contrast to having incomplete knowledge; condoms need to be used (and therefore remembered) at each coitus, whereas hormonal/LARC methods are effective for longer periods of time.

Table 3
Relative risk ratios from multinomial regression models with male individual and relationship characteristics predicting matched reporting of hormonal/long-acting method use versus mismatched reporting ($n = 1096$)

	Matched report of using a hormonal/LARC method versus mismatched		Matched report of not using a hormonal/LARC method versus mismatched	
	Bivariate (1) (95% CI)	Full model (2) (95% CI)	Bivariate (3) (95% CI)	Full model (4) (95% CI)
Individual male characteristics				
Race (r: black)				
White	1.3 (0.7–2.4)	1.3 (0.6–2.9)	0.9 (0.5–1.6)	1.3 (0.6–2.6)
Hispanic	1.6 (0.7–3.9)	1.9 (0.7–5.5)	3.0 ^b (1.3–6.7)	3.1 ^a (1.1–8.3)
Age	1.0 (0.9–1.0)	1.0 (0.9–1.1)	1.0 (0.9–1.1)	1.0 (0.9–1.1)
Education (r: HS degree or less)				
Has at least some college/enrolled	2.2 ^b (1.3–3.7)	1.6 (0.8–3.1)	1.1 (0.6–1.8)	1.2 (0.6–2.3)
Parents' education (r: less than a HS degree)				
HS degree	0.8 (0.5–1.4)	1.9 (0.7–5.0)	1.2 (0.7–2.0)	0.9 (0.4–2.2)
Has at least some college	1.6 (0.9–2.8)	2.0 (0.8–5.5)	0.7 (0.4–1.2)	0.7 (0.3–1.6)
Lived with two biological parents during high school	1.0 (0.5–1.8)	0.6 (0.3–1.2)	0.8 (0.4–1.4)	0.6 ⁺ (0.3–1.1)
Age at first sex (r: 14 or younger)				
15–18 years old	0.7 (0.4–1.2)	0.7 (0.3–1.5)	0.6 ^a (0.3–0.9)	0.5 (0.3–1.1)
19 or older	2.0 ⁺ (1.0–4.3)	1.0 (0.3–3.3)	1.6 (0.8–3.3)	0.8 (0.3–2.4)
Number of lifetime partners (r: 3 or more)				
1 or 2	2.5 ^b (1.4–4.6)	2.2 ^a (1.1–4.4)	1.5 (0.9–2.8)	1.5 (0.8–3.0)
Static relationship characteristics				
Relationship duration (days)	1.0 (1.0–1.0)	1.0 (1.0–1.0)	1.0 (1.0–1.0)	1.0 (1.0–1.0)
Relationship status (r: dating)				
Married	0.9 (0.5–1.6)	0.5 (0.2–1.2)	2.2 ^b (1.3–3.6)	1.5 (0.7–3.4)
Cohabiting	0.8 (0.4–1.4)	0.7 (0.3–1.5)	0.9 (0.5–1.6)	1.0 (0.5–2.0)
Not in a relationship	0.2 ^b (0.1–0.5)	0.4 (0.1–1.7)	0.3 ^a (0.1–0.8)	0.5 (0.1–1.7)
Children in the household	0.4 ^b (0.2–0.7)	0.5 ^a (0.3–1.0)	1.3 (0.7–2.3)	0.9 (0.5–1.6)
Dynamic relationship characteristics				
Very satisfied with relationship	2.3 ^b (1.3–4.2)	1.4 (0.7–2.9)	1.5 (0.8–2.6)	0.9 (0.5–1.8)
No problem drinking	1.0 (0.5–2.0)	1.2 (0.6–2.5)	1.6 (0.8–3.1)	1.6 (0.8–3.2)
No relationship violence	1.5 (0.8–2.8)	1.2 (0.6–2.2)	1.0 (0.6–1.9)	1.1 (0.6–1.9)
Believes partner is monogamous	2.8 ^a (1.1–6.6)	2.7 ^a (1.1–6.8)	1.4 (0.6–3.0)	1.3 (0.6–2.7)
Control variables				
Time between partner interviews	1.0 (1.0–1.0)	1.0 (1.0–1.0)	1.0 (1.0–1.0)	1.0 (1.0–1.0)
Male matches partner report of using condoms	1.7 ^b (1.2–2.4)	1.9 ^b (1.3–2.6)	1.6 ^b (1.2–2.3)	1.5 ^a (1.1–2.1)
LR test				134.01 ^c

⁺ $p < .10$.

^a $p < .05$.

^b $p < .01$.

^c $p < .001$.

These couples were either miscommunicating or not communicating about contraception. It is possible that women were deliberately miscommunicating information by telling their partners they were not using hormonal contraception even when they were using effective methods in order to encourage their partners to use condoms to reduce STI risk. Some qualitative evidence supports this, finding that women worry about asking their partners to use a condom in addition to the pill because it may signal infidelity or a risk of STI transmission [21]. Regardless, it is clear that programs should continue to support, or even improve, efforts to promote communication around contraceptive use in teen and young adult couples.

Overall, these findings suggest that surveys of young men and program evaluations focusing on male involvement in reducing teen pregnancy should acknowledge potential inaccuracies in reporting method use, particularly among those in more casual relationships or those with lower levels of trust, commitment and communication in their relationships. Other research has found that few young adult men know much about female contraceptive methods [22], and relatively few couples have discussions about contraception [14]. Thus, programs could potentially increase males' knowledge of contraceptive use, and pregnancy prevention and healthy relationships more broadly, by providing information about contraceptive methods; encouraging partner communication about sex, contraception and healthy relationships (including monogamy); and highlighting the role that young men can play in supporting their partners' method use.

As noted, the Romantic Pair data were collected in 2001 and are representative of couples in more serious relationships. Our findings may not be generalizable to more recent cohorts of teen and young adult

men who are the targets of current unintended pregnancy prevention efforts. Additionally, these data lack detail about couples' actual communication on contraceptive use and about pregnancy intention, an important reason for nonuse. Nonetheless, these limitations are more than offset by the ability to use *couple-level* data to assess men's reporting of partner contraceptive use.

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Appendix A

Table A1

Matched reporting among partners of hormonal/LARC method type.

		Female report					N
		Pill	Ring	IUD	Implant	Injection	
Male report	Pill	320	1	0	0	7	328
	Ring	0	0	0	0	0	0
	IUD	0	0	5	0	0	5
	Implant	0	0	0	1	3	4
	Injection	4	0	0	1	32	37
	N	324	1	5	2	42	

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