# **HHS Public Access**

Author manuscript

J Interpers Violence. Author manuscript; available in PMC 2021 June 06.

Published in final edited form as:

J Interpers Violence. 2021 November; 36(21-22): NP12324-NP12341. doi:10.1177/0886260519888205.

# Prevalence of Intimate Partner Reproductive Coercion in the United States: Racial and Ethnic Differences

Kathleen C. Basile, PhD<sup>1</sup>, Sharon G. Smith, PhD<sup>1</sup>, Yang Liu, PhD<sup>1</sup>, Elizabeth Miller, MD, PhD<sup>2</sup>, Marcie-jo Kresnow, MS<sup>1</sup>

<sup>1</sup>Centers for Disease Control and Prevention, Atlanta, GA, USA

<sup>2</sup>University of Pittsburgh, PA, USA

#### **Abstract**

Reproductive coercion (RC) is a specific type of intimate partner violence (IPV). Although clinical studies have highlighted women's experiences of RC, we know little about its national prevalence and differences in prevalence by sex category and race/ethnicity. Data are from the National Intimate Partner and Sexual Violence Survey (NISVS), years 2010 to 2012. NISVS is an ongoing, nationally representative random-digit-dial telephone survey of the noninstitutionalized Englishor Spanish-speaking U.S. adult population. This article reports the national lifetime and 12-month prevalence of two RC victimization measures, and proportions among IPV victims. Ttests were used to examine differences in estimates across racial/ethnic groups. In the United States, 9.7% of men and 8.4% of women experienced any RC by an intimate partner during their lifetime. Men reported more commonly than women that a partner tried to get pregnant when the man did not want her to; women reported higher prevalence of partner condom refusal. Examination by race/ethnicity revealed that non-Hispanic (NH) Black women and men had significantly higher lifetime prevalence of both RC types than all other groups; in the last 12 months, NH Blacks had significantly higher prevalence across the board than NH Whites. Hispanics had significantly higher lifetime and 12-month prevalence of any RC and partner condom refusal than NH Whites. RC is at the intersection of two public health concerns—IPV and reproductive health. Documenting its prevalence and differences by sex and race/ethnicity may inform prevention efforts to reduce occurrence and negative health outcomes among specific populations.

#### **Keywords**

domestic v	violence;	anything	related to	domestic	violence;	domestic	violence	and cu	ıltural	contexts
sexuality;	sexual as	sault								

Article reuse guidelines: sagepub.com/journals-permissions

Corresponding Author: Kathleen C. Basile, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 4770 Buford Highway NE, MS F64, Atlanta, GA 30341-3724, USA. kbasile@cdc.gov.

The findings and conclusions in this article are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

**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.

#### Introduction

Intimate partner violence (IPV), including physical violence, sexual violence (SV), stalking, or psychological aggression (including coercive tactics) against a current or former romantic/dating partner (Breiding, Basile, Smith, Black, & Mahendra, 2015) is common. It is estimated that more than a third of U.S. women (36.4%, approximately 44 million) and 33.3% of men (about 37 million) experienced IPV in their lifetime (including contact SV, physical violence, or stalking) (Smith et al., 2018).

Reproductive coercion (RC) is a specific form of IPV that is at the intersection of violence and reproductive health. RC involves an abusive partner's control of reproduction through explicit attempts to impregnate a partner (or get pregnant) against their wishes, controlling outcomes of a pregnancy, coercion to have unprotected sex, and interfering with condoms/contraception to promote a pregnancy (American College of Obstetricians and Gynecologists, 2013; Grace & Anderson, 2018; Miller et al., 2010; Moore, Frohwirth, & Miller, 2010). RC can occur in the absence of physical violence and SV, and is independently associated with unintended pregnancy (Miller et al., 2010; Miller et al., 2014).

IPV, including RC, is associated with poor sexual and reproductive health outcomes—unintended pregnancy and sexually transmitted infection including HIV infection (Anderson, Grace, & Miller, 2017; Fanslow, 2017; Sarkar, 2009). Mechanisms include forced unprotected intercourse, condom nonuse (Sales et al., 2008), inconsistent condom use (Wu, El-Bassel, Witte, Gilbert, & Chang, 2003), fear of condom negotiation (Teitelman, Ratcliffe, Morales-Aleman, & Sullivan, 2008), and inconsistent contraceptive use (Gee, Mitra, Wan, Chavkin, & Long, 2009), and many victims are experiencing RC as part of abusive control characteristic of IPV (Gee et al., 2009; Miller et al., 2010). For example, in a recent analysis using National Intimate Partner and Sexual Violence Survey (NISVS) data, women who experienced rape-related pregnancy most commonly reported an intimate partner perpetrator and had experienced RC by that perpetrator (Basile et al., 2018).

There are a small number of studies on RC of men. One qualitative study of 25 men described their experiences as both victims and perpetrators of RC, though provided limited information about impact on men's health (Alexander, Grace, Sacko, Morgan, & Sanders, 2018). In their study, six participants reported perpetrating RC against an intimate partner and three reported being a victim of RC by a partner. A dyadic study of adolescent parenting couples showed that RC victimization is not uncommon among adolescent fathers, suggesting that RC may contribute to mistimed parenthood for young men (Willie et al., 2017).

Most studies of RC to date have focused on clinic-based samples of women with higher prevalence of IPV/RC than the general population (Gee et al., 2009; Miller et al., 2010). A systematic review of RC (Grace & Anderson, 2018) found that RC commonly co-occurs with IPV. For example, in a study of female family planning clients ages 16 to 29 years in California, 53% reported IPV and 25% experienced RC in their lifetime (Miller et al., 2010). Among women reporting RC, 79% had also experienced physical or sexual IPV (Miller

et al., 2010). Similar studies among patients seeking obstetrics/gynecology care found a RC prevalence of 16% with significant overlap with IPV (Clark, Allen, Goyal, Raker, & Gottlieb, 2014). In a large family planning clinic-based study in Pennsylvania, 5% of clients reported recent (past 3 months) RC which was associated with an 80% increase in past year unintended pregnancy compared with women not experiencing RC, and a twofold increase when IPV and RC co-occur (Miller et al., 2014). Qualitative studies have also noted the extent to which RC emerges in women's stories about unintended pregnancy (Holliday et al., 2018; Moore et al., 2010; Nikolajski et al., 2015). Although previous research has shown that RC frequently occurs with IPV, this is not always the case. For example, an analysis of 641 women found that Black women were significantly more likely than women of other races/ethnicities to report RC as occurring without IPV (Clark et al., 2014).

Data from the 2010 NISVS revealed that 8.6% of women (about 10.3 million women) and 10.4% of men (an estimated 11.7 million men) experienced RC by an intimate partner in their lifetime, defined as either trying to get (them) pregnant or refusing to use a condom (Black et al., 2011). The study found that 4.8% of women and 8.7% of men had an intimate partner who tried to get (them) pregnant when they did not want to, and 6.7% of women and 3.8% of men experienced intimate partner condom refusal. Although condom refusal, in isolation, may not be a direct measurement of RC, previous scholarship described refusal to use a condom as an important tactic used by coercive men (Davis et al., 2014), and condom refusal may be especially relevant in the context of intimate partner RC (Nikolajski et al., 2015). Disparities in RC prevalence by race/ethnicity have not been examined in nationally representative samples, but smaller studies indicate a disproportionate impact within racial/ethnic minority women (see Grace & Anderson, 2018, for a review). For example, recent clinic-based research suggests a higher prevalence of RC among Black and multiracial women (Holliday et al., 2017). As mentioned, little is known about male experiences of RC.

To fill these gaps, this article uses 3 years of data from NISVS, a nationally representative telephone survey, to report the national prevalence of two RC victimization experiences separately for women and men. This study also examines proportions of RC among female and male IPV victims and examines differences by race/ethnicity among victims of IPV and among those without previous experience of IPV (aside from RC). This is the first study to our knowledge that uses nationally representative data to examine RC by sex and race/ethnicity and to compare RC among IPV victims and non-victims.

### **Method**

#### The Sample

Data are from the NISVS combined years of 2010, 2011, and 2012. NISVS is an ongoing, nationally representative random-digit-dial telephone survey of the noninstitutionalized English- or Spanish-speaking U.S. adult population (18+ years) that assesses lifetime and 12-month prevalence and characteristics of SV, stalking, and IPV using a dual-frame sampling strategy including both landline and cell phones. RTI International's institutional review board (IRB) approved the survey protocol. In the years 2010 to 2012, 41,174 respondents (22,590 women, 18,584 men) completed the survey. Approximately 43.3% of interviews were conducted through landline and 56.7% through cell phone. The overall

weighted response rate across 2010 to 2012 ranged from 27.5% to 33.6%. The weighted cooperation rate (the proportion of respondents who participated in the survey among those eligible) ranged from 80.3% to 83.5%. Data were appropriately weighted and allow for estimates of the prevalence among U.S. adult women and men. Additional details on NISVS methods and weighting procedures are reported elsewhere (Black et al., 2011).

#### **Measures**

IPV was defined as any form of SV, stalking, physical violence, psychological aggression, or RC by an intimate partner (described as a romantic or sexual partner including spouses, boyfriends, girlfriends, people whom a respondent dated, were seeing, or "hooked up"). See Black and colleagues (2011) for the complete measurement of IPV. Lifetime Intimate Partner RC was measured with two items: How many of your current or ex romantic or sexual partners have ever: (a) tried to get you pregnant (if victim is female)/tried to get pregnant (if victim is male) when you did not want to become pregnant or tried to stop you from using birth control? and (b) refused to use a condom when you wanted them to use one? Victims who responded affirmatively to either of these two items were coded as having experienced any lifetime RC. To measure 12-month Intimate Partner RC, respondents were asked Has this person/Did any of these people (fill: behavior) in the past 12 months, that is since (fill: date, 12 months ago)?

Race/Ethnicity was measured with the following items: (a) Are you of Hispanic or (if female: Latina; if male: Latino) origin? (b) What is your race? You may identify more than one category. Would you say you are White, Black or African American, Asian, Native Hawaiian or Pacific Islander, or American Indian or Alaskan Native? For the purposes of this analysis, we recoded responses into Hispanic, non-Hispanic (NH) White, NH Black, and NH Other.

#### **Statistical Analyses**

Statistical inference for prevalence and population estimates was based on weighted analyses, taking into account complex sample design features such as dual sampling frame, stratified sampling, and unequal sample selection probabilities. The lifetime and past 12-month estimates of intimate partner RC were computed separately for males and females overall, and by race/ethnicity, averaging across the 2010–2012 data years. Sex-specific estimates were computed for the adult population, for victims of IPV and for victims who experienced no type of IPV other than RC. All analyses were conducted using SAS-Callable SUDAAN, version 11.0.1. Estimates based on 20 or fewer respondents and those with relative standard errors greater than 30% were considered statistically unreliable and not presented. *T* tests were used to test for significant differences in lifetime and 12-month estimates across racial/ethnic groups; *p* values <0.05 were considered statistically significant.

<sup>&</sup>lt;sup>1</sup> This item does not specify that refusal to use a condom was intended to get the partner pregnant; therefore, this item may be capturing other coercion beyond reproductive coercion, such as coercion related to sexual health (e.g., coerced condom nonuse).

### **Findings**

#### Sample Characteristics

The mean age at the time of the survey was 46.9 for females and 45.1 for males (range = 18–98 years old for both sexes). The majority of the sample identified as NH White (women, 66.9%; men, 66.8%), followed by Hispanic (women, 13.2%; men, 14.6%), NH Black (women, 12.2%; men, 11.1%), and NH Other, NH Asian/Pacific Islander (women, 5.0%; men, 4.7%), NH multiracial (women, 1.4%; men, 1.4%), and NH American Indian/Alaska Native (AIAN; women, 0.7%; men, 0.7%). Most respondents had some college or higher education. Only 9.7% of women and 10.3% of men had less than a high school diploma (data not shown).

#### Lifetime and 12-Month Prevalence of Intimate Partner RC of U.S. Women and Men

In the United States, 8.4% of women (an estimated 10.1 million) and 9.7% of men (an estimated 11.1 million) experienced any intimate partner RC during their lifetime; 1.3% of women (an estimated 1.6 million) and 1.7% men (an estimated 1.9 million) experienced this in the 12 months preceding the survey. Within subtypes of RC, 4.6% of women and 8.4% of men reported that, in their lifetime, an intimate partner tried to get them (or get) pregnant when they did not want them to, and 0.6% of women and 1.2% of men experienced this in the previous 12 months. An estimated 6.4% of women and 3.4% of men reported that an intimate partner refused to use a condom, and 1.0% of both women and men experienced this in the previous 12 months (Table 1).

#### Lifetime and 12-Month Prevalence of RC by Race/Ethnicity of U.S. Women and Men

Examining racial/ethnic differences among U.S. women, racial/ethnic minorities were significantly more likely to experience any RC at some point in life and in the previous 12 months, especially among NH Black and Hispanic women. This pattern also emerged for specific forms of RC, for partner trying to get them pregnant (NH Black women had significantly higher reporting than all other groups) and partner condom refusal (NH Black and Hispanic women had significantly higher reporting than other women) (see Table 1 for specifics).

Similarly, results for U.S. men revealed that during their lifetime and the previous 12 months, NH Black and Hispanic were more likely to report having experienced any RC and to report that a partner tried to get pregnant when they did not want them to (NH Black men had significantly higher reporting than other groups) and partner refusal to use a condom (NH Black and Hispanic men had significantly higher reporting than other men). See Table 1.

#### Proportion of Female and Male Victims of IPV Who Experienced RC by Race/Ethnicity

Among victims of IPV specifically, 15.3% of female and 17.5% of male victims reported having experienced RC during their lifetime; 8.6% of female victims and 15.1% of male victims reported that their partner tried to get (them) pregnant when they did not want them to, and 11.6% of female and 6.1% of male victims reported partner condom refusal. In the previous 12 months, 6.7% of female and 7.2% of male victims experienced any RC,

with 3.0% of female and 5.3% of male victims reporting that a partner tried to get (them) pregnant when they did not want them to, and 5.4% of female and 3.8% of male victims reporting partner condom refusal (Table 2).

Among racial/ethnic groups, NH Black and Hispanic female victims of lifetime IPV females were significantly more likely to experience any RC during their lifetime. NH Black females were more likely to experience any RC during the prior 12 months (see Table 2 for specifics). Subtypes of RC showed similar patterns with significantly more NH Black, Hispanic, and NH other female victims having had these experiences during their lifetime compared with most other racial/ethnic groups (see Table 2).

Among male IPV victims, NH Black and Hispanic male IPV victims were significantly more likely than other racial/ethnic groups to report any RC during their lifetime and in the previous 12 months (Table 2). Within subtypes, NH Black male victims were more likely than all other groups to report that a partner tried to get pregnant during their lifetime and past 12 months. NH Black and Hispanic male victims were more likely than other groups to report that their partner refused to use a condom (see Table 2 for specifics).

# Lifetime and 12-Month Reports of Intimate Partner RC by Race/Ethnicity Among Female and Male Victims of RC Who Experienced No Other Type of IPV

Examining RC among female victims who experienced no other forms of IPV, overall lifetime prevalence for any RC was 1.1%, and 0.3% in the past 12 months. Within subtypes, 0.3% of female victims reported that their partner tried to get them pregnant (lifetime), and 0.9% reported that their partner refused to use a condom (lifetime).

Within racial/ethnic groups, 3.6% of NH Black and 0.7% of NH White female victims experienced some form of RC; 0.6% of NH White female victims reported that their partner refused to use a condom in their lifetime. The estimates by race/ethnicity were not statistically reliable for tried to get them pregnant. In the previous 12 months, 0.3% of female victims reported any RC, and 0.2% reported that their partner refused to use a condom (Table 3).

For male victims of RC without other IPV victimization, lifetime prevalence for any RC was 1.5%, and 0.3% in the past 12 months. Within subtypes, 1.2% of male victims reported that their partner tried to get pregnant when they did not want them to (lifetime) with 0.2% in the previous 12 months, and 0.5% reported that their partner refused to use a condom (lifetime). Within racial/ethnic groups, 1.2% of NH White male victims experienced any RC, and 1.1% reported that their partner tried to get pregnant in their lifetime. Data for other groups or for the last 12 months were not statistically reliable (Table 3).

#### **Discussion**

RC is at the intersection of IPV and reproductive health. Documenting the prevalence of RC and differences by sex and race/ethnicity may inform the tailoring of prevention programs to reduce RC and its negative health outcomes among specific populations. Consistent with previous nonnationally representative samples, this study found that RC

by an intimate partner is common in the United States. Interestingly, the analysis of sex differences revealed that men report a slightly higher overall lifetime prevalence of RC compared with women; this finding appears to be driven by men reporting that a partner tried to get pregnant when the man did not want her to. Conversely, women had a higher prevalence than men of experiencing a partner refusing to use a condom at some point in their life. There was a similar pattern of reporting by sex of RC in the previous 12 months, although the prevalence of having a partner refuse to use a condom in the last 12 months was the same for women and men. Similar lifetime and 12 month patterns also emerged among IPV victims.

Overall, the patterns were consistent that NH Black women and men in the United States have significantly higher lifetime prevalence of RC than other racial/ethnic groups overall, and for both types of RC, and Hispanics had significantly higher prevalence of any RC and reporting a partner refusing to use a condom than NH Whites. These findings are consistent with previous research (Holliday et al., 2017; Miller et al., 2010). For example, Holliday and colleagues' (2017) study of a family planning clinic-based sample of women found Black and multiracial women reported the highest rates of RC. Among IPV victims, it is important to note that NH Blacks had the highest reporting of RC of all racial/ethnic groups: about 14% of NH Black female and 13% of NH Black male IPV victims reported RC in the last year, which is an indicator of current or ongoing risk of unintended pregnancy among this group (Holliday et al., 2017; Miller et al., 2014).

The present study also examined prevalence of RC without other IPV victimization, and findings suggest that while RC can and does happen in isolation, it is uncommon for most racial/ethnic groups when no other forms of IPV are present. This is consistent with other studies that have shown the co-occurrence of RC with other forms of IPV (Basile et al., 2018; Clark et al., 2014; Miller et al., 2014). The one exception was among NH Black female victims; 3.6% of NH Black females without other IPV reported lifetime RC, which is consistent with findings by Clark et al. (2014). Additional research is needed to better understand this finding.

These findings suggest that RC most commonly intersects with other forms of IPV and racial/ethnic minorities, particularly NH Black women and men, are most heavily burdened. Emerging research is beginning to uncover structural factors that may help explain what is happening in some intimate relationships of Black couples (Alexander et al., 2018; Nikolajski et al., 2015). For example, a qualitative study by Nikolajski and colleagues (2015) reported that Black women were more likely to report RC and reported more severe forms of RC (e.g., overt birth control sabotage) than their White counterparts. Their study elucidated women's perspectives on why their partners were trying to get them pregnant when they did not want to become pregnant. Black female victims noted male partner's impending incarceration, lack of housing, employment, and social support that the male partner hoped to secure by impregnating their partner as important factors related to RC. Similarly, a study by Alexander and colleagues (2018) suggests that motivations for pregnancy among African American men are driven in part by a desire for a personal legacy and expectations for impending incarceration. Although these two studies had small samples, they may provide insights as to why the prevalence of RC was significantly higher

for NH Black women in the present study. However, it does not shed light on the high prevalence of RC victimization reported by NH Black men (only three men in the Alexander et al. [2018] study reported experiencing RC). More research is needed to further document the stories of female and male RC victims and to understand racial/ethnic differences.

This study is subject to limitations. First, NISVS only reaches those who have a landline or cell phone, which misses certain groups such as transient and institutionalized (e.g., prisoners) populations who may be at risk for IPV. Second, the response rate was lower than we would have liked. However, the cooperation rate in excess of 80% indicates that once contacted and deemed eligible, most respondents agree to participate. In addition, data were weighted to the age, sex, and racial/ethnic distribution of the population mitigating any impact that over- or underrepresentation of these subgroups might have had on the results. Third, this study likely underestimates the true prevalence of RC for various reasons (e.g., sensitive nature of questions, safety concerns). Fourth, the racial/ethnic groups were combined into four categories including "Other NH," given low prevalence for certain groups (e.g., AIAN). Additional research is needed to understand the prevalence among other subgroups. Fifth, only two items measured RC (compared with 10 items in many RC studies), including one on condom refusal that did not explicitly ask whether this was an attempt to cause pregnancy, and may in some cases be capturing coercion related to sexual and not reproductive health (Silverman et al., 2011). However, analysis of the psychometric properties of nine RC items found that pregnancy coercion and condom manipulation appear to be the two underlying domains of RC, suggesting that the two items used in our study are most critical for understanding RC (McCauley et al., 2017). That said, these two items measuring RC do not assess context, intentions, extent of coercion, or consequences, and how these may vary by sex (e.g., a man reporting a female partner trying to get pregnant may not perceive this as being coercive, nor have the same social consequences as a woman facing a pregnancy that she does not want). Further contextual understanding of the differences by sex in RC behaviors and consequences is needed. Finally, this analysis does not account for the possibility that some of the male reports of partner refusal to use a condom could have been with same sex partners. Qualitative studies, especially of men, would be valuable in clarifying their experiences of RC and could inform future measurement of the phenomenon. It is possible that women and men are reporting different behaviors, and the current measures are not fully capturing the gendered nuances of the RC experience.

As the first nationally representative study on RC among men and women that reports prevalence by race/ethnicity, these findings underscore that RC is common and usually occurs in the context of other IPV. Given the known association of RC with unintended pregnancy (American College of Obstetricians and Gynecologists, 2013), the American Congress of Obstetricians and Gynecologists recommends that clinicians consider IPV and RC assessment routinely in their practices. The use of a universal education brief counseling intervention in family planning clinics has been shown to reduce RC among women with higher levels at baseline (Miller et al., 2016). To date, no clinical or community-based interventions to our knowledge have sought to address RC victimization among men nor have any prevention efforts been tailored to address the elevated levels of RC among racial/ethnic minorities.

The findings from this study have implications for prevention of RC in the context of IPV, as they reveal significant differences in prevalence across racial/ ethnic groups. Prevention efforts, particularly those with NH Black populations, may be more successful if they recognize and address the larger structural contexts in which RC may be occurring. Although more research is needed to better understand mechanisms, the racial/ethnic disparities in the prevalence of RC documented in this study suggest the need for strategies to address the structural factors that may increase risk for RC, such as poverty and mass incarceration of Black and other racial/ethnic minority groups. Improving the economic stability of high-risk communities may also reduce RC, given the links between low socioeconomic status (SES) and violence victimization (Byrne, Resnick, Kilpatrick, Best, & Saunders, 1999). The Centers for Disease Control and Prevention's technical packages on IPV and SV prevention (Basile et al., 2016; Niolon et al., 2017), which compile the best available evidence of what works to prevent IPV and SV, suggest approaches geared toward strengthening economic supports for families that may be relevant in reducing RC and other violence among low SES populations. In addition, primary prevention of adolescent teen dating violence, particularly among racial/ethnic minority youth, might be most successful in preventing later IPV and its negative health outcomes. Dating Matters®: Strategies to Promote Healthy Teen Relationships (DM; Tharp et al., 2011), is a comprehensive teen dating violence (TDV) prevention model. It includes youth, 11 to 14 years old, parents, teachers, and older peers in prevention efforts, with the goal of increasing social support of healthy relationship messaging for youth before they start dating. DM was rigorously evaluated in a multisite trial and found to be effective in reducing TDV (Niolon et al., 2019). Also, efforts to educate adolescents directly about sexual consent, condom negotiation, and communication related to pregnancy intentions and prevention are also needed to prevent RC and SV (Basile et al., 2016).

This article is the first of its kind to report nationally representative lifetime and 12-month prevalence of RC by sex and race/ethnicity. It also includes an examination of RC among victims who do and do not report other forms of IPV. This work highlights important findings related to disparities by race/ethnicity that were heretofore demonstrated in clinical samples only. Future research using improved measurement of RC and exploring the contexts in which it occurs will advance the understanding of this problem. Prevention efforts that address these differences by sex and race/ethnicity may also benefit from recognizing and addressing the larger structural contexts in which RC may occur.

# **Acknowledgments**

The following people contributed to the original development of the National Intimate Partner and Sexual Violence Survey: Kathleen Basile, PhD, Michele Black, PhD, Matthew Breiding, PhD, James Mercy, PhD, Linda Saltzman, PhD, Sharon Smith, PhD, Division of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and prevention (CDC).

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

## **Author Biographies**

**Kathleen C. Basile**, PhD, is a senior scientist in the Division of Violence Prevention in the National Center for Injury Prevention and Control at Centers for Disease Control and Prevention (CDC), where she has been since 2000. Her main research interests are the measurement, prevalence, risk and protective factors, and health consequences of sexual violence and intimate partner violence of adults and adolescents.

**Sharon G. Smith**, PhD, is a behavioral scientist in the Division of Violence Prevention, in the National Center for Injury Prevention and Control at the CDC, where she has worked since 2005. In her position, she conducts surveillance to inform violence prevention. Her current work focuses on the measurement, prevalence, and health consequences of sexual violence, stalking, and sex trafficking.

**Yang Liu**, PhD, is a mathematical statistician in CDC. He provides technical assistance to strengthen capacity for employing sound statistical methods in national injury/violence programs. He conducts research, statistical consultation, and hands-on analysis. He has published numerous reports and journal articles on violence/ injury topics.

**Elizabeth Miller**, MD, PhD, is director of the Division of Adolescent and Young Adult Medicine, Children's Hospital of Pittsburgh at the University of Pittsburgh, and professor of Pediatrics at the University of Pittsburgh School of Medicine. Her main areas of focus are etiological and prevention research on sexual violence and intimate partner violence of adults and adolescents.

**Marcie-jo Kresnow**, MS, is a mathematical statistician in CDC. She provides technical assistance to strengthen capacity for employing sound statistical methods in national injury/violence programs. She conducts research, statistical consultation, and hands-on analysis. She has published numerous reports and journal articles on violence/injury topics.

#### References

- Alexander KA, Grace KT, Sacko C, Morgan A, & Sanders RA (2018). "Having a child meant I had a real life": Childbearing motivations and reproductive coercion among urban socioeconomically disadvantaged Black young men. Journal of Adolescent Health, 62(2), Article S18.
- American College of Obstetricians and Gynecologists. (2013). Reproductive and sexual coercion: ACOG Committee opinion no. 554. Obstetrics & Gynecology, 121, 411–415. [PubMed: 23344307]
- Anderson J, Grace K, & Miller E (2017). Reproductive coercion among women living with HIV: An unexplored risk factor for negative sexual and mental health outcomes. AIDS, 31, 2261–2265. [PubMed: 28832408]
- Basile KC, DeGue S, Jones K, Freire K, Dills J, Smith SG, & Raiford JL (2016). STOP SV: A technical package to prevent sexual violence. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Basile KC, Smith SG, Liu Y, Kresnow MJ, Fasula AM, Gilbert L, & Chen J (2018). Rape-related pregnancy and association with reproductive coercion in the U.S. American Journal of Preventive Medicine, 55, 770–776. [PubMed: 30361141]
- Black MC, Basile KC, Breiding MJ, Smith SG, Walters ML, Merrick MT, ... Stevens MR (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.

Breiding M, Basile KC, Smith SG, Black MC, & Mahendra RR (2015). Intimate partner violence surveillance: Uniform definitions and recommended data elements Version 2.0. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

- Byrne CA, Resnick HS, Kilpatrick DG, Best CL, & Saunders BE (1999). The socioeconomic impact of interpersonal violence on women. Journal of Consulting and Clinical Psychology, 67, 362–366. [PubMed: 10369056]
- Clark LE, Allen RH, Goyal V, Raker C, & Gottlieb AS (2014). Reproductive coercion and cooccurring intimate partner violence in obstetrics and gynecology patients. American Journal of Obstetrics & Gynecology, 210, 42.e41–42.e48. [PubMed: 24055583]
- Davis KC, Stappenbeck CA, Norris J, George WH, Jacques-Tiura AJ, Schraufnagel TJ, & Kajumulo KF (2014). Young men's condom use resistance tactics: A latent profile analysis. The Journal of Sex Research, 51, 454–465. [PubMed: 23548069]
- Fanslow J (2017). Intimate partner violence and women's reproductive health. Obstetrics, Gynaecology & Reproductive Medicine, 27, 148–157.
- Gee RE, Mitra N, Wan F, Chavkin DE, & Long JA (2009). Power over parity: Intimate partner violence and issues of fertility control. American Journal of Obstetrics & Gynecology, 201, 148.e141–148.e147. [PubMed: 19564020]
- Grace KT, & Anderson JC (2018). Reproductive coercion: A systematic review. Trauma, Violence, & Abuse, 19, 371–390.
- Holliday CN, McCauley HL, Silverman JG, Ricci E, Litt M, Decker MR, ... Miller E (2017). Racial/ethnic differences in women's experiences of reproductive coercion, intimate partner violence, and unintended pregnancy. Journal of Women's Health, 26, 828–835.
- Holliday CN, Miller E, Decker MR, Burke JG, Documet PI, Borrero SB, ... McCauley HL (2018).
  Racial differences in pregnancy intention, reproductive coercion, and partner violence among family planning clients: A qualitative exploration. Women's Health Issues, 28, 205–211. [PubMed: 29631975]
- McCauley HL, Silverman JG, Jones KA, Tancredi DJ, Decker MR, McCormick MC, ... Miller E (2017). Psychometric properties and refinement of the Reproductive Coercion Scale. Contraception, 95, 292–298. [PubMed: 27639927]
- Miller E, Decker MR, McCauley HL, Tancredi DJ, Levenson RR, Waldman J, ... Silverman JG (2010). Pregnancy coercion, intimate partner violence and unintended pregnancy. Contraception, 81, 316–322. [PubMed: 20227548]
- Miller E, McCauley HL, Tancredi DJ, Decker MR, Anderson H, & Silverman JG (2014).

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

  Contraception, 89, 122–128. [PubMed: 24331859]
- Miller E, Tancredi DJ, Decker MR, McCauley HL, Jones KA, Anderson H, ... Silverman JG (2016). A family planning clinic-based intervention to address reproductive coercion: A cluster randomized controlled trial. Contraception, 94, 58–67. [PubMed: 26892333]
- Moore AM, 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. [PubMed: 20359808]
- Nikolajski C, Miller E, McCauley HL, Akers A, Schwarz E, Steinberg J, ... Borrero S (2015). Race and reproductive coercion: A qualitative assessment. Women's Health Issues, 25, 216–223. [PubMed: 25748823]
- Niolon PH, Kearns M, Dills J, Rambo K, Irving S, Armstead TL, & Gilbert L (2017). Preventing intimate partner violence across the lifespan: A technical package of programs, policies, and practices. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Niolon PH, Vivolo-Kantor AM, Tracy A, Latzman NE, Little TD, DeGue S, ... Tharp AT (2019). An RCT of the Dating Matters: Effects on teen dating violence and relationship behaviors. American Journal of Preventive Medicine, 57(1), 13–23. [PubMed: 31128957]
- Sales JM, Salazar LF, Wingood GM, DiClemente RJ, Rose E, & Crosby RA (2008). The mediating role of partner communication skills on HIV/STD-associated risk behaviors in young African

- American females with a history of sexual violence. Archives of Pediatrics & Adolescent Medicine, 162, 432–438. [PubMed: 18458189]
- Sarkar NN (2009). The impact of intimate partner violence on women's reproductive health and pregnancy outcome. Journal of Obstetrics and Gynaecology, 28, 266–271. doi:10.1080/01443610802042415
- Silverman JG, McCauley HL, Decker MR, 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 and Reproductive Health, 43, 60–65. [PubMed: 21388506]
- Smith SG, Zhang X, Basile K, Merrick M, Wang J, Kresnow M, & Chen J (2018). The National Intimate Partner and Sexual Violence Survey (NISVS): 2015 data brief—Updated release. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Teitelman AM, Ratcliffe SJ, Morales-Aleman MM, & Sullivan CM (2008). Sexual relationship power, intimate partner violence, and condom use among minority urban girls. Journal of Interpersonal Violence, 23, 1694–1712. [PubMed: 18349344]
- Tharp AT, Burton T, Freire K, Hall DM, Harrier S, Latzman NE, ... Vagi KJ (2011). Dating Matters™: Strategies to promote healthy teen relationships. Journal of Women's Health, 20, 1761–1765.
- Willie TC, Powell A, Callands T, Sipsma H, Peasant C, Magriples U, ... Kershaw T (2017). Investigating intimate partner violence victimization and reproductive coercion victimization among young pregnant and parenting couples: A longitudinal study. Psychology of Violence, 9, 278–287. doi:10.1037/vio0000118 [PubMed: 31086693]
- Wu E, El-Bassel N, Witte SS, Gilbert L, & Chang M (2003). Intimate partner violence and HIV risk among urban minority women in primary health care settings. AIDS and Behavior, 7, 291–301. [PubMed: 14586191]

Estimates.

Basile et al. Page 13

 $\begin{tabular}{l} \textbf{Table 1.} \\ \textbf{Lifetime and 12-Month Prevalence of Reproductive Coercion by an Intimate Partner by Race/Ethnicity}^a — \\ \textbf{U.S. Women and Men, National Intimate Partner and Sexual Violence Survey 2010–2012 Average Annual } \\ \end{tabular}$ 

	Lifetime			12-Month			
	Weighted %	95% Confidence Interval	Estimated Number of Victims*	Weighted %	95% Confidence Interval	Estimated Number of Victims*	
Women							
Any Reproductive Coercion	8.4	[7.8, 9.0]	10,136,000	1.3	[1.1, 1.6]	1,593,000	
Hispanic	9.9 <sup>b</sup>	[8.0, 12.2]	1,578,000	1.8 <sup>b</sup>	[1.1, 2.8]	283,000	
NH White	7.0	[6.4, 7.6]	5,628,000	0.9	[0.7, 1.1]	684,000	
NH Black	14.8 <sup>c,d,e</sup>	[12.9, 17.0]	2,180,000	3.3 <sup>c,d</sup>	[2.4, 4.7]	492,000	
NH Other	8.0	[5.9, 10.8]	721,000				
Tried to get you pregnant	4.6	[4.2, 5.0]	5,508,000	0.6	[0.5, 0.8]	740,000	
Hispanic	5.4	[4.0, 7.2]	856,000				
NH White	3.8	[3.3, 4.2]	3,025,000	0.3	[0.2, 0.5]	268,000	
NH Black	8.5 <i>c,d,e</i>	[7.1, 10.3]	1,254,000	$2.0^d$	[1.2, 3.2]	290,000	
NH Other	4.1	[2.6, 6.3]	366,000				
Refused to use a condom	6.4	[5.9, 6.9]	7,686,000	1.0	[0.8, 1.3]	1,234,000	
Hispanic	8.2 <sup>b</sup>	[6.4, 10.4]	1,308,000	$1.4^{b}$	[0.9, 2.3]	223,000	
NH White	5.0	[4.5, 5.6]	4,045,000	0.7	[0.5, 0.9]	526,000	
NH Black	11.7 <sup>c,d,e</sup>	[10.0, 13.8]	1,726,000	$2.5^{d}$	[1.7, 3.5]	363,000	
NH Other	6.5	[4.8, 8.9]	584,000				
Men							
Any Reproductive Coercion	9.7	[9.1, 10.4]	11,117,000	1.7	[1.4, 2.0]	1,922,000	
Hispanic	11.8 <sup>b,g</sup>	[9.7, 14.3]	1,973,000	3.0 <sup>b,g</sup>	[2.1, 4.3]	499,000	
NH White	8.1	[7.4, 8.8]	6,151,000	0.9	[0.7, 1.1]	664,000	
NH Black	17.7 <sup>c,d,e</sup>	[15.0, 20.7]	2,248,000	4.9 <sup>c,d,e</sup>	[3.3, 7.2]	619,000	
NH Other	8.4	[6.6, 10.7]	694,000	1.5	[0.9, 2.6]	124,000	
Tried to get pregnant	8.4	[7.8, 9.1]	9,594,000	1.2	[0.9, 1.5]	1,336,000	
Hispanic	9.0	[7.2, 11.3]	1,510,000	1.6 <sup>b</sup>	[1.0, 2.6]	269,000	
NH White	7.3	[6.6, 7.9]	5,547,000	0.7	[0.5, 0.9]	493,000	
NH Black	14.7 <sup>c,d,e</sup>	[12.2, 17.7]	1,873,000	3.6 <sup>d</sup>	[2.2, 5.9]	464,000	
NH Other $^f$	7.4	[5.7, 9.7]	613,000				
Refused to use a condom	3.4	[3.0, 3.8]	3,880,000	1.0	[0.8, 1.2]	1,084,000	
Hispanic	6.1 <i>b,g</i>	[4.6, 8.0]	1,018,000	$2.4^{b}$	[1.6, 3.7]	400,000	

Basile et al.

NH Other

Lifetime 12-Month **Estimated Estimated** Number of Number of 95% Confidence 95% Confidence Victims\* Victims\* Weighted % Interval Weighted % Interval NH White 2.1 1,634,000 0.4 276,000 [1.8, 2.5][0.2, 0.6]7.5<sup>d,e</sup> NH Black  $2.8^{d}$ 351,000 [5.9, 9.4]952,000 [1.8, 4.2]3.0

247,000

Page 14

Note. -- Estimate is not reported; relative standard error > 30% or cell size 20. NH = non-Hispanic; RC = reproductive coercion.

[1.8, 5.0]

<sup>&</sup>lt;sup>a</sup>Race/ethnicity was self-identified. Persons of Hispanic ethnicity can be of any race or combination of races.

 $<sup>^</sup>b\mathrm{Hispanic}$  significantly more likely to experience RC than NH White,  $p\!<\!.05.$ 

 $<sup>^{</sup>C}$ NH Black significantly more likely to experience RC than Hispanic, p < .05.

 $d_{\rm NH~Black~significantly~more~likely~to~experience~RC~than~NH~White,~p\,<\,.05.$ 

 $<sup>^</sup>e_{\rm NH}$  Black significantly more likely to experience RC than NH Other, p < .05.

fIncludes Asian or Pacific Islander, American Indian or Alaska Native, and multiracial.

<sup>&</sup>lt;sup>g</sup>Hispanic significantly more likely to experience RC than NH Other, p < .05.

<sup>\*</sup>Rounded to the nearest thousand.

**Table 2.**Lifetime and 12-Month Reports of Reproductive Coercion by an Intimate Partner by Race/Ethnicity<sup>a</sup> Among Female and Male Victims of Intimate Partner Violence<sup>b</sup>—National Intimate Partner and Sexual Violence Survey 2010–2012 Average Annual Estimates.

	Lifetime			12-Month			
	Weighted %	95% Confidence Interval	Estimated Number of Victims*	Weighted %	95% Confidence Interval	Estimated Number of Victims*	
Female Victims							
Any Reproductive Coercion	15.3	[14.3, 16.4]	9,467,000	6.7	[5.5, 8.2]	1,254,000	
Hispanic	18.8°	[15.3, 23.0]	1,471,000	7.1	[4.2, 11.5]	213,000	
NH White	12.8	[11.7, 14.0]	5,353,000	4.6	[3.5, 6.1]	534,000	
NH Black	$22.9^{d}$	[19.9, 26.3]	1,956,000	14.2 <sup><i>d,e</i></sup>	[9.9, 19.9]	395,000	
NH Other $^f$	18.0	[13.3, 23.9]	666,000				
Tried to get you pregnant	8.6	[7.8, 9.5]	5,329,000	3.0	[2.2,4.1]	554,000	
Hispanic	10.9 <sup>C</sup>	[8.1, 14.4]	850,000				
NH White	7.1	[6.3, 7.9]	2,944,000	1.8	[1.1, 2.9]	208,000	
NH Black	13.7 <sup>d</sup>	[11.3, 16.5]	1,170,000	$7.4^{d}$	[4.2, 13.0]	208,000	
NH Other	9.9	[6.4, 14.9]	366,000				
Refused to use a condom	11.6	[10.6, 12.6]	7,152,000	5.4	[4.4, 6.7]	1,011,000	
Hispanic	15.5°	[12.1, 19.6]	1,208,000	6.0	[3.4, 10.1]	180,000	
NH White	9.2	[8.2, 10.2]	3,814,000	3.6	[2.6, 4.9]	417,000	
NH Black	18.5 <sup>d</sup>	[15.7, 21.7]	1,579,000	11.0 <sup><i>d,e</i></sup>	[7.7, 15.4]	306,00	
NH Other	14.3 <sup>g</sup>	[10.3, 19.4]	529,000	9.0	[3.8, 20.2]	109,000	
Male Victims							
Any Reproductive Coercion	17.5	[16.3, 18.7]	10,314,000	7.2	[5.9, 8.8]	1,613,000	
Hispanic	20.9 <sup>c</sup>	[17.2, 25.1]	1,866,000	10.7 <sup>C</sup>	[7.2, 15.6]	425,000	
NH White	14.7	[13.4, 16.0]	5,705,000	4.3	[3.2, 5.7]	558,000	
NH Black	28.4 <sup>d,e,h</sup>	[24.2, 33.0]	2,130,000	$13.4^{d}$	[8.7, 20.2]	505,000	
NH Other	16.4	[13.1, 20.4]	586,000	8.6	[5.0, 14.4]	124,000	
Tried to get pregnant	15.1	[14.0, 16.3]	8,909,000	5.3	[4.1, 6.8]	1,185,000	
Hispanic	16.2	[12.9, 20.0]	1,445,000	6.4	[3.9, 10.2]	255,000	
NH White	13.2	[12.0, 14.4]	5,130,000	3.3	[2.3, 4.5]	428,000	
NH Black	23.9 <sup>d,e,h</sup>	[19.9, 28.4]	1,789,000	10.9 <sup>d</sup>	[6.5, 17.7]	409,000	
NH Other	14.6	[11.5, 18.3]	519,000				
Refused to use a condom	6.1	[5.4, 6.9]	3,590,000	3.8	[3.0, 5.0]	859,000	

		Lifetime			12-Month			
	Weighted %	95% Confidence Interval	Estimated Number of Victims*	Weighted %	95% Confidence Interval	Estimated Number of Victims*		
Hispanic	10.6 <sup>c,i</sup>	[8.0, 14.0]	950,000	8.2 <sup>c</sup>	[5.1, 13.0]	328,000		
NH White	4.0	[3.3, 4.8]	1,555,000	1.7	[1.1, 2.6]	223,000		
NH Black	12.0 <sup>d,h</sup>	[9.5, 15.2]	902,000	6.7 <sup>d</sup>	[4.1, 10.7]	251,000		
${\rm NH\ Other}^f$	5.0	[3.4, 7.1]	177,000					

Note. -- Estimate is not reported; relative standard error > 30% or cell size 20. NH = non-Hispanic; RC = reproductive coercion.

<sup>&</sup>lt;sup>a</sup>Race/ethnicity was self-identified. Persons of Hispanic ethnicity can be of any race or combination of races.

<sup>&</sup>lt;sup>b</sup>Intimate partner violence includes any form of sexual violence, stalking, physical violence, or psychological aggression by an intimate partner.

<sup>&</sup>lt;sup>C</sup>Hispanic significantly more likely to experience RC than NH White, p < .05.

MH Black significantly more likely to experience RC than NH White, p < .05.

NH Black significantly more likely to experience RC than Hispanic, p < .05.

fIncludes Asian or Pacific Islander, American Indian or Alaska Native, and multiracial.

 $<sup>^{</sup>g}$ NH Other more likely to experience RC than NH White, p < .05.

 $<sup>^{</sup>h}_{\rm NH}$  Black significantly more likely to experience RC than NH Other, p < .05.

iHispanic significantly more likely to experience RC than NH Other, p < .05.

<sup>\*</sup>Rounded to the nearest thousand.

Table 3.

Lifetime and 12-Month Reports of Reproductive Coercion by an Intimate Partner Among Female and Male Victims Without Other IPV, by Race/Ethnicity<sup>a,b</sup>—National Intimate Partner and Sexual Violence Survey 2010–2012 Average Annual Estimates.

	Lifetime			12-Month			
	Weighted %	95% Confidence Interval	Estimated Number of Victims*	Weighted %	95% Confidence Interval	Estimated Number of Victims*	
Women	,						
Any reproductive coercion	1.1	[0.9, 1.5]	669,000	0.3	[0.2, 0.5]	339,000	
NH White	0.7	[0.5, 1.1]	275,000				
NH Black	3.6	[2.3, 5.7]	224,000				
Tried to get you pregnant	0.3	[0.2, 0.5]	179,000				
Refused to use a condom	0.9	[0.7, 1.3]	534,000	0.2	[0.1, 0.4]	223,000	
NH White	0.6	[0.4, 0.9]	231,000				
Men							
Any reproductive coercion	1.5	[1.1, 1.9]	804,000	0.3	[0.2, 0.5]	309,000	
NH White	1.2	[0.9, 1.6]	446,000				
Tried to get pregnant	1.2	[0.9, 1.7]	685,000	0.2	[0.09, 0.3]	150,000	
NH White	1.1	[0.8, 1.5]	417,000				
Refused to use a condom	0.5	[0.3, 0.9]	290,000				

Note. -- Estimate is not reported; relative standard error > 30% or cell size 20. NH = non-Hispanic; IPV = intimate partner violence.

<sup>&</sup>lt;sup>a</sup>Race/ethnicity was self-identified. Persons of Hispanic ethnicity can be of any race or combination of races.

b Only racial/ethnic groups with reliable estimates are shown.

<sup>\*</sup> Rounded to the nearest thousand.