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Article *in* Trauma Violence & Abuse · August 2016

DOI: 10.1177/1524838016663935

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Reproductive Coercion: A Systematic Review

Karen Trister Grace[1] and Jocelyn C. Anderson[2]

Abstract

Reproductive coercion is a behavior that interferes with the autonomous decision-making of a woman, with regard to reproductive health. It may take the form of birth control sabotage, pregnancy coercion, or controlling the outcome of a pregnancy. The objectives of this article are to address the questions: (1) What is known about reproductive coercion, its prevalence, and correlates? (2) What strategies do women use to preserve their reproductive autonomy when experiencing reproductive coercion? (3) What interventions are effective to decrease reproductive coercion? In this review of 27 research studies, 12 contained findings regarding the general phenomenon of reproductive coercion and 19 contained findings about at least one component of reproductive coercion. Additionally, 11 studies contained findings related to the intersection of intimate partner violence (IPV) and reproductive coercion, 6 presented data on strategies women use to resist reproductive coercion, and 3 included intervention data. Variation in measurement makes synthesis of prevalence and correlate data challenging. The reviewed literature presents reproductive coercion as a phenomenon that disproportionately affects women experiencing concurrent IPV, women of lower socioeconomic status, single women, and African American, Latina and multiracial women. Women who experience reproductive coercion were found to present frequently for certain health services. Most data on reproductive coercion are descriptive, and there is need for further research to examine the co-occurrence with related phenomena such as IPV and unintended pregnancy. More research is also needed on the strategies women use to resist reproductive coercion as well as interventions aimed at survivors and perpetrators of reproductive coercion and health-care providers who encounter them.

Keywords

reproductive coercion, pregnancy, contraception, sexual violence, pregnancy, unwanted, domestic violence, intimate partner violence

In a violent intimate partner relationship, the underlying dynamic is often of an abuser utilizing a variety of tactics in an effort to create vulnerabilities and to achieve power over and coercive control of his partner (Dutton & Goodman, 2005). Abusive partners may exert power and control in nonviolent ways, such as isolation, financial control, and emotional abuse (Gentry & Bailey, 2014; Katerndahl, Burge, Ferrer, Becho, & Wood, 2013; Sanders, 2015). Nonviolent power and control tactics may be exerted specifically on the reproductive health of women in a phenomenon that has recently been labeled as reproductive coercion or reproductive control. Within the context of intimate partner violence (IPV), the definition of coercion includes the threat of consequences for noncompliance with a demand, while control is defined as the influence one person has over another and encompasses coercion (Dutton, Goodman, & Schmidt, 2005); the term reproductive coercion will be used in this review, as it is the term most commonly used in the current literature. Reproductive health-care providers and researchers have long recognized that women who experience IPV are vulnerable to negative reproductive health outcomes including unintended and unwanted pregnancy and sexually transmitted infections (Coker, 2007). The specific focus on the study of reproductive coercion enables researchers to examine the complex etiology of this phenomenon as well as the intersection with IPV and unintended pregnancy.

Reproductive coercion is defined as behavior that interferes with the autonomous decision-making of a woman, with regard to reproductive health (Miller, Decker, et al., 2010; Miller, Jordan, Levenson, & Silverman, 2010; Moore, Frohwirth, & Miller, 2010). Specifically, this may take the form of birth control sabotage (such as removing a condom, damaging a condom, removing a contraceptive patch, or throwing away oral contraceptives), coercion or pressure to get pregnant, or controlling the outcome of a pregnancy (such as pressure to continue a pregnancy or pressure to terminate a pregnancy).

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Perpetrators of reproductive coercion may be an intimate partner, a family member, or a family member of the partner (Gupta, Falb, Kpebo, & Annan, 2012). While it is recognized that women may place pregnancy pressure of varying degrees on their male partners and may "entrap" partners into pregnancy and/or parenting by surreptitious means, research comparing the effects on female and male victims is lacking. Additionally, the underlying mechanisms and the impact on the victims may be inherently different. Important questions are raised by studying reproductive coercion of victims of any sex and by any perpetrator, and the results can help inform our understanding of reproductive autonomy and freedom in reproductive choices. This review will focus on the phenomenon of reproductive coercion perpetrated by male intimate partners.

Since reproductive coercion was first labeled and purposefully studied in 2010 (Miller, Decker, et al., 2010; Moore et al., 2010), prevalence estimates have ranged from 8% (Black et al., 2011) to 16% (Clark, Allen, Goyal, Raker, & Gottlieb, 2014) of the populations being studied. However, prior to 2010, and even after, behaviors of reproductive coercion emerge in research findings without necessarily being labeled as such. By examining these findings as a whole, a greater understanding of reproductive coercion, its prevalence and correlates, and its knowledge gaps, emerges.

Several concepts are closely related or intersected with reproductive coercion. There is a strong relationship between reproductive coercion and IPV. Reproductive coercion is one of many forms of power and control exercised by an abusive partner, but it also can occur in the absence of any physical violence. Questions exist about the nature of the relationship and the chronology of occurrence of these distinct but related phenomena. In some cases, reproductive coercion could be a harbinger of abusive behavior, while in others, it could be a secondary form of control in addition to physical abuse.

Unintended pregnancy is a related phenomenon with significant intersection with the study of reproductive coercion. Reproductive coercion is one potential cause of unintended pregnancy; a deeper understanding of racial and ethnic disparities in reproductive coercion may help to explain some of the disparities in unintended pregnancy. Pregnancy intention, self-efficacy, and contraceptive compliance are examples of important factors in the study of unintended pregnancy, but they omit important aspects of gender and power imbalance that also may be impacting this phenomenon (Connell, 1987).

Reproductive autonomy is also distinct but closely related to reproductive coercion. Reproductive autonomy describes a broader concept consisting of multiple domains of autonomous decision-making and empowerment with regard to reproductive health, including freedom from reproductive coercion, communication, and autonomy during decision-making (Upadhyay, Dworkin, Weitz, & Foster, 2014). This concept focuses on the ability to make decisions regarding reproductive health that may be impacted by multiple other forms of individual and systematic policies and pressures that are outside the scope of this review, including government coercion (forced sterilization, laws restricting fertility or abortion, etc.) and cultural or societal pressure regarding reproductive norms and expectations. While there is significant overlap between the concepts of reproductive autonomy and reproductive coercion, this review is limited to literature specific to the behaviors of reproductive coercion.

The objectives of this article are to review the current state of knowledge about reproductive coercion and about the specific behaviors of reproductive coercion, when examined separately, in an American context, to address the questions:

1. What is known about reproductive coercion in terms of prevalence, correlates, and specific manifestations and behaviors?
2. What strategies do women use to preserve their reproductive autonomy when experiencing reproductive coercion?
3. What interventions are effective to decrease reproductive coercion?

Method

Searches were conducted with the assistance of a research librarian in July 2015. Databases searched were PubMed, CINAHL, PsycINFO, and Embase, and search terms included "reproductive," "coercion," "sexual partners," "pregnancy," "contraception," "birth control," "reproductive behavior," and "sexual behavior." These broad key words were designed to encompass the specific behaviors of reproductive coercion. Inclusion criteria were research studies of humans, English language, and the 5 years before and after reproductive coercion was first named in the literature (2005–2015; Miller, Jordan, et al., 2010; Miller, Decker, et al., 2010; Moore et al., 2010) that covered male partner reproductive coercion or any of the specific behaviors of reproductive coercion. Abstracts and titles were reviewed for this inclusion criteria as well as exclusion criteria: only examining sexual coercion, IPV, or coercion by the government (e.g., forced sterilization). Articles that were potentially relevant were reviewed in full text for inclusion and exclusion criteria. Research on reproductive coercion that is set outside the United States tends to address coercion by family members or in-laws, or to uncover cultural etiologies such as preference for male children, so to maintain focus on the gendered phenomenon of male partner reproductive coercion, this review excluded articles that were set outside the United States. Following database searches, a hand search was conducted on the reference lists of all relevant articles.

The meta-analysis of observational studies in epidemiology (Stroup et al., 2000) and preferred reporting items for systematic reviews and meta-analyses (Liberati et al., 2009) protocols were used to guide the review. Data were extracted from each included article on the topics of reproductive coercion, birth control sabotage, pregnancy coercion, abortion coercion, intersection with IPV, intersection with unintended pregnancy, resistance strategies and interventions, and compiled chronologically to facilitate analysis of the knowledge development that has occurred in this emerging area of research. Most

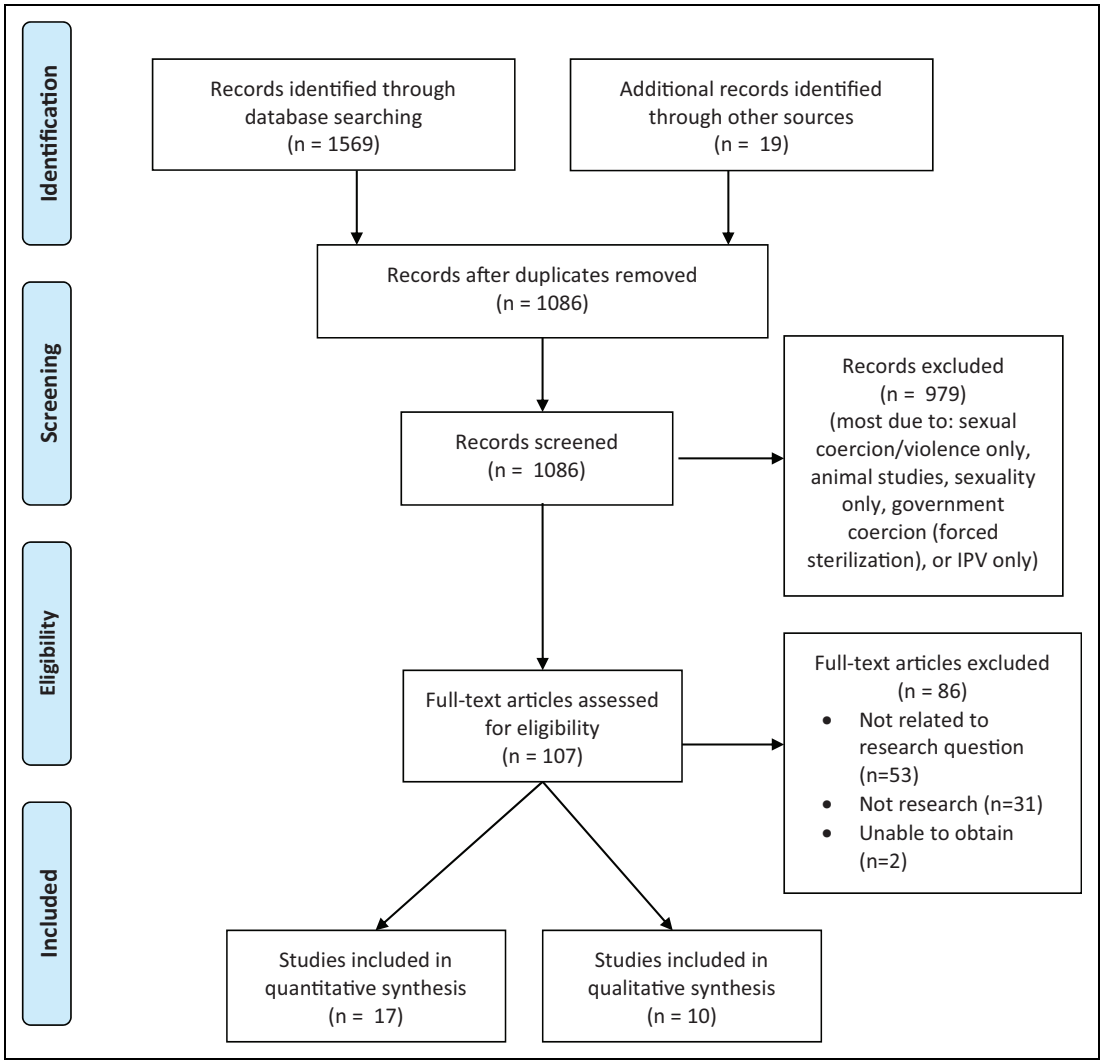

Figure 1. Results of search strategies on reproductive coercion.

studies reviewed for this article contained findings in more than one subtopic on which data were gathered.

Quality assessments of each research study were conducted. Quantitative descriptive studies were evaluated with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist (Vandenbroucke et al., 2007). Qualitative studies were evaluated with the *Journal of Obstetric, Gynecologic & Neonatal Nurses* (*JOGNN*) Qualitative Research assessment tool for qualitative studies (Cesario, Morin, & Santa-Donato, 2002). Experimental studies were evaluated with the Effective Public Health Practice Project (EPHPP, n.d.) quality assessment tool. And mixed methods studies were evaluated with the *Journal of Mixed Methods Research* (n.d.) review criteria. The STROBE checklist and *Journal of Mixed Methods* tool do not include scoring systems, so these tools were adapted for purposes of this review, and a scoring system was created that was comparable to the JOGNN instrument to enable comparison of studies. Quality was rated QI (75–100% of criteria were met), QII (50–74% of criteria were met), or QIII (less than 50% of criteria were met).

Results

Description of Studies

Search results are summarized and displayed in Figure 1. Initial searches of electronic databases yielded 1,546 citations, and the hand search of reference lists yielded an additional 19, for a total of 1,565 citations. After removing duplicates, screening titles and abstracts, and excluding articles based on exclusion criteria, 27 articles remained to be reviewed. Two articles reported on the same parent study (Borrero et al., 2015) focused on pregnancy intention but reported on findings about reproductive coercion; part way through their qualitative interviews, when reproductive coercion themes began to emerge, interview questions were added with that aim, and that became the focus of the second article by Nikolajski et al. (2015).

The research reviewed included 10 qualitative studies and 17 quantitative studies, of which 2 were mixed methods, 1 was a randomized control trial, and 14 were descriptive studies. Of the 27 studies, 13 contained findings regarding the general phenomenon of reproductive coercion (Borrero et al., 2015;

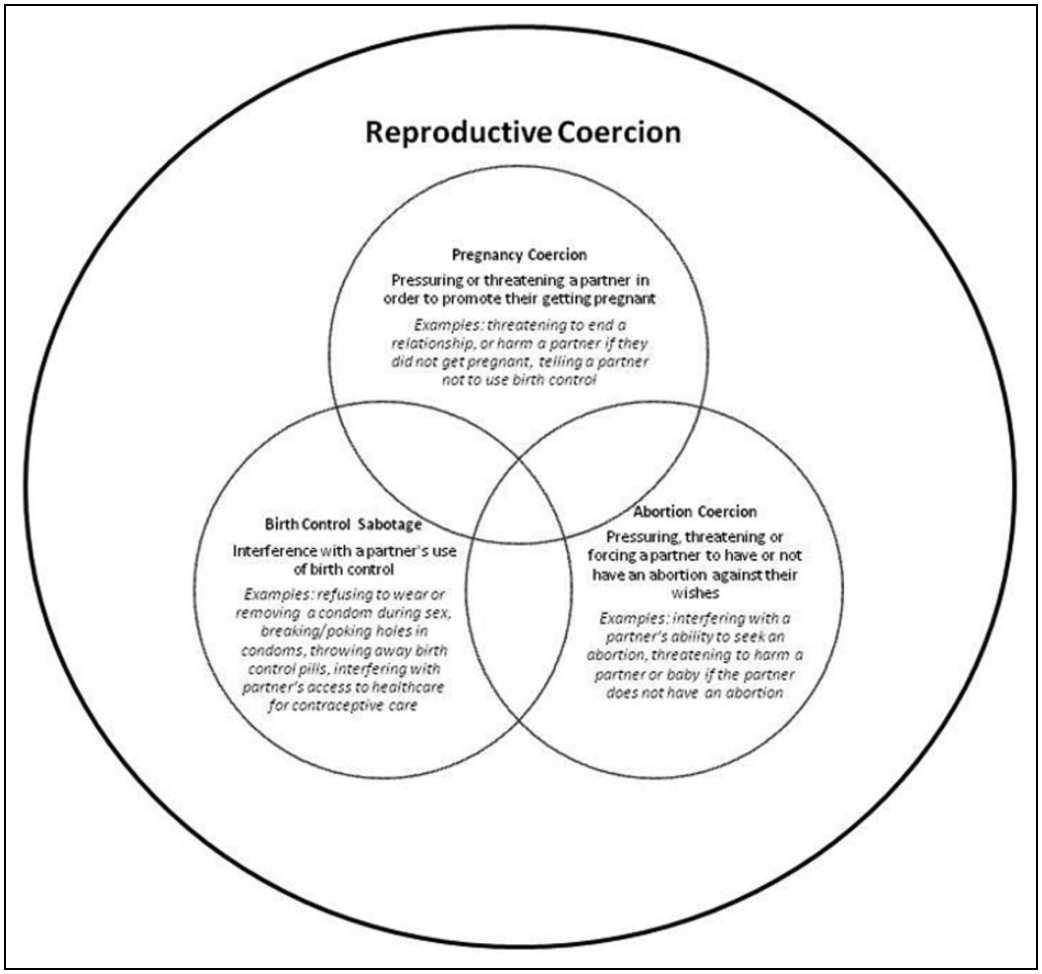

Figure 2. Reproductive coercion and subdomains examples.

Clark et al., 2014; Hathaway, Willis, Zimmer, & Silverman, 2005; Kazmerski et al., 2015; McCauley et al., 2014, 2015; Miller, Decker, et al., 2010; Miller et al., 2007, 2014; Moore et al., 2010; Nikolajski et al., 2015; Sutherland, Fantasia, & Fontenot, 2015; Upadhyay et al., 2014), and 19 contained findings about a component of reproductive coercion—specifically birth control sabotage or pregnancy or abortion coercion (see Figure 2 for conceptual map of reproductive coercion with examples of behaviors for each subdomain; Borrero et al., 2015; Chibber, Biggs, Roberts, & Foster, 2014; Finer, Frohwirth, Dauphinee, Singh, & Moore, 2005; Foster, Gould, Taylor, & Weitz, 2012; Hathaway et al., 2005; Herrman, 2007; Miller, Decker, et al., 2010; Miller et al., 2007, 2011, 2012, 2014; Moore et al., 2010; Nikolajski et al., 2015; Patel, Laz, & Berenson, 2015; Silverman et al., 2010, 2011; Sutherland et al., 2015; Teitelman, Tennille, Bohinski, Jemmott, & Jemmott, 2011). Additionally, 11 studies contained findings related to the intersection of IPV and reproductive coercion (Clark et al., 2014; Dick et al., 2014; Gee, Mitra, Wan, Chavkin, & Long, 2009; Kazmerski et al., 2015; McCauley et al., 2014; Miller, Decker, et al., 2010; Miller et al., 2011, 2014; Silverman et al., 2010, 2011; Sutherland et al., 2015), 3 contained findings related to reproductive coercion and unintended pregnancy (Miller, Decker, et al., 2010; Miller et al., 2014; Sutherland et al., 2015), 6 contained findings related to strategies women use to resist reproductive coercion (Miller et al., 2007; Moore et al., 2010; Nikolajski et al., 2015; Sutherland et al., 2015; Teitelman et al., 2011; Thiel de Bocanegra, Rostovtseva, Khera, & Godhwani, 2010), and 3 contained findings on interventions for reproductive coercion (Burton & Carlyle, 2015; Clark et al., 2014; Miller et al., 2011). These results are summarized below, grouped according to the findings, with additional information reported in Tables 1–4.

Measurement Instruments

Several studies in this review used or adapted a set of 10 questions to measure reproductive coercion that were originally created by Miller et al. in 2010 (Miller, Decker, et al., 2010) based on earlier qualitative work (Miller et al., 2007). These questions, or adaptations of them, were used in a total of nine studies (Clark et al., 2014; Dick et al., 2014; Kazmerski et al., 2015; McCauley et al., 2014, 2015; Miller, Decker, et al., 2010; Miller et al., 2011, 2014; Sutherland et al., 2015). Only four of these studies reported Cronbach's α coefficients, and these ranged from .66 to .76, indicating moderate internal reliability

Table 1. Sample, Quality, and Prevalence of Types of Reproductive Coercion in Quantitative Studies.

Author (Year)	Sample, Setting, and Design	Race/Ethnicity and SES of Sample (If Noted)	Subgroup(s)	Prevalence				Quality Rating
				Reproductive Coercion	Pregnancy Coercion	Birth Control Sabotage	Abortion Coercion	
Finer, Frohwirth, Dauphinee, Singh, and Moore (2005)	1,209 Abortion patients 11 locations in the United States Mixed methods	31% Black 19% Hispanic remainder not specified SES: 60% low income	Partner wanting abortion was most important reason for abortion				0.5%	QI
Gee, Mitra, Wan, Chavkin, and Long (2009)	1,463 Women over age 18 Philadelphia, Pennsylvania Cross-sectional survey	57% White 23% Black 15% Other [Note: These data were not reported but was calculated from other data provided in the study]	Partner makes it difficult to use birth control (past 4 months): No IPV Past year IPV Did not use birth control because partner did not want to/wanted participant to get pregnant: No IPV Past year IPV			4.6% 13.5% 6.1% 16.7%		QII
Miller et al. (2010)	1,278 Women ages 16–29 seeking care in five family planning clinics California Cross-sectional survey	29.9% Hispanic 28.1% Black 22.4% White 12.5% Asian/Other 7.1% multiracial	Overall Hispanic Black White Asian/Other Multiracial		19.1% 16.8% 25.9% 13.3% 15.0% 27.5%	15% 11.5% 27.0% 7.3% 9.4% 15.4%		QI
Silverman et al. (2010)	1,318 Men ages 18–35 who had ever had sex Boston, MA Cross-sectional survey	48.5% Black 31.5% Hispanic 11.9% Other 8.1% White	Partner sought to compel abortion Partner sought to prevent abortion				4.1% 8%	QII
Miller et al. (2011)	906 Women ages 16–29 years Northern California Cluster randomized control trial	29.7% Hispanic 27.9% Black 22.9% White 12.9% Asian/Pacific Islander/Other 6.7% multiracial	Past 3 months at baseline: Intervention group Control group		9.3%, 7.9%	10.7% 7.0%		QI
Silverman et al. (2011)	356 Women aged 14–20 who had ever had sex Boston, Massachusetts Cross-sectional survey	40% White 34% Hispanic 20% Black 6% Other	Coerced into sex without a condom			20%		QI

(continued)

Table 1. (continued)

Author (Year)	Sample, Setting, and Design	Race/Ethnicity and SES of Sample (If Noted)	Subgroup(s)	Prevalence				Quality Rating
				Reproductive Coercion	Pregnancy Coercion	Birth Control Sabotage	Abortion Coercion	
Foster, Gould, Taylor, and Weitz (2012)	5,109 Women who sought abortions at one clinic United States Cross-sectional survey	56.1% White/Hispanic 38.8% Black 2.6% mixed/Other 1.8% missing 0.7% Asian	Pushed to have an abortion against their wishes				2%	QI
Chibber, Biggs, Roberts, and Foster (2014)	954 Pregnant women, 15 years or older, meeting criteria for the parent study (the Turnaway study) Multiple locations in the United States Mixed methods	37% White 29% Black 21% Hispanic 13% Other SES: at least 68% low income	Coerced to have abortion by partner				0.1%	QI
Clark, Allen, Goyal, Raker, and Gottlieb (2014)	641 Women ages 18–44, literate Urban location Cross-sectional survey	41.8% Latina 27% White 16.4% Black 8.7% Other 6.1% >1 race SES: 79% low income	Overall Latina[a] Black White Other >1 race	16% 5.7% 3.2% 3% 1.7% 1.7%				QI
Dick et al. (2014)	1,008 Youth ages 14–18 (RC results from 769 female participants only) Northern California Cross-sectional survey	36.5% Hispanic 27.1% Black 15.5% Asian 10.7% Multiracial 5.2% White 5.1% Native American/Pacific Islander	No cyber dating abuse Low cyber dating abuse High cyber dating abuse	4% 11.6% 21.6%				QI
Kazmerski et al. (2015)	1,262 Women ages 16–29 years seeking care in five family planning clinics Northern California Cross-sectional survey	30% Hispanic 27.9% Black 22.6% White 8.5% multiracial/other 5.7% Native American/Pacific Islander/Alaskan Native/Native Hawaiian 5.4% Asian	Past 3 months	13%				QI
McCauley et al. (2014)	564 Girls ages 14–19 seeking services at school-based health clinics, who completed questions on sexual minority status Northern California Cross-sectional survey	36.9% Hispanic 29.1% Black 15.6% Asian 8.9% multiracial 5% White 4.6% American Indian/Pacific Islander	Overall Sexual minority group females	12.4% 12.3%				QI

(continued)

Table 1. (continued)

Author (Year)	Sample, Setting, and Design	Race/Ethnicity and SES of Sample (If Noted)	Subgroup(s)	Prevalence				Quality Rating
				Reproductive Coercion	Pregnancy Coercion	Birth Control Sabotage	Abortion Coercion	
Miller et al. (2014)	3,539 Women aged 16–29 seeking care in 24 rural and urban family planning clinics Pennsylvania Cross-sectional survey	80.3% White 13.3% Black 2.9% multiracial 1.6% Hispanic 1.6% Asian/Other	Past 3 months	5%	1.7%			QI
			Past 3 months by race:					
			White	3.7%				
			Black	12.5%				
			Multiracial	5.9%				
			Hispanic	8.8%				
			Asian/Other	7.3%				
			Past 3 months:					
			Partner removing condom during sex			1.6%		
			Poking holes in condoms			0.2%		
			Breaking condoms			0.4%		
			Preventing access to birth control			0.4%		
			Coerced into sex without a condom			0.5%		
McCauley et al. (2015)	3,455 Women aged 16–29 years seeking care at family planning clinics, whose partners were equally men and women or mostly or exclusively men Western Pennsylvania Cross-sectional survey	80.6% White 13.1% Black 2.9% Multiracial 1.6% Other 1.5% Hispanic/Latina	Past 3 months	5.1%				QI
			Women who have sex with women and men	9.3%				
			Women who have sex with men	4.6%				
Patel, Laz, and Berenson (2015)	1,388 Nonpregnant women aged 16–40 Southeast Texas Cross-sectional survey	21.3% White 35.2% Black 22.9% Hispanic Remainder not specified SES: 80% low income			1%			QI
Sutherland, Fantasia, and Fontenot (2015)	972 Women aged 18–25, enrolled at a large public university; sexually active Northeast United States Cross-sectional survey	75.3% White 10.3% Hispanic 9.6% Asian 4.8% Black		8%	6.8%	3.9%		QI
			White	6.6%				
			Hispanic	16.7%				
			Asian	6.7%				
			Black	15.6%				

Note. Quality ratings for cross-sectional and mixed-methods studies are as follows (Cesario, Morin, & Santa-Donato, 2002): QI: Total score of 22.5–30 indicates that 75–100% of the total criteria were met, QII: Total score of 15–22.4 indicates that 50–74% of the total criteria were met, and QIII: Total score of less than 15 indicates that less than 50% of the total criteria were met. Quality ratings for randomized control studies are as follows (Effective Public Health Practice Project, n.d.): (1) STRONG (no WEAK ratings), (2) MODERATE (one WEAK rating), (3) WEAK (two or more WEAK ratings). SES = socioeconomic status; RC = reproductive coercion; IPV = intimate partner violence.

[a]Racial and ethnic prevalence was calculated from data provided.

Table 2. Areas of Qualitative Findings Related to Reproductive Coercion.

Author (Year)	Sample and Setting	Race/Ethnicity of Sample	Areas of Qualitative Findings Related to Reproductive Coercion							Quality Rating
			Reproductive Coercion	Pregnancy Coercion	Birth Control Sabotage	Abortion Coercion	Unintended Pregnancy	Resistance Strategies	Clinical Interventions	
Hathaway, Willis, Zimmer, and Silverman (2005)	38 Women ages 23–62 participating in a hospital-based IPV program Massachusetts	47% White 42% Latina	X	X	X	X				QII
Herrman (2007)	12 Teen mothers with a repeat pregnancy ages 16–19 Not listed	69% Black 6% Hispanic 25% not described		X		X				QII
Miller et al. (2007)	53 Sexually active adolescent females, ages 15–20 with history of IPV United States	37.7% Latina 37.7% White 20.8% Black 1.9% Asian/Pacific Islander 1.9% multiple/Other	X	X	X	X		X		QI
Moore, Frohwirth, and Miller (2010)	71 Women ages 18–49 with history of IPV Midwestern and Eastern United States	53% Black 33% White 11% Hispanic 1% American Indian/ Alaska Native 1% Other	X	X	X	X		X		QI
Thiel de Bocanegra, Rostovtseva, Khera, and Godhwani (2010)	53 Women age 18 and older, living in an IPV shelter San Francisco, California	45% Hispanic 26% White 17% Asian 9% Black 2% Native American		X	X	X		X		QI
Teitelman, Tennille, Bohinski, Jemmott, and Jemmott (2011)	64 Adolescent girls ages 14–17, sexually active Northeastern United States	100% Black		X	X			X		QI
Miller et al. (2012)	20 Women ages 18–34, with gang involvement Los Angeles, California	100% Latina		X	X		X			QI
Borrero et al. (2015)	66 Low-income women, ages 18–45 Western Pennsylvania	55% White 45% Black	X		X		X			QI
Burton and Carlyle (2015)	47 providers Virginia	53.2% White 31.9% Black 6.4% Hispanic/Latino 4.3% Other 2.1% Multiracial 2.1% Asian							X	QI
Nikolajski et al. (2015)	66 Low-income women, ages 18–45 Western Pennsylvania	55% White 45% Black	X	X	X	X		X		QI

Note. Quality ratings for qualitative studies are as follows (Cesario et al., 2002): QI: Total score of 22.5–30 indicates that 75–100% of the total criteria were met, QII: Total score of 15–22.4 indicates that 50–74% of the total criteria were met, QIII: Total score of less than 15 indicates that less than 50% of the total criteria were met. IPV = intimate partner violence.

Table 3. Quantitative Results on the Intersection of Reproductive Coercion and Intimate Partner Violence (IPV).

Author (Year)	Findings on Intersection With IPV	
Gee et al. (2009)	Women with history of IPV more likely to report no birth control use because of partner unwillingness or pregnancy pressure	16.7% with IPV versus 6.1% without IPV
	Women with history IPV more likely to agree with: "my partner makes it difficult to use birth control"	13.5% with IPV versus 4.6% without IPV
	Increased odds of IPV for women reporting partner unwillingness to use birth control or pregnancy pressure	*OR* 2.34, 95% CI [1.41, 3.89]
	Increased odds of IPV for women agreeing with the statement: "my partner makes it difficult for me to use birth control"	*OR* 2.78, 95% CI [1.68, 4.63]
Miller et al. (2010)	RC prevalence without IPV	7%
	RC prevalence with IPV	18.5%
	Women reporting birth control sabotage who also reported IPV	79%
	Women reporting pregnancy coercion who also reported IPV	74%
Silverman et al. (2010)	IPV was associated with both:	
	abortion pressure	ARR 2.41, 95% CI [1.38, 4.20]
	and men preventing abortion	ARR 2.60, 95% CI [1.76, 3.87]
Miller et al. (2011)	Among women with recent IPV (past 3 months) exposure to intervention had a 71% reduction in the odds of pregnancy coercion compared to control group	AOR 0.29, 95% CI [0.09, 0.91]
		AOR 1.63, 95% CI [0.80, 3.34]
	Among women *without* recent IPV (past 3 months) exposure to the intervention had no significant impact on pregnancy coercion	
Silverman et al. (2011)	Women who experienced IPV had significantly higher odds of having coerced sex without a condom than women without IPV	AOR 4.9, 95% CI [2.6, 8.9]
Clark et al. (2014)	Of women who experienced RC percent who also experienced IPV in the same relationship	32%, (95% CI [23, 41]
Dick et al. (2014)	Exposure to cyber dating abuse (CDA) increased odds of reporting RC:	
	Low exposure to CDA	AOR 3.0, 95% CI [1.4, 6.2]
	Higher exposure to CDA	AOR 5.7, 95% CI [2.8, 11.6]
Kazmerski et al. (2015)	Reported both RC and IPV	4.4%
	Reported RC only	9%
	Recent RC (past 3 months) in the absence of IPV increased odds of using emergency contraception:	
	once	AOR 2.6, 95% CI [1.2, 5.8]
	2 or more times	AOR 2.2, 95% CI [1.7, 2.7]
	Recent IPV in the absence of RC increased odds of seeking pregnancy testing:	
	one pregnancy test	AOR 1.4, 95% CI [1.1, 1.7]
	two or more pregnancy tests	AOR 2.2, 95% CI [1.4, 3.2]
	using emergency contraception once	AOR 1.6, 95% CI [1.3, 2.0]
	Combined effect of both recent IPV and RC increased odds of:	
	seeking two or more pregnancy tests	AOR 3.6, 95% CI [3.3, 3.8]
	using emergency contraception 2 or more times	AOR 2.4, 95% CI [1.5, 4.1]
	seeking STI testing once	AOR 2.5, 95% CI [1.6, 3.9]
	seeking STI testing 2 or more times	AOR 2.9, 95% CI [1.02, 8.5]
McCauley et al. (2014)	Prevalence of RC:	
	in overall sample	12.4%
	of those with recent IPV	24%
	Recent IPV increased odds of RC	AOR, 3.32, 95% CI [1.87, 5.92]
Miller et al. (2014)	Increased odds of past-year unintended pregnancy in women with IPV and RC	AOR 2.00, 95% [CI 1.15, 3.48]
Sutherland et al. (2015)	Of women who reported RC, percent who also reported IPV	57.9%, 95% CI [2.74, 7.29] [*sic*]
	Of women who reported birth control sabotage, percent who also reported IPV	67.9%, 95% CI [2.75, 13.93] [*sic*]
	Of women who reported pregnancy coercion, percent who also reported IPV	59.1%, 95% CI [2.73, 7.75] [*sic*]

Note. SES = socioeconomic status; RC = reproductive coercion; AOR = adjusted odds ratio; ARR = adjusted risk ratio; CI = confidence interval; STI = sexually transmitted infection.

Table 4. Quantitative Results on the Intersection of Reproductive Coercion and Unintended Pregnancy.

Author (Year)	Findings on Intersection With Unintended Pregnancy	
Miller (2010)	RC increased the odds of unintended pregnancy	AOR 1.60, 95% CI [1.22, 2.09]
	RC increased the odds of unintended pregnancy among those exposed to IPV	AOR 2.02, 95% CI [1.45, 2.82]
	RC *did not* increase the odds of unintended pregnancy among those *not* exposed to IPV	AOR 1.00, 95% CI [0.62, 1.63]
	Interaction effect of IPV and RC increased the odds of unintended pregnancy	
	Pregnancy coercion increased the odds of with unintended pregnancy	AOR 1.99, 95% CI [1.11, 3.58]
	Pregnancy coercion increased the odds of unintended pregnancy among those reporting IPV	AOR 1.83, 95% CI [1.36, 2.46] AOR 2.35, 95% CI [1.63, 3.38]
	Pregnancy coercion *did not* increase the odds of unintended pregnancy for those not exposed to IPV	AOR 1.03, 95% CI [0.59, 1.81]
	Interaction effect of IPV and pregnancy coercion increased the odds of unintended pregnancy	AOR 2.22, 95% CI [1.14, 4.32]
	Birth control sabotage increased the odds of unintended pregnancy	
	Birth control sabotage increased the odds of unintended pregnancy among those exposed to IPV	AOR 1.58, 95% CI [1.14, 2.20] AOR 1.77, 95% CI [1.21, 2.59]
	Birth control sabotage *did not* increase the odds of unintended pregnancy among those exposed to IPV	AOR 1.11, 95% CI [0.56, 2.19]
	Interaction effect of IPV and birth control sabotage *did not* increase the odds of unintended pregnancy	AOR 1.60, 95% CI [0.73, 3.48]
Miller et al. (2014)	Among women exposed to recent (past 3 months) RC, past year unintended pregnancy prevalence	20.9%
	Increased odds of past year unintended pregnancy among those experiencing RC	AOR 1.79, 95% CI [1.06, 2.03]
	Increased odds of past year unintended pregnancy among those experiencing RC and IPV	AOR 2.00, 95% CI [1.15, 3.48]
Sutherland et al. (2015)	Women who experienced RC were more likely to report a history of unintended pregnancy	19.7%, $p < .001$ [Note: comparison proportion not provided]

Note. SES = socioeconomic status; IPV = intimate partner violence; RC = reproductive coercion; AOR = adjusted odds ratio; ARR = adjusted risk ratio.

(Dick et al., 2014; Kazmerski et al., 2015; Miller et al., 2014; Sutherland et al., 2015). The Miller et al. items have been used in racially and ethnically diverse populations, with only three studies testing it in a majority White population (McCauley et al., 2015; Miller et al., 2014; Sutherland et al., 2015). To date, detailed psychometric analysis (validity testing and/or factor analysis) on the Miller et al. items has not been published.

In addition to the Miller and colleagues (2010) reproductive coercion measurement items, one other relevant instrument was discovered in the literature search for this review, which has recently been developed for measuring reproductive autonomy (Upadhyay et al., 2014). The article describing the validation of this instrument does not present prevalence data about reproductive coercion and so it is not included in tables, but results about strength of association of various characteristics with reproductive coercion are presented in the results section.

The Reproductive Autonomy Scale measures freedom from reproductive coercion as a subdomain of reproductive autonomy in a 14-item instrument that includes 5 items specific to reproductive coercion that are reverse-scored relative to the Miller and colleagues items. This instrument was validated in English and Spanish, in 19 suburban and urban sites across the United States, on a sample of 1,892 adolescent and adult women. The sample was ethnically and racially diverse, with 38% having a high school education or less and 86% single women, but generalizability was limited by sampling exclusively from family planning and abortion facilities, which may also bias results in favor of those already motivated enough to reach health-care providers. The final Cronbach's α coefficient on the full instrument was .78, indicating moderate internal reliability, but the coefficient for the coercion-specific items was .82, indicating strong internal reliability. Construct validity was assessed through association with contraceptive use among women seeking to avoid pregnancy, which was associated in the expected direction on two of the three subscales (including the coercion subscale). One limitation of the instrument is that it was only tested on women who were seeking to avoid pregnancy; there is no validation data for women who are seeking pregnancy. Although further psychometric testing is indicated for both instruments, both the reproductive coercion and reproductive autonomy measures are promising and reliable instruments for researchers.

Reproductive Coercion—General

Thirteen of the reviewed studies contained findings regarding the general phenomenon of reproductive coercion. Three of the studies aimed to examine related phenomena (IPV, sexual minority status, and pregnancy intentionality) and had incidental findings related to reproductive coercion (Borrero et al., 2015; Hathaway et al., 2005; McCauley et al., 2014), while

aims in the remaining studies were focused on a reproductive coercion research question.

Summary of findings. The quantitative studies with findings in this area report prevalence of reproductive coercion ranging from 5 to 13% in a sample of 16- to 29-year-olds attending family planning clinics (Kazmerski et al., 2015; Miller, Decker, et al., 2010). Some studies reported on factors that were associated with reproductive coercion. Three studies found it to be significantly more common among women with less education (2014; Miller, Decker, et al., 2010; Miller et al., 2014; Upadhyay et al., 2014) and significantly less associated with younger age (Upadhyay et al., 2014). Five studies found reproductive coercion to be more prevalent among non-Hispanic Black, multiracial, or Latina women or women born in the United States when compared to those born elsewhere (Clark et al., 2014; Miller, Decker, et al., 2010; Miller et al., 2014; Sutherland et al., 2015; Upadhyay et al., 2014), and one found the highest odds of experiencing reproductive coercion among multiracial women (adjusted odds ratio [AOR] 2.5, 95% confidence interval [CI] = [1.04, 5.99]; Clark et al., 2014). Two studies found being single or in a dating relationship were significantly associated with experiencing reproductive coercion (Clark et al., 2014; Miller et al., 2014), while one found no significant difference based on marital status (Upadhyay et al., 2014). One study found lack of health insurance (a marker for socioeconomic status) to be significantly associated (Clark et al., 2014). One study found that women who have sex with both women and men were 75% more likely to have experienced recent (past 3 months) reproductive coercion from a male partner (McCauley et al., 2015). One study of college students found reproductive coercion significantly associated with living with a partner (as opposed to living in a dormitory or with parents; Sutherland et al., 2015). One study's results had clear and direct implications for health-care providers: Women who experienced reproductive coercion were significantly more likely to have visited a health-care provider for one or multiple pregnancy tests, sexually transmitted infection tests, or for emergency contraception (Kazmerski et al., 2015). Another study reported a stronger association between reproductive coercion and seeking services at abortion facilities as compared to family planning facilities, although this difference was not significant (Upadhyay et al., 2014).

Qualitative findings in this category described the experience of partners limiting women's ability to choose whether or not to have children (Hathaway et al., 2005), having a partner who actively tried to impregnate them, age differentials with older male partners, and illuminating examples of reproductive coercion (Miller et al., 2007).

Birth Control Sabotage

Thirteen studies reported findings relating to birth control sabotage. Eight studies specifically aimed to study reproductive coercion and reported findings on birth control sabotage as a component of this (Hathaway et al., 2005; Miller, Decker, et al., 2010; Miller et al., 2007, 2011, 2014; Moore et al., 2010; Nikolajski et al., 2015; Sutherland et al., 2015). Two studies specifically aimed to study birth control sabotage (Teitelman et al., 2011; Thiel de Bocanegra et al., 2010). The remaining two studies reported findings on birth control sabotage that were incidental to the specified aims of the study (Borrero et al., 2015; Miller et al., 2012; Silverman et al., 2011).

Summary of findings. A wide range of birth control sabotage was examined in quantitative studies. Miller et al. (2010) reported a prevalence of 15% for this general finding, and Miller et al. (2011) reported a range of 7% (control group) to 11% (intervention group) for recent birth control sabotage (past 3 months). Miller et al. (2014) found very low prevalence (less than 1% each) of putting holes in a condom, breaking condoms on purpose, and restricting access to birth control or to family planning clinics, although these data are for past 3 months prevalence only. Prevalence of being made to have sex without a condom ranged from 0.5% (past 3 months) to 20% (Miller et al., 2014; Silverman et al., 2011). Prevalence of having a partner remove a condom during sex ranged from 1% to 2% (Miller et al., 2014; Sutherland et al., 2015). Birth control sabotage was found to be most prevalent among non-Hispanic Black women (27%) and also more prevalent among women born in the United States when compared to those born elsewhere (Miller, Decker, et al., 2010).

Qualitative studies described findings regarding specific methods of birth control sabotage: Women were prevented from obtaining birth control or getting refills on oral contraceptives (Hathaway et al., 2005; Miller et al., 2007; Thiel de Bocanegra et al., 2010); reported having sex without a condom despite asking their partners to wear one (Nikolajski et al., 2015; Teitelman et al., 2011); had partners lie about being infertile (Hathaway et al., 2005); tear, poke, or bite holes in condoms (Hathaway et al., 2005; Miller et al., 2007; Moore et al., 2010); fail to withdraw when using the withdrawal method for contraception (Moore et al., 2010); throw contraceptive methods in the trash (Borrero et al., 2015; Miller et al., 2007; Nikolajski et al., 2015); scare them with exaggerated risks of oral contraceptives (Moore et al., 2010); refuse to wear condoms (Borrero et al., 2015; Hathaway et al., 2005; Nikolajski et al., 2015; Moore et al., 2010); tell them they were wearing a condom when they were not (Nikolajski et al., 2015); not tell them if a condom fell off or broke during sex (Moore et al., 2010); and remove condoms during sex without telling them (Miller et al., 2007; Moore et al., 2010; Nikolajski et al., 2015; Teitelman et al., 2011).

Pregnancy Coercion

Thirteen studies reported findings on pregnancy coercion, which for this analysis is considered coercion or pressure to get pregnant or not to get pregnant (coercion or pressure to terminate or not to terminate a pregnancy will be considered

separately). The behavior of telling a partner not to use birth control could be considered birth control sabotage or pregnancy coercion; for this review, it is treated as pregnancy coercion (which is also how the measurement instrument classifies it; Miller, Decker, et al., 2010). Eight studies specifically aimed to study reproductive coercion and reported findings on pregnancy coercion as a component of this (Hathaway et al., 2005; Miller, Decker, et al., 2010; Miller et al., 2007, 2011, 2014; Moore et al., 2010; Nikolajski et al., 2015; Sutherland et al., 2015). No studies specifically aimed to study pregnancy coercion, and five studies aimed to study aspects of intentionality in pregnancy (Herrman, 2007; Miller, Decker, et al., 2010; Miller et al., 2012, 2014; Patel et al., 2015). Some studies fell into multiple categories (Miller, Decker, et al., 2010; Miller et al., 2014).

Summary of findings. Three quantitative studies reported prevalence rates for the broad category of pregnancy coercion, ranging from 1% to 19% (Miller, Decker, et al., 2010; Patel et al., 2015). Other studies reported prevalence rates of specific behaviors related to pregnancy coercion: Prevalence of recent (past 3 months) experience of partner telling her not to use contraception was 3% (Miller et al., 2014), and another study reported a prevalence of 6% (Sutherland et al., 2015). Prevalence of recent (past 3 months) experiencing a partner forcing or pressuring her to become pregnant was 2%, and less than 1% reported a partner telling the woman he would leave her if she didn't get pregnant, he would have a baby with someone else if she didn't get pregnant, and hurting her physically because she did not agree to get pregnant (Miller et al., 2014). Only one study examined the relationship between immigrant status and pregnancy coercion and found that American-born women were more likely to experience pregnancy coercion than foreign born (Miller, Decker, et al., 2010). One study reported that nonpregnant women who were ambivalent about pregnancy were more than twice as likely to have experienced pregnancy coercion (Patel et al., 2015). Pregnancy coercion was found to be most prevalent among multiracial women (27.5%) and non-Hispanic Black women (25.9%) and among women born in the United States as compared to those born elsewhere (Miller, Decker, et al., 2010).

Qualitative findings described specific tactics of pregnancy coercion, which included verbal threats (a partner telling a woman he was going to impregnate her; Moore et al., 2010), coercing or pressuring sex (Hathaway et al., 2005; Herrman, 2007), refusing to use a male-controlled method of contraception (Hathaway et al., 2005; Herrman, 2007; Miller et al., 2007; Moore et al., 2010; Thiel de Bocanegra et al., 2010), accusations of infidelity if condoms were requested (Moore et al., 2010), refusing to allow or pressure not to use a woman-controlled method of contraception (Hathaway et al., 2005; Herrman, 2007; Miller et al., 2007; Moore et al., 2010; Nikolajski et al., 2015), monitoring of menstrual cycles and gynecology appointments (Nikolajski et al., 2015), purchasing of ovulation and pregnancy testing kits (Nikolajski et al., 2015), pressure to undergo tubal ligation (female sterilization; Hathaway et al., 2005), and pressure not to undergo tubal ligation (Hathaway et al., 2005).

Several qualitative studies offered previously unreported information on pregnancy coercion. One study identified pressure specifically to produce male children (Thiel de Bocanegra et al., 2010). One study offered the perspective of a woman who experienced pregnancy pressure by her partner, which she interpreted as his commitment to the relationship (Teitelman et al., 2011). Others offered the perspective of participants that male partners who pressured them to get pregnant did so out of a desire for a "nuclear family" or to force them to stay in the relationship and ensure a permanent connection (Miller et al., 2012; Moore et al., 2010). Two studies identified connections between pregnancy coercion and male incarceration or housing and employment instability, reflecting that men facing incarceration would want to have a strong connection to someone on the outside or would want to be assured of their fidelity (Moore et al., 2010; Nikolajski et al., 2015). Interestingly, this connection was limited to African American participants; White participants tended to connect pregnancy coercion to love and relationship factors (Nikolajski et al., 2015). These findings merit further exploration with qualitative as well as quantitative research.

Abortion Coercion

Ten studies reported findings on abortion coercion, which for this analysis is considered coercion or pressure to control the outcome of a pregnancy by termination or coercion or pressure not to terminate. Four of the studies specifically aimed to study reproductive coercion and reported findings on abortion coercion as a component of this (Hathaway et al., 2005; Miller et al., 2007; Moore et al., 2010; Nikolajski et al., 2015). Four studies aimed to study abortion or reasons for seeking abortion (Chibber et al., 2014; Finer et al., 2005; Foster et al., 2012; Silverman et al., 2010). In the remaining studies, findings on abortion coercion were incidentally reported.

Summary of findings. Findings in this area centered on how partners influenced the decision to terminate a pregnancy. Some studies found large numbers of abortions being influenced by male partners not wanting a child or other noncoercive partner-related factors (i.e., partner being the wrong person to have a baby with, in some cases due to abuse, partner being unwilling or unable to support the baby, or new or unstable relationship with partner; Chibber et al., 2014; Finer et al., 2005; Silverman et al., 2010). Few quantitative studies specifically identified partner coercion or pressure in the decision to terminate; those who did reported low prevalence ranging from 0.1% to 4% (Chibber et al., 2014; Finer et al., 2005; Foster et al., 2012; Silverman et al., 2010). One study also reported findings about male partners pressuring women not to terminate or preventing them from seeking abortion services, and this was reported at 8% prevalence (Silverman et al., 2010). Of note, the highest prevalence values in each of these categories come from an exclusively male sample (Silverman et al., 2010). These

numbers are self-report of abortion pressure by the men themselves; the potential for social desirability bias here indicates these actual numbers may be even higher. One study reported that when violence was present in the lives of women seeking abortion, it was not often used to coerce abortions or pregnancy continuation, but more often was part of the woman's reason for seeking an abortion in an effort to end the relationship or to prevent a continuing connection to an abusive partner (Chibber et al., 2014).

Qualitative findings described male behaviors of pressuring women to have abortions (Hathaway et al., 2005; Miller et al., 2007; Moore et al., 2010; Nikolajski et al., 2015; Thiel de Bocanegra et al., 2010) as well as preventing women from having abortions or accessing abortion services (Hathaway et al., 2005; Herrman, 2007; Moore et al., 2010; Nikolajski et al., 2015; Thiel de Bocanegra et al., 2010). Two studies described women whose partners threatened to harm or kill them if they had abortions (Moore et al., 2010; Nikolajski et al., 2015) and one described women whose partners threatened to use violence to cause an abortion (Moore et al., 2010). Specific behaviors related to abortion coercion included excessive badgering and making promises to provide financial support for the baby when women wanted to terminate, making a woman eat on the day of her abortion so she would be ineligible for the procedure, being disruptive at the abortion clinic to get the woman to leave, and refusing to provide money for an abortion or for transportation to the abortion clinic (Moore et al., 2010).

Intersection With IPV

Eleven studies reported findings on the intersection of reproductive coercion and IPV. Six studies specifically aimed to study reproductive coercion or reproductive coercion and IPV (Clark et al., 2014; Kazmerski et al., 2015; Miller, Decker, et al., 2010; Miller et al., 2011, 2014; Sutherland et al., 2015). The remaining studies all had aims relating to IPV (Dick et al., 2014; Gee et al., 2009; McCauley et al., 2014; Silverman et al., 2010, 2011).

Summary of findings. All studies with findings in this area found associations between reporting reproductive coercion and reporting IPV. Synthesizing the findings is challenging, as some studies examined reproductive coercion as a risk factor for IPV and others reversed the directionality of the relationship. Two studies reported on the prevalence of reproductive coercion without concomitant IPV, with a prevalence of 7–9% (compared to 24% [McCauley et al., 2014] with concomitant IPV), and one hypothesized that there might be a temporal relationship, with reproductive coercion preceding IPV in an abusive relationship (Kazmerski et al., 2015; Miller, Decker, et al., 2010). Six of the 11 studies found a higher prevalence or higher risk of reproductive coercion among women who had experienced IPV compared to participants who had not experienced IPV (Dick et al., 2014; Gee et al., 2009; McCauley et al., 2014; Miller, Decker, et al., 2010; Silverman et al., 2010, 2011), and one study found a higher prevalence of women experiencing reproductive coercion without concomitant IPV (9%) than with IPV (4.4%), although this may have been due to the study asking only about episodes of each in the 3 months prior to reproductive health-care clinic visits (Kazmerski et al., 2015). This relationship was significant in both directions; two studies also found that women who experienced reproductive coercion had increased odds or prevalence of experiencing IPV (Gee et al., 2009; Miller, Decker, et al., 2010). Two studies found that large percentages of women who had experienced reproductive coercion had also experienced IPV (Clark et al., 2014; Sutherland et al., 2015). When reproductive coercion occurred without IPV, it was more likely to be reported by Black women (Clark et al., 2014). One study found a dose–response relationship, with greater frequency of IPV (in this case cyber-dating abuse) increasing odds of experiencing reproductive coercion (Dick et al., 2014). A synergistic effect of reproductive coercion and IPV was found, with one study noting that while reproductive coercion and IPV separately increased the odds of seeking various reproductive health services, the combined effect of both reproductive coercion and IPV further increased the odds (Kazmerski et al., 2015), and the one intervention study in this review finding a greater impact in reduction of pregnancy coercion among women who had experienced IPV than among those who had not (Miller et al., 2011). Miller et al. (2014) reported on the intersection between reproductive coercion and IPV in relation to the additional intersection with unintended pregnancy (see unintended pregnancy section for those results). IPV findings are further summarized in Table 3.

Intersection With Unintended Pregnancy

Five studies reported findings on the intersection between reproductive coercion and unintended pregnancy. Three of the studies specifically aimed to study either reproductive coercion or reproductive coercion and unintended pregnancy (Miller, Decker, et al., 2010; Miller et al., 2014; Sutherland et al., 2015). Two studies specifically aimed to study intentionality in pregnancy (Borrero et al., 2015; Miller et al., 2012).

Summary of findings. In general, studies with findings in this area reported more unintended pregnancies in women who had experienced reproductive coercion. Two of the three quantitative studies also found IPV to be a factor in this relationship (Miller, Decker, et al., 2010; Miller et al., 2014). Miller et al. (2010) found an association between reproductive coercion and its individual components with unintended pregnancy, although this association did not hold up among participants who did not also experience IPV, when compared to those who did. This same study found that pregnancy coercion increased the odds of unintended pregnancy (*OR*: 1.83), although this impact was twice as strong when comparing IPV to no IPV groups (*OR*: 2.22). Birth control sabotage increased the odds of unintended pregnancy by 58% in the entire sample, and 77% among women experiencing IPV. This moderation effect was not significant. Miller et al. (2014) found the odds of

unintended pregnancy increased among women with a recent history (past 3 months) of reproductive coercion by 79%, but again, a higher odds ratio (2.00) among women who also had a history of IPV. They reported a prevalence of unintended pregnancy (past year) among women with a recent history of reproductive coercion (past 3 months) of 21%, which is comparable to the prevalence of approximately 20% found by Sutherland, Fantasia, and Fontenot (2015; a significant difference from those who did not experience reproductive coercion). Findings are summarized in Table 4.

Qualitative findings on the intersection of reproductive coercion and unintended pregnancy supported the quantitative findings above. They reported pregnancy coercion and birth control sabotage as factors impacting unintended pregnancy (Borrero et al., 2015; Miller et al., 2012).

Resistance Strategies

Six studies addressed strategies women used to resist reproductive coercion from male partners. None of the studies specifically aimed to study resistance strategies, but five of the six studies specifically aimed to study reproductive coercion (Miller et al., 2007; Moore et al., 2010; Nikolajski et al., 2015; Sutherland et al., 2015; Thiel de Bocanegra et al., 2010).

Summary of findings. The quantitative study of college women with findings in this area reported that women who experienced reproductive coercion were more likely than those who did not use an injectable method of contraception. The total number of women who fell into this category was only four (5.3% of those experiencing reproductive coercion), but this was statistically significant ($p = .001$; Sutherland et al., 2015).

Qualitative studies reported that strategies women used to resist reproductive coercion included hiding contraceptive or emergency contraceptive use (Miller et al., 2007; Nikolajski et al., 2015; Thiel de Bocanegra et al., 2010), obtaining birth control pills in another country, so that a partner could not read the label (Thiel de Bocanegra et al., 2010), lying about being pregnant (Miller et al., 2007), having abortions against their partners' wishes (Moore et al., 2010), lying to a partner about nonexistent fines for an intrauterine device (IUD) insertion appointment (Thiel de Bocanegra et al., 2010), checking condom placement during sex (Teitelman et al., 2011), promising a partner who pressured for termination that he would not have to pay child support (Thiel de Bocanegra et al., 2010), and secretly leaving the abortion clinic after a pressuring partner dropped her off (Thiel de Bocanegra et al., 2010). One focus group of women suggested establishing group norms of not having sex without condoms in order to "cut the supply" (Teitelman et al., 2011).

Clinical Interventions

Three studies reviewed for this article addressed clinical interventions for reproductive coercion (Burton & Carlyle, 2015; Clark et al., 2014; Miller et al., 2011). All had specific aims related to reproductive coercion.

Summary of findings. Clark, Allen, Goyal, Raker, and Gottlieb (2014) reported that 20% of women who experienced reproductive coercion felt it would have been helpful had a health-care provider discussed nondetectable methods of contraception with them, 14% felt it would have been helpful had providers asked about pregnancy coercion, and 3% felt it would have been helpful had providers asked about birth control sabotage.

Miller et al. (2011) pilot tested an intervention to reduce reproductive coercion consisting of enhanced IPV screening, which encompassed reproductive coercion screening and education, as well as an informational card with information and resources on reproductive coercion. In this cluster randomization trial, the intervention group was significantly more likely to end a relationship in the 3-month follow-up period (37.1% vs. 26.8%, $p < .001$) and more likely to do so due to feeling the relationship was unhealthy or unsafe (13% vs. 8%, $p = .013$). Other effects were only significant for women who were also experiencing IPV; these women had a significant (71%) reduction in the odds of experiencing pregnancy coercion at 3-month follow-up, while women who were not experiencing IPV had a nonsignificant change in odds. Effects were nonsignificant for both IPV groups for the outcome of birth control sabotage.

Burton and Carlyle (2015) evaluated the implementation of an IPV and reproductive coercion screening and response initiative through qualitative focus groups and interviews with health-care providers. Researchers found that providing specific screening skills and tools assisted providers in feeling comfortable screening for and responding to reproductive coercion, although time constraints remained a barrier as well as lack of tools for non-English-speaking clients.

Discussion

Quality of Evidence

Overall, the quality of studies reviewed was very high. The majority of qualitative studies were rated QI, the highest category of quality. Weaknesses were in the areas of theoretical connectedness and procedural rigor, such as using member checking to validate findings and mentioning saturation in data collection. Two qualitative studies reported on the same study; part way through data collection on the parent study (Borrero et al., 2015); when themes of reproductive coercion began to emerge, questions were added to specifically address this topic for the secondary study (Nikolajski et al., 2015). While this introduces potential for weakness in data analysis, the authors felt this did not impact their conclusions.

Quantitative studies also rated very high with the majority rated QI, the highest category of quality. Few studies discussed power analysis in the determination of sample size. In one study, there appears to be an error in presentation of data, so the true prevalence is difficult to interpret (Sutherland et al., 2015). In another study, the measurement of unintended pregnancy with the question "How many times have you been pregnant when you didn't want to be?" reflects the difficulty

in defining constructs such as unintended as opposed to unwanted pregnancy (Miller, Decker, et al., 2010). Studies may have been biased by sampling strategies (no study used a random sampling technique), reliance on self-report, recall, women's depictions of male behavior, or social desirability. Bias may have influenced women's emphasis on reproductive coercion, depending on whether they were interviewed before getting an abortion (when they may be likely to overemphasize if they feel they will be judged) or when describing a pregnancy they continued or are planning to continue (when they may be likely to underemphasize coercion). Bias may also be introduced by sampling from reproductive health-care facilities, as women who are empowered enough to access those facilities may have greater reproductive autonomy or be experiencing less reproductive coercion. All studies were limited in their generalizability. Almost all quantitative studies were descriptive and thus were unable to draw conclusions about causality in relationships such as with unintended pregnancy and IPV. Likewise, conclusions cannot be made about chronology of reproductive coercion in an abusive relationship. Physical violence and reproductive coercion may begin concurrently, with reproductive coercion being one of many coercive tactics, or reproductive coercion may possibly be an indicator of impending abuse.

Analysis of Ethnocentrism

A strength of the studies in this review was the diversity of samples by race, ethnicity, non-English-speaking status, and socioeconomic status. Despite this diversity, few studies examined race or ethnicity as important variables in analysis. Several studies adjusted for all demographic characteristics in their regression analyses, which preclude any inference regarding racial/ethnic findings. Examination of these factors as potential modifiers would be a strength of future research. Only two studies reported whether attrition or response rates were different by demographic group (Miller et al., 2011, 2014).

Since reproductive coercion is an inherently gendered phenomenon, no analysis of androcentricity is discussed. However, it is noteworthy that most studies focused exclusively on female participants, with the exception of two that included males (Dick et al., 2014; Silverman et al., 2010). Likewise, as this review was limited to male partner reproductive coercion of women, no analysis of heterocentricity is discussed, but it is noted that two studies in this review aimed specifically to study sexual minority status in the context of IPV and/or reproductive coercion (McCauley et al., 2014, 2015), and one study did include over 15% nonheterosexual participants (Dick et al., 2014).

Summary of Evidence

The evidence reviewed in this article and the chronological display of findings (Tables 1–4) describes an emerging field of research of enormous importance to women's health care that has been rigorously examined but is in need of further study. Instruments for measuring reproductive coercion and reproductive autonomy are a valuable addition to the field, but these tools require further validation as well as testing in different populations. The Reproductive Autonomy Scale was tested in a large and ethnically diverse sample but has not been used in a research setting beyond this development study. Thirteen of the 27 articles reviewed for this article specifically aimed to study reproductive coercion, and the remainder reported incidental findings on its components. Studies were set in a wide variety of urban and suburban settings across the United States, although most were in the northeast or California and few were set in rural areas.

This review describes reproductive coercion as a phenomenon that disproportionately affects women experiencing concurrent IPV, women of lower socioeconomic status, single women, and African American, Latina, and multiracial women. The strongest of these associations appears to be with IPV, although some women do experience reproductive coercion without concomitant IPV. Women who experience reproductive coercion were found to present frequently to reproductive health-care providers for certain services. Immigrant women seemed to be less vulnerable to reproductive coercion, although findings on this are very limited.

A variety of tactics in the areas of birth control sabotage and pregnancy coercion were described in both quantitative and qualitative literature. Qualitative findings describe specific tactics by male perpetrators that may inform further refinement of the reproductive coercion measures. One study identified pressure specifically to produce male children, and this finding may be more prevalent when examining the international literature on reproductive coercion.

Findings about abortion coercion described male partners figuring into the decision to have an abortion but less often coercive in their influence. While women frequently reported noncoercive partner-related factors in the decision to have an abortion, prevalence of (male self-reported) partner pressure to terminate was as high as 4%, and pressure not to terminate was as high as 8%. Qualitative literature described specific coercive tactics for and against abortion. The decision to have a baby or to have an abortion is one that can involve both a man and a woman, and male partners have a place in the decision-making process; the point at which their involvement in the decision becomes coercive can be difficult to discern. A woman making an autonomous decision to terminate a pregnancy because she does not have a supportive partner is different from a woman who would like to continue a pregnancy but feels pressured to terminate by her unsupportive partner. Similarly, findings about other specific behaviors of reproductive coercion must be explored and interpreted with an aim of identifying where the boundaries of coercion lie. Within a romantic and/or sexual relationship, a male partner asking a woman to get pregnant may be meant as an indication of love or as a tactic of coercion and control and may also be interpreted different ways by the female partner. Further research can help establish these boundaries to inform clinical interventions, but researchers and clinicians must take pains to maintain objectivity and to respect

the woman's interpretation of the behaviors in question, and examples of reproductive coercion must be understood and viewed within the social context in which they occur. There is a broad continuum of pressure, coercion, and persuasion and associated demands, threatening behaviors and consequences within a relationship (Dutton & Goodman, 2005); the point at which this behavior becomes coercive must be more clearly identified taking into account context.

Findings in this review support a clear association among reproductive coercion, unintended pregnancy, and IPV. Reproductive coercion and IPV appear to have a synergistic effect on unintended pregnancy, seeking reproductive health services, as well as likelihood of success with an intervention to decrease reproductive coercion. Unintended pregnancy and reproductive coercion were less strongly associated among women who did not experience IPV, indicating the experience of reproductive coercion may be different for women not also experiencing violence. Findings in the area of abortion coercion suggest that violence was less often used to coerce abortions or pregnancy continuation, and more often was given as a reason by the woman seeking an abortion (to end the relationship or to prevent a continuing connection to an abusive partner).

This review revealed findings as well as speculation about the etiology of reproductive coercion from the perspective of male and female participants. Women interpreted pregnancy coercion as commitment by their partner to the relationship or as an attempt by partners to ensure connection, especially if the partner was facing incarceration or suffered other social instability. These data are qualitative, but authors did note that the findings were more common among African American participants, while White participants more commonly identified relationship factors as the underlying motivation.

Findings were limited on strategies used by women to resist reproductive coercion, but some were found in the qualitative literature. Likewise, findings on interventions for reproductive coercion are very limited. Participants made suggestions about what they thought might be effective, and one intervention was tested, with significant improvement especially among women who also experienced IPV mainly due to more of those women leaving the relationship.

Implications

The prospect of women being coerced into having abortions has been the subject of much politicization in the public arena of the abortion debate. Findings in this area do not support the assertion that women are frequently coerced into abortions, but rather, that they are more often coerced into continuing a pregnancy. Findings are limited, however, and in need of further investigation.

Results showing an association between reproductive coercion and frequent visits to a reproductive health-care provider, as well as pregnancy ambivalence, indicate that midwives and other women's health-care providers should have heightened vigilance when women present frequently for services or with ambivalence toward pregnancy. They also support the recommendations to routinely screen all women for reproductive coercion in conjunction with IPV screening (American College of Obstetricians & Gynecologists, 2013). These findings highlight the importance of screening a woman in private for at least a portion of her clinic visit. The findings on resistance strategies currently used by women indicate an interest in nondetectable methods of contraception that should be explored by providers during office visits. The Patient Protection and Affordable Care Act of 2010 (*The Patient Protection and Affordable Care Act*, 2010) facilitates access for women who previously could not afford such methods, but more work is needed to ensure that all women have access to unbiased contraceptive counseling and free or low-cost services. Women who may not have insurance or may not want to use insurance for fear of a partner or parent inadvertently receiving access to their contraceptive choices through this mechanism need to be considered in state and national policy and in funding decisions.

From the results on the association between reproductive coercion and IPV, it is unclear whether violence precedes reproductive coercion, whether the reverse is true, or whether these events occur concurrently. Either chronology has implications for health-care providers and advocates in counseling women who report reproductive coercion or IPV. Findings clearly support the need for providers to be prepared for screening and counseling on both reproductive coercion and IPV when encountering one of these in a patient visit and also for providers to provide counseling on less detectable methods of contraception to help women avoid unintended pregnancy, when they report reproductive coercion. The co-occurrence of IPV and reproductive coercion also presents opportunities for health-care providers and IPV service providers to collaborate to improve screening and response to both issues.

Reproductive coercion is an emerging area of research, reflecting disparate opinions on the exact definition of the point at which a behavior reflects normal disagreement between people in a relationship as opposed to coercion. Additional research is needed to further define reproductive coercion and to clarify the phenomenon. This is increasingly important as policy makers and enforcers attempt to implement reproductive coercion screening, intervention, and policy. Implications for practice, policy, and research are summarized in Table 5.

Limitations of This Review

This review used a broad search strategy and collected a sizable amount of literature on the topic of reproductive coercion. The search was limited to the 5 years before and after reproductive coercion began being studied in the literature to make the integrative review manageable; removing time limits would potentially yield a larger number of relevant studies, but an informal search of literature prior to the 2005 cutoff did not yield any additional relevant studies. Limiting the search to domestic literature restricted findings as well; including international literature in the search (a total of 10 articles otherwise meeting the inclusion criteria for this review) would increase the depth

Table 5. Implications for Practice, Policy, and Research.

Practice	• Brief screening intervention appears to be promising in decreasing rates of unintended pregnancy among women experiencing IPV and reproductive coercion • Findings related to long acting and less detectable methods of contraception as resistance strategies suggest a need for private conversations between a woman and her health-care provider regarding contraceptive options • Findings about association between seeking pregnancy/STI testing and reproductive coercion suggest need for heightened awareness when women present for these services • The association between reproductive coercion, IPV, and unintended pregnancy provides an opportunity for target screening and intervention but also shows the need for earlier prevention, identification, and intervention strategies • Associations between IPV and reproductive coercion offer opportunities for collaboration between health-care and violence-related service providers
Policy	• Multiple methods of contraception, including long acting and covert methods must be included services in insurance plans as well as available to women who may not have or be using insurance (i.e., immigrant women, girls under 18 presenting without parental involvement) • Reproductive coercion should be included in discussion regarding legal definitions of sexual and IPV
Research	• Consistency in definitions of reproductive coercion and its subdomains is needed • Validation of a measurement tool for reproductive coercion is imperative • Population-based studies are needed to further examine the phenomena in women who are not actively in school or health-care settings • Longitudinal studies to examine temporal relationship between reproductive coercion and IPV as well as to evaluate prevention and intervention strategies are needed

Note. IPV = intimate partner violence; STI = sexually transmitted infection.

and breadth of the review by revealing manifestations of reproductive coercion in diverse contexts, by examining other potential motivations for male partners such as a cultural preference for male children, and by exploring other influences on women's vulnerability such as the status of women's rights and restrictions on reproductive choices. The limitation of male partners as perpetrators excluded the rare occurrences of women mentioning pressure from a parent to terminate a pregnancy (Foster et al., 2012; Herrman, 2007). This was outside the scope of this review but is a clear threat to women's reproductive autonomy worthy of further examination. Notably, the majority of articles initially located in the literature search for this review were excluded due to focusing exclusively on IPV or government or sexual coercion. These concepts have significant overlap with reproductive coercion, but describe distinct phenomena, which may help inform the study of reproductive coercion but which we excluded from this review due to not directly addressing the specific behaviors that define reproductive coercion. Further analysis of these excluded articles may yield further knowledge about reproductive coercion as well as other threats to reproductive autonomy.

Suggestions for Further Research

There are no qualitative studies examining in depth the intersection of reproductive coercion and IPV and only two with findings on the intersection of reproductive coercion and unintended pregnancy. Qualitative research in these areas would provide valuable insight into the nature of these intersections and would help inform intervention studies. No studies aimed specifically to study resistance strategies currently used by women who experience reproductive coercion, and findings in this area are almost entirely qualitative. Further qualitative research would enable researchers to build on those existing strengths and also to explain the quantitative findings about lack of success in women who are not experiencing IPV. Further research into how women understand the experience of reproductive coercion, especially in the absence of IPV, as well as the sociocultural context of reproductive coercion from the perspective of both men and women, will be essential in understanding the phenomenon as well as developing interventions. Most research on pregnancy coercion focuses on pressure to get pregnant, with less emphasis on pressure to use contraception or to avoid pregnancy. Further exploration of this dynamic would contribute to better understanding of the diverse manifestations of reproductive coercion. Qualitative research can also contribute to further developing the conceptual construct of reproductive coercion and its specific behaviors. For instance, the behavior of telling a partner not to use birth control, which for this review was considered pregnancy coercion, could also be considered birth control sabotage. Clarification of the boundaries of these behaviors and the theoretical construct in which they fit will support high-quality quantitative research as well as effective clinical interventions and potential legal remedies.

Existing quantitative literature illuminates several associations with reproductive coercion that merit further examination, such as immigrant status, race, sexual minority status, and pregnancy ambivalence. Existing qualitative literature illuminates many aspects of reproductive coercion that merit quantitative analysis, such as specific tactics of reproductive coercion, resistance strategies, and associations with male incarceration and housing instability. Very few studies include male participants, and there is a large knowledge gap in understanding the motivation of men who perpetrate reproductive coercion as well as the factors that encourage men to use reproductive coercion to exert power and control over women.

The primary prevention of reproductive coercion will depend on further research and interventions targeting men.

The development of the Reproductive Autonomy Scale and the continued refinement of the Miller et al. reproductive coercion assessment provide essential tools for continuing to describe and define the phenomenon of reproductive coercion and for measuring the effect of interventions in improving a woman's resistance of coercion. Both instruments are in need of further validation; the Reproductive Autonomy Scale specifically should be tested in a broader sample of women than just those seeking to avoid pregnancy. Knowledge of reproductive coercion and autonomy would benefit, as well, from a systematic review of the reproductive autonomy literature.

More research is needed on interventions for women experiencing reproductive coercion. Current recommendations for health-care providers who care for patients experiencing reproductive coercion are limited to harm reduction strategies (counseling on less detectable methods of contraception and abortion; American College of Obstetricians & Gynecologists, 2013). Limited research currently supports (or refutes) those recommendations (Miller et al., 2011) or looks at long-term outcomes as a result of them, and no research examines behavioral interventions that support healthy relationships, addressing men as well as women.

Conclusion

The abundance of cross-sectional data found in this review means that little is known about causality or chronology of events in the lives of women who experience reproductive coercion. Delving deeper into the aspects of reproductive coercion that are just beginning to be examined will illuminate unexplained relationships and will inform interventions for providers and advocates. This area of research has great potential to explain previously unexplained phenomena in the field of violence and unintended pregnancy and to establish connections between the many factors that influence the reproductive health and safety of women.

Authors' Note

The contents of this article are solely the responsibility of the authors and do not necessarily represent the official view of NICHD, the Johns Hopkins ICTR, NCATS, or NIH.

Acknowledgments

The authors wish to thank Dr. Jacquelyn Campbell for her guidance during the writing of this article.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This publication was made possible by the NICHD predoctoral training grant: Interdisciplinary Research Training on Violence in the Family, NICHD T32-HDO64428, as well as the Johns Hopkins Institute for Clinical and Translational Research (ICTR) which is funded in part by Grant Number TL1 TR001078 from the National Center for Advancing Translational Sciences (NCATS) a component of the National Institutes of Health (NIH) and NIH Roadmap for Medical Research. Dr. Anderson also received funding from the NIMH (F31MH100995).

References

American College of Obstetricians and Gynecologists. (2013). ACOG Committee opinion no. 554: reproductive and sexual coercion. *Obstet Gynecol*, *121*, 411–415.

Black, M. C., Basile, K. C., Breiding, M. J., Smith, S. G., Walters, M. L., Merrick, M. T., ... Stevens, M. R. (2011). *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.

Borrero, S., Nikolajski, C., Steinberg, J. R., Freedman, L., Akers, A. Y., Ibrahim, S., & Schwarz, E. B. (2015). It just happens: A qualitative study exploring low-income women's perspectives on pregnancy intention and planning. *Contraception*, *91*, 150–156. doi:http://doi.org/10.1016/j.contraception.2014.09.014

Burton, C. W., & Carlyle, K. E. (2015). Screening and intervening: Evaluating a training program on intimate partner violence and reproductive coercion for family planning and home visiting providers. *Family & Community Health*, *38*, 227–239. doi:http://doi.org/10.1097/FCH.0000000000000076

Cesario, S., Morin, K., & Santa-Donato, A. (2002). Evaluating the level of evidence of qualitative research. *Journal of Obstetric, Gynecologic, and Neonatal Nursing : JOGNN/NAACOG*, *31*, 708–714.

Chibber, K. S., Biggs, M. A., Roberts, S. C., & Foster, D. G. (2014). The role of intimate partners in women's reasons for seeking abortion. *Women's Health Issues*, *24*, e131–e138. doi:http://doi.org/10.1016/j.whi.2013.10.007

Clark, L. E., Allen, R. H., Goyal, V., Raker, C., & Gottlieb, A. S. (2014). Reproductive coercion and co-occurring intimate partner violence in obstetrics and gynecology patients. *American Journal of Obstetrics & Gynecology*, *210*, 42.e1–42.e8. doi:http://doi.org/10.1016/j.ajog.2013.09.019

Coker, A. L. (2007). Does physical intimate partner violence affect sexual health? A systematic review. *Trauma, Violence & Abuse*, *8*, 149–177. doi:http://doi.org/8/2/149[pii]

Connell, R. W. (1987). *Gender and power*. Stanford, CA: Stanford University Press.

Dick, R. N., McCauley, H. L., Jones, K., Tancredi, D. J., Goldstein, S., Blackburn, S., ... Miller, E. (2014). Cyber dating abuse among teens using school-based health centers. *Pediatrics*, *134*, e1560–e1567.

Dutton, M. A., & Goodman, L. A. (2005). Coercion in intimate partner violence: Toward a new conceptualization. *Sex Roles*, *52*, 743–756. doi:http://doi.org/10.1007/s11199-005-4196-6

Dutton, M. A., Goodman, L., & Schmidt, J. (2005). *Development and validation of a coercive control measure for intimate partner*

violence: Final technical report. Washington, DC. Retrieved from https://www.ncjrs.gov/pdffiles1/nij/grants/214438.pdf

Effective Public Health Practice Project. (n.d.). *Quality assessment tool for quanititative studies*. Retrieved April 22, 2015, from http://www.ephpp.ca/tools.html

Finer, L. B., Frohwirth, L. F., Dauphinee, L. A., Singh, S., & Moore, A. M. (2005). Reasons U.S. women have abortions: Quantitative and qualitative perspectives. *Perspectives on Sexual and Reproductive Health*, *37*, 110–118. doi:http://doi.org/3711005 [pii]

Foster, D. G., Gould, H., Taylor, J., & Weitz, T. A. (2012). Attitudes and decision making among women seeking abortions at One U.S. Clinic. *Perspectives on Sexual and Reproductive Health*, *44*, 117–124. doi:http://doi.org/10.1363/4411712

Gee, R. E., Mitra, N., Wan, F., Chavkin, D. E., & Long, J. A. (2009). Power over parity: intimate partner violence and issues of fertility control. *American Journal of Obstetrics and Gynecology*, *201*, 148.e1–148.e7. doi:http://doi.org/10.1016/j.ajog.2009.04.048

Gentry, J., & Bailey, B. A. (2014). Psychological intimate partner violence during pregnancy and birth outcomes: Threat of violence versus other verbal and emotional abuse. *Violence Vict*, *29*, 383–392.

Gupta, J., Falb, K., Kpebo, D., & Annan, J. (2012). Abuse from in-laws and associations with attempts to control reproductive decisions among rural women in Cote d'Ivoire: A cross-sectional study. *BJOG: An International Journal of Obstetrics & Gynaecology*, *119*, 1058–1066. doi:http://doi.org/10.1111/j.1471-0528.2012.03401.x

Hathaway, J. E., Willis, G., Zimmer, B., & Silverman, J. G. (2005). Impact of partner abuse on women's reproductive lives. *Journal of the American Medical Women's Association*, *60*, 42–45.

Herrman, J. W. (2007). Repeat pregnancy in adolescence: Intentions and decision making. *MCN: The American Journal of Maternal Child Nursing*, *32*, 89–94.

Journal of Mixed Methods Research. (n.d.). *Review Criteria*. Retrieved April 9, 2015, from http://www.uk.sagepub.com/journals/Journal201775/manuscriptSubmission

Katerndahl, D., Burge, S., Ferrer, R., Becho, J., & Wood, R. (2013). Differences in social network structure and support among women in violent relationships. *Journal of Interpersonal Violence*, *28*, 1948–1964. doi:http://doi.org/10.1177/0886260512469103

Kazmerski, T., McCauley, H. L., Jones, K., Borrero, S., Silverman, J. G., Decker, M. R., … Miller, E. (2015). Use of reproductive and sexual health services among female family planning clinic clients exposed to partner violence and reproductive coercion. *Maternal and Child Health Journal*, *19*, 1490–1496. doi:http://doi.org/10.1007/s10995-014-1653-2

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gotzsche, P. C., Ioannidis, J. P., … Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: Explanation and elaboration. *Journal of Clinical Epidemiology*, *62*, e1–e34. doi:http://doi.org/10.1016/j.jclinepi.2009.06.006

McCauley, H. L., Dick, R. N., Tancredi, D. J., Goldstein, S., Blackburn, S., Silverman, J. G., … Miller, E. (2014). Differences by sexual minority status in relationship abuse and sexual and reproductive health among adolescent females. *Journal of Adolescent Health*, *55*, 652–658. doi:http://doi.org/10.1016/j.jadohealth.2014.04.020

McCauley, H. L., Silverman, J. G., Decker, M. R., Agenor, M., Borrero, S., Tancredi, D. J., … Miller, E. (2015). Sexual and reproductive health indicators and intimate partner violence victimization among female family planning clinic patients who have sex with women and men. *Journal of Women's Health*, *online ahe*. doi:http://doi.org/10.1089/jwh.2014.5032

Miller, E., Decker, M. R., McCauley, H. L., Tancredi, D. J., Levenson, R. R., Waldman, J., … Silverman, J. G. (2010). Pregnancy coercion, intimate partner violence and unintended pregnancy. *Contraception*, *81*, 316–322. doi:http://doi.org/10.1016/j.contraception.2009.12.004

Miller, E., Decker, M. R., McCauley, H. L., Tancredi, D. J., Levenson, R. R., Waldman, J., … Silverman, J. G. (2011). A family planning clinic partner violence intervention to reduce risk associated with reproductive coercion. *Contraception*, *83*, 274–280. doi:http://doi.org/10.1016/j.contraception.2010.07.013

Miller, E., Decker, M. R., Reed, E., Raj, A., Hathaway, J. E., & Silverman, J. G. (2007). Male partner pregnancy-promoting behaviors and adolescent partner violence: Findings from a qualitative study with adolescent females. *Ambulatory Pediatrics : The Official Journal of the Ambulatory Pediatric Association*, *7*, 360–366. doi:http://doi.org/S1530-1567(07)00092-5 [pii]

Miller, E., Jordan, B., Levenson, R., & Silverman, J. G. (2010). Reproductive coercion: Connecting the dots between partner violence and unintended pregnancy. *Contraception*, *81*, 457–459. doi:http://doi.org/10.1016/j.contraception.2010.02.023

Miller, E., Levenson, R., Herrera, L., Kurek, L., Stofflet, M., & Marin, L. (2012). Exposure to partner, family, and community violence: Gang-affiliated Latina women and risk of unintended pregnancy. *Journal of Urban Health*, *89*, 74–86. doi:http://doi.org/10.1007/s11524-011-9631-0

Miller, E., McCauley, H. L., Tancredi, D. J., Decker, M. R., Anderson, H., & Silverman, J. G. (2014). Recent reproductive coercion and unintended pregnancy among female family planning clients. *Contraception*, *89*, 122–128. doi:http://doi.org/10.1016/j.contraception.2013.10.011

Moore, A. M., Frohwirth, L., & Miller, E. (2010). Male reproductive control of women who have experienced intimate partner violence in the United States. *Social Science & Medicine*, *70*, 1737–1744.

Nikolajski, C., Miller, E., McCauley, H. L., Akers, A., Schwarz, E. B., Freedman, L., … Borrero, S. (2015). Race and reproductive coercion: A qualitative assessment. *Women's Health Issues : Official Publication of the Jacobs Institute of Women's Health*. doi:http://doi.org/S1049-3867(14)00153-4 [pii]

Patel, P. R., Laz, T. H., & Berenson, A. B. (2015). Patient characteristics associated with pregnancy ambivalence. *Journal of Women's Health*, *24*, 37–41. doi:http://doi.org/10.1089/jwh.2014.4924

Sanders, C. K. (2015). Economic abuse in the lives of women abused by an intimate partner: A qualitative study. *Violence Against Women*, *21*, 3–29. doi:http://doi.org/10.1177/1077801214564167

Silverman, J. G., Decker, M. R., McCauley, H. L., Gupta, J., Miller, E., Raj, A., & Goldberg, A. B. (2010). Male perpetration of intimate partner violence and involvement in abortions and abortion-related

conflict. *American Journal of Public Health*, *100*, 1415–1417. doi: http://doi.org/10.2105/AJPH.2009.173393

Silverman, J. G., McCauley, H. L., Decker, M. R., Miller, E., Reed, E., & Raj, A. (2011). Coercive forms of sexual risk and associated violence perpetrated by male partners of female adolescents. *Perspectives on Sexual & Reproductive Health*, *43*, 60–65. doi:http://doi.org/10.1363/4306011

Stroup, D. F., Berlin, J. A., Morton, S. C., Olkin, I., Williamson, G. D., Rennie, D., . . . Thacker, S. B. (2000). Meta-analysis of observational studies in epidemiology: A proposal for reporting. Meta-analysis Of Observational Studies in Epidemiology (MOOSE) group. *Journal of the American Medical Association*, *283*, 2008–2012. doi:http://doi.org/jst00003 [pii]

Sutherland, M. A., Fantasia, H. C., & Fontenot, H. (2015). Reproductive coercion and partner violence among college women. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, *44*, 218–227. doi: http://doi.org/10.1111/1552-6909.12550

Teitelman, A. M., Tennille, J., Bohinski, J. M., Jemmott, L. S., & Jemmott, J. B. (2011). Unwanted unprotected sex: Condom coercion by male partners and self-silencing of condom negotiation among adolescent girls. *Advances in Nursing Science*, *34*, 243–259. doi:http://doi.org/10.1097/ANS.0b013e31822723a3

The Patient Protection and Affordable Care Act, Pub. L. No. 124 (2010). Washington, DC: US Government Printing Office.

Thiel de Bocanegra, H., Rostovtseva, D. P., Khera, S., & Godhwani, N. (2010). Birth control sabotage and forced sex: Experiences reported by women in domestic violence shelters. *Violence Against Women*, *16*, 601–612. doi:http://doi.org/10.1177/1077801210366965

Upadhyay, U. D., Dworkin, S. L., Weitz, T. A., & Foster, D. G. (2014). Development and validation of a reproductive autonomy scale. *Studies in Family Planning*, *45*, 19–41. doi:http://doi.org/10.1111/j.1728-4465.2014.00374.x

Vandenbroucke, J. P., von Elm, E., Altman, D. G., Gotzsche, P. C., Mulrow, C. D., Pocock, S. J., . . . Initiative, S. (2007). Strengthening the Reporting of Observational Studies in Epidemiology (STROBE): Explanation and elaboration. *PLoS Medicine*, *4*, e297. doi:http://doi.org/07-PLME-RA-1056 [pii]

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