A family planning clinic partner violence intervention to reduce risk associated with reproductive coercion

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Abstract

Background—This study examined the efficacy of a family planning clinic-based intervention to address intimate partner violence (IPV) and reproductive coercion.

Study Design—Four free-standing urban family planning clinics in Northern California were randomized to intervention (trained family planning counselors) or standard-of-care. English-and Spanish-speaking females ages 16-29 years (N=906) completed audio computer-assisted surveys prior to a clinic visit and 12 to 24 weeks later (75% retention rate). Analyses included assessment of intervention effects on recent IPV, awareness of IPV services, and reproductive coercion.

Results—Among women reporting past 3-month IPV at baseline, there was a 71% reduction in the odds of pregnancy coercion among participants in intervention clinics compared to participants from the control clinics that provided standard of care. Women in the intervention arm were more likely to report ending a relationship because the relationship was unhealthy or unsafe regardless of IPV status (AOR 1.63, 95% CI 1.01 – 2.63).

Conclusions—Results of this pilot study suggest that this intervention may reduce risk for reproductive coercion from abusive male partners among family planning clients and support such women to leave unsafe relationships.

Keywords

violence against women; pregnancy; contraception; sexual violence; intimate partner violence

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1. Introduction

The extent and health impact of intimate partner violence (IPV) worldwide has prompted recommendations for screening in clinical settings to identify and assist victims [1-3]. Young adult women utilizing family planning clinics report higher rates of IPV as compared to their same-age peers [4-6], underscoring the potential of family planning clinics to provide intervention and a bridge to further services for large numbers of women affected by IPV.

The consistent associations of IPV with increased risk for unintended pregnancy, abortion and sexually transmitted infection (STI) [7-21] are increasingly considered a result of male coercive behaviors related to sex and contraception [22-26]. "Reproductive coercion" spans both pregnancy coercion (e.g., male partners' verbal pressure to get women pregnant) and birth control sabotage (e.g., condom manipulation and other active interference with contraceptive methods) and results in women's compromised decision-making regarding, or limited ability to enact, condom and other contraceptive use [4]. The likely role of reproductive coercion in elevating abused women's risk for unintended pregnancy [4,27,28], and other sexual and reproductive health concerns, strongly suggests that clinic-based IPV assessments may benefit from addressing reproductive coercion directly.

Moreover, prior research indicates that clinic-based IPV assessment can be the first step in recognizing partner violence [29,30], thus discussion of specific elements of reproductive coercion in the clinical context, such as pressure not to use contraception or fear of condom negotiation, may similarly provide a unique opportunity to enhance women's ability to identify and address such abuse. Expanding IPV screening to include reproductive coercion also provides a context to introduce harm reduction behaviors to assist women in resisting and minimizing the potential impact of such coercion on their health and safety. Currently, family planning counselors and clinicians are urged to assess for IPV among their patient population; however, these protocols do not include assessment tools to identify reproductive coercion, nor guidance on counseling patients to reduce their risk for unintended pregnancy based on IPV and reproductive coercion.

Clinical interventions that facilitate awareness of male partner reproductive coercion as well as strategies for overcoming such coercion may be critical tools in reducing unintended pregnancy and related abortions. To our knowledge, the currently described and evaluated intervention offers the first harm reduction protocol that assesses for reproductive coercion and focuses on reducing women's risk for unintended pregnancy in the context of IPV. Of note, this reproductive coercion intervention enhances existing standard-of-care practice, and does not require additional structures or personnel, maximizing potential sustainability.

The current study evaluates this family planning clinic-based intervention utilizing a randomized controlled design, comparing changes in reports of reproductive coercion, IPV, awareness and utilization of IPV-related resources, and relationship status among participants in intervention and control clinics.

2. Materials and methods

2.1. Brief description of intervention and control conditions

The intervention was developed collaboratively by a team of community-based practitioners, IPV advocates, and researchers. Delivered by trained paraprofessional reproductive health specialists (RHSs; a.k.a., family planning counselors), the intervention constitutes an enhanced IPV screening, which focuses first on educating clients about reproductive coercion and the many forms of IPV, specifically ways in which IPV can affect sexual and

reproductive health with respect to control of reproductive choices (e.g., birth control use, condom use, pregnancy and timing of pregnancy). Such assessment can be done efficiently during a clinic visit in that the provider asks about IPV or reproductive coercion within the context of why the client is visiting the clinic. For example, if a client were seeking to change her birth control method, a RHS would ask the client about possible partner influence of her birth control use. In the event of a positive assessment for either IPV or reproductive coercion, RHSs then assist patients in identifying specific harm reduction behavioral strategies, specific to the reason the client is visiting the clinic, to reduce risk for IPV and reproductive coercion, e.g., minimizing risk for partner interference in birth control by using a hidden method of birth control and/or emergency contraception. Finally, RHSs educate women regarding local IPV and sexual assault resources and facilitate utilization of these services by contacting these programs together with the client or offering a safe space within the clinic for patients to initiate such contact. Business card-size intervention cards were developed to serve both as an on-going clinical prompt for staff as well as a resource for patients. The RHSs reported that the time required to review the intervention card with a client varied from less than a minute to longer discussions if IPV or reproductive coercion was disclosed. As the intervention is designed to be visit-specific and re-frames the way providers approach the clinic visit, providers in the intervention clinics reported that the intervention helped to stream-line the clinic visit. Thus, the intervention appears to be feasible and replicable, accomplished within time and resource constraints.

Clients attending control clinics received standard-of-care, which involves responding to two violence screening questions on an intake form which is then reviewed by the RHS: "Have you ever been hit, kicked, slapped, or choked by your current or former partner?" "Have you ever been forced to have sex against your will?" Questions concerning reproductive coercion are not included in this standard-of-care assessment. In the event of a positive disclosure in the control clinics, RHS and clinicians followed standard clinic protocol, including filing any necessary mandated reports, documenting IPV in the client chart, and giving the client a list of violence victimization resources.

2.2. Sample and setting

Six free-standing urban family planning clinics in Northern California were recruited to participate in this intervention study, of which four agreed to participate. These four clinics were randomized evenly into intervention and control arms using a computer-generated randomization scheme via SAS (cluster randomization with clinics as the level of randomization)[33]. The providers in the two intervention clinics received the intervention training described above. The two control clinics continued to provide standard of care as described above, i.e., two IPV screening items regarding physical violence and sexual assault on an intake form completed by the client, then reviewed by the RHSs. This longitudinal study was conducted via a baseline and follow-up survey at 12-24 weeks post-intervention; participants were recruited from October 2008 to May 2009, and all follow-up surveys were completed by October 2009. All English-and Spanish-speaking females ages 16 to 29 years seeking care in participating family planning clinics were eligible. All female clients were screened upon clinic entry for age eligibility by trained research staff. Eligible women interested in participating 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. At the time of consent, participants agreed to be recontacted in three months time to complete a follow-up survey, and provided research assistants with at least three methods to contact them.

Evaluation data were collected via audio computer-assisted survey instrument, a self-administered computer program that allows participants to complete surveys on a laptop computer with questions read aloud through headphones. Each participant received a card

listing local violence-related resources and a $15 gift card upon baseline survey completion and a $25 gift card after the follow-up survey to remunerate them for their time. All materials were provided in English or Spanish based on client preference. All study procedures were approved by Human Subjects Research Committees at the University of California Davis and the Harvard School of Public Health, and also reviewed by the Planned Parenthood Federation of America. The data were protected with a federal Certificate of Confidentiality.

Clinic staff from all four participating clinics referred eligible female clients (n=1337) to research assistants, and 1207 agreed to complete the survey, resulting in a participation rate of 90.3%. Nine hundred six women returned to complete the follow-up survey for a retention rate of 75.1%. The primary reasons for non-participation at baseline were lack of time and plans to move away from the local area in the near future (these individuals were disqualified based on the study's longitudinal design). Non-participants did not differ significantly from participants by age or ethnicity.

Follow-up surveys were completed at each of the four clinics between 12 and 24 weeks after the baseline survey 9mean interval to follow-up was 17.3 weeks (St Dev = 4.9). A minority (13.9%)) of follow-up participants were unable to return to clinic due to work schedules or having moved out of the area and requested follow-up survey completion via email. This option was offered only to women 18 years and older, and who were able to confirm by phone and email that they had a safe, private computer on which to take the survey.

2.3. Participant survey measures

Single items assessed demographic characteristics including age, ethnicity, education level, nativity, and relationship status.

Intimate relationships were defined as "your sexual or dating relationships." Recent (past 3-month) experiences of physical and sexual violence were assessed using items modified from the Conflict Tactics Scales-2 (CTS-2) [31] and the Sexual Experiences Survey [32].

Two domains of *reproductive coercion* were assessed. *Recent (past 3-month) pregnancy coercion* was assessed using an investigator-developed set of four items: "In the past three months, has someone you were dating or going out with:" 1) told you not to use any birth control (like the pill, shot, ring, etc); 2) said he would leave you if you didn't get pregnant?; 3) told you he would have a baby with someone else if you didn't get pregnant?; 4) hurt you physically because you did not agree to get pregnant? A positive response to any of these items was coded as pregnancy coercion.

Recent (past 3-month) birth control sabotage was assessed via five items. Participants were asked, "In the past three months, has someone you were dating or going out with:" 1) taken off the condom while you were having sex so that you would get pregnant?; 2) put holes in the condom so you would get pregnant?; 3) broken a condom on purpose while you were having sex so you would get pregnant?; 4) taken your birth control (like pills) away from you or kept you from going to the clinic to get birth control so that you would get pregnant?; 5) made you have sex without a condom so you would get pregnant? A positive response to any of these items was coded as birth control sabotage.

Awareness and recent use of IPV services was measured via the following questions: "Do you know about the following services in your area" and "Have you used any of the following services in the past 3 months?" Responses included a list of eight local and national services for IPV and sexual assault, with awareness and recent use of services defined as being aware or having used any of these eight services.

Relationship changes from T1 to T2 were measured with the following questions: "Have you stopped dating or going out with someone in the past 3 months?" If the respondent said yes, she was prompted to identify the reason for this change; options used for the current analysis include "It was an unhealthy relationship" and "I felt unsafe." Other options (not included in the final analysis) included "We grew apart", "It was a mutual decision" "He left me", "My feelings changed," as well as an option to enter another reason.

2.4. Analyses

As the intervention emphasized harm reduction and connection to IPV-related resources, and these harm reduction discussions and connection to resources were likely to be more relevant to those reporting partner-related abuse, intervention effects were hypothesized to be concentrated among women reporting recent IPV at baseline. Thus, outcome analyses were stratified based on baseline IPV status. Baseline differences in demographic characteristics by intervention status were assessed via chi-square analyses; significance for all analyses was set at $p<.05$ (Table 1). Prevalence estimates were calculated for recent (past 3-month) IPV, birth control sabotage, pregnancy coercion, awareness of services and recent use of services at baseline (T1) and follow-up (T2). Baseline and follow-up prevalence of key outcomes was described for each arm (i.e., comparing participants from the intervention clinics to participants in the control clinics), stratified by recent IPV status at baseline (Table 2). Potential effects of the intervention on follow-up measures of birth control sabotage, pregnancy coercion, and awareness and use of IPV-related services were assessed via logistic regression models (Table 3). All available data at follow-up were utilized, within an intention-to-treat framework. Models were adjusted for baseline report of the outcome, reason for visit, age, race/ethnicity, and immigrant status, and were stratified by past 3-month IPV at baseline to evaluate the impact of the intervention both in the presence and the absence of recent IPV. In this pilot study, clinics were the unit of randomization. By including the baseline report of the outcome as a predictor, our primary assessment of the intervention effect is able to adjust for clinic effects on outcomes that are persistent over time, but we are not able to adjust for time-varying clinic effects that may confound our estimate of the intervention effect (thus increasing the probability of a Type 1 error). Post-hoc analyses assessed reports of relationship status changes from baseline to follow-up via chi-square analyses. To maximize power by utilizing all available data, the N varies slightly across outcomes based on missing data (specific sample sizes are noted throughout). Statistical analyses were conducted using SAS Version 9.1 [33].

3. Results

3.1. Demographic characteristics and attrition analyses

Seventy-six percent of the entire sample (across all four clinics) were 24 years of age or younger. These family planning clinics were located in urban neighborhoods predominantly serving communities of color, thus over three quarters of the participants identified themselves as non-White. The intervention clinics had more Hispanic/Latina participants, while the control clinics had significantly more African-American participants. More intervention clinic participants were born outside of the U.S. About one third of all participants described their current relationship status as single or dating more than one person (Table 1).

Among participants who did not return to complete the follow-up survey, there were no differences based on baseline demographics, IPV, birth control sabotage, or pregnancy coercion reports, nor differences between intervention and control arms in terms of attrition.

3.2. Differences in outcomes of interest at baseline and follow-up

Participants from the intervention and control clinics were similar at baseline on reporting awareness and utilization of services, as well as in experiencing pregnancy coercion in the past three months. At baseline, intervention clinic participants overall were somewhat more likely to report past 3-month birth control sabotage (11% compared with 7% in control clinics, $p = 0.054$), and were significantly more likely to report past 3-month IPV (21% compared with 14%, $p = 0.002$). Baseline differences between respondents reporting recent IPV and no recent IPV are shown in Table 2.

3.3. Intervention effects by baseline IPV status

Among women who reported at baseline having experienced IPV in a relationship with a male partner in the past three months, those women exposed to the intervention demonstrated a 71% reduction in the odds of pregnancy coercion compared to participants in the control clinics (0.29, 95% CI 0.09 -0.91) (Table 3). However, among women not reporting past 3-month IPV, the intervention was not associated with a significant change in reports of pregnancy coercion at follow-up (1.63, 95% CI 0.80-3.34). There were no significant changes in past 3 month IPV at follow up for women in either the intervention or control arms, regardless of IPV status at baseline.

Awareness of IPV-related services and reports of utilization of those services increased in both intervention and control groups (McNemar's test p value < 0.001, Table 2). These increases did not differ between intervention and control arms (Table 3).

3.4. Changes in relationship status

Bivariate analyses of relationship change from baseline to follow-up were conducted post-hoc to assess whether intervention exposure was associated with greater likelihood of such changes. Across the total sample (i.e., not stratified based on baseline IPV status), more women in the intervention than control arm reported having stopped dating or going out with someone during the past three months (p<0.001), and having stopped going out with someone in the past three months because the relationship was unhealthy or they felt unsafe (p=0.013) (Table 4). Analyses stratified by recent IPV at baseline indicate that these differences were not due to greater numbers of women reporting recent IPV in the intervention arm. Models adjusted for age, ethnicity, immigrant status, reason for visit and report of recent IPV at baseline demonstrated a significant difference between intervention and control groups in respondents reporting ending a relationship, and leaving because the relationship was unhealthy or felt unsafe.

4. Discussion

Exposure to this brief and sustainable intervention to reduce male partner reproductive coercion was associated with a large reduction in pregnancy coercion among women who had recently experienced IPV. Post-hoc analyses suggest that intervention exposure was also associated with leaving a relationship because it felt unhealthy or unsafe, perhaps partially explaining the observed reduction in reproductive coercion experiences. While intervention participants reported greater awareness of services and utilization of services at follow-up, this increase did not differ significantly from control participants. Findings suggest the utility of an intervention which educates women about reproductive coercion and promotes harm reduction strategies, and possibly ending abusive relationships, which may lead to reduced experiences of reproductive coercion. Larger-scale and longer-term studies are necessary to assess the potential for this type of intervention to improve clinical outcomes, specifically unintended pregnancy.

These findings should be interpreted in the context of several limitations. First, as a pilot study, the small number of clusters (i.e., clinics; n=4) and relatively small number of participants resulted in a design underpowered to assess key outcomes of interest. To compensate for this, we used an analysis strategy that assumed that heterogeneity arising from unmeasured clinic-level effects were not present; an assumption that, if violated, could cause us to understate our actual type 1 error probability. In addition, the interval to follow-up was short; the 12-24 week follow-up interval precluded examining longer term clinical outcomes such as unintended pregnancy. Third, the differences in demographics across clinics at baseline, while adjusted for in the outcome analyses, may reflect other unmeasured clinic differences which are not accounted for in our analyses. Fourth, as women in the intervention arm were not asked specifically about whether their leaving a relationship (between baseline and follow up) was related to their receiving the intervention, we cannot ascertain the extent to which exposure to the intervention may have contributed to this finding. Adjusted models indicate a significant difference between intervention and control in patients leaving a relationship because it felt unhealthy or unsafe, suggesting these differences in outcome could be attributable to exposure to the intervention. Of note, no changes in clients' reports of recent IPV emerged at the 3 month follow up; the close interval to follow up may have been too short to see substantial reductions in IPV overall. Finally, findings from this non--representative sample from four family planning clinics in one Northern California region cannot be generalized to all family planning clinic clients. A larger cluster-randomized controlled trial with a greater number of clusters, more participants from geographically diverse clinics, and longer term follow-up with assessment of clinical outcomes is needed.

Acknowledgments

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Table 1

Demographic characteristics of sample comparing intervention and control participants (collected at baseline)

	%*	% Among intervention	% Among control
Age, years (N=897)			
16-20	43.6	45.7	41.4
21-24	32.8	31.6	34.0
25-29	23.6	22.7	24.6
Chi-square p value			0.438
Race/ethnicity (N=897)			
White	22.9	22.5	23.2
Non-Hispanic Black	27.9	23.6	32.2
Hispanic	29.7	37.5	21.6
Multiracial/More than one race	6.7	5.1	8.3
Asian/Pacific Islander/Other	12.9	11.3	14.6
Chi-square p value			<0.001
Relationship status (N=896)			
Single/Dating more than 1 person	31.9	32.2	31.6
In a serious relationship	46.7	47.2	46.1
Married/Cohabitating	19.2	18.3	20.1
Divorced/Separated/Widowed	2.2	2.2	2.3
Chi-square p value			0.927
Education (N=890)			
Less than high school	1.9	1.3	2.5
Some high school	19.8	18.3	21.2
High school graduate	34.5	36.7	32.3
Some college or technical school	33.9	34.5	33.4
Graduated from college or technical school	9.9	9.2	10.6
Chi-square p value			0.375
Country of origin (N=899)			
U.S. Born	83.3	79.9	86.7
Born outside of the U.S.	16.7	20.1	13.3
Chi-square p value			0.006
Reason for visit (N=897)*			
General OB/GYN	48.8	53.9	43.7
Chi-square p value			0.002
Abortion-related	9.7	5.7	13.7
Chi-square p value			<0.001
Birth control-related	44.0	41.5	46.6
Chi-square p value			0.123

	%*	% Among intervention	% Among control
Emergency contraception	8.0	10.4	5.6
Chi-square p value			0.009
STI/HIV	23.3	25.4	21.2
Chi-square p value			0.135

*
Items not mutually exclusive

Table 2

Prevalences for outcomes of interest at baseline and follow-up for intervention and control participants, differentiated by IPV status at baseline

	Total sample		Among recent IPV exposed (N=156)^		Among recent IPV unexposed (N=741)^	
	T1% (N)	T2% (N)	T1 % (N)	T2 % (N)	T1 % (N)	T2 % (N)
Past 3 Month IPV						
Intervention	21.2 (96)	22.1 (97)	-	-	-	-
Control	13.5 (60)	15.7 (70)	-	-	-	-
Awareness of services						
Intervention	32.7 (147)	47.0 (211)	29.2 (28)	41.1 (39)	33.6(119)	48.6 (172)
Control	30.8 (138)	48.2 (216)	30.0(18)	51.7(31)	31.3(120)	48.4(185)
Use of services p3m						
Intervention	1.8 (8)	13.6 (60)	3.1 (3)	11.6(11)	1.4(5)	14.2 (49)
Control	2.2 (10)	16.7 (75)	10.0(6)	17.0(10)	1.0(4)	17.0(65)
Birth control sabotage past 3 months						
Intervention	10.7 (47)	4.4 (18)	24.2 (23)	9.3 (8)	7.0 (24)	3.1 (10)
Control	7.0 (31)	4.8 (20)	17.0(10)	8.5 (5)	5.6 (21)	4.2 (15)
Pregnancy coercion past 3 months						
Intervention	9.3 (41)	7.5 (31)	23.2 (22)	10.5(9)	5.5(19)	6.8 (22)
Control	7.9 (35)	7.6 (32)	25.4(15)	23.7 (14)	5.3 (20)	5.0(18)

T1 = baseline survey.

T2 = follow-up survey.

IPV = intimate partner violence.

^
Outcomes may have small amounts of missing data

Table 3

Intervention effects stratified by recent partner violence

Outcome	Among women exposed to recent IPV[*] AOR (95% Cl)	Among women unexposed to recent IPV[*] AOR (95% Cl)
Awareness of services	0.66 (0.31, 1.42)	1.07 (0.77, 1.48)
Use of services	0.89 (0.31, 2.53)	0.87 (0.57, 1.34)
Birth control sabotage	0.71 (0.17, 2.94)	1.00 (0.41, 2.43)
Pregnancy coercion	**0.29 (0.09, 0.91)**	1.63 (0.80, 3.34)

[*] AOR is adjusted odds ratio of the intervention versus the control for T2 outcomes, estimated in logistic regression models that were adjusted for age, race/ethnicity, immigrant status, reason for visit and baseline (T1) report of outcome.

Recent IPV = Intimate partner violence (physical and/or sexual violence) in the past 3 months reported at baseline.

Table 4

Relationship status change from baseline to follow-up

	Total		Among IPV exposed		Among IPV unexposed		Total
	Intervention (N=453) % (N)	Control (N=451) % (N)	Intervention (N=96) % (N)	Control (N=60) % (N)	Intervention (N=357) % (N)	Control (N=384) % (N)	AOR* (95% CI)
Stopped dating or going out with someone p3m	37.1 (168)	26.8 (121)	52.1 (50)	45.0 (27)	33.1 (118)	24.0 (92)	1.54 (1.13, 2.10)
Chi-square		<0.001		0.389		0.006	
Stopped going out with someone as it was an unhealthy or unsafe relationship p3m	13.0 (59)	8.0 (36)	29.2 (28)	20.0 (12)	8.7 (31)	6.0 (23)	1.63 (1.01, 2.63)
Chi-square		0.013		0.202		0.159	

*
Adjusted for age, race/ethnicity, immigrant status, reason for visit and report of recent IPV at baseline

Recent IPV = Intimate partner violence (physical and/or sexual violence) in the past 3 months reported at baseline.