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# Recent reproductive coercion and unintended pregnancy among female family planning clients

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## Abstract

**Objective**—Reproductive coercion (RC) – birth control sabotage and coercion by male partners to become pregnant and to control the outcome of a pregnancy -- has been associated with a history of both intimate partner physical and sexual violence (IPV) and unintended pregnancy among females utilizing reproductive health services. The temporal nature of associations of RC and unintended pregnancy (distinct from the impact of IPV), however, has remained less clear.

**Study Design**—A survey was administered to females ages 16–29 years seeking care in 24 rural and urban family planning clinics in Pennsylvania (N=3539).

**Results**—Five percent of respondents reported RC in the past 3 months and 12% reported an unintended pregnancy in the past year. Among those who reported recent RC, 21% reported past year unintended pregnancy. Compared to women exposed to neither condition, exposure to recent RC increased odds of past year unintended pregnancy, both in the absence of a history of IPV (AOR 1.79, 1.06–2.03) and in combination with a history of IPV (AOR 2.00, 1.15–3.48); history of IPV without recent RC was also associated with unintended pregnancy (AOR 1.80, 1.42–2.26).

**Conclusions**—Findings indicate the temporal proximity of the association of RC and unintended pregnancy, with recent RC related to past year unintended pregnancy, both independently and in combination with a history of IPV. Recent RC is relatively prevalent among young women using family planning clinics and is associated with increased risk for past-year unintended pregnancy even in the absence of IPV.

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## INTRODUCTION

Unintended pregnancy is common in the United States [1], disproportionately affects younger women [2], and is associated with intimate partner physical and sexual violence (IPV) [3–8]. One in three women experience IPV, and similar to unintended pregnancy, younger women ages 15 to 24 experience the highest rates [9, 10]. In reproductive health clinics, the prevalence of IPV among female clients ranges from 40% to 53% [11–16].

Mechanisms linking IPV with unintended pregnancy include women's compromised sexual decision making [17, 18], limited ability to enact contraceptive use [8, 17, 19, 20], inconsistent condom use [18, 19, 21, 22], and fear of condom negotiation [19, 21]. *Reproductive coercion (RC)* by male partners also contributes to increased risk for unintended pregnancy through contraceptive sabotage (active interference with contraceptive methods) and pregnancy pressure (threats to promote a pregnancy) [13, 23–26]. National data demonstrate that approximately 9% of (or 10.3 million) U.S. women report ever experiencing RC [9]. Estimates are higher among family planning clients, with recent evidence documenting a lifetime RC prevalence of 25% [13].

As noted in recent clinical guidelines, health professionals caring for women who are experiencing RC are able to offer contraceptive methods less vulnerable to partner influence (such as intrauterine contraception and implant) while providing women with information about IPV and strategies to increase their safety [27]. Thus, knowing if RC occurring around the time of a clinical encounter increases risk for unintended pregnancy is critical to guide reproductive health providers on whether to assess for RC in addition to physical and sexual violence during routine reproductive health visits [27].

This study hypothesized that RC occurring in the past three months (pregnancy promoting behaviors specifically) would be associated with recent unintended pregnancy, independent of the influence of IPV. Knowing whether physical and sexual partner violence (given its consistent and robust associations with unintended pregnancy in past literature) and RC (an aspect of control within relationships distinct from physical and sexual IPV) separately confer significant, independent risk for unintended pregnancy is needed to guide screening recommendations.

As pregnancy intention is complex and not easily characterized by a single dichotomous category (intended vs. unintended) [28], pregnancy intention was assessed using a set of items that asked about planning and timing in addition to desire for a pregnancy. This allowed for a more precise discrimination of unintended pregnancy risk among those experiencing recent RC and lifetime IPV (separately and in combination).

## MATERIALS AND METHODS

The current study was conducted via a survey of English and Spanish-speaking females ages 16–29 years at 24 family planning clinics in Western Pennsylvania from October 2011 to November 2012 (baseline data for a randomized controlled trial testing a brief RC intervention). Upon arrival to a clinic, females seeking care at these family planning clinics were approached by research staff about the study. Interested, age-eligible women were escorted to a private area in the clinic for consent and survey administration. As participants were receiving confidential services, parental consent for participation was waived for minors.

Data were collected via a laptop computer with survey questions re ad aloud through headphones (ACASI). Each participant received a county-specific social service information sheet (including IPV services) and a $15 gift card. All study procedures were approved by the Human Subjects Research Committee at the University of Pittsburgh. Data were protected with a federal Certificate of Confidentiality.

### Measures

Single items assessed demographic characteristics including age, ethnicity, education level, and relationship status. Intimate relationships were defined as someone they were "dating or going out with."

*Lifetime physical and sexual violence by an intimate partner (IPV)* was measured via three items modified from the Conflict Tactics Scale-2 (CTS-2) [29] and the Sexual Experiences Survey [30] -- one item for any physical violence and two items for sexual violence (with and without the use of force or threats).

*Past 3 month reproductive coercion (RC)* –pregnancy promoting behaviors specifically -- was assessed using 10 items [14]: five items assessed for pregnancy pressure and five items for birth control sabotage experienced in the past 3 months (Table 2). Recent RC was defined as a positive answer to any of these internally consistent items (Cronbach alpha 0.76).

*Unintended pregnancy in the past 12 months* -- the primary outcome of interest -- was measured via 7 items from the National Survey for Family Growth, as recommended by Santelli and colleagues to assess pregnancy intention (i.e., desire and timing) [28]. Women who reported any pregnancy in the past 12 months were asked, for their most recent pregnancy, three dichotomous items about the timing (mistimed), planning (unplanned), and desire to have a baby with their current partner (not desired). Four scaled items asked about how much they wanted to be pregnant ("did not want" to "wanted"), how much they were trying to get pregnant ("not trying" to "trying"), trying to avoid getting pregnant ("trying to avoid" to "not trying to avoid"), and how happy they were when they found out they were pregnant ("unhappy" to "happy"). For each of these four items, the scale was from zero to 4, with responses of zero and 1 coded as unintended. In multivariate analyses, these 7 items were unidimensional [31]. Thus, a summary score from responses to all 7 items was created to measure unintendedness of the pregnancy, ranging from 1 to 7 (Cronbach alpha 0.94).

Women with no pregnancy in the past year and women who had been pregnant but had no 'unintended' responses to the above 7 items were coded as zero (i.e., no unintended pregnancy).

### Analysis

Demographic characteristics and frequencies of RC and each of seven unintended pregnancy items were calculated for the total sample. Associations of each of these items with recent RC and with lifetime IPV were assessed via Wald Chi Square Tests for clustered data, using survey data analysis procedures in SAS® (SAS Institute v. 9.3, 2009). Significance was set at $p<0.05$. Parallel analysis [31, 32] of the principal components of the Pearson correlation matrix for the seven unintended pregnancy items determined that the unintended pregnancy summary score measure was unidimensional. Associations of unintended pregnancy (dependent variable) with exposures were assessed using regression models for clustered survey data, to account for residual correlation among observations from women seen at the same clinic. Multiple ordinal logistic regression was used to estimate the increased risks of RC and IPV when statistically adjusting for the other exposure and client demographics (age, race/ethnicity, education, and relationship status). Multiple ordinal logistic regression models with separate effects for each combination of recent RC and lifetime IPV exposure were found to provide a better fit to the data than a multiplicative main effects model, using the quasilikelihood under the independence model criterion (QIC), an information criterion appropriate for clustered data [33]. In sensitivity analyses, logistic regression models were fit to a dichotomized version of the unintended pregnancy summary score (1+ vs. 0); inferences from these models were consistent with the results from the ordinal logistic regression analyses that are reported here. Ordinal logistic regression models were chosen instead of the model with a dichotomous response variable to allow for more precise measurement of the association between recent RC, IPV, and unintended pregnancy (as a multifaceted construct across varying degrees of unintendedness), information that would be lost by dichotomization.

## RESULTS

### Sample characteristics

Of the 3980 age-eligible female clients approached, 3682 agreed to complete the survey (participation rate 93%). Primary reasons for non-participation were lack of time and plans to move away in the near future (these individuals were ineligible based on need for follow-up surveys for the intervention study). Participants and non-participants did not differ significantly by age or ethnicity. Final sample size was determined by outcomes of interest for this analysis (i.e., unintended pregnancy); women reporting never having sex (n=69) and women reporting their primary sex partners since they started having sex were mostly or exclusively women (n=74) were removed from the sample, resulting in a final sample of 3,539 women.

Seventy-three percent of the sample were 24 years of age or younger. Eighty percent self-identified as White, 13% as African American, and 7% as Hispanic, Asian, Multi-racial or other. Consistent with the young age of the sample, about half (46%) had a high school

education or less. Sixty-seven percent reported being in a serious relationship or married (Table 1).

### Intimate partner physical and sexual violence (IPV) and recent reproductive coercion (RC)

Close to half of the sample (46%) reported having ever experienced physical or sexual violence from an intimate partner (Table 1). The lifetime prevalence of IPV increased from 40% among the youngest cohort (ages 16–20) to 51% among the oldest cohort (25–29). Women identifying as Asian, Other, and Multi-racial were most likely to report having ever experienced IPV. Women with less than a college degree were more likely to report IPV compared with women who had finished college. No differences in IPV were noted by relationship status.

Five percent of participants reported experiencing any RC in the past 3 months (Table 1). The youngest cohort (ages 16–20) reported the greatest proportion of recent RC (6%) compared to 3.5% of the oldest cohort (age 25–29). The most common forms of RC reported were a partner telling her not to use contraception (2.9%), forcing or pressuring her to become pregnant (1.7%), and removing a condom during sex (1.6%) (Table 2). Women identifying as non-White were more likely to report recent RC, with African American women reporting the highest proportion (13%). Having less education and being single (or dating more than one person) were associated with greater frequency of RC.

### Unintended pregnancy in past year

Thirteen percent of the total sample reported being pregnant in the past year, while 12% reported any unintended pregnancy in the past year (i.e., an unintended pregnancy score of 1 or more) (Table 1). Women between the ages of 21–24, identifying as non-White, having less than a college education, and being single had the highest proportions of past year unintended pregnancy.

For women expressing some degree of unintendedness of pregnancy, scale scores were evenly distributed across the full range, from 1 to 7. Among women who reported recent RC, 21% reported past year unintended pregnancy. Sixteen percent of women with IPV history reported past year unintended pregnancy (Table 3).

### Associations of recent RC, IPV, and unintended pregnancy

In non-adjusted models, both recent RC and lifetime IPV were associated with unintended pregnancy in the past year. The final, best-fitting multiple ordinal logistic regression model was specified to allow separate effects for each combination of IPV and RC. Compared to the reference category of no IPV or RC, adjusted odds for past-year unintended pregnancy were statistically significantly increased when IPV or RC was present, whether alone or in combination. That is, the adjusted odds ratio (AOR) [95% CI] for *RC only* was 1.79 [1.06, 2.03]; for *IPV only* was 1.80 [1.42, 2.26]; and for *IPV and RC* together was 2.00 [1.15, 3.48] (Table 4).

# DISCUSSION

This study is the first to document a robust and independent association of recent reproductive coercion (RC) with unintended pregnancy in the past year, even in the absence of exposure to IPV. Prior research by this investigative team has shown associations of lifetime exposure to RC with unintended pregnancy occurring in the context of any IPV [13]. The finding that RC occurring around the time of a clinical encounter is associated with increased risk for unintended pregnancy, independent of physical or sexual violence, provides critical evidence in support of reproductive health providers assessing for RC in addition to physical and sexual violence during routine reproductive health visits [27].

A unique aspect of this study is the use of ordinal logistic regression models to elucidate how recent RC contributes to the level of unintendedness of a pregnancy. That is, in comparing two groups of women who would otherwise have a similar baseline level of pregnancy unintendedness, the group that experienced recent RC would be more likely to report more unintendedness than would be reported by the group that did not experience recent RC. As over half of pregnancies in the United States are unintended (to some degree) and these pregnancies are associated with poor health outcomes for women and infants [1, 34], efforts to reduce women's risk for RC (e.g., by offering longer acting reversible contraceptives less vulnerable to partner influence and emergency contraception) could have substantial impact on helping women control their reproductive lives even in the context of unhealthy and abusive relationships [27].

The current study focused on whether the presence of any recent RC is associated with recent unintended pregnancy, as experiencing any of these behaviors would be clinically relevant. A subsequent follow up study should examine the extent to which experiencing more RC behaviors increases risk for unintended pregnancy and other poor reproductive health outcomes. As the frequency of some RC items in this sample was relatively low, more data are needed to definitively examine how the recent RC items would function as a summative scale.

Consistent with prior research [11–16], this study documents a high prevalence of intimate partner physical and sexual violence victimization (IPV) among women seeking reproductive health services. A striking finding is how many more young women report recent RC compared to older women, underscoring the need to include education for RC in adolescent pregnancy prevention efforts. Findings also highlight how important clinics providing reproductive health services are as sites for identification, assessment, and interventions for young women to reduce harm related to IPV and to RC. These clinical settings can serve as a connection to victim services to support the many women exposed to violence as well as a site for prevention education about IPV, RC, and harm reduction strategies to increase women's safety and reduce pregnancy risk.

These findings also support the recent committee opinion from the American Congress of Obstetricians and Gynecologists recommending routine assessment by health providers for reproductive and sexual coercion in addition to IPV [27]. Screening solely for physical or sexual partner violence will not necessarily identify women experiencing RC. Findings

indicate that if reproductive health professionals do not inquire specifically about experiencing RC, they are less likely to identify female patients at increased risk for unintended pregnancy. When RC is identified, providers can help women reduce risk for unintended pregnancy through advanced provision of emergency contraception as well as counseling about contraceptives less susceptible to partner influence (IUD, implant and injectable contraceptives). Providers should also be prepared to connect women to violence victim support services.

Findings from this study should be interpreted in light of several limitations. The cross-sectional nature of the investigation precludes causal inferences regarding the associations observed among recent RC and past year unintended pregnancy. RC assessment referred only to the past 3 months while unintended pregnancy was assessed in the past year. However, these measures were more closely associated in time than prior studies that assessed only for lifetime exposures, allowing for a more clear assessment of the potential role of recent RC (pregnancy promoting behaviors, specifically) on unintended pregnancy distinct from exposure to IPV. Longitudinal studies with greater specificity about the timing of RC, IPV, and pregnancy are needed. This sample from family planning clinics in Western Pennsylvania was mostly White, thus may not generalize to clinics in more diverse settings.

These limitations notwithstanding, this study provides the first evidence of the association of recent RC with unintended pregnancy, with and without adjustment for lifetime exposure to any physical or sexual violence. Comprehensive assessment for RC along with IPV in clinical settings (especially reproductive health clinics) may facilitate addressing barriers to contraception among affected women and girls to reduce their elevated risk for unintended pregnancy.

## Acknowledgments

## REFERENCES

1. Finer LB, Henshaw SK. Disparities in rates of unintended pregnancy in the United States, 1994 and 2001. Perspectives on Sexual and Reproductive Health. 2006; 38(2):90–96. [PubMed: 16772190]
2. Finer LB. Unintended Pregnancy Among US Adolescents: Accounting for Sexual Activity. Journal of Adolescent Health. 2010; 47(3):312–314. [PubMed: 20708573]
3. Cripe SM, Sanchez SE, Perales MT, Lam N, Garcia P, Williams MA. Association of intimate partner physical and sexual violence with unintended pregnancy among pregnant women in Peru. International Journal of Gynecology & Obstetrics. 2008; 100(2):104–108. [PubMed: 17963763]
4. Gao W, Paterson J, Carter S, Iusitini L. Intimate Partner Violence and unplanned pregnancy in the Pacific Islands Families Study. IJGO. 2007; 100:109–115.

5. Gazmararian JA, Petersen R, Spitz AM, Goodwin MM, Saltzman LE, Marks JS. Violence and reproductive health: current knowledge and future research directions. Maternal and child health journal. 2000; 4(2):79–84. [PubMed: 10994575]

6. Pallitto CC, O'Campo P. The Relationship Between Intimate Partner Violence and Unintended Pregnancy: Analysis of a National Sample From Colombia. Int Fam Plan Perspect. 2004; 30(4): 165–173. [PubMed: 15590382]

7. Silverman J, Gupta J, Decker MR, Kapur N, Raj A. Intimate partner violence and unwanted pregnancy, miscarriage, induced abortion, and stillbirth among a national sample of Bangladeshi women. BJOG: An International Journal of Obstetrics & Gynaecology. 2007; 114(10):1246–1252. [PubMed: 17877676]

8. Stephenson R, Koenig MA, Acharya R, Roy TK. Domestic Violence, Contraceptive Use, and Unwanted Pregnancy in Rural India Studies in Family Planning. 2008; 39(3):177–186.

9. Black, M.; Basile, K.; Breiding, M.; Smith, S.; Walters, M.; Merrick, M., et al. The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 Summary Report. Atlanta, GA: National Center for Injury Prevention and Control Centers for Disease Control and Prevention; 2011.

10. Davis A. Interpersonal and Physical Dating Violence among Teens. The National Council on Crime and Delinquency Focus. 2008

11. Keeling J, Birch L. The prevalence rates of domestic abuse in women attending a family planning clinic. The journal of family planning and reproductive health care / Faculty of Family Planning & Reproductive Health Care, Royal College of Obstetricians & Gynaecologists. 2004; 30(2):113–114.

12. Miller E, Decker M, Raj A, Reed E, Marable D, Silverman J. Intimate partner violence and health care-seeking patterns among female users of urban adolescent clinics. Maternal and child health journal. 2010; 14(6):910–917. [PubMed: 19760162]

13. Miller E, Decker MR, McCauley HL, Tancredi DJ, Levenson RR, Waldman J, et al. Pregnancy Coercion, Intimate Partner Violence, and Unintended Pregnancy. Contraception. 2010; 81(4):316–322. [PubMed: 20227548]

14. Miller E, Decker MR, McCauley HL, Tancredi DJ, Levenson RR, Waldman J, et al. A family planning clinic partner violence intervention to reduce risk associated with reproductive coercion. Contraception. 2011; 83(3):274–2280. [PubMed: 21310291]

15. Rickert VI, Wiemann CM, Harrykissoon SD, Berenson AB, Kolb E. The relationship among demographics, reproductive characteristics, and intimate partner violence. American journal of obstetrics and gynecology. 2002; 187(4):1002–1007. [PubMed: 12388996]

16. Zeitler MS, Paine AD, Breitbart V, Rickert VI, Olson C, Stevens L, et al. Attitudes about intimate partner violence screening among an ethnically diverse sample of young women. J Adolesc Health. 2006; 39(1):119 e1–119 e8. [PubMed: 16781970]

17. McFarlane J, Malecha A, Watson K, Gist J, Batten E, Hall I, et al. Intimate Partner Sexual Assault Against Women: Frequency, Health Consequences, and Treatment Outcomes. Obstetrics & Gynecology. 2005; 105(1):99–108. [PubMed: 15625149]

18. Silverman, JG.; Decker, MR.; Reed, E.; Raj, A.; Miller, EM. APHA. Philidelphia, PA: 2005. Mechanisms for sexual risk among adolescent female survivors of dating violence. 2005.

19. Wingood GM, DiClemente R. The Effects of an Abusive Primary Partner on the Condom Use and Sexual Negotiation Practices of African-American Women. Am J Public Health. 1997; 87(6): 1016–1018. [PubMed: 9224187]

20. Williams CM, Larsen U, McCloskey LA. Intimate Partner Violence and Women's Contraceptive Use. Violence Against Women. 2008; 14(12):1382–1396. [PubMed: 18845676]

21. Sales JM, Salazar LF, et al. The Mediating Role of Partner Communication Skills on HIV/STD-Associated Risk Behaviors in Young African American Females with a History of Sexual Violence. Arch Pediatr Adolesc Med. 2008; 162(5):432–438. [PubMed: 18458189]

22. Teitelman AM, Ratcliffe SJ, et al. Sexual Relationship Power, Intimate Partner Violence, and Condom Use Among Minority Urban Girls. J Interpersonal Violence. 2008; 23(12):1694–1712.

23. Moore AM, Frohwirth L, Miller E. Male reproductive control of women who have experienced intimate partner violence in the United States. Social Science & Medicine. 2010; 70(11):1737–1744. [PubMed: 20359808]

24. Center for Impact Research. Domestic Violence & Birth Control Sabotrage: A Report from the Teen Parent Project. Chicago: Center for Impact Research; 2000.

25. Gee RE, Mitra N, Wan F, Chavkin DE, Long JA. Power over parity: intimate partner violence and issues of fertility control. American journal of obstetrics and gynecology. 2009; 201(148):e1–e7. [PubMed: 19564020]

26. Miller E, Decker MR, Reed E, Raj A, Hathaway JE, Silverman JG. Male pregnancy promoting behaviors and adolescent partner violence: findings from a qualitative study with adolescent females. Ambulatory Pediatrics. 2007; 7(5):360–366. [PubMed: 17870644]

27. American College of Obstetricians Gynecologists. Reproductive and sexual coercion. Committee Opinion No. 554. Obstetrics & Gynecology. 2013; 121(2, PART 1):411–415. [PubMed: 23344307]

28. Santelli JS, Lindberg LD, Orr MG, Finer LB, Speizer I. Toward a Multidimensional Measure of Pregnancy Intentions: Evidence from the United States. Studies in Family Planning. 2009; 40(2): 87–100. [PubMed: 19662801]

29. Straus MA, Hamby SL, Boney-McCoy SUE, Sugarman DB. The Revised Conflict Tactics Scales (CTS2): Development and Preliminary Psychometric Data. Journal of Family Issues. 1996; 17(3): 283–316.

30. Koss MP, Gidycz CA. Sexual experiences survey: reliability and validity. J Consult Clin Psychol. 1985; 53(3):422–423. [PubMed: 3874219]

31. Horn JL. A Rationale And Test For The Number Of Factors In Factor Analysis. Psychometrika. 1965; 30:179–185. [PubMed: 14306381]

32. Kabacoff RI, Miller IW, Bishop DS, Epstein NB, Keitner GI. A psychometric study of the McMaster Family Assessment Device in psychiatric, medical, and nonclinical samples. Journal of Family Psychology. 1990; 3(4):431–439.

33. Pan W. Akaike's information criterion in generalized estimating equations. Biometrics. 2001; 57(1):120–125. [PubMed: 11252586]

34. Gipson JD, Koenig MA, Hindin MJ. The effects of unintended pregnancy on infant, child, and parental health: A review of the literature. Studies in Family Planning. 2008; 39(1):18–38. [PubMed: 18540521]

## Implications

Recent reproductive coercion and a history of intimate partner physical and sexual violence are prevalent among female family planning clients, particularly younger women, and these experiences are each associated with unintended pregnancy. Pregnancy prevention counseling should include not only assessment for physical and sexual partner violence but also specific inquiry about reproductive coercion.

**Table 1**

Demographic Characteristics of Total Sample and by Recent Reproductive Coercion and Intimate Partner Violence (IPV) (n=3539)

| | Total %[*] (n) (n=3539) | %[¥] (n) Recent Reproductive Coercion | %[¥] (n) Lifetime IPV | %[¥] (n) Past 12 Month Unintended Pregnancy |
|---|---|---|---|---|
| **Total Sample** | | 5.1% (182) | 45.5% (1609) | 12.4% (439) |
| **Age** | | | | |
| 16–20 | 37.0% (1311) | 6.0% (78) | 40.3% (528) | 11.2% (147) |
| 21–24 | 35.6% (1260) | 5.6% (70) | 47.0% (592) | 14.4% (182) |
| 25–29 | 27.4% (968) | 3.5% (34) | 50.5% (489) | 11.4% (110) |
| **P value[^]** | | 0.01 | 0.005 | 0.06 |
| **Race** | | | | |
| White | 80.3% (2843) | 3.7% (106) | 46.4% (1318) | 10.7% (304) |
| Black/African American | 13.3% (471) | 12.5% (59) | 38.2% (180) | 20.4% (96) |
| Hispanic/Latina | 1.6% (57) | 8.8% (5) | 36.8% (21) | 17.5% (10) |
| Multi-racial | 2.9% (102) | 5.9% (6) | 53.9% (55) | 18.6% (19) |
| Asian/Other | 1.6% (55) | 7.3% (4) | 49.1% (27) | 9.1% (5) |
| **P value[^]** | | 0.11 | 0.02 | 0.03 |
| **Education** | | | | |
| Less than 12th grade | 18.8% (666) | 9.5% (63) | 46.6% (310) | 16.2% (108) |
| Finished high school | 27.0% (955) | 6.0% (57) | 47.4% (453) | 16.7% (159) |
| Some college | 33.2% (1176) | 3.2% (38) | 47.5% (559) | 10.5% (123) |
| Finished college or grad school | 20.4% (722) | 2.6% (19) | 38.5% (278) | 6.0% (43) |
| **P value[^]** | | 0.006 | 0.008 | 0.001 |
| **Relationship Status** | | | | |
| Single / Dating more than 1 person | 33.4% (1171) | 7.4% (87) | 46.0% (539) | 14.1% (165) |
| In a serious relationship | 59.2% (2075) | 4.2% (87) | 45.6% (946) | 11.4% (236) |
| Married | 7.5% (262) | 2.3% (6) | 40.1% (105) | 12.2% (32) |
| **P value[^]** | | 0.004 | 0.17 | 0.16 |

[*] %s may not sum to 100% due to small amounts of missing data or rounding error

[¥] Row percentages

[^] P values from survey data analysis chi-square test statistics that account for clinic clustering

**Table 2**

Recent (Past 3 Month) Reproductive Coercion (n=3539)

| | % (n) |
|---|---|
| **Any Recent Reproductive Coercion** | 5.1% (182) |
| **Reproductive Coercion items** | |
| Force or pressure to become pregnant | 1.7% (59) |
| Told her not to use contraception | 2.9% (101) |
| Told her he would leave her if she didn't get pregnant | 0.5% (18) |
| Told her he would have a baby with someone else if she didn't get pregnant | 0.3% (11) |
| Hurt her physically because she did not agree to get pregnant | 0.2% (8) |
| Took off the condom during sex so she would get pregnant | 1.6% (58) |
| Put holes in the condom so she would get pregnant | 0.2% (7) |
| Broke condom on purpose so she would get pregnant | 0.4% (13) |
| Took birth control away or prevented her from going to the clinic | 0.4% (10) |
| Made her have sex without a condom so she would get pregnant | 0.5% (16) |

**Table 3**

Past 12 month unintended pregnancy (UIP) items among total sample (N=3539)

| | Total % (n) | % (n) Among Women Exposed to Recent Reproductive Coercion (n=182) | % (n) Among Women Exposed to Lifetime IPV (n=1609) |
|---|---|---|---|
| **Pregnancy timing** | | | |
| Too soon (*UIP*) | 8.8% (311) | 15.9% (29) | 12.1% (195) |
| Right time / later than wanted or No pregnancy (*No UIP*) | 91.2% (3228) | 84.1% (153) | 87.9% (1414) |
| **Planned to get pregnant before recent pregnancy** | | | |
| No (*UIP*) | 11.0% (391) | 17.0% (31) | 14.5% (234) |
| Yes, planned or No pregnancy (*No UIP*) | 89.0% (3148) | 83.0% (151) | 85.5% (1375) |
| **Wanted to have a baby with partner at this time (in month before most recent pregnancy)** | | | |
| No (*UIP*) | 7.1% (252) | 13.2% (24) | 9.8% (157) |
| Yes, wanted or No pregnancy (*No UIP*) | 92.9% (3287) | 86.8% (158) | 90.2% (1452) |
| **Degree of wantedness of most recent pregnancy**[a] | | | |
| Did not want (*UIP*) | 6.7% (237) | 12.6% (23) | 8.8% (142) |
| Wanted or Neutral / No pregnancy (*No UIP*) | 93.3% (3302) | 87.4% (159) | 91.2% (1467) |
| **Degree that they were trying to get pregnant**[a] | | | |
| Not trying to get pregnant (*UIP*) | 10.3% (363) | 17.0% (31) | 13.4% (215) |
| Trying to get pregnant or Neutral / No pregnancy (*No UIP*) | 89.7% (3176) | 83.0% (151) | 86.6% (1394) |
| **Degree that they were trying to AVOID getting pregnant**[b] | | | |
| Trying to avoid (*UIP*) | 5.9% (207) | 11.0% (20) | 7.8% (125) |
| Not trying to avoid or Neutral/No pregnancy (*No UIP*) | 94.2% (3332) | 89.0% (162) | 92.2% (1484) |
| **Degree of happiness when found out about pregnancy**[a] | | | |
| Unhappy (*UIP*) | 4.6% (163) | 5.0% (9) | 5.5% (89) |
| Happy or Neutral/No pregnancy (*No UIP*) | 95.4% (3376) | 95.1% (173) | 94.5% (1520) |
| **Unintendedness of Pregnancy Summary Score** | | | |
| **7** | 2.0% (70) | 2.8% (5) | 2.5% (40) |
| **6** | 2.6% (92) | 4.4% (8) | 3.9% (62) |
| **5** | 1.8% (65) | 3.9% (7) | 2.3% (37) |
| **4** | 1.6% (57) | 3.3% (6) | 2.4% (38) |
| **3** | 1.8% (64) | 3.3% (6) | 1.9% (31) |
| **2** | 1.3% (46) | 0.6% (1) | 1.7% (28) |
| **1** | 1.3% (45) | 2.8% (5) | 1.2% (19) |
| **Any Unintendedness (score of 1 or more)** | 12.4% (439) | 20.9% (38) | 15.8% (255) |
| **Past 12 month pregnancy with no unintendedness (score = 0) or No pregnancy in past 12 months** | 87.6% (3100) | 79.1% (144) | 84.2% (1354) |

[a] scale from 0–4, coded UIP if 0 or 1;

[b] reverse coded

UIP = unintended pregnancy
IPV = intimate partner violence

**Table 4**

Associations of Recent Reproductive Coercion, Intimate Partner Violence (IPV), and Unintended Pregnancy Score

| Lifetime IPV | Recent Reproductive Coercion | Frequency % (N) | Participants with UIP > 0 % (N)[¥] | OR (95% CI) | Adjusted * OR (95% CI) |
|---|---|---|---|---|---|
| No | No | 50.2% (1777) | 8.8% (156) | -ref- | -ref- |
| No | Yes | 1.3% (45) | 20.0% (9) | 2.60 (1.47, 4.59) | 1.79 (1.06, 2.03) |
| Yes | No | 40.3% (1427) | 15.1% (215) | 1.86 (1.47, 2.34) | 1.80 (1.42, 2.26) |
| Yes | Yes | 3.7% (131) | 20.6% (27) | 2.70 (1.60, 4.55) | 2.00 (1.15, 3.48) |

Notes: UIP (unintended pregnancy) is an ordinal integer score describing degree of unintendedness, ranging from 0 (no unintendedness) to 7 (highest degree of unintendedness). OR are odds ratios from an ordinal logistic regression model for clustered survey data, to account for clinic clustering.

[¥]Row percentage

*
Adjusted OR is from models that statistically adjusted for demographic characteristics (age, ethnicity, education, and relationship status) by adding these terms as covariates to the unadjusted model.