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Reasons for using contraception: Perspectives of US women seeking care at specialized family planning clinics

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Abstract

Background
The availability and use of contraception to prevent unintended pregnancy has had profound and positive impacts on the lives of American women. This study looks beyond the aggregate benefits of contraceptive use to examine the individual-level benefits and reasons for using contraception reported by women themselves.

Study Design
We surveyed 2,094 women receiving services from 22 family planning clinics located throughout the United States.

Results
A majority of respondents reported that birth control use had allowed them to take better care of themselves or their families (63%), support themselves financially (56%), complete their education (51%), or keep or get a job (50%). Young women, unmarried women, and those without children reported more reasons for using contraception than others. Not being able to afford a baby, not being ready for children, feeling that having a baby would interrupt their goals, and wanting to maintain control in their lives were the most commonly reported very important reasons for using birth control.

Conclusions
Women value the ability to plan their childbearing and need continued access to contraception and contraceptive services, allowing them to realize the benefits that accrue when unintended pregnancies are avoided.

Keywords: Contraception; Family planning clinics; Reasons; Unintended pregnancy

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1. Introduction

The development of and increased access to modern contraception has been heralded by the U.S. Centers for Disease Control and Prevention (CDC) as one of the 10 greatest public health achievements of the 20th century [1]. In 2011, the U.S. Department of Health and Human

Services adopted guidelines specifying that contraceptive services be included as basic preventive care for women [2]. In both cases, experts reviewed the existing evidence and concluded that the availability and use of contraception has had a profound and positive impact on the lives of women and families, including both health benefits and a range of socioeconomic improvements [3,4]. Despite the preponderance of evidence-based research demonstrating the critical value of contraception, publicly funded family planning and related women's health care services have received disproportionately large, and sometimes dramatic, funding cuts [5,6], and attacks on contraception itself have become increasingly common [7].

In documenting the important role of family planning, research has emphasized the links between contraceptive use and later ages at marriage, smaller families, longer birth intervals, and the ability of women and couples to plan when and how many children to bear. These outcomes are in turn linked to improvements in infant, child, and maternal health, as well as to improved social and economic roles for women [3,4]. For example, short birth intervals are associated with a variety of poor infant health outcomes, and births that are unintended are associated with delayed prenatal care and lower rates of breastfeeding [8,9]. Economic analyses have found clear associations between the availability and diffusion of oral contraceptives particularly among young women, and increases in U.S. women's education, labor force participation, and average earnings, coupled with a narrowing in the wage gap between women and men [10–12]. Similar themes are found among developing countries. A large multi-country study conducted in the 1990s assessed the impact of family planning on women's lives in 10 countries, in part by talking directly to individuals about their beliefs regarding the benefits and costs of contraceptive use in their lives [13]. Across all the countries studied, most women and men interviewed

reported that using family planning and having smaller families resulted in both economic and health benefits.

In the United States, although models predicting fertility behavior or contraceptive decision-making often include assumptions about how women evaluate the trade-off between the expected benefits and costs from different behaviors [14–17], few studies have directly asked American women why they use contraception and what benefit they expect or have achieved from contraceptive use. Several studies have asked women why they are *not* using (or did not use) contraception when it is expected that they should be using contraception, due to their being sexually active and not trying to become pregnant [18,19]. But these same large, nationally representative survey efforts have not asked similar questions of women who are using contraception, and thus provide limited insights into women's personal reasons for using contraception and their individual-level expectation of benefits. One of the goals of the current study was to fill that gap by asking women themselves to report why they currently are using contraception and what benefits contraceptive use to prevent pregnancy has had in their lives. Understanding women's perspectives is also important for the design and implementation of reproductive health services that can best meet women's needs.

2. Materials and methods

2.1 Sample and fieldwork protocols

The sample for the 2011 Survey of Clinic Clients was based on first identifying potentially eligible clinics from among the respondents to a previous nationally representative survey of publicly funded family planning clinics; state and regional Title X program administrators were also contacted to identify additional eligible sites. To be eligible, clinics needed to have a specialized focus on the provision of contraceptive and related sexual and

reproductive health services, such as providing and prescribing contraceptive methods, testing and treating patients for sexually transmitted infections, conducting annual gynecology exams, and administering pregnancy tests. Additionally, eligible clinics needed to be located in a community that also had one or more comprehensive primary care providers. Typically, we identified several sites in a state based on their responses to the prior survey, and then contacted the program administrator to help us choose the sites that met our criteria, or to identify alternative sites. Two-thirds of the final sample of clinics had been part of the prior survey sample and one-third of the sample was identified from administrator recommendations. The participating facilities represent a range of provider types (i.e., Planned Parenthood clinics, health department clinics, hospital clinics and independent family planning centers) and were located in 13 states from several geographic regions: Alaska, California, Colorado, Iowa, Indiana, Kentucky, Louisiana, Massachusetts, Montana, Oregon, Pennsylvania, Texas and Utah.

Survey materials and instructions were provided to clinic managers at each participating site. Clinic staff distributed the questionnaire to every eligible female patient during the fielding period, which was 1 to 4 weeks at each clinic depending on patient volume (clinics with low patient volume were in the field for longer periods). All female clients who received services during the fielding period, except those coming in solely for pregnancy-related services (prenatal care or abortion services) were eligible to participate. Women completed the questionnaire on-site and returned it to clinic staff in a sealed envelope to ensure anonymity and confidentiality. Regular follow-up was conducted with clinic managers to answer questions and guide them through the fieldwork period; a $100 gift card was offered to each clinic as an incentive. One respondent at each site was also randomly selected to win a $100 gift card incentive.

The four-page survey instrument consisted of mostly closed-ended questions and was available in both English and Spanish. The questionnaire asked women about the reasons for their visit, why they decided to visit that specific facility, what medical services they had received in the prior year, a series of questions about the role that use of birth control to prevent pregnancy has had in their lives, and a series of questions about their reasons for using birth control. The survey items examined here were developed after a review of relevant literature, as well as other surveys, around reasons for using contraception and related outcomes, such as reasons for wanting to avoid pregnancy or for choosing to have an abortion. Demographic characteristics and information about health insurance coverage were also collected. The survey instrument and protocols were approved by our organization's institutional review board.

2.2 Analysis

Analyses were performed using SPSS Statistics version 18, using the complex samples procedures. Results are based on unweighted data, and the clustered nature of the sample has been accounted for in analysis and significance testing. While this sample is not nationally representative of all female clinic patients, we compared the distribution of our respondents to the distribution of clients receiving care from Title X-funded clinics [20] by key characteristics, such as age and race/ethnicity, and found them to be very similar. And, although all clinics participating in this study were facilities that specialize in the provision of contraceptive and reproductive services, we do not expect that women's reasons for using contraception would vary according to the type of clinic visited. We examined bivariate associations between women's reasons for using contraception and their sociodemographic characteristics (age, race/ethnicity, parity, relationship status, education, poverty level) and present significance levels for the differences between proportions. We conducted multivariable logistic regression to

measure the joint associations between key reasons for using birth control and women's sociodemographic characteristics. We present adjusted odds ratios for each predictor variable and the Nagelkerke R square, which estimates the proportion of variation explained by each model [21].

3. Results

3.1.Response

We surveyed 2,094 women receiving services from 22 specialized family planning clinics in 13 states between October 2011 and January 2012 in the 2011 Survey of Clinic Clients. Of the 27 clinics identified for this study, three refused to participate, one was found to be ineligible and one failed to reach a 50% response rate among clients. The remaining 22 clinics reported a total of 3,105 eligible female clients seen during the survey period and usable data were collected from 2,094 of these clients, for a response rate of 67%.

3.2 Women's characteristics

Half of the women responding to our survey were in their twenties—34% were ages 20–24 years and 21% were ages 25–29 years. About one in four was either a teenager (22%) or ages 30 and over (24%) (data not shown). Most clients had no children (58%), and most were neither married nor living with a partner (63%). Sixty-one percent of respondents had an income below 100% of the federal poverty level. Half of respondents were non-Hispanic white (51%) and about one fifth were either non-Hispanic black (21%) or Hispanic (23%).

3.3 Role of birth control in women's lives

Women were asked to think about their lives and their use of birth control to prevent pregnancy and to report if each of four statements was 'definitely true,' 'somewhat true,' or 'not really true or applicable' for them. Six in 10 (63%) respondents reported that it was definitely true that using birth control to prevent pregnancy has 'allowed me to take better care of myself or my family' (Fig. 1). At least half of respondents said that using birth control to prevent pregnancy has definitely 'allowed me to support myself financially' (56%), 'helped me to stay in school or finish my education' (51%), or 'helped me to get or keep my job or have a career' (50%).

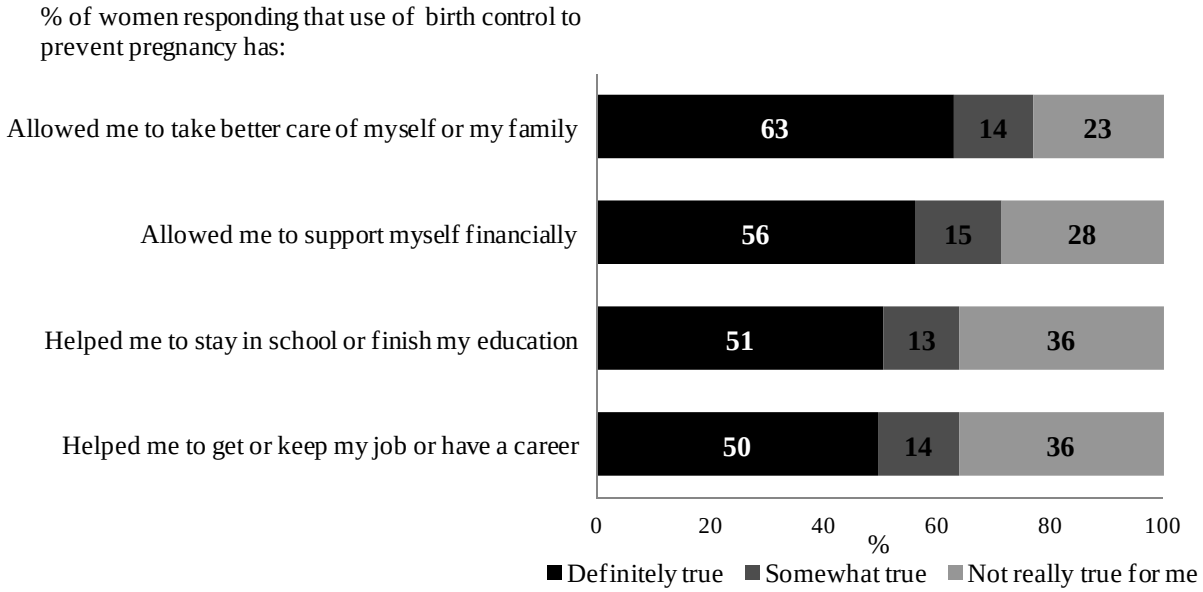

Fig. 1. Distribution of women according to their response about the importance of using birth control in their lives, 2011 Survey of Clinic Clients

3.4 Reasons for using birth control

Women were also asked to respond to a series of 17 possible reasons for using birth control and to indicate if each reason was 'very important,' 'somewhat important,' 'not so

important,' or 'not applicable' for them. We divide 14 of these reasons into substantively related groups (with one, two, or three reasons in each). An additional three reasons are substantively distinct; we report them in Table 1, but they are not examined in the multivariate models.

About seven in 10 women (69%) reported that being unable to take on the financial responsibility of a baby was a very important reason for using birth control (Table 1). In fact, the single most frequently cited reason for using birth control was 'I can't afford to take care of a baby now,' mentioned by about two-thirds (65%) of respondents. Nearly one-quarter of respondents (23%) reported that the fact that they or their partner was unemployed was a very important reason for using birth control. Nearly all of the women who reported that being unemployed was an important reason for using birth control, also reported that not being able to afford a baby was an important reason.

Overall, about six in 10 women reported that each of the next four reasons were very important to their decision to use birth control: 63% reported not being ready to have children; 57% said that having a child would interrupt their goals; 60% reported that using birth control gave them better control over their lives and 60% expressed a desire to wait until their life was more stable to have a baby.

Half of women (49%) responded that their lack of a husband or partner was a very important factor in the decision to use birth control. More than four in 10 women (45%) said that caring for the children they already have was a very important reason to use birth control.

On average, women reported about seven (out of the possible 14) different very important reasons for using birth control. Young women, women without children and unmarried women reported a greater number of reasons for using birth control compared to older women, women with children and married women. In fact, teenagers reported nearly nine very important reasons

for using birth control on average, compared to only about five reasons reported by women ages30 years and over (data not shown).

3.5 Reasons for contraceptive use by women's characteristics

Overall, women's age, parity, and relationship status were the characteristics most likely to be associated with different reasons for using birth control. Table 2 presents both the bivariate and multivariate results of the associations between women's characteristics and four reasons for contraceptive use that were applicable to all women—financial constraints, having more control over life, waiting until life is more stable, and not wanting to interrupt goals. There was statistically significant variation between nearly all of women's characteristics and reasons for contraceptive use at the bivariate level. Age and relationship status were significant in all four models, with greater percentages of younger women and unmarried, non-cohabiting women reporting that each reason was very important compared to older or married women. Parity and education were significant at the bivariate level in three of the four models, while poverty and race/ethnicity were each significant in two of the four models.

The multivariate models controlled for all of the sociodemographic characteristics together. In three of the four models—financial constraints (Model 1), more stable (Model 3) and interrupt goals (Model 4)—younger women, women without children, and unmarried women were much more likely than older women, women with children, and married women to report that that reason was very important to their use of birth control.

Education was also significant in these same three models—financial constraints (Model 1), more stable (Model 3), and interrupt goals (Model 4). In each case, it was the middle category—women with some college or an associate's degree—who were more likely than women with high school or less to report the reason as very important (adjusted OR=1.3, 1.6 and

1.9, respectively). However, neither women's poverty status nor their race or ethnicity were significantly associated with the specific reasons for using birth control in Models 1, 3, and 4, once the other variables were accounted for.

The associations between women's characteristics and reporting that using birth control gives them better control over their life was a very important reason (Model 2) follow a different pattern compared to the other models in Table 2. Neither age, parity, education, nor poverty status was significant in this multivariate model. High percentages of women with varying characteristics were equally likely to report 'better control" as a very important reason. The only two variables significant in the multivariate model were relationship status and race/ethnicity.

Table 3 presents similar bivariate and multivariate results for three additional models—examining women who reported that the following were very important reasons to use birth control: not being ready for children (among respondents without any children) (Model 5), not having a partner (among unmarried respondents) (Model 6), and caring for the children they already had (among respondents with children) (Model 7). The patterns for Models 5 and 6 are similar to those observed in Models 1, 3, and 4, with younger women, women without children (when applicable), and unmarried women being more likely than older women, women with children, and married or cohabiting women to report that not being ready for children or not having a partner were very important reasons for using birth control. (Neither education, poverty status, nor race/ethnicity was significant in either of these two models at the bivariate or multivariate levels.) Few characteristics were predictive in Model 7—looking at women who reported that caring for the children already born was a very important reason for using birth control. Among the applicable respondents—those with children—over 90% reported one of these reasons, and there were no significant differences by age, poverty or race/ethnicity.

4. Discussion

This study documents women's perception of the benefits of using contraception and their reasons or motivation for use. Our focus is on the women served by specialized publicly funded family planning clinics—a group that is disproportionately young, unmarried, and low-income. Many of the benefits of providing women access to publicly funded contraceptive care have been quantified at the aggregate level. For example, publicly funded family planning clinics are estimated to help women avoid about 1.5 million unintended pregnancies each year [22]. Without this care, levels of unintended pregnancy and abortion in the United States would be two-thirds higher than they are today (and more than twice as high among poor women) [23]. Every dollar spent to provide publicly funded family planning services saves almost $4 that would otherwise have to be spent on pregnancy-related care for the woman and medical care during the first year of the infant's life [22]. While these numbers illustrate important aggregate benefits that accrue from the contraceptive services provided by publicly funded family planning clinics, other more personal benefits that accrue to individual women are missed. To help fill in this gap, we have detailed—in women's own voices—some of the personal benefits and motivations for family planning among the women served by publicly funded clinics.

Women reported receiving a range of benefits from their contraceptive use. The majority of women perceive that using birth control allows them to better care for themselves and their families, either directly or indirectly through facilitating their education and career. These individual-level evaluations of the benefits of personal contraceptive use are generally consistent with the findings of broader economic research examining the role that contraceptive use has played in improvements in social and economic conditions for women, particularly through greater education and more workforce participation [24,25].

Most women considered many reasons for using contraception to be very important. As might be expected for their stage in life, younger, unmarried, and childless women provided a broader set of reasons than did women who were older, married, or already mothers. This finding is consistent with the fact that young, unmarried women are generally at high risk for unintended pregnancy, and suggests that they see avoiding unintended pregnancy as integrally related to many aspects of their lives.

Some of the reported very important reasons for contraceptive use directly parallel the reported benefits of economic security, improved educational and career outcomes, and being able to better care for one's family. For example, not being able to afford a baby, not being ready for children, feeling that children would interrupt goals, not having a partner, and wanting to better care for children already born were all considered very important reasons by the majority of applicable respondents. Among women with children, nearly all reported that the desire to care for their current children was a reason for contraceptive use. Additionally, many women reported that birth control was a means to maintain control in their lives, and this was more common among unmarried and black respondents. Birth control appears to offer a means of personal empowerment, which may be especially important to certain women facing instability in other aspects of their lives.

While financial realities are frequently a motivator in planning pregnancies, the importance of unemployment in this study may reflect the influence of the recent economic downturn. Nearly one out of four women in this study reported that being unemployed (either they or their partner) was a very important reason for their contraceptive use. The ongoing recession in the United States has altered the economic realities of many women' lives, and it has reshaped the environment in which family planning and reproductive decisions are made. In a

2009 national study, nearly half of surveyed women (44%) reported that because of the economy, they want to reduce or delay their childbearing [26]. Indeed, the number of births in the United States has declined each year since 2007 [27,28], a pattern many interpret as a response to the ongoing recession [29,30]. Taken together, the findings of this study and others point to the instrumental role of contraception in the lives of women and families who are coping with difficult economic realities.

The reasons women give for using birth control are also similar to the reasons for seeking an abortion as measured in prior research. In a large study of abortion patients in 2004 [31], nearly three-quarters of respondents indicated that they were seeking an abortion because they could not afford a baby right now. About one-third reported that having a child would interfere with their education, work, or ability to care for dependents, and nearly half cited relationship problems or not wanting to be a single mother as a reason for seeking an abortion. In that study, similar to this one, women often reported multiple reasons for their decision to use contraception or to have an abortion, suggesting that there are interrelated motivations for not wanting to have a child at a given point in time. The prior study also suggested that when women report reasons for having an abortion, they are not expressing a desire for abortion per se, but instead are speaking to why they do not want, or feel they cannot have, a baby at that point in their lives. The fact that the reasons women give for using contraception are similar to the reasons they give for having an abortion suggests that access to abortion would be better viewed in the broader context of women's desire to prevent unplanned childbearing, given their perceptions of its myriad consequences for themselves and their families.

The findings from this current study suggest a number of avenues for future research. Efforts to increase effective and consistent contraceptive use should consider how method choice

and consistency of use intersect with women's reasons for use. Some reasons for using contraception may potentially be related to more effective contraceptive use, while other reasons may potentially be a marker for reduced motivation or commitment. Additionally, a more dynamic approach could consider how change in reasons for contraceptive use over the life course may influence changes in contraceptive choice or use patterns. Finally, qualitative work exploring women's reasons for contraceptive use through open-ended questions, as opposed to the fixed items provided in this survey, might further enrich our understandings of women's motivations to avoid pregnancy and the connections to method choice and use.

This study is subject to some limitations. It focuses solely on the experiences of women at specialized publicly funded family planning clinics. Moreover, even among this group, it is not based on a nationally-representative sample, although the social and demographic characteristics of respondents were similar to the known national distribution of clients receiving care from Title X-funded clinics [20]. However, we do not have any a priori expectation that the reasons reported by our respondents for using contraception are necessarily different from the reasons that would be reported by contraceptive users in the general population. In fact, the finding that poverty status and race/ethnicity were not significant in most multivariate models once women's life stage was accounted for suggests that the reasons reported here may be broadly applicable to a wider pool of contraceptive users, and that variation in the reasons for using contraception will relate more to age, parity, and relationship status than to where women receive their contraceptive care. Finally, although contraception may also be used by women for health-related reasons separate from preventing pregnancy, such as treatment for endometriosis, acne or regulating one's menstrual cycle [32], these benefits are not examined in this study.

While the focus of this study is on women's reasons for using contraception, our findings have broader implications for the personal costs of unintended pregnancy and the need for access to and use of contraceptive services. Women's reported reasons for using contraception are in many ways reflections of their fears about the consequences an unintended pregnancy would have on their lives. It is therefore critical to recognize how important contraception is for women and couples who are motivated to consciously and carefully plan for their and their families' futures. The results from this study provide further evidence of the value of women's continued and increased access to contraceptive care, and can be used by policymakers and program planners to demonstrate the importance that women themselves place on these services.

Table 1. Percentage of women reporting that each item (or any of the items within summary variables) was a very important reason for using birth control, 2011 Survey of Clinic Clients

Reason for using birth control	Total
Total N	1,992
Financial constraints	**69**
I can't afford to take care of a baby now	65
I or my partner/husband are unemployed	23
Not ready	**63**
Having a baby would change my life in ways I am not ready	53
I'm not ready to have kids	52
I'm too young to have a baby	38
Control over life	
When I use birth control, I have better control over my life	**60**
More stable	
I want to wait until my life is more stable to have a baby	**60**
Interrupt goals	**57**
Having a baby would make it hard to keep my job or get a better job	49
Having a baby would make it hard to stay in school	43
No partner	**49**
I don't want to be a single mother	41
I don't have a husband or regular partner	33
Best for other children	**45**
I want the best future for the children I already have	43
Having a baby would make it hard to care for my other	23
I already have all the children I want	23
Other reasons	
Birth control helps me have regular periods or clears my skin	41
My partner/husband wants me to use birth control	31
I don't want to have a baby because of health reasons	13
Mean number of 'very important' reasons reported	**6.9**

Table 2. Percentage of women reporting that each item is a very important reason for using birth control, by background characteristics; and adjusted odds ratios from multivariate logistic regression analysis of the association between each reason and women's characteristics, 2011 Survey of Clinic Clients

		Model 1: Financial constraints		Model 2: Control over life		Model 3: More stable		Model 4: Interrupt goals	
Characteristics	*N*	Bivariate %	Adj. odds ratio	Bivariate %	Adj. odds ratio	Bivariate %	Adj. odds ratio	Bivariate %	Adj. odds ratio
Total	1992	69		60		60		57	
Age, years									
<20	424	83 ***	2.63 ***	63 *	1.23	83 ***	4.73 ***	80 ***	4.45 ***
20-29	1054	70 **	1.63 **	62	1.32	65 ***	2.92 ***	58 ***	1.75 ***
30+ (ref)	435	53	1.00	53	1.00	28	1.00	35	1.00
Parity									
0 children	1028	76 ***	1.71 **	62	1.02	76 ***	4.08 ***	71 ***	2.40 ***
1+ children (ref)	724	57	1.00	59	1.00	38	1.00	40	1.00
Relationship status									
Married (ref)	229	53	1.00	52	1.00	31	1.00	31	1.00
Cohabiting	413	62	1.08	58	1.16	54 **	1.77 **	49 **	1.54 **
Not married or cohabiting	1088	74 **	1.58 *	64 *	1.47 *	69 ***	2.68 ***	67 ***	2.62 ***
Education									
High School or less (ref)	867	68	1.00	60	1.00	58	1.00	54	1.00
Some college or AA	759	73	1.35 *	61	1.05	66	1.61 **	65	1.90 **
College graduate or above	297	64	0.95	60	1.12	53	0.82	51	1.08
Poverty									
<100% poverty (ref)	996	71	1.00	62	1.00	64	1.00	60	1.00
100%+ poverty	658	65	0.78	61	1.05	55	0.75	55	0.92
Race/ethnicity									
White (ref)	993	71	1.00	58	1.00	62	1.00	59	1.00
Black	392	68	0.97	68	1.49 *	59	1.37	58	1.34
Hispanic	426	61 *	0.80	57	1.08	55	1.34	52	1.25
Asian/other	113	81	1.37	71	1.44	72	1.29	72	1.52
Nagelkerke R^2			.111		.022		.324		.233

*p<.05. **p<.01. ***p<.001. ref=reference category. Note: For bivarate % and adjusted odds ratios, significance levels are for comparison with the reference category.

Table 3. Percentage of women reporting that each item is a very important reason for using birth control, by background characteristics; and adjusted odds ratios from multivariate logistic regression analysis of the association between each reason and women's characteristics, 2011 Survey of Clinic Clients

	Model 5: Not ready (among those with no children) N=935		Model 6: No partner (among those who are unmarried) N=1381		Model 7: Best for other children (among women with children) N=662	
Characteristics	Bivariate %	Adj. odds ratio	Bivariate %	Adj. odds ratio	Bivariate %	Adj. odds ratio
Total	81		55		91	
Age, years						
<20	88 **	4.91 ***	66 **	1.62 *	95	1.51
20-29	80 *	2.45 ***	54 *	1.44	94 *	1.58
30+ (ref)	65	1.00	41	1.00	88	1.00
Parity						
0 children		na	63 ***	2.09 ***		na
1+ children (ref)			41	1.00		
Relationship status						
Married (ref)	71	1.00			85	1.00
Cohabiting	71	0.85	30	1.00	92	1.63
Not married or cohabiting	85 *	1.98 **	64 ***	3.85 ***	94	2.55 **
Education						
High school or less (ref)	81	1.00	55	1.00	92	1.00
Some college or AA degree	85	1.59	55	1.01	93	1.19
College graduate or above	75	1.31	52	0.97	78 *	0.39 *
Poverty						
<100% poverty (ref)	83	1.00	54	1.00	92	1.00
100%+ poverty	80	0.97	56	1.12	89	0.84
Race/ethnicity						
White (ref)	82	1.00	55	1.00	89	1.00
Black	79	0.83	56	1.26	94	1.38
Hispanic	77	0.57	50	1.01	90	1.08
Asian/other	85	1.03	62	1.05	96	2.76
Nagelkerke R^2		.096		.173		.081

*p<.05. **p<.01. ***p<.001. ref=reference category. Note: For bivarate % and adjusted odds ratios, significance levels are for comparison with the reference category.

References

[1] Centers for Disease Control and Prevention (CDC). Ten great public health achievements—United States, 1900-1999. MMWR Morb Mortal Wkly Rep 1999;48 241-3.

[2] Health Resources and Services Administration. Women's preventive services: required health plan coverage guidelines. Available at http://www.hrsa.gov/womensguide lines/, accessed April 28, 2012.

[3] Centers for Disease Control and Prevention (CDC). Achievements in public health, 1900-1999: family planning. MMWR Morb Mortal Wkly Rep 1999;48:1073-80.

[4] Institute of Medicine (IOM). Clinical preventive services for women: closing the gaps. Washington, DC: The National Academies Press, 2011. Available at http://www.nap.edu/catalog.php?record_id=13181, accessed April 28, 2012.

[5] Guttmacher Institute. Laws affecting reproductive health and rights: 2011 state policy review. New York: Guttmacher Institute. Available at http://www.guttmacher.org/statecenter/updates/2011/statetrends42011.html, accessed May 24, 2012.

[6] Office of Population Affairs. Title X funding history. Available at http://www.hhs.gov/opa/title-x-family-planning/title-x-policies/title-x-funding-history/, accessed May 29, 2012.

[7] Tenety E. Rick Santorum's very Catholic birth control beliefs. The Washington Post. 2012 Feb 16. Available at http://www.washingtonpost.com/blogs/under-god/post/rick-santorums-very-catholic-birth-control-beliefs/2012/02/16/gIQALczyHR_blog.html, accessed May 24, 2012.

[8] Conde-Agudelo A, Rosas-Bermudez A, Kafury-Goeta AC. Birth spacing and risk of adverse perinatal outcomes: a meta-analysis. JAMA 2006;295:1809-23.

[9] Gipson JD, Koenig MA, Hindlin MJ. The effects of unintended pregnancy on infant, child and parental health: a review of the literature. Stud Fam Plann 2008;39:18-38.

[10] Goldin C, Katz L. The power of the pill: oral contraceptives and women's career and marriage decisions. J Polit Econ 2002;110:730-70.

[11] Bailey MJ. More power to the pill: the impact of contraceptive freedom on women's life cycle labor supply. Q J Econ 2006;121:289-320.

[12] Bailey MJ , Hershbein B, Miller AR. The opt-in revolution? Contraception and the gender gap in wages. *Am Econ J: Appl Econ*, 4(3): 225–54. [13] Barnett B, Stein J. Women's voices, women's lives: the impact of family planning. A synthesis of findings from the Women's Studies Project. North Carolina: Family Health International; 1998.

[14] Becker MH. The health belief model and personal health behavior. Thorofare, NJ: CB Slack; 1974.

[15] Ajzen I, Fishbein M. Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall, 1980.

[16] Ajzen I, Madden TJ. Prediction of goal-directed behavior: attitudes, intentions and perceived behavioral control. J Exp Soc Psychol 1986;22:453-74.

[17] Bandura A. Social foundations of thought and action: a social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall, 1986.

[18] Frost JJ, Singh S, Finer LB. U.S. women's one-year contraceptive use patterns, 2004. Perspect Sex Reprod Health 2007;39:48-55.

[19] Mosher WD, Jones J. Use of contraception in the United States: 1982–2008. National Center for Health Statistics, Vital Health Statistics 23(29), 2010, Series 23, No. 29.

[20] Fowler CI, Lloyd SW, Gable J, Wang J, Krieger K. Family planning annual report: 2010 national summary. Research Triangle Park, NC: RTI International, 2011.

[21] Nagelkerke NJD. A Note on a General Definition of the Coefficient of Determination. Biometrika 1991,78(3):691-692.

[22] Guttmacher Institute. Contraceptive needs and services, 2008 update. New York: Guttmacher Institute, 2010. Available at http://www.guttmacher.org/pubs/win/contraceptive-needs-2008.pdf, accessed May 17, 2012.

[23] Gold RB, Sonfield A, Richards CL, Frost JJ. Next steps for America's family planning program: leveraging the potential of Medicaid and Title X in an evolving health care system. New York: Guttmacher Institute, 2009.

[24] Goldin C, Katz LF. Career and marriage in the age of the pill. Am Econ Rev 2000;90:461-5.

[25] Ananat EO, Hungerman DM. The power of the pill for the next generation: oral contraception's effects on fertility, abortion, and maternal and child characteristics. Rev Econ Stat 2012;94:37-51.

[26] Guttmacher Institute. A real-time look at the impact of the recession on women's family planning and pregnancy decisions. New York: Guttmacher Institute, 2009. Available at http://www.guttmacher.org/pubs/RecessionFP.pdf, accessed May 18, 2012.

[27] Sutton PD, Hamilton BE, Mathews TJ. Recent decline in births in the United States, 2007–2009. NCHS Data Brief, 60. Hyattsville, MD: National Center for Health Statistics, 2011.

[28] Hamilton BE, Martin JA, Ventura SJ. Births: preliminary data for 2010. National Vital Statistics Reports; 60(2). Hyattsville, MD: National Center for Health Statistics, 2011.

[29] Lopatto E. U.S. birthrate declines for third year on economic worries. Bloomberg. 2011 Nov 18. Available at http://www.bloomberg.com/news/2011-11-18/u-s-birthrate-declines-for-third-year-on-economic-worries.html, accessed May 21, 2012.

[30] Livingston G, Cohn D. U.S. birth rate decline linked to recession. Washington, DC: Pew Research Center, 2010.

[31] Finer LB, Frohwirth, LF, Dauphinee LA, Singh S, Moore AM. Reasons U.S. women have abortions: quantitative and qualitative perspectives. Perspect Sex Reprod Health 2005;37:110-8.

[32] American College of Obstetricians and Gynecologists (ACOG). Hormonal contraceptives offer benefits beyond pregnancy prevention. 2009. Available at http://www.acog.org/About_ACOG/News_Room/News_Releases/2009/Hormonal_Contraceptives_Offer_Benefits_Beyond_Pregnancy_Prevention, accessed Sept. 21, 2011.