EFFECTS OF RELATIONSHIP CHARACTERISTICS ON CONTRACEPTIVE USE AND UNINTENDED PREGNANCY

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Abstract

It is commonly accepted that relationship context influences contraceptive use and unintended pregnancy but little is known about these potential influences. Data were collected as part of a longitudinal study on hormonal contraception among unmarried women who wanted to avoid pregnancy for at least one year, recruited at family planning clinics in low-income San Francisco Bay area communities. Baseline and follow-up surveys were completed at 3, 6, and 12 months. Among 1,089 participants in sexual relationships, higher quality relationships, measured by an 11-item scale, were associated with reduced risk of contraceptive discontinuation (AHR=0.91, $p<0.001$) and unintended pregnancy (AOR=0.81, $p<0.05$) within one year, adjusting for other factors. Partner cohabitation was associated with higher risk of contraceptive discontinuation but relationship length of >1 year was protective against contraceptive discontinuation. Neither living with a partner nor relationship length was associated with pregnancy risk. Unintended pregnancy interventions should consider the influence of relationship context.

Introduction

Most studies examining the risk of unintended pregnancy focus on individual determinants, including sociodemographics, knowledge, attitudes, and contraceptive use (Bryant 2009; Finer and Henshaw 2006; Trussell and Wynn 2008). It is commonly accepted that relationship context also influences contraceptive use and unintended pregnancy but little is known about these potential influences. Some studies have examined whether the woman is cohabitating with her sexual partner, or the length of the relationship but few go further to examine specific qualitative aspects about the relationship and their role in risk of unintended pregnancy.

When a woman lives with her sexual partner, sex is more frequent increasing her risk of pregnancy, but it is also more predictable making it easier to contracept or more likely that she will secure a longer term contraceptive method. Women in unpredictable relationships may be less likely than others to plan sexual intimacy, and they often may not be prepared with a method (Glei 1999). At the same time, living in a marriage-like arrangement may reduce the motivation to avoid a pregnancy, and thus reduce the care taken in using contraception effectively (Bachrach 1987; Tanfer, Cubbins and Brewster 1992). One national study found that current living arrangement is not associated with contraceptive use (Tanfer et al. 1992). A more recent national study, however, found that unmarried women who were not cohabitating with their sexual partner were half as likely as married women to use long-acting contraceptives (Frost and Darroch 2008). Similarly, another study found that married and cohabiting women were more likely to use effective methods than were single women (Glei 1999).

Evidence of the effect of the length of the relationship on contraceptive use and unintended pregnancy is mixed. A recent study by Wilson and colleagues, done in Atlanta and Charlotte, found several predictors of contraceptive nonuse or use of less effective methods: already having a child with the partner and being in a relationship for a longer time (Wilson and Koo 2008). However, in another study among Latina women in Los Angeles, those in relationships of 1 to 2 years were nearly 3 times more likely to use an effective contraceptive compared to women in relationships of less than 1 year (Harvey, Henderson and Casillas 2006).

It is even less clear whether women in closer or higher quality relationships are more or less likely to use contraception effectively or have unintended pregnancies since so few studies examine such qualitative aspects. Women in such relationships may have greater self-efficacy and support to achieve their intentions. On the other hand, they may have more ambivalent feelings about becoming pregnant and let down their vigilance in protecting against pregnancy (Higgins, Hirsch and Trussell 2008). Contrary to the authors' hypothesis, the study by Wilson and Koo (2008) found that women expecting to receive a lot of emotional support from their partner if they became pregnant were more likely to report contraceptive use.

In unintended pregnancy research it is essential to acknowledge that within relationships, women's desire for a baby with their partner is not fixed, but changes over time as relationships evolve and life circumstances change. Women may change their minds iteratively, at some moments wanting to avoid pregnancy, while at others feeling that pregnancy may be a satisfactory outcome.

The relationship context also likely affects levels of ambivalence. Researchers now acknowledge the many complexities and ambiguities involved in women's lived experience of pregnancy intentions, plans, and desires (Bachrach and Newcomer 1999; Klerman 2000; Luker 1999; Moos et al. 1997; Petersen and Moos 1997; Santelli et al. 2009; Speizer et al. 2004; Trussell, Vaughan and Stanford 1999). For women with limited self-efficacy or more fatalistic perspectives, pregnancy may be something that just happens. Some women may also want to test their fertility while at the same time not desiring to become a mother. Newer work also suggests that the perceived emotional and sexual benefits of sexual relationships may outweigh the goal of averting conception, even when childbearing is not wholly intended (Higgins et al. 2008).

This ambivalence around pregnancy intentions may be one reason why some of the women in the current study outwardly stated that they do not wish to become pregnant and but do not take the contraceptive steps necessary to ensure that a pregnancy does not occur (Layte et al. 2007). Among this sample of women who want to avoid pregnancy, we expect that women who report having higher quality and more established relationships will be associated with reduced contraceptive use and increased risk of unintended pregnancy.

Methods

The study enrolled a cohort of 1,388 racially diverse, unmarried adolescents and young women ages 15-24 who were not planning pregnancy and were starting a hormonal contraceptive method. Participants completed computer-assisted surveys at baseline, and then at 3, 6, and 12 month follow-up appointments. They were tested for pregnancy at 6 and 12 month intervals.

For the current analysis, we excluded 72 participants for whom no follow-up data were available, 218 participants who were not in a sexual relationship at baseline, and an additional 3 participants for whom contraception or pregnancy data were missing. The final sample for this analysis included 1,089 participants.

The analysis was done in three parts. First socio-demographic and relationship characteristics of the study population are described. Properties of the relationship quality scale are also examined and described. Next, bivariate associations between relationship characteristics and contraceptive continuation and pregnancy are examined. Finally, to simultaneously examine the effects of multiple relationship factors, two separate multivariable models predicting the hazard of contraceptive discontinuation and the odds of pregnancy are specified. Only variables that are significant in the bivariate analyses are included in the multivariable models.

The primary independent variable of interest is an 11-item standardized relationship quality scale. Participants responded to each statement using a five-point Likert scale ranging from Strongly Disagree to Strongly Agree. The combined measure had high internal consistency (Cronbach's alpha=0.871). A higher score on the scale represents a closer relationship.

Items in relationship quality scale
1. I want to grow old with my partner.
2. I would be very upset if my partner and I broke up.
3. It is really important to me to make my relationship as good as it can be.
4. I like knowing that my partner and I are a couple.
5. I am completely devoted to my partner.
6. I often think that my partner and I are too different. (reversed)
7. I am not sure that my relationship will last forever. (reversed)
8. When I think about what my life will be like in the future, I always see my partner with me.
9. When my partner and I first got together, we knew we would be together forever.
10. I often think about what it would be like to be involved with someone other than my partner. (reversed)
11. There is nothing that I wouldn't give up for my partner.

Results

Both in the bivariate multivariable models, a higher score on the relationship quality scale was significantly associated with a reduced risk of discontinuing contraception (Adjusted Hazard Ratio (AHR)=0.91, $p<0.001$) (see Table 2). Current cohabitation with a partner was associated with higher risk of contraceptive discontinuation (AHR=1.14, $p<0.05$) but being in a relationship for one year or longer was protective against contraceptive discontinuation (AHR=0.92, $p<0.05$). The only other variable that remained significantly associated with increased risk of contraceptive discontinuation in the multivariable model was believing that it is very or somewhat likely that she will become pregnant in the next 3 months (AHR=1.14, $p<0.001$).

The relationship scale was also strongly associated with risk of pregnancy. A higher score on the relationship scale was associated with a reduced risk of pregnancy (Adjusted Odds Ratio (AOR) =0.81, $p<0.05$) (see Table 3). As with risk of contraceptive discontinuation, believing that it is very or somewhat likely that she will become pregnant in the next 3 months was associated with pregnancy (AOR=1.61, $p<0.001$). Not wanting to become pregnant for at least 2 years or ever again was protective against pregnancy (AOR=0.69, $p<0.01$). Neither living with a partner nor the length of the relationship was associated with pregnancy.

Additional analyses will explore interactive effects between individual relationship characteristics and between sociodemographic variables and relationship characteristics.

Table 1 Selected characteristics of the study sample

	n	%
Total	1089	100.0
Socio-Demographics		
Age		
15-17	396	36.3
18-19	350	32.1
20-24	346	31.7
Race/Ethnicity		
White	122	11.2
Latina	296	27.1
Black	355	32.5
Asian/Pacific Islander	128	11.7
Multiracial/Other	191	17.5
Highest Grade Completed		
Currently in High School	385	35.3
Less than High School	100	9.2
High School Diploma or GED	293	26.9
Some college, vocational training, or college degree	312	28.6

Table 2. Unadjusted and adjusted hazard of contraceptive discontinuation, by selected socio-demographic and relationship characteristics and woman's expectations

	Unadjusted Hazard of Contraceptive Discontinuation		Adjusted Hazard of Contraceptive Discontinuation[a]	
	Hazard Ratio	95% CI	Hazard Ratio	95% CI
Relationship Characteristics				
Relationship quality scale	0.93**	0.89–0.98	0.91***	0.86–0.96
Current co-residence with main partner	1.12***	1.05–1.19	1.14*	1.02–1.29
Length of relationship with main partner				
0-3 mo	(ref)		(ref)	
4-6 mo	0.92	0.78–1.09	0.92	0.74–1.15
7-12 mo	0.99	0.85–1.14	0.94	0.83–1.06
>1 yr	0.95	0.89–1.02	0.92*	0.87–0.98
Having sex with other men	1.14	0.95–1.36		
Main partner very much against use of any hormonal method	1.23*	1.01–1.50	1.17	0.97–1.42
Very likely or somewhat likely will be pregnant by main partner in next 3 months	1.18***	1.07–1.29	1.14***	1.07–1.21
Woman's feelings if got pregnant in next 3 months by main partner				
Very or somewhat upset	(ref)		(ref)	
Don't know/wouldn't care	1.11	0.94–1.32	0.98	0.74–1.30
Very or somewhat pleased	1.19**	1.05–1.36	1.00	0.79–1.28
Partner's feelings if got pregnant in next 3 months				
Very or somewhat upset	(ref)			
Don't know/wouldn't care	1.18	0.97–1.45	1.13	0.83–1.54

Very or somewhat pleased	1.29**	1.08–1.55	1.21	0.92–1.58
Woman's Plans and Expectations				
Plans if got pregnant in next 3 months				
Have an abortion	(ref)		(ref)	
Have the baby	1.14**	1.04–1.26	1.05	0.87–1.27
Give the baby up for adoption	1.15	0.67–1.97	1.04	0.53–2.05
Don't know	1.11*	1.00–1.22	1.06	0.92–1.21
Woman does not want a child in next 2 years or ever	0.85*	0.73–0.99	0.91	0.78–1.05

All Hazards ratios are adjusted for clustering by clinic site.
[a]Multivariable model is adjusted for age, race, and highest grade completed in addition to other factors shown.
***p≤0.001; **p≤0.01; *p≤0.05.

Table 3. Unadjusted and adjusted odds of pregnancy, by selected socio-demographic and relationship characteristics and woman's expectations

	Unadjusted Odds of Pregnancy		Adjusted Odds of Pregnancy[a]	
	Odds Ratio	95% CI	Odds Ratio	95% CI
Relationship Characteristics				
Relationship quality scale	0.83***	0.78–0.88	0.81*	0.66–0.99
Current co-residence with main partner	1.24	0.81–1.90	1.01	0.62–1.67
Length of relationship with main partner				
0-3 mo	(ref)		(ref)	
4-6 mo	1.11	0.80–1.53	0.98	0.54–1.76
7-12 mo	1.41	0.78–2.54	1.08	0.55–2.14
>1 yr	1.41	0.89–2.23	1.10	0.65–1.88
Having sex with other men	1.72*	1.11–2.64	1.49	0.93–2.39
Main partner very much against use of any hormonal method	1.64	0.95–2.83		
Very or somewhat likely will be pregnant by main partner in next 3 months	1.79***	1.59–2.02	1.61***	1.48–1.76
Woman's feelings if got pregnant in next 3 months by main partner				
Very or somewhat upset	(ref)		(ref)	
Don't know/wouldn't care	1.18	0.69–2.05	0.86	0.58–1.29
Very or somewhat pleased	1.62*	1.09–2.43	0.93	0.57–1.54
Partner's feelings if got pregnant in next 3 months				
Very or somewhat upset	(ref)		(ref)	
Don't know/wouldn't care	1.78*	1.12–2.82	1.26	0.94–1.69
Very or somewhat pleased	2.23***	1.44–3.45	1.65	0.83–3.27
Woman's Plans for Pregnancy				
Woman does not want a child in next 2 years or ever	0.62***	0.51–0.76	0.69**	0.53–0.89
Plans if got pregnant in next 3 months				
Have an abortion	(ref)		(ref)	
Have the baby	1.78***	1.29–2.46	1.44	0.74–2.82
Give the baby up for adoption	3.27***	2.01–5.34	2.41	0.96–6.06
Don't know	1.42	0.78–2.57	1.26	0.69–2.28

All odds ratios are adjusted for clustering by clinic site.
[a]Multivariable model is adjusted for age, race, and highest grade completed in addition to other factors shown.
***p≤0.001; **p≤0.01; *p≤0.05.

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