YOUNG ADULT MEN, PREGNANCY AMBIVALENCE, AND CONTRACEPTIVE USE IN THE U.S.

Ronna A. Popkin, Jenny A. Higgins, and John S. Santelli
Mailman School of Public Health, Columbia University

Introduction & Background

Unintended pregnancy has been a source of significant policy concern over the past several decades. Despite recent declines in unintended pregnancy rates among the middle and upper class, rates are worsening rather than improving among the most socially deprived women (1, 2). Although most research has focused on adolescents, young adults in their twenties have a greater likelihood of experiencing unintended pregnancy than all other age groups (1).

Despite significant clarity about the socio-demographic patterns of unintended pregnancy (1, 3-6), we still know surprisingly little the *psychosocial processes* that impede or facilitate the translation of pregnancy intentions into contraceptive practices, particularly among young adults. Pregnancy ambivalence, or unresolved feelings about whether one wants to have children at a particular moment, is one of the few psychosocial factors that has emerged recently in the literature as a strong correlate of contraceptive practices (7, 8). Several studies of adolescents demonstrate lower odds of contraception use among young women defined as ambivalent toward pregnancy (8-12). In a recent nationally representative analysis of adult women (18-44 year olds), Frost et al. found strong associations between pregnancy ambivalence (measured by one's anticipated reaction to discovering a pregnancy) and contraceptive non-use and gaps in use in the last year (5). In fact, pregnancy ambivalence had a stronger effect on contraceptive practices than fatalistic attitudes about pregnancy, provider satisfaction, or demographic factors such as race/ethnicity, parity, marital status, or poverty level.

Despite the clear potential of pregnancy ambivalence in helping us identify those most at risk of unintended pregnancy, two critical gaps remain. First, no study of pregnancy ambivalence has been conducted specifically among young adults, who are likely to be especially ambivalent about pregnancy given their greater tendency to be completed with secondary schooling, cohabitating with a partner, and assessing the marriage-and-children potential of their relationships. Second, not one of the studies mentioned above included men in their assessments of pregnancy ambivalence and contraceptive use. However, qualitative research suggests that men's attitudes about ambivalence may be equally, if not more, powerful in influencing contraceptive use (9). Moreover, research about men's contraceptive attitudes suggests a strong male influence on use patterns, although these attitudes have typically been measured by asking women about their male partners' attitudes rather than asking men themselves (10-12). Extending our understanding of contraceptive use requires inquiry into men's pregnancy ambivalence.

To address these gaps, we have analyzed new nationally-representative data of 18-29 year-olds in the US (N=388 men, 433 women). Our research questions are twofold. First, among young adults in the US, what are men's levels of pregnancy ambivalence compared to women's? Second, how do men's versus women's levels of pregnancy ambivalence comparatively influence contraceptive method choices, even when controlling for associated factors?

Methods

Survey of Reproductive and Contraceptive Knowledge (NSRCK)

Data come from the NSRCK, a nationally-representative survey that collected information on the attitudes and behaviors of unmarried adults regarding pregnancy planning, contraception, and related issues. The study was commissioned by the National Campaign to Prevent Teen and Unplanned Pregnancy and conducted by researchers at the Guttmacher Institute. The survey involved a nationally representative probability sample of 1,800 unmarried 18-29 year olds, of whom 177 were reached through random digit dialing of landline phone numbers, 903 through a sample of landline numbers with a high probability of containing unmarried twenty-something residents, and 720 by cell phone. More information about the NSRCK can be found elsewhere (13).

Methods used to select the sample were designed so that the weighted results are statistically representative of the overall population of unmarried 18-29 year-old adults as well as of unmarried young adults by age, gender, and race/ethnicity. The sample was stratified by type of phone number and race/ethnicity, and African American and Hispanic young adults were over-sampled. The field-tested questionnaire, which was offered in both English and Spanish, was approved by the Guttmacher Institute's Institutional Review Board.

Inclusion and Exclusion Criteria

The total sample of the NSRCK consists of 903 men and 897 women (N=1,800). For the purposes of the current paper, we restricted the sample to those in a current sexual relationship (N=919, 420 men and 499 women). We did so not only because pregnancy ambivalence is more likely to exist in ongoing relationships, but also because we wanted respondents to have had sex in the last month. Also excluded from the analyses were respondents who were pregnant at the time of the survey (women only), who were trying to get pregnant or get a partner pregnant, or who were using female or male sterilization as a contraceptive method. These criteria resulted in a final sample of 821 individuals (N= 388 men, 433 women).

Measures

Pregnancy ambivalence: Women's pregnancy ambivalence has been measured in various ways. One approach to assessing ambivalence has been to measure conflicting

responses to discordantly worded paired statements designed to measure the same feeling (e.g., "I would look forward to telling my friends about a baby" and "I would dread telling my friends about a baby") (14). Another common approach has been to investigate inconsistencies between women's plans or intentions to avoid pregnancy and their feelings if/when they found out they were pregnant (15-17). In the NSRCK, which was the first survey in which young adult men were directly asked questions related to ambivalence, only women were presented with paired statements about feelings about a potential pregnancy, whereas both women and men were asked questions about pregnancy intentions and feelings about an unplanned pregnancy. Thus, to assess gender differences in pregnancy ambivalence, we defined ambivalence as discrepant responses to the following two measures: the importance of avoiding pregnancy right now in one's life and feelings one would have if she/he found out today that she/his partner were pregnant. Respondents were coded as not ambivalent if their responses to the two measures were both firm (at either end of the scale) and concordant. They were coded as ambivalent if their response to either measure was wavering (mid-scale) or their responses to the two measures were inconsistent. For example, among respondents who said it was very important to them to avoid pregnancy in their lives right now, if they also said they would be very upset or a little upset if they found out they or their partner were pregnant, they were coded as not ambivalent; however, if they stated that they would be somewhat or a little pleased while also stating that it was very important to avoid pregnancy, they were coded as ambivalent.

Contraceptive use outcome: Contraceptive use was measured using responses to questions about method use in the last month. Early in the survey respondents were queried about their awareness of various birth control methods: pills, condoms, injectables, the patch, IUDs, implants, the vaginal ring, spermicides, natural family planning, withdrawal, sterilization, and emergency contraception. Later, sexually active respondents were asked whether in the past month they had used each method that was familiar to them. Since respondents could report more than one method, their responses were recoded based on their most effective reported current method and then grouped into three categories: long-acting and hormonal methods; condoms and withdrawal; and no method.

C*ovariates and control variables:* The NSRCK dataset allows for exploration of a large assortment of social and personal factors, including relationship dimensions (e.g., feelings about one day marrying and having a baby with one's current partner), pregnancy attitudes (e.g., how strongly one believes pregnancy should be planned or that every pregnancy is a blessing), risk propensity, and infertility fears. It also includes more classic control variables such as age, parity, education, race/ethnicity, religiosity, and insurance coverage, which also influence contraceptive use (18-20).

Analyses

All analyses were conducted in Stata version 11 using the complex survey settings to account for sample stratification and appropriately weight the results. For bivariate analyses, we used cross-tabs and Chi-square (χ^2) tests to gauge associations between the covariates,

socio-demographic controls, pregnancy ambivalence, and contraceptive use. For multivariate analyses, we used the bivariate results to eliminate from the model all covariates that were not associated with ambivalence or contraceptive use at the p<.10 level. Because gender had a significant relationship with numerous covariates and controls, separate regressions were run for women and men.

Results

Overall, young adults in the NSRCK dataset exhibit very strong ambivalence about pregnancy, as 43% of the respondents in the subsample provided ambivalent responses. Men were significantly more likely than women to be ambivalent, with 50% providing ambivalent responses compared to only 35% of women (p<.01). In addition, the significant relationship between gender and ambivalence remained even when other factors were controlled for in the multivariate analysis. In the logistic regression of ambivalence, women were, on average, 59% less likely than men to be ambivalent about pregnancy when other variables in the model were held constant (p<.001).

Ambivalence was also a significant factor in men's contraceptive method choices, but not in women's. Multinomial logistic regression showed that male respondents who used no method of birth control in the past month were, on average, 182% more likely to be ambivalent than men who used condoms (p<.05), holding other factors in the model constant. Similarly, men who relied on their partners to use hormonal contraception were 117% more likely to have provided ambivalent responses (p<.05). In contrast, ambivalence was not a statistically significant factor in women's contraceptive method choices (see Table 1).

Discussion

This analysis of nationally-representative data from 18-29 year-olds demonstrates that a very large proportion of young adults in the US experience ambivalence about whether or not they wish to have a baby. Much of the prior research linking pregnancy ambivalence to contraceptive use has focused on adolescents (8-12). However, unmarried twenty-somethings seem particularly suited to ambivalence about pregnancy given that they may be done with their schooling and in relationships with partners with whom they are actively considering a future.

Our results indicate that ambivalence was especially marked among young men. Few studies have attempted to measure men's pregnancy ambivalence and its possible influence on contraceptive use, despite calls to further involve men in such research (21). In the current analysis, men not only experienced pregnancy ambivalence, but also were more ambivalent than women. There are several possible explanations for this finding. Women may have a better sense of how their lives would be limited by a baby, and thus more likely to be clear(er) in their pregnancy intentions. Men may also feel like pregnancy is ultimately their partner's choice and primary responsibility, and thus may have less coherently formed opinions on the topic than women.

In addition to men being more likely to experience pregnancy ambivalence, men's ambivalence affected their contraceptive use and method choices, whereas women's ambivalence did not. As such, our study confirms prior qualitative research indicating that men's experiences of ambivalence may be equally if not more powerful in influencing contraceptive use (9). The finding that men who used condoms were significantly less likely to be ambivalent than both men who relied on hormonal methods and those who used no method was, initially, puzzling. Since hormonal methods are among the most effective contraceptive options and using no method is obviously the least effective approach, we anticipated a more direct relationship between ambivalence and method choice, expecting the men who relied on hormones to be the least ambivalent and those used no method to be the most ambivalent. However, condoms and withdrawal are male controlled methods, and thus it is possible that men who are less ambivalent, and therefore more committed to preventing a pregnancy, prefer to rely on methods they can control even if those methods are statistically less effective at preventing pregnancy.

Our study suggests a number of programmatic, clinical, and educational implications. Perhaps most importantly, our results confirm that women cannot remain the sole "targets" of contraceptive programs. Moreover, contraceptive promotional messages and counseling may need to be tailored for women and men. In terms of clinical implications, better understanding the relationships between ambivalence and contraceptive use could encourage the development of clinical ambivalence screening tools or assessments that could, in turn, help providers and counselors more effectively guide patients in method selection and instruct them in appropriate use. Ambivalent clients could be excellent candidates for long acting reversible contraception (LARC), such as IUDs or Implanon, which do not require regular decisions about whether or not to be used during a particular sexual encounter.

Finally, educational interventions may be warranted as well. Most sexuality education targets adolescents rather than young adults. Fewer than 10% of respondents in the NSRCK dataset indicated that they had had any sexuality education after age 18. Determining which groups of young adults are most likely to be ambivalent will help reproductive health professionals better determine the appropriate venues and target audiences for young adult education efforts aimed at reducing unplanned pregnancies. Furthermore, improved understanding of the reproductive health outcomes of ambivalence will help educators develop tools that encourage individuals to actively evaluate how their feelings of pregnancy ambivalence shape their contraceptive method choices, use, and misuse. Such educational efforts have the potential to reduce unwanted pregnancies by encouraging more careful personal pregnancy assessments and contraceptive choices.

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Table 1: Predictors of Contraceptive Method Use, by Gender (N=736)

	Long-Acting or Hormonal Methods (vs. Condoms or Withdrawal)		No Method (vs. Condoms or Withdrawal)	
	Men (N=338)	Women (N=399)	Men (N=338)	Women (N=399)
Predictors	**Linearized Relative Risk Ratio**	**Linearized Relative Risk Ratio**	**Linearized Relative Risk Ratio**	**Linearized Relative Risk Ratio**
PREGNANCY AMBIVALENCE	2.17 *	0.75	2.82 *	1.36
PREGNANCY INTENTIONS & EXPECTATIONS				
Likelihood of pregnancy in next year				
Not at all likely	1.00	1.00	1.00	1.00
Slightly likely	0.93	0.72	2.29	0.81
Quite or Extremely likely	6.50 *	5.59	10.48 **	2.45
Likelihood of having baby with current partner				
Not at all likely	1.00		1.00	1.00
Slightly likely	0.94	0.85	1.01	0.58
Quite likely	1.08	3.98	5.68 *	0.55
Extremely likely	0.44	2.40	8.44 **	0.93
Likely to have unprotected sex in next 3 months	0.79	0.01 ***	12.84 **	0.32
PREGNANCY & FERTILITY ATTITUDES				
Likelihood of infertility				
Not at all likely	1.00	1.00	1.00	1.00
Slightly likely	0.62	0.26 **	0.32 *	0.16 ***
Quite likely	0.60	0.35	0.01 **	0.23
Extremely likely	0.42	0.50	0.42	0.87
Pregnancy should be planned				
Strongly Agree	1.00	1.00	1.00	1.00
Somewhat agree	1.10	2.78	2.39	4.25
Somewhat or strongly disagree	1.21	5.25	14.12	10.07 *
Every pregnancy is a blessing				
Strongly Agree	1.00	1.00	1.00	1.00
Somewhat agree	3.18 *	1.80	0.27	0.52
Somewhat or strongly disagree	2.62	4.36 *	2.70	2.75
SOCIO-DEMOGRAPHIC CONTROLS				
Age				
18-19	1.00		1.00	1.00
20-21	2.83	4.71 *	0.45	1.60
22-24	1.27	3.14 *	0.50	2.67
25-29	1.36	2.03	0.60	1.54
Race & ethncity				
White (non-Hispanic)	1.00		1.00	1.00
Black (non-Hispanic)	1.30	0.42	1.20	0.99
Hispanic	0.33	0.32	1.93	0.33
Other (non-Hispanic)	0.21 *	0.08 ***	0.91	0.18
Education				
No high school diploma	1.00			1.00
High school graduate/GED	1.00	0.13 *	1.74	0.06 ***
Some college or associate/vocational school	1.00	0.13 ***	1.68	0.05 ***
College graduate	1.08	0.10 **	2.93	0.01 ***
Graduate/professional degree	1.96	0.13	3.30	0.06 *
Health insurance				
Medicaid only	1.00		1.00	1.00
Medicaid & private insurance	0.07	1.24	0.24	3.39
Private insurance only	0.19	1.23	0.05	1.51
Other insurance	0.46	0.15	0.01 *	3.10
Uninsured	0.20	0.38	0.18	0.49

*p<.05; **p<.01; ***p<.001

Note: Covariates that were insignificant in all models are excluded from this table