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Attitudes Toward Unprotected Intercourse and Risk of Pregnancy among Women Seeking Abortion

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A B S T R A C T

Background: Despite the high prevalence of unintended pregnancies caused by lack of contraceptive use, little is known about women's reasons for or attitudes toward unprotected intercourse (UI).
Methods: We included 562 women seeking pregnancy termination at six U.S. abortion clinics who completed surveys on their experiences and attitudes about UI, knowledge of the risk of conception, and willingness to engage in UI in the future.
Results: Respondents reported an average of 18 acts of UI leading up to conception. The most commonly reported reasons for UI were thinking one could not get pregnant (42%), difficulties procuring a contraceptive method (40%), and not planning to have sex (38%). When asked about attitudes toward UI, 48% reported that UI feels better or more natural, 36% said it is okay to have UI once in a while or at certain times of the month, and 28% cited partner or relationship benefits as a reason to engage in UI. In addition, 23% said they were somewhat or extremely likely to engage in UI in the next 3 months. Younger women (<20 years), women who named partner or relationship benefits to UI, and women who underestimated the risk of conception were significantly more willing to engage in UI in the next 3 months.
Conclusions: Given the prevalence of risk taking and the perceived benefits of UI, contraceptives, particularly long-acting methods, need to be made easy to procure and use. The success of coital specific methods may be limited by women underestimating the risk of conception.

Introduction and Background

The majority of unintended pregnancies in the United States are caused not by contraceptive failure, but by lack of contraceptive use or intermittent use (Finer & Henshaw, 2006). More than1.5 million pregnancies each year are experienced by women who did not use any method of contraception in the month before conception and were not intending to become pregnant (Finer & Henshaw, 2006). Many in the reproductive health field have assumed that lack of contraceptive use can be largely explained by poor contraceptive knowledge, lack of access to (Oliva, Rienks, & McDermid, 1999) or dissatisfaction with (Forrest & Frost, 1996) family planning services, experience with or fear of side effects (Ramstrom, Baron, Crane, & Shlay, 2002; Rosenberg, Waugh, & Burnhill, 1998; Trussell & Vaughan, 1999), ambivalence around becoming pregnant (Bruckner, Martin, & Bearman, 2004; Schwarz, Lohr, Gold, & Gerbert, 2007), or the difficulty or inconvenience of using contraceptives (Archer et al., 2002; Smith & Oakley, 2005). Male partners may also discourage or even sabotage contraceptive use (Kerns, Westhoff, Morroni, & Murphy, 2003; Montgomery et al., 2008; Moore, Frohwirth, & Miller, 2010). However, even when couples are able to access and negotiate successful contraceptive use, a number of factors may encourage couples to have unprotected intercourse (UI) when they are not actively seeking a pregnancy (Nettleman, Brewer, & Ayoola, 2007). A few studies have explored such factors, the results of which suggest a wide range of personal, partner, sociocultural, and structural reasons for UI. Even fewer studies have explored women's willingness to engage in UI in the future. Identifying those women most likely to take pregnancy risks, and why, could greatly enhance efforts to reduce the number of unintended pregnancies in the United States. This study

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fills a number of important gaps by assessing reasons for and attitudes about UI, knowledge of the risk of conception, and willingness to engage in UI in the next 3 months.

Nettleman, Chung, Brewer, Ayoola, and Reed (2007) analyzed reasons for UI among 7,856 women in the Pregnancy Risk Assessment Monitoring System who experienced a recent, unintended pregnancy. The most common reasons were perceived low risk for pregnancy (33%), not really minding if one got pregnant (30%), partner resistance to contraception (22%), and contraceptive side effects (16%). Unfortunately, the study collected no additional data on why respondents thought they could not become pregnant. Because the study only included participants who decided to carry their unintended pregnancies to term, these women may have had more ambivalence about becoming pregnant than women who decide to end their pregnancy with an abortion.

A nationally representative study of 10,863 women receiving abortion services in 2000 and 2001 by Jones, Darroch, and Henshaw (2002) showed that 46% reported not using a contraceptive method in the month they conceived. The most commonly cited reasons for non-use of contraception were perceived low risk of pregnancy (33%), concerns about contraceptive methods (32%), unexpected or unwanted sex (27%), and ambivalence about contraception (22%). Homco, Peipert, Secura, Lewis, and Allsworth (2009) conducted a smaller but more recent survey of 298 abortion patients from a single abortion clinic. Approximately two thirds (63%) reported not using contraception before pregnancy. Participants were asked to identify specific reasons for not obtaining their desired birth control method. Worry about side effects, weight gain, and cost were the most commonly reported reasons. However, the authors argued that "obstacles to obtaining desired contraception was diverse" (p. 572). One third of women reporting some preconception contraception reported one or more reasons why obtaining contraception was difficult.

Surprisingly few studies ask women in detail about their reasons for UI (Ayoola et al., 2007). For example, when women cite low perceived risk of pregnancy as a reason for not using contraception, what, specifically, do they mean? This response could indicate that women thought they had UI during a "safe" time in their menstrual cycle, but it could also mean women had UI in the past without getting pregnant, thus instigating infertility suspicions. A recent nationally representative study of 18- to 29-year-olds found that 59% of women and 47% of men had at least some concern about their fertility (Kaye, Suellentrop, & Sloup, 2009). However, only a very small percentage of these young adults had confirmed infertility from a health professional. Investigations of attitudes regarding UI should inquire about the various reasons behind low perceived pregnancy risk, particularly because this factor has emerged as such a common explanation for UI in the literature.

Studies have also failed to explore people's propensity for engaging in UI in the future, as well as whether particular reasons for engaging in UI may be more linked to such willingness. One new study surveyed 1,500 California family planning clients about their willingness to have sex without contraception if they did not have a contraceptive on hand (Foster et al., 2011). Even among women and men seeking or continuing contraceptives, almost one third said definitively that yes, they would have UI in the next 3 months, and 20% indicated that they would "sometimes" or "maybe" engage in UI. This new study suggests the strong potential of this line of questioning to identify which groups of people may be most at risk for unintended pregnancy. We examine attitudes toward UI and correlates of self-perceived propensity to engage in future UI among women seeking termination services at six abortion clinics across the United States.

Methods

Procedures

Between April and September 2010, women seeking abortion were asked to complete a survey in the waiting rooms of six large abortion clinics, located in or just outside Saint Louis, Chicago, Little Rock, Seattle, Philadelphia, and Oakland. English- and Spanish-speaking women were eligible if they were either seeking an abortion or attending a follow-up appointment after an abortion. A research assistant led women through an information sheet about the study and participants gave verbal consent before starting the survey. Women received $20 for completing the survey. No identifying information was collected. The survey asked about contraceptive preferences, attitudes about UI, risk behavior, contraindications for contraceptive methods, and reasons for delay in recognition of unintended pregnancy. Surveys were collected on laptop computers using Survey Monkey software and data were transferred to Stata 11.0 for analysis (StataCorp, College Station, TX). The order of responses to multiple choice questions were randomized for each respondent. The study protocol was approved by the Committee for Human Research.

Measures

Frequency of UI

We asked women to report the frequency with which they had sex in the 3 months before conception and the percentage of time that they used a contraceptive method. The percentages were listed in 10% intervals from 0% to 100%, with 0% labeled "never," 50% labeled "half of the time," and 100% labeled "always." Combining the responses to the coital frequency and percent UI questions, we estimated the number of episodes of UI in the 3 months before conception. We defined women as having low-risk behavior if their answers indicate fewer than three episodes of UI over the 3-month period leading to conception. The three episode cutoff represents one episode per month, a break point that identifies a sizable fraction of high-risk women.

Reasons for UI

To understand women's experience with UI, we asked respondents about reasons they had UI in the 3 months preceding their current pregnancy. We grouped reasons for having UI into the following eight umbrella questions, based on previous research and pilot interviews: Had trouble getting a contraceptive method, wasn't planning on having sex, did not think one was going to get pregnant, contraceptives too difficult to use, worried about side effects of contraceptives, partner and relationship reasons, not sure if one wanted to become pregnant, and thought contraceptives did not work. Each group of reasons was worded as a question, for example, "In the 3 months before you because pregnant, did you ever have unprotected sex because you [had trouble getting a contraceptive method]?" Women were asked to check all that examples of that reason that are true for them, for example, "Yes, I ran out of the birth control method I was using," "Yes, I couldn't get an appointment to get birth control when I needed it," or choose "No, none of the above are true for me."

Knowledge of risk of conception

The survey defined UI as "sex without using condoms or any other type of birth control." To gauge attitudes toward risk of UI, respondents were asked to indicate on a scale what they thought that the odds of conception were for a single act of UI (the true figure is 3%–5%), 1 year of having UI (true figure is 85%), 1 year of condom use (true figure 15%), and a year of oral contraceptive use (true figure 8%; Hatcher, 2007). We defined responses about the risk of conception from one act of UI as high if the answer was more than 50%, the risk from 1 year of UI to be low if the answer is less than 75%, the risk from 1 year of condom use to be high if the answer is more than 30% and the risk from 1 year of oral contraceptive use to be high if the answer is more than 15%. Each of these cutoffs were chosen to identify women who are in the ballpark of the correct answer without demanding precision.

Attitudes toward UI

To identify women's current perceptions of the benefits of UI, we asked respondents to indicate the degree to which they agreed with eight statements about UI (reported below). Finally, women were asked, "In the next 3 months, how likely is it that you will have sex without using any method of birth control?" Response choices were extremely likely, somewhat likely, and not at all likely.

Analyses

Chi-square tests were performed to examine reasons for having UI and frequency of UI in the 3 months leading up to conception and to examine the understanding of the risk of conception and intention to have UI in the future. To understand past UI, we explicitly asked about their reasons for having UI in the 3 months leading to conception. We predict willingness to engage in future UI using current attitudes toward UI. Because current attitudes about UI may have been influenced by their current pregnancy and abortion, we do not use current attitudes to explain previous acts of UI. A multivariable logistic regression examined predictors of likelihood of having UI in the future.

Results

Study Population

There were 983 women eligible to participate in the study and 61% agreed. Of the 602 women in the larger study, 562 (93%) women answered the questions about reasons for having UI. Most respondents were in their twenties (55%) with 17% under age 20 and 23% age 30 or older. One quarter (26%) of the women were White/non-Hispanic, nearly half (46%) were African American, 11% were Hispanic, and 11% were either Asian/Pacific Islanders or American Indians. Race/ethnicity data was missing for 5%of the sample (Table 1).

History of and Intentions to Have UI

In the 3 months before conception, more than half of the women had sex either every day (13%) or at least three times per week (40%). One in five (22%) had intercourse once a week and 17% had sex once or twice per month. Just over one quarter of the respondents (28%) report that they never used a method of contraception. Almost half of respondents say they used contraceptives less than half the time. Only 11% reported that they always used a method of contraception.

Table 1
Study Participants ($n = 562$)

Characteristic	*n*	%
Age (yrs)		
14–19	97	17
20–24	185	33
25–29	126	22
30–49	127	23
Missing	27	5
Race/ethnicity		
White non-Hispanic	144	26
African American	259	46
Asian/PI	38	7
American Indian	23	4
Hispanic	62	11
Missing/other	36	6
Plan to use a method to prevent pregnancy		
Plan to use	491	87
Do not plan to use	14	2
Undecided	46	8
Prefer not to answer	11	2
Likelihood of having sex without any method of birth control in next 3 months		
Extremely likely	33	6
Somewhat likely	89	16
Not at all likely	412	73
Prefer not to answer	28	5
Frequency of intercourse in 3 months before pregnancy		
Every day	71	13
3× per week	223	40
1× per week	121	22
2× per month	82	15
1× per month	12	2
Once or twice	27	5
Never	17	3
Prefer not to answer	9	2
Proportion of acts of intercourse in which a contraceptive method was used (%)		
0 (never)	157	28
10	34	6
20	28	5
30	23	4
40	20	4
50 (half the time)	94	17
60	9	2
70	33	6
80	30	5
90	53	9
100 (always)	60	11
Missing/prefer not to answer	21	4

Combining the responses to questions about past frequency of intercourse and proportion of acts in which a method of contraception was used (not shown in table), we estimate that the 562 respondents had 16,500 acts of intercourse in the 3 months preceding their pregnancies, of which 10,130 (61%) were unprotected. Women had an average of 18 acts of UI leading up to conception. One quarter of the respondents (140/562) gave responses that indicate that they had UI fewer than three times in the 3 months preceding conception.

The vast majority of respondents (87%) report that they planned to use a method of contraception after the abortion. However, some women who planned to use a method also reported that they will likely have some future episodes of UI. When asked about the likelihood of having sex without any method of birth control in the next 3 months, 6% said it was extremely likely, 16% said it was somewhat likely, and just under three quarters (73%) said it was not at all likely. Younger women were more likely than older women to intend to have UI. One third of women under age 20, 23% of women in their 20s and 17%

Table 2
Reasons for Having UI by Number of Episodes in 3 Months Leading to Pregnancy

	Total ($n = 562$), %	<3 UI Episodes ($n = 140$), %	≥3 UI Episodes ($n = 422$), %
Did not think I was going to get pregnant			
Any in this category	42	31	46*
I didn't think I could get pregnant because of where I was in my cycle	20	19	21
I didn't think I could get pregnant because I had had unprotected sex before without getting pregnant	18	10	21*
I thought my partner could not get me pregnant	8	4	9
I thought I was infertile	8	4	9
I thought I was too old to become pregnant	2	1	2
I thought I was too young to become pregnant	1	1	1
Had trouble getting a contraceptive method			
Any in this category	40	24	46*
I ran out of the birth control method I was using	20	17	21
I couldn't afford to pay for birth control or my insurance wouldn't cover it	12	4	14*
I couldn't get an appointment to get birth control when I needed it	7	4	8
I could not get to the clinic	7	1	8*
I did not know what method to use	5	3	6
I did not want to go to a clinic or see a doctor	4	0	6*
I did not know where to get a birth control method	2	0	3
Wasn't planning on having sex			
Any in this category	38	32	40
I didn't think I was going to have sex	34	28	36
I was using alcohol or drugs	7	5	7
I was forced to have sex	2	2	2
Worried about side effects			
Any in this category	34	24	37*
I previously had side effects from contraceptives	17	11	19*
I was worried I would have a side effect	17	12	19
I was worried that contraceptives were bad for my health	8	6	9
Partner issues			
Any in this category	23	14	27*
My partner did not want to use birth control	19	12	22*
My partner forced me to have unprotected sex	4	2	5
My partner messed with my birth control.	1	0	2
Contraceptives were too difficult to use			
Any in this category	23	15	25*
Sometimes I forgot to use or take my birth control method	15	10	16
I didn't have time to use a method	5	4	5
It was difficult to insert or put on the method when I wanted to have sex.	3	1	4
I couldn't figure out how to use the method	2	2	2
Not sure if I wanted to get pregnant			
Any in this category	13	5	15*
I would have been fine either way	8	3	9*
I wanted to take the chance of getting pregnant	6	2	7*
Think contraceptives don't work			
Any in this category	7	5	8

* Differences between <3 episodes and ≥3 episodes are significant at an .05 level.

of women age 30 and older reported intending to have UI in the next 3 months ($p < .05$; data not shown). There were no significant differences by race/ethnicity.

Reasons for Previous UI

Women gave an average of 2.7 specific reasons for having UI in the past 3 months. Women who had fewer than three acts of UI gave an average of 1.9 reasons; women who had more UI gave an average of 3.0 reasons ($p < .05$; data not shown). The most common groups of reasons for having had UI in the 3 months before conception were that they did not think they were going to get pregnant (42%), they had trouble getting a contraceptive method (40%), and they weren't planning on having sex (38%) (Table 2). The most common specific reason was, "I did not think I was going to have sex" (34%), followed by thinking one could not become pregnant because of one's place in the menstrual cycle (20%), running out of birth control supplies (20%), and the partner not wanting to use birth control (19%). What distinguished women who had frequent UI (three or more times in the 3-month period) from women with few reported acts was greater reporting of access problems (inability to afford, difficulty getting to the clinic, and not wanting to see a doctor), a history of side effects from contraception, a partner who did not want to use birth control, and a higher level of ambivalence about becoming pregnant.

Attitudes Toward UI

The most prevalent attitude about UI was that it "feels better or more natural," an opinion held by 48% of respondents. Just over one third (36%) said it was "okay to have once in a while or at certain times of the month" (Table 3). One in four women (28%), reported "relationship and partner reasons" to have UI. Although this was the least common attitude, partnership and relationship reasons to have UI were significantly associated with a willingness to have UI in the future. Among women who said they were somewhat or extremely likely to have UI in the

next 3 months, 46% cited some partner or relationship benefit to having UI.

Knowledge of the risk of conception from UI was also associated with willingness to have future episodes of UI. Women who believed the risk of conception from one act of UI is more than 50% were less likely to intend to have UI in the future. Nearly two thirds of the overall sample of women (63%) and just over half (53%) of the women who intended to have UI in the next 3 months held this opinion. Women who intended to have UI were more likely to report that the risk of conception from a year of UI was less than 75% (47% compared with 37% of the overall sample). Teenagers were also more likely than adults to underestimate the chance of conception from a year of UI (48% compared with 33% among women 20 and older). Two thirds of respondents were aware of the risk of conception while using contraceptives; they knew that the risk of conception from 1 year of condom use is less than 30% and the risk from OC use is less than 15%. However, knowledge of the failure rate of contraception did not differ for women who reported an intention to have UI in the next 3 months.

Predictors of Willingness to Engage in Future Acts of UI

In a multivariate model of being likely to have UI in the next 3 months, we found three factors were significant: Holding any view that UI improves one's relationship with their partner, underestimating the risk of conception in 1 year of not using any method of contraception, and being under age 20 (Table 4). Compared with women who did not give partner-related reasons for having UI, women who reported a partner or relationship reason to have UI had twice the odds of reporting that UI was likely in the next 3 months. Women who thought that the chance of conception from a year of UI is less than 75% were 58% more likely to report future UI. Finally, women under age 20 were more than 2.5 times more likely to report willingness to have UI than older women.

Table 3
Current Attitudes About UI and the Likelihood of Engaging in UI in the Future

Item	Overall Sample ($n = 562$), %	Women Who Say They are Somewhat or Extremely Likely to Have UI in the Next 3 Months ($n = 122$), %
Attitudes about UI		
Any partner/relationship reasons to have UI*	28	46
Having sex without using birth control means you love your partner*		
Do not agree	89	82
Somewhat/completely agree	11	18
Having sex without using birth control is more fun when there is a chance you could make a baby*		
Do not agree	88	75
Somewhat/completely agree	12	25
If you become pregnant after having unprotected sex, your relationship will become stronger and more committed*		
Do not agree	87	72
Somewhat/completely agree	13	28
Having sex without using birth control makes you closer to your partner*		
Do not agree	82	68
Somewhat/completely agree	18	32
Attitude that UI is okay certain times or once in a while*	36	49
Having sex without using birth control is safe to do certain times of the month		
Do not agree	76	70
Somewhat/completely agree	24	30
Having sex without using birth control is okay to do every once in awhile*		
Do not agree	74	56
Somewhat/completely agree	26	44
Attitude that UI feels better/more natural*	48	58
Having sex without using birth control feels better*		
Do not agree	61	53
Somewhat/completely agree	39	47
Having sex without using birth control feels more natural		
Do not agree	59	50
Somewhat/completely agree	41	50
Knowledge of risk of conception		
Think risk of conception from 1 act of UI is >50%*		
Yes	63	53
No	37	47
Think risk of conception from 1 year of UI is ≤75%*		
Yes	35	47
No	65	53
Think risk of conception from 1 year of using condoms is >30%		
Yes	35	34
No	65	66
Think risk of conception from 1 year of OCPs is >15%		
Yes	34	40
No	66	60

* Significant differences in percentage of women who say they are somewhat or extremely likely to have UI in the next 3 months.

Discussion

The 602 abortion patients in this study reported a high frequency of UI preceding their unintended pregnancies. Findings were consistent with an odds of conception between 3% and 5% per act of UI. In accordance with prior research (Ayoola et al., 2007), the most common reasons for engaging in UI were thinking one could not get pregnant (42%), difficulties procuring a contraceptive method (40%), and not planning to have sex (38%). Results underscore several themes of ongoing concern to the reproductive health field: Lack of knowledge and/or misperceptions about reproductive physiology and (in)fertility, including misinformed notions of the odds of pregnancy; contraceptive access problems; and lack of anticipation of sex.

Our analysis augments the burgeoning literature on the emotional, sexual, and relational benefits of engaging in UI (Bartz, Shew, Ofner, & Fortenberry, 2007; Gebhardt, Kuyper, & Dusseldorp, 2006; Higgins & Hirsch, 2007, 2008; Higgins, Hirsch, & Trussell, 2008; Higgins, Hoffman, Graham, & Sanders, 2008). Reproductive health researchers and practitioners often assumed that people only take risks around pregnancy if they lack access to or knowledge of contraception. To be sure, these factors emerged in our study as reasons people engage in UI. Yet study respondents also highlighted a number of benefits of UI, including relationship benefits (e.g., the belief that having UI makes one's relationship more committed) and sensual–sexual benefits (e.g., the belief that UI feels better or more natural than sex with contraception). These benefits may help to explain the greater proportion of people both in this study and in other analyses (Foster et al., 2011) who say they are likely to engage in UI in the near future, even though they do not wish to become pregnant. Indeed, results demonstrate that those at greatest risk for repeat unintended pregnancy (as measured by reported

Table 4
Predictors of Being Willing to Have UI in the Next 3 Months

	Odds Ratio	$p > z$	95% Confidence Interval
Age (yrs)			
<20	2.59*	.007	1.30–5.16
20–24	1.62	.12	0.88–2.99
25–29	1.86	.06	0.97–3.56
≥30	Reference		
Race/ethnicity			
African American	1.41	.191	0.84–2.35
Asian	1.70	.245	0.70–4.14
American Indian	0.94	.913	0.29–3.07
Hispanic	1.52	.272	0.72–3.19
White/non-Hispanic	Reference		
Attitudes toward UI			
Any partner/relationship reasons to have UI	2.24*	.001	1.38–3.64
Attitude that UI is okay certain times or once in a while	1.53	.083	0.95–2.49
Attitude that UI feels better/more natural	1.06	.811	0.65–1.73
Understanding of risk of conception			
Think risk of conception from 1 act of UI is >50%	0.78	.295	0.49–1.24
Think risk of conception from 1 year of UI is ≤75%	1.58*	.05	1.00–2.51
Think risk of conception from 1 year of using condoms is >30%	0.93	.802	0.55–1.59
Think risk of conception from 1 year of OCPs is >15%	1.30	.32	0.77–2.18

* Odds ratios significant at $p < .05$ level.

likelihood of UI) also report significantly more benefits to having UI compared with those women who do not anticipate a future act of UI. To some women, the emotional and sexual benefits of engaging in UI may be more salient than the goal of using contraception every single time one engages in sexual intercourse.

Partner and relationship issues emerged as critical to understanding UI. Half of those who said they are likely to engage in UI in the near future cited at least one partner or relationship benefits of engaging in UI. Moreover, partner factors were among only three covariates that retained statistical significance in multivariate analyses predicting propensity for UI in the next 3 months. Compared with women who cited no relationship benefits of UI, those women who cited any partner or relationship reasons for UI were 2.2 times as likely to report willingness to engage in UI in the next 3 months. Prior calls to include men in reproductive health research (Greene & Biddlecom, 2000) have certainly led to increases in studies of partner preferences in dynamics in contraceptive use. However, the majority of such studies focus on how men may discourage or even sabotage the use of contraception (Kerns, et al., 2003; Montgomery et al., 2008; Moore et al., 2010). Although these factors are important in light of gender inequality and gendered power dynamics (Blanc, 2001; Pulerwitz, Amaro, De Jong, Gortmaker, & Rudd, 2002), partner and relationship influences may operate in far less overt and negative ways. Our study highlights that many women perceive relational benefits of—and not merely partner pressures or coercion leading to—unprotected sex.

Implications for Reducing Unintended Pregnancy

Our study highlights some of the reasons that people dispense with contraceptive use, even if they do have relative easy access. Those people who do not feel at risk for pregnancy or who perceive benefits of UI may be the most difficult to target with interventions. For example, researchers and policy makers have repeatedly suggested advance provision of emergency contraceptive pills as a possible antidote to the consequences of unprotected sex. However, research convincingly shows that the same factors that contribute to UI (e.g., not feeling at risk of pregnancy) will also undermine emergency contraceptive pills use. A pericoital contraceptive pill (Raymond, Halpern, & Lopez, 2011) might be more successful than emergency contraceptive pills if women take the pill after every act of UI, rather than just those which they believe carry a risk of conception.

Younger women emerge as being at particularly high risk for future acts of UI. We find that teenagers exhibit lower levels of knowledge about the pregnancy risk from repeated UI. They, like the rest of the sample, overestimate the odds of conception from one act, but young women are particularly more likely to underestimate the odds from 1 year of UI, indicating a lack of math literacy or understanding of cumulative risk.

In their review of 16 articles on why women engage in unprotected sex, Ayoola et al. (2007) suggest that interventions must take place at individual, interpersonal, and societal levels, because all three levels influence the prevalence of and propensity for UI. We strongly agree. In terms of educational and social marketing messages, women and men need more and more accurate information on reproductive physiology, the unlikelihood of infertility, and the true risk of conception. At the clinical and policy levels, contraceptive methods must be made as easy to procure and use as possible. Our findings indicate that a large proportion of women have contraceptive access problems (two in five report some access problem, including 20% who reported that they ran out of contraceptive supplies before becoming pregnant); many women also may deliberately dispense with contraceptive methods if they detract from sexual pleasure or emotional connection. Streamlined access to short-term methods of contraception, like over-the-counter availability of oral contraceptive pills, may address some of these barriers and help to normalize use of contraceptive protection. Long-acting, reversible methods of contraception may address some of the problems couples have in assessing risk and negotiating contraceptive use. Women need a wide array of contraceptive choices, methods that are simple to use and obtain, and methods that have the potential to enhance rather than undermine sensual experience and partner connection.

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