

**RACIAL/ETHNIC DISPARITIES IN UNINTENDED
PREGNANCY, REPRODUCTIVE COERCION, AND INTIMATE
PARTNER VIOLENCE**

by

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Edmund Ricci, PhD, MLitt

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ABSTRACT

Unintended pregnancies account for more than half of all pregnancies in the U.S. and are disproportionately more prevalent among racial/ethnic minorities and younger women. Women who experience an unintended pregnancy are more likely to report experiences of reproductive coercion and/or intimate partner violence (IPV). Furthermore, unintended pregnancies are of public health significance due to poor health outcomes for women and children. Low birth weight, lack of prenatal care, and low educational attainment are only a few risk factors associated with unintended pregnancy.

Three studies were conducted to examine racial/ethnic differences and disparities associated with unintended pregnancy, reproductive coercion, and IPV. The data are organized by three specific aims. To address Aim 1, a systematic literature review was conducted to explore racial/ethnic factors that may predict unintended pregnancy and to develop a comprehensive conceptual framework of these findings. The second component (Aim 2) is a quantitative analysis documenting associations between unintended pregnancy, reproductive coercion, and IPV, and differences among racial/ethnic groups. Finally, semi-structured interviews (Aim 3) were analyzed

to identify mechanisms associated with unintended pregnancy in the context of IPV among Non-Hispanic Black (Black) and Non-Hispanic White (White) women.

Results from this dissertation document significant differences in the prevalence of unintended pregnancy, reproductive coercion, and IPV among the racial/ethnic groups. Reproductive coercion and unintended pregnancy were most prevalent among Black and multiracial women. Socio-demographic characteristics, pregnancy intention, partner influence, contraception use, and maternal behavior prior to conception emerged from the systematic literature review as correlates of the association between unintended pregnancy and race/ethnicity. Additional correlates were noted in narratives provided by Black and White women who reported partner abuse.

Unintended pregnancy is a multifaceted public health issue with implications for the well-being of women and their children. This dissertation contributes some novelty to the research field concerning racial/ethnic disparities that surround unintended pregnancy, reproductive coercion, and IPV. However, future research is needed to explore and confirm relationships documented in this study. Public health practitioners should consider interventions that are specific to racial/ethnic populations and that address barriers to pregnancy prevention (i.e. pregnancy attitude, partner pressure, socio-demographics influences).

TABLE OF CONTENTS

PREFACE.....	XV
1.0 INTRODUCTION.....	1
1.1 UNINTENDED PREGNANCY AMONG ADOLESCENTS AND YOUNG ADULTS	3
1.1.1 Socio-ecological Context of Unintended Pregnancy.....	3
1.1.2 Structural Influences and Unintended Pregnancy.....	4
1.1.3 Community-level Factors and Unintended Pregnancy.....	6
1.1.4 Interpersonal Factors and Unintended Pregnancy.....	8
1.1.4.1 Partner Influences	8
1.1.4.2 Familial Relationships.....	10
1.1.5 Intrapersonal Factors and Unintended Pregnancy.....	11
1.2 REPRODUCTIVE COERCION AMONG ADOLESCENTS AND YOUNG WOMEN	13
1.3 INTIMATE PARTNER VIOLENCE AND REPRODUCTIVE COERCION....	16
1.4 INTIMATE PARTNER VIOLENCE AMONG ADOLESCENTS AND YOUNG WOMEN	20
1.5 THEORETICAL UNDERPINNINGS OF RACIAL/ETHNIC HEALTH DISPARITIES.....	23
1.6 RACIAL/ETHNIC DISPARITY AND THE ASSOCIATION BETWEEN IPV, REPRODUCTIVE COERCION, AND UNINTENDED PREGNANCY: CONCEPTUAL FRAMEWORK	25

1.6.1	Ecological Causes of Unintended Pregnancy, Reproductive Coercion, and Intimate Partner Violence	27
1.7	SUMMARY	32
2.0	OVERVIEW OF DISSERTATION AND SPECIFIC AIMS	33
2.1	SPECIFIC AIMS AND HYPOTHESES	34
2.1.1	Aim 1	34
2.1.2	Aim 2 and Hypotheses	34
2.1.3	Aim 3	35
3.0	RACIAL/ETHNIC DISPARITIES IN UNINTENDED PREGNANCY: A SYSTEMATIC LITERATURE REVIEW	36
3.1	ABSTRACT	37
3.2	INTRODUCTION	38
3.3	METHODS.....	39
3.3.1	Data Sources and Searches.....	40
3.4	RESULTS.....	45
3.4.1	Measuring Unintended Pregnancy	45
3.4.2	Maternal Age, Education, Income, and Related Socio-demographic Factors	56
3.4.2.1	Maternal Age.....	56
3.4.2.2	Educational Attainment	57
3.4.2.3	Socio-economic Status and Social standing.....	58
3.4.2.4	Health Insurance.....	58
3.4.2.5	Marital Status.....	59

3.4.3	Reproductive Values/Behaviors.....	60
3.4.3.1	Reproductive Values and Household Structure.....	60
3.4.3.2	Pregnancy Ambivalence and Fatalism.....	60
3.4.3.3	Fertility Attitudes.....	61
3.4.4	Contraception.....	62
3.4.4.1	Contraceptive use.....	62
3.4.4.2	Contraceptive Method Choice.....	63
3.4.5	Preconception Behaviors.....	64
3.4.6	Partner Influence.....	65
3.4.7	Thematic Synthesis.....	65
3.5	DISCUSSION.....	67
3.5.1	Limitations.....	70
3.5.1.1	Critique of the Evidence.....	70
3.5.2	Implications for Practice, Policy, and Research.....	71
3.5.2.1	Practice.....	71
3.5.2.2	Policy.....	72
3.5.2.3	Research.....	72
4.0	METHODS.....	74
4.1	DATA.....	74
4.1.1	Dataset One: Quantitative.....	74
4.1.1.1	Sample.....	76
4.1.2	Dataset Two: Qualitative Analysis.....	76
4.1.2.1	Sample.....	77

4.1.3	Data Storage and Management	78
4.2	APPROACH	78
4.2.1	Systematic Literature Review Component	78
4.2.2	Data Sources and Searches.....	79
4.2.2.1	Study Selection	80
4.2.3	Quantitative Component	83
4.2.4	Sample	83
4.2.5	Measures	84
4.2.5.1	Primary Predictor Variable.....	84
4.2.5.2	Unintended Pregnancy	84
4.2.5.3	Reproductive Coercion.....	85
4.2.5.4	Intimate Partner Violence.....	85
4.2.6	Analysis Plan	86
4.2.7	Qualitative Component.....	87
4.2.8	Recruitment	87
4.2.9	Interview Procedures	88
4.2.10	Analysis Plan	89
5.0	RACIAL/ETHNIC DISPARITIES ASSOCIATED WITH UNINTENDED PREGNANCY, REPRODUCTIVE COERCION, AND INTIMATE PARTNER VIOLENCE	90
5.1	ABSTRACT	91
5.2	INTRODUCTION	93
5.3	METHODS.....	95

5.3.1	Sample	95
5.3.2	Measures	96
5.3.2.1	Primary Predictor Variable.....	96
5.3.2.2	Unintended Pregnancy	96
5.3.2.3	Reproductive Coercion.....	97
5.3.2.4	Intimate Partner Violence.....	97
5.3.3	Analysis Plan	98
5.4	RESULTS.....	99
5.4.1	Sample Characteristics	99
5.4.2	Intimate Partner Violence	101
5.4.3	Reproductive Coercion	102
5.4.4	Unintended Pregnancy	102
5.4.5	Unintended Pregnancy, Reproductive Coercion, and Intimate Partner Violence	103
5.5	DISCUSSION.....	105
5.5.1	Limitations	109
6.0	RACIAL/ETHNIC DIFFERENCES IN PREGNANCY INTENTION, REPRODUCTIVE COERCION, AND PARTNER VIOLENCE AMONG FAMILY PLANNING CLIENTS: A QUALITATIVE EXPLORATION	114
6.1	ABSTRACT	115
6.2	INTRODUCTION	116
6.3	METHODS.....	117
6.3.1	Recruitment	118

6.3.2	Interview Procedures	118
6.3.3	Analysis Plan	119
6.4	RESULTS.....	120
6.4.1	Study Sample	120
6.4.2	Intimate Partner Violence	121
6.4.3	Pregnancy Intention.....	123
6.4.3.1	Pregnancy Ambivalence.....	124
6.4.4	Love Seeking.....	125
6.4.5	Reproductive Coercion	126
6.4.6	Unwanted Sexual Experiences	129
6.5	DISCUSSION.....	132
6.5.1	Limitations	134
6.5.2	Implications for Research and Practice	135
7.0	DISCUSSION.....	136
7.1	AIM 1.....	136
7.1.1	Limitations	139
7.1.1.1	Critique of the Evidence.....	139
7.1.2	Implications for Practice, Policy, and Research.....	140
7.1.2.1	Practice	140
7.1.2.2	Policy	141
7.1.2.3	Research.....	141
7.2	AIM 2.....	142
7.2.1	Limitations	146

7.3	AIM 3.....	147
7.3.1	Limitations.....	149
7.3.2	Implications for Research and Practice.....	149
7.4	SYNTHESIS OF KEY FINDINGS.....	150
7.5	IMPLICATIONS FOR POLICY AND PRACTICE.....	152
7.6	NEXT STEPS FOR RESEARCH.....	155
8.0	CONCLUSION.....	157
	APPENDIX A: SURVEY QUESTIONS.....	158
	APPENDIX B: INTERVIEW SCRIPT AND CODE BOOK.....	180
	BIBLIOGRAPHY.....	191

LIST OF TABLES

Table 1. Systematic Literature Review Search Terms	42
Table 2. Example Search History for PubMed	44
Table 3. A Comprehensive Description of the Systematic Literature Review	44
Table 4. Summary of Publications Included in the Review	49
Table 5. Systematic Literature Review Search Terms	81
Table 6. Example Search History for PubMed	82
Table 7. A Comprehensive Description of the Systematic Literature Review	82
Table 8. Characteristics of the Study Population by Race/Ethnicity	110
Table 9. Crude Associations of Unintended Pregnancy, Reproductive Coercion, and Intimate Partner Violence across Race/Ethnicity and Other Socio-Demographic Variables, N=1,234	111
Table 10. Logistic Regression Models Assessing Associations of Race, Reproductive Coercion, and Intimate Partner Violence with Unintended Pregnancy	112
Table 11. Logistic Regression Models Assessing Associations of Race/Ethnicity (White and Black) and Reproductive Coercion with Unintended Pregnancy.....	113
Table 12. Participant Demographics by Race, Percentage, and Frequency.....	122

LIST OF FIGURES

Figure 1. Conceptual Model of Potential Determinants of Unintended Pregnancy, Reproductive Coercion, and IPV.....	27
Figure 2. Summary of Ecological Factors Associated with Unintended Pregnancy, Reproductive Coercion, and IPV.....	31
Figure 3. Selection Process of Systematic Literature Review Focusing on the Association between Racial/Ethnic Experiences and Unintended Pregnancy	48
Figure 4. Thematic Synthesis Demonstrating the Correlation of Unintended Pregnancy with Race/Ethnicity	66

PREFACE

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1.0 INTRODUCTION

Addressing reproductive health concerns such as unintended pregnancy, sexually transmitted infections (STIs), and contraception use are goals of *Healthy People 2020*, specifically for adolescents (10-19 years) and young adults (20-24 years) (U.S. Department of Health and Human Services, 2013a). A disproportion exists with regards to racial/ethnic background and the prevalence of unintended pregnancy (Finer & Zolna, 2013; Miller et al., 2013; A. Moore, Frohwirth, & Miller, 2010; Ventura, Hamilton, & Mathews, 2013). Though birth rates for all racial/ethnic groups have declined, they are still higher among Non-Hispanic Blacks (Black) and the Hispanic/Latino population. Among women ages 15-19, Hispanics/Latinas and Blacks have birth rates of 46.3 per 1,000 and 43.9 per 1,000, respectively, compared to the birth rate of 20.5 per 1,000 experienced by their Non-Hispanic (White) peers (Hamilton, Martin, & Ventura, 2013). Additional disparity exists between Hispanic/Latino populations, with individuals who identify as “other” experiencing higher teen birth rates when compared to Mexicans, Puerto Ricans, and Cubans (Ventura et al., 2013).

The prevalence of unintended pregnancy is particularly high among younger women (Finer & Zolna, 2011). According to the National Survey of Family Growth, between 2006 and 2010, 77% of all births to adolescents (15-19 years of age) were unintended (Mosher, Jones, & Abma, 2012). Estimates conclude that births among this age group are associated with an annual cost burden to society of 10.9 billion dollars (U.S. Department of Health and Human Services, 2013a).

Since 1991, the birth rate among young women has declined in the U.S. (Hamilton et al., 2013; Ventura et al., 2013). However, rates of unintended pregnancy are still relatively high among minority populations. Unintended pregnancy is only one health disparity. Women who are younger, less educated, from low socioeconomic backgrounds, and/or abused physically or sexually by an intimate partner are more at-risk for unintended pregnancy (Finer & Zolna, 2013; Miller, Decker, et al., 2010; Miller & McCauley, 2013; Silverman et al., 2011). Specifically, researchers have presented an association between unintended pregnancy, reproductive coercion, and intimate partner violence (IPV) (Miller, Decker, et al., 2010; Miller et al., 2013; A. Moore et al., 2010; Silverman et al., 2011). Women who report being abused by an intimate partner are more likely to experience reproductive coercion (pregnancy coercion or interference with birth control) when compared to women with no experiences of IPV. Additionally, experiences of IPV and reproductive coercion, either singly or combined, increase a woman's odds for unintended pregnancy (Miller et al., 2013).

The prevalence of reproductive health issues among adolescents is presented in the literature with pronounced racial/ethnic disparities (Finer & Zolna, 2013; Miller et al., 2013; U.S. Department of Health and Human Services, 2013a). However, literature has yet to be published on why such racial/ethnic disparities exist in the context of reproductive health and IPV. The purpose of this review is to explore racial/ethnic disparities particularly related to the association between unintended pregnancy, reproductive coercion, and IPV.

1.1 UNINTENDED PREGNANCY AMONG ADOLESCENTS AND YOUNG ADULTS

Unintended pregnancies (defined for the purpose of this review) are pregnancies that are mistimed, unplanned or unwanted, based on a woman's pregnancy intention just before conception (Finer & Zolna, 2013). Unintended pregnancies account for more than half of all pregnancies in the U.S., which is indicative of the reproductive health of respective sub- populations (Finer & Zolna, 2013). In 2008, approximately 6.6 million unintended pregnancies were reported (Finer & Zolna, 2013).

In general, an unintended pregnancy can be debilitating to a woman and infant's health with consequences including low birth weight, lack of prenatal care, and poor academic performance. These effects are amplified among adolescent mothers (Dehlendorf, Rodriguez, Levy, Borrero, & Steinauer, 2010). Studies have documented the short and long-term consequences of unintended pregnancy, yet little information is known regarding how underlying racial/ethnic factors contribute to women's risk for unintended pregnancy (Dehlendorf et al., 2010).

1.1.1 Socio-ecological Context of Unintended Pregnancy

Unintended pregnancy should be approached from an ecological perspective, as differences in the incidence of unintended pregnancy are noticeable across race/ethnicity, age, and socioeconomic factors (Dehlendorf et al., 2010; Finer & Henshaw, 2006; Ventura et al., 2013). At the individual level, gender norms, contraception use/adherence, age, and past sexual experiences increase the odds of unintended pregnancy (Borrero, Zhao, et al., 2013; Finer & Zolna, 2013). Black and Hispanic/Latina women were more likely to report early onset of sexual intercourse (before the age of 13), having more than four sexual partners in their lifetime, and to not have used any form

of pregnancy prevention during their last sexual encounter (Center for Disease Control and Prevention, 2012). Research supports that racial/ethnic disparities also exist regarding family planning practices, interpersonal relationships, and community status (Bryant, Nakagawa, Gregorich, & Kuppermann, 2010; Shih, Dube, Sheinbein, Borrero, & Dehlendorf, 2013). Additional predictors of unintended pregnancy include: paternal age, nativity, religion, previous live births, access to care, academic attainment, and social standing (Bryant et al., 2010).

Three main factors have been identified in the literature as contributors to the racial/ethnic disparity that exists regarding unintended pregnancy and overall female reproductive health: patient preference and behavior, the health care system, and provider-related influences (Dehlendorf et al., 2010).

1.1.2 Structural Influences and Unintended Pregnancy

In response to the disparate number of Hispanic/Latina and Black women receiving prenatal care in comparison to White women, the federal government passed Medicaid expansion and Title X to increase access to family planning care and related prevention (Dehlendorf et al., 2010). However, these laws did not account for underlying racial/ethnic disparity such as inadequate transportation, the quality of service provided by physicians, and lack of access to specialty care (Anachebe & Sutton, 2003). Due to unsuccessful changes at the policy level, we realize that racial/ethnic disparities associated with reproductive health are more complex.

Dehlendorf et al. (2010) alluded to the cultural and historical experiences of Black women in the context of reproductive health. Some studies attribute unintended pregnancies among Black and other minority women to behavioral, cultural, and structural challenges (Anachebe & Sutton, 2003; Sampson, Morenoff, & Raudenbush, 2005) like minority status, level of education, and

socioeconomic status (Dehlendorf et al., 2010). Inaccessible health care, lack of transportation, delayed screening and preventive care, and a number of other factors often lead to reproductive health disparities among women (Anachebe & Sutton, 2003). Despite advances in modern day medicine, racial/ethnic health disparities persist (Anachebe & Sutton, 2003).

Borrero, Schwarz, Creinin, and Ibrahim (2009) reported that there are no variances in access to reproductive and family planning health care between racial/ethnic groups, but that there is evidence to suggest that the services provided are different. When compared to their White and Hispanic/Latino counterparts, Black adolescent females were 11 times more likely to report that their unwanted pregnancy was attributed to their inability to obtain contraception. Lack of insurance and the inability to pay for contraception have been cited as structural issues that may contribute to the prevalence of unintended pregnancy (Clark et al., 2013; Gee, Mitra, Wan, Chavkin, & Long, 2009).

Compared to White and Black women, Hispanic/Latina women are significantly more likely to receive counseling regarding birth control and tubal sterilization. Yet, Hispanic/Latina women are less likely to accept birth control during their family planning visit. Also, Black women are less likely to accept birth control despite receiving more birth control counseling. In digging deeper, the degree in which White women receive tubal sterilization counseling is comparable to that of Hispanic/Latina women. However, Black women are most likely to undergo sterilization (Borrero, Schwarz, et al., 2009). Given this information, one conclusion may be that sterilization among Black women is patient initiated (Borrero, Schwarz, et al., 2009), suggesting the need for research regarding partner-based control among this sub-population.

Gender and race-based differences have been reported in the context of sterilization (Shih et al., 2013). Black and Hispanic/Latina women are more likely to undergo female sterilization

when compared to their White counterparts. Additionally, a disproportion exists regarding the percentage of female sterilizations to male sterilizations among all races. Structural reasons of socioeconomic status, being a carrier of private health insurance, and higher education levels have been alluded to as reasons why racial/ethnic disparity exists regarding sterilization (Shih et al., 2013).

The association between contraception and unintended pregnancy is clear at the surface level. Policies that promote providing women with a 13-month supply of birth control, rather than dispensing on a month-by-month basis, improve continuation rates of contraception use as well as reduce incidences of unintended pregnancy and abortion (Borrero, Zhao, et al., 2013). While this finding is important to inform policy change, more information is needed on the racial/ethnic disparities of contraception use, including interpersonal and intrapersonal barriers. Specifically, women who are in abusive relationships are more likely to experience birth control interrupted by their partner (Miller, Decker, et al., 2010).

In the U.S., factors linked to race/ethnicity are often correlated with socioeconomic status. Nonetheless, considering the individual influences of these factors, race/ethnicity predicts unintended pregnancy despite income level. Similarly, low-income predicts unintended pregnancy regardless of race/ethnicity (Finer & Henshaw, 2006).

1.1.3 Community-level Factors and Unintended Pregnancy

Community level factors such as religious affiliation, neighborhood, and environments, have been associated with unintended pregnancy (Finer & Zolna, 2013; Gee et al., 2009). Women who did not affiliate with religious groups experienced higher rates of unintended pregnancy. In comparing

Catholic and Protestant women, rates of unintended pregnancy were similar. However, birth outcomes varied with higher abortion rates reported among women in the Catholic community (Finer & Zolna, 2013).

Unintended pregnancy predicts female tubal sterilization (Borrero, Moore, Qin, et al., 2010). In exploring the community context of sterilization among long-term couples of various racial/ethnic backgrounds, Shih et al. (2012) reported narratives from men of all racial/ethnic groups who were willing to share the burden of reproductive health with their female partners. These men also expressed financial stability, the desire to support their families, and the inability to impregnate a woman during times of infidelity as reasons why they would go through with male sterilization. Of note, however, Hispanic/Latino and Black males quoted a lack of support and social stigma as reasons why they would not undergo a vasectomy. Given common misconceptions related to sterilization, males from all groups were uneasy about vasectomies and were more inclined to opt for female sterilization, which was perceived to be easily reversible (Shih et al., 2013). Though results were not significant, minority males were found to be more likely to receive counseling about a vasectomy despite lower ratios of male to female sterilization among minority groups (Borrero, Moore, Creinin, & Ibrahim, 2010). The commentary from the men and women in this study sheds light on racial/ethnic differences in reproductive health as well as gender norms and community influences.

Reproductive decision making and pregnancy intentions are complex constructs associated with the prediction of unintended pregnancy (Bryant et al., 2010). Bryant et al. (2010) explored social standing, a subjective measure that associates with social, physical, and emotional aspects of health independent of other traditional measures of socioeconomic status. In an unadjusted model, women who reported unintended pregnancies were significantly more likely to have higher

fatalism scores, or believe that the pregnancies were due to an external locus of control, and have lower levels of social standing (Bryant et al., 2010). Among women born in the U.S. as well as White women, an increase in social standing was significantly associated with a decrease in unintended pregnancy. This association, however, was not observed among racial/ethnic minorities, demonstrating the need for wide reaching, perhaps community-based interventions regarding unintended pregnancy. Regardless of social standing, women of color are more likely to experience an unintended pregnancy (Bryant et al., 2010; Finer & Zolna, 2013). Contraception use and incidences of abortion are correlated with unintended pregnancy. Particularly, women of low SES and racial/ethnic minorities are less likely to use contraception and are more prone to misuse contraceptive measures (Dehlendorf et al., 2010).

1.1.4 Interpersonal Factors and Unintended Pregnancy

1.1.4.1 Partner Influences

In heterosexual relationships, the male partner influences the couple's contraception choice (Grady, Klepinger, Billy, & Cubbins, 2010). Specifically, in dating relationships as opposed to married and co-habiting couples, men have more of an influence on contraception preference. Furthermore, Borrero, Farkas, Dehlendorf, and Rocca (2013) reported racial/ethnic differences regarding men's knowledge and attitudes about contraception. While there is no significant difference in knowledge about condoms among men from different racial/ethnic groups, Black and Hispanic/Latino men were less likely to have heard of IUDs, vaginal rings, and emergency contraception. This group of men also lacked knowledge pertaining to methods of insertion and reversibility of IUDs, female sterilization, and vaginal rings, as well as the period of effectiveness when pills and contraception injections were delayed (Borrero, Farkas, Dehlendorf, & Rocca,

2013; Shih et al., 2013). Finally, men from all racial/ethnic groups were aware of condoms, the most effective means to prevent STIs. However, White and Hispanic/Latino males' attitude towards condoms was that they are a hassle to use. This finding has implications for unintended pregnancy risk given the racial/ethnic gap in knowledge of the most effective methods of contraception (Borrero, Farkas, et al., 2013).

Racial/ethnic disparities also exist regarding men's attitudes about contraception. When compared to White men, Black men were more likely to report the belief that birth control is a means for the government to limit procreation among minorities (Borrero, Farkas, et al., 2013). Black males also expressed concern for their partner's libido and physical appearance, attitudes that were significantly different from White males (Borrero, Farkas, et al., 2013). Similar to Black males, Hispanic/Latino males expressed concerns about the side effects of contraceptives such as weight gain, onset of serious health adversities, and mistrust in the government (Borrero, Farkas, et al., 2013). With regard to pregnancy intention, and in light of the disproportionate rate of unintended pregnancies (Hamilton et al., 2013; Ventura et al., 2013), Hispanic/Latino males reported, significantly more than White males, that they believe pregnancy should be a planned occurrence (Borrero, Farkas, et al., 2013).

Misconception about contraceptives may result in lack of partner support regarding contraception use, thus leading to an unintended pregnancy (Coles, Makino, & Stanwood, 2011). Particularly, adolescent females who are experiencing IPV are more likely to experience unintended pregnancy based on the actions and beliefs of their partner (Coles et al., 2011). In an analysis of repeat pregnancy among young mothers, ages 12 to 18, Raneri and Wiemann (2007) found that women who were abused by their partner were significantly more likely to experience a repeat pregnancy within 24 months of their previous delivery (Raneri & Wiemann, 2007). No

significant racial/ethnic differences in repeat pregnancy were discovered, but young women of Caucasian descent were significantly more likely to report a second pregnancy that was intentional (Raneri & Wiemann, 2007). Furthermore, women in relationships where the father of their first child was three or more years older were significantly more likely to experience a rapid repeat pregnancy, as were women who were abused by their partner.

1.1.4.2 Familial Relationships

In viewing the familial influence of pregnancies among teens and young women, perhaps the racial/ethnic disparities associated with unintended pregnancy are cyclic or based on continued interpersonal factors that influence the behavior of adolescents (Raneri & Wiemann, 2007). Culturally, for instance, research supports that Black women are less likely than White women to speak with their mothers about sexual experiences or contraception use. It is the idea of some mothers that speaking with their daughter about contraception encourages or condones promiscuity (Akers, Schwarz, Borrero, & Corbie-Smith, 2010).

Depending on their perspective, parents may have a positive or negative effect on their adolescent's decisions on contraception (Akers et al., 2010). In a qualitative study of Black parents of adolescents, ages 15 to 17, parents reported taking a more indirect approach when talking about contraceptive use with their teen. Although birth control was considered a priority among these Black parents, conversations about contraceptive use with adolescents focused on the consequences of sexual activity, such as unintended pregnancy and the contraction of STIs, rather than on specific pregnancy prevention measures (Akers et al., 2010). Parents feared the idea of unintended adolescent pregnancy, and felt obligated to promote abstinence among young females. Particularly, Black mothers thought that providing their daughters with information about birth control would promote "wild" behavior (Akers et al., 2010). Mothers were also uneasy knowing

that their daughter could obtain contraception from a local clinic. As a result, Black women reported learning about reproductive health from older siblings and family members, rather than their mother or father (Akers et al., 2010).

Within this specific racial/ethnic group, a difference in gender-based norms and knowledge was noted. Mothers and fathers were more inclined to discuss the expectation of condom use with male versus female youth. Furthermore, conversations about condom use tended to be more direct and parents felt comfortable providing their sons with condoms. Parents were less distressed about their sons being sexually active (Akers et al., 2010).

Knowledge of pregnancy prevention measures, outside of condoms and oral contraceptives, is often lacking among parents (Akers et al., 2010). Fathers and adolescent males attributed their lack of knowledge of other birth control methods such as IUDs, for example, to their lack of responsibility for birth control. “That’s a girl thing,” one father stated (Akers et al., 2010). Mothers also discussed the issue of responsibility in expressing disdain for the fact that many forms of birth control exist for females, but condoms are the only pregnancy prevention tools on the market for males (Akers et al., 2010).

1.1.5 Intrapersonal Factors and Unintended Pregnancy

Age, income, educational attainment, and psychological challenges are some individual level factors associated with unintended pregnancy (Centers for Disease Control and Prevention, 2012; Miller et al., 2013; Vezina & Hebert, 2007). In examining shifts in pregnancy proportions between 2001 and 2008, the data showed disparities at all individual levels (Finer & Zolna, 2013). Among low-income women, unintended pregnancies were five times higher than among women who ranked in the high-income category. In addition to an increase in total pregnancies and unintended

pregnancies, the unintended birth rate was also greater among lower income women.

Women with a college degree were less likely to experience an unintended pregnancy, whereas, unintended pregnancy rates were highest among women who did not complete high school. Furthermore, unintentional pregnancies were inversely related to age, with the highest rate of unintended pregnancy among women ages 18-24 (Finer & Zolna, 2013). Finally, in all relationship types, females who are more educated or make more money than their male partner are relatively submissive to their partner when deciding on a contraceptive method to prevent pregnancy; this phenomenon may be explained to be a compensatory gesture to assuage non-normative power within the intimate relationship (Grady et al., 2010).

Within focus groups, Black and White women shared their perspectives about tubal sterilization (Borrero, Nikolajski, et al., 2009). Between both racial/ethnic groups, the chief reason to undergo sterilization was because they were done with childbearing. In further exploring this theme, women reported that they had reached their desired family size, desired to not get pregnant due to age (i.e. already being a grandmother), and difficulties with child rearing (i.e. financial strain or lack of overall support). Particularly, Black women spoke about the challenges of being a single mother and made mention of unsupportive or neglectful fathers. Again, women from both racial/ethnic groups spoke about their desire to control their reproduction and that tubal sterilization was the best way to control for unintended pregnancies.

Within focus groups containing Black women, the issue of one or more unintended pregnancies arose as a reason for tubal sterilization: “Because I didn’t even want it to accidentally happen anymore.” (Borrero, Nikolajski, et al., 2009). Despite reports of regret for female sterilization among minority groups, women participating in this qualitative study mentioned feelings of relief and peace with their decision to permanently prevent pregnancies. Furthermore,

men often influence the reproductive decisions of their female partners (Borrero, Farkas, et al., 2013). Black women often decided to undergo sterilization without seeking input from their partners. Conversely, Black women cited familial input as an influence in their decision to undergo sterilization. White women reported seeking input from partners rather than family members (Borrero, Nikolajski, et al., 2009). Additional themes that arose at the individual level were personal addictions to drug and alcohol as well as family-based motivations. While the concept of awareness of contraceptive methods needs to be explored, one may conclude that unintended pregnancy is the reason why Black women seek sterilization, a permanent barrier of fertility, as their contraception of choice (Borrero, Nikolajski, et al., 2009).

1.2 REPRODUCTIVE COERCION AMONG ADOLESCENTS AND YOUNG WOMEN

Reproductive coercion is an imbalance of power among heterosexual couples, whereas a male partner actively interferes with the use of contraceptive measures and/or coerces conception (Chamberlain & Levenson, 2012). Specifically, reproductive coercion, which includes pregnancy coercion via rape or verbal pressure, birth control sabotage by means of destroying contraceptive measures, or other forms of contraception manipulation, is associated with an increased risk for HIV/STIs, unintended pregnancy, and abortion (Alleyne-Green, Coleman-Cowger, & Henry, 2012; Miller et al., 2011; Silverman et al., 2011; Swartzendruber et al., 2012). Among all women in the U.S., nine percent have reported experiencing reproductive coercion in their lifetime (Black et al., 2011). However, rates of reproductive coercion are highest among Black women as well as

women who have less education and/or who identify as being single, date more than one person, or lack awareness of their relationship status (Clark et al., 2013; Miller et al., 2013).

National data from 2011 collected among adolescent males and females focused on forced sexual intercourse, a form of reproductive coercion, showing differences by gender, race, and demographics. The national prevalence of forced sexual intercourse among adolescents was eight percent in 2011 (Center for Disease Control and Prevention, 2012). Female high school students' reports of forced sexual intercourse (11.8%) were more than double that of male students (4.5%). The prevalence of forced sexual intercourse varied slightly by race with the highest prevalence among White students (12%), compared to Hispanic/Latino (11.2%) and Black (11%) students. Also, reports of forced sexual intercourse increased with age (ninth grade student=5.8% vs. 12 graders=9.5%) (Center for Disease Control and Prevention, 2012).

A growing body of literature has documented reproductive coercion both in the context of IPV and in relationships where no other physical or sexual abuse is present (Miller, Decker, et al., 2010; Miller et al., 2013). These qualitative and quantitative studies describe unwillingness to use barrier method contraception, forced abortion and sexual activity, threats of infidelity if a woman does not get pregnant, and other forms of pregnancy pressure (Miller, Decker, et al., 2010; Thiel de Bocanegra, Rostovtseva, Khera, & Godhwani, 2010). In one recent study, women seeking services at Planned Parenthood clinics in California cited specific forms of reproductive coercion such as having their birth control pills flushed down the toilet or thrown away by an intimate partner (Miller, Decker, et al., 2010; Miller et al., 2013).

Among a predominantly minority population of young women, ages 16 to 29, many of the study participants reported experiencing physical or sexual violence from an intimate partner, pregnancy coercion, birth control sabotage, or unintended pregnancy (Miller, Decker, et al., 2010).

More than half of these women (53.4%) experienced IPV in their lifetime and 40.9% had been pregnant, unintentionally. One in five of the women reported experiencing at least one coerced pregnancy and one in seven reported that their partner had sabotaged their birth control (Miller, Decker, et al., 2010).

The association between IPV and unintended pregnancy has been reported in the literature (Roberts, Auinger, & Klein, 2005; Wingood, DiClemente, McCree, Harrington, & Davies, 2001); however, the study by Miller, Decker, et al. (2010) is the first to explore reproductive coercion as a contributing mechanism to the relationship. Among this cohort of women, Black women and other women who self-identified as a minority were more likely to report at least one unintended pregnancy and/or experience with reproductive coercion. Furthermore, results from this study demonstrate the potential for overlap regarding partner abuse and reproductive coercion (Miller, Decker, et al., 2010). Specifically, 35% of women who reported experiencing IPV also reported either pregnancy coercion or birth control sabotage when compared to the 15% of women who did not report IPV (Miller, Decker, et al., 2010). When looking at the combined effects, IPV and reproductive control were significantly associated with unintended pregnancy. These results are the first quantitative demonstration of the association between IPV, unintended pregnancy, and reproductive control, consisting of forced pregnancy and birth control sabotage (Miller, Decker, et al., 2010).

The prevalence of reproductive coercion and associated health factors are higher among women seeking care at family planning clinics and shelters (Miller, Decker, et al., 2010; Miller et al., 2011; Miller et al., 2013; Thiel de Bocanegra et al., 2010). In a qualitative study including women from four domestic violence shelters, 56.6% of women between the ages of 19 and 57 reported experiencing birth control sabotage with their most recent partner. Of note, birth control

sabotage was significantly higher among younger women, ages 19 to 32 ($p < 0.05$) (Thiel de Bocanegra et al., 2010). This study consisted of a diverse group of women who reported that they were instructed by their partner to not use forms of birth control or were prevented to do so (Thiel de Bocanegra et al., 2010). Non-belief in birth control use, a preference to have baby boys, and increased weight gain were reasons stated by male partners as to why they did not want their partner to use birth control (Thiel de Bocanegra et al., 2010).

While the relationships between reproductive coercion and IPV or reproductive coercion, IPV, and unintended pregnancy have been published (Chamberlain & Levenson, 2012; Clark et al., 2013; Miller et al., 2011; Miller, Jordan, Levenson, & Silverman, 2010; Silverman et al., 2011), in a more recent study, Miller et al. (2013) explored the temporality of reproductive coercion. Collective experiences of IPV and reproductive coercion increase a woman's odds for unintended pregnancy (Miller et al., 2013). Specifically, women who experience IPV as well as reproductive coercion are twice as likely to have had an unintended pregnancy in the past year. Furthermore, this study is the first to report a significant relationship between reproductive coercion and unintended pregnancy, even in the absence of IPV, as well as the temporal nature of these two variables (Miller et al., 2013).

1.3 INTIMATE PARTNER VIOLENCE AND REPRODUCTIVE COERCION

Reproductive control is described as a conduit for an overarching occurrence of power that is also central to IPV. Adverse reproductive health outcomes among women can be attributed to reproductive coercion and IPV enacted by a male partner (Miller et al., 2011). In the context of IPV, reproductive coercion may occur along with threats of physical or psychological abuse or

threats of infidelity or abandonment. Such behaviors may result in an alteration of a woman's decision-making skills regarding contraception use or her inability to actively carry out a decision (Miller et al., 2011).

Fear and control are two common concepts associated with IPV and reproductive coercion (Chang et al., 2011; Gee et al., 2009; Thiel de Bocanegra et al., 2010; Wingood et al., 2001). Women who experience IPV may have difficulty negotiating the use of contraception, making them vulnerable for STIs, unintended pregnancy, and other poor reproductive health outcomes (Roberts et al., 2005). Before a sexual encounter, a male partner may enforce reproductive control with verbal and physical abuse as he expresses his intentions of impregnating his partner (A. Moore et al., 2010). During the sexual experience, the male partner may exhibit control by removing the contraceptive or refusing to withdraw, perhaps, despite previous agreements. Finally, if conception is achieved, the male partner may control pregnancy outcomes by demanding that the woman carry the baby to full-term or abort the pregnancy (A. Moore et al., 2010).

Among Black adolescents, previous experiences with dating violence resulted in an increased fear for negotiating contraceptive use with an intimate partner (Wingood et al., 2001). IPV is associated with greater risk of contracting HIV and other STIs, particularly among younger women. Compounding this susceptibility of contracting STIs is that women who are abused have a greater fear of notifying their partner about the disease and are significantly less likely to seek testing and/or treatment (Decker et al., 2011).

In a nationally representative sample of female adolescents who were sexually active, a link between IPV and reproductive health was reported (Roberts et al., 2005). Specifically, females who were currently involved in a verbally abusive relationship were 1.56 times more likely to not use a condom during their most recent experience of sexual intercourse. Also, young women from

the same study who had a history of physical abuse or were currently involved in a physically abusive relationship were 2.70 and 3.33 times more likely to experience pregnancy, respectively (Roberts et al., 2005). This study sheds light on women's lack of ability to negotiate or self-advocate for positive reproductive health outcomes.

Additionally, economic factors such as being unemployed or living with someone other than family also predicted partner abuse. Living alone showed a marginal significance of increased risk for IPV (Gee et al., 2009). Reproductive coercion was also indicated, as a significant number of women reported they did not use birth control because their "partner made it difficult for them" (Gee et al., 2009). These women were more likely to avoid birth control altogether due to their partner's beliefs or due to economic barriers. Conversely, women who feared negotiation of contraception with their partner were more likely to use emergency contraception, which also highlights their eagerness to use contraception. Securing emergency contraception to prevent a pregnancy was significantly associated with a history of IPV (Gee et al., 2009).

In a study of Black adolescent females aged 14 to 18 years, individuals having a history of dating violence within the past six months were found to be at risk for poor sexual health. Specifically, women likely of contracting a STI and/or having an unfaithful partner were 2.8 times more likely to be abused (Wingood et al., 2001). Also, these women were more likely to become pregnant and less likely to consistently use condoms within a six month time frame (Wingood et al., 2001).

In addition to the influence of male partners on the sexual health behaviors of young women, abusive relationships also impact attitudes and social norms. Wingood et al. (2001) found that Black adolescent females were more likely to favor, or perceive as normal, unhealthy relationships and feel a lack of control over their intimate relationship and sexual well-being. Also,

Black women who were victims of abuse were found to be 3.1 times more likely than women who did not have a history of abuse to have peers whose attitudes were not supportive of the use of condoms (Wingood et al., 2001).

Unlike studies that have examined the HIV/AIDS epidemic among Black females from the perspective of a number of public health theories, including the socioecological theory, theory of reasoned action, health belief model, and the social cognitive theory, the association between race/ethnicity, IPV, and female reproductive health has been studied more shallowly (Raiford, Diclemente, & Wingood, 2009).

One mechanism described is the trajectory between fear and self-efficacy. According to the Social Cognitive Theory, individuals who are confident in their capabilities to change a behavior are more successful. Also associated with the aspect of self-efficacy is knowledge (McKenzie, Neiger, & Thackeray, 2009; Raiford et al., 2009). Women who fear negotiating the use of contraceptives are less likely to feel self-efficacious, resulting in risky sexual behavior (Raiford et al., 2009).

In exploring this relationship between fear, knowledge, and risky behavior, it was reported that fear has an overarching impact on the sexual behavior of young Black women aged 15-21. When considering their level of knowledge of STIs, women with high levels of knowledge and high levels of fear were significantly less likely to use condoms consistently during most recent intercourse with their main partner, as well as within the past 60 days (Raiford et al., 2009). Conversely, women with a low level of STI knowledge coupled with a low level of fear were significantly more likely to use condoms consistently when compared to more knowledgeable women who feared their partners (Raiford et al., 2009). Also, it is important to note, women who were more knowledgeable about STIs were able to recognize symptoms of a STI and thus, were

significantly less likely to have unprotected sexual intercourse with their partner when infected for fear of additional repercussions (Raiford et al., 2009).

Raiford et al. (2009) explain the rationale of this, perhaps, counter-intuitive phenomenon in that women who are more knowledgeable about STIs are able to make more informed choices about their sexual health. Women who fear abuse from their partner when negotiating the use of contraception have a lesser perception of contracting STIs from their partner; the fear of abuse outweighs their perceived susceptibility for contracting an STI (Raiford et al., 2009).

1.4 INTIMATE PARTNER VIOLENCE AMONG ADOLESCENTS AND YOUNG WOMEN

IPV is a major public health concern that affects approximately one in three women in the U.S. (Black et al., 2011). Women disproportionately experience IPV (one in seven men experience IPV), though it spans all relationship types (Ali & Naylor, 2013; Black et al., 2011). IPV has been used interchangeably with terms such as domestic violence/abuse, spousal abuse, wife abuse, and teen dating violence (Ali & Naylor, 2013). However, regardless of the appellation, IPV is associated with physical, psychological (Black et al., 2011; Campbell, 2002; Coker, Smith, Bethea, King, & McKeown, 2000), reproductive (Miller, Jordan, et al., 2010), and social health consequences (Banyard & Cross, 2008; Heise & Garcia-Moreno, 2002). IPV is highest among adolescents and young women aged 16-24 (Rennison & Welchans, 2000) and is a predictor of IPV in adulthood (St Mars & Valdez, 2007).

In a national sample of adolescents, 9.4% reported experiences with physical dating violence within 12 months of completing the survey; the prevalence was as high as 16.1% across

states and 24.2% across large, urban school districts (Centers for Disease Control and Prevention, 2012). A higher prevalence of dating violence was reported among Black and Hispanic/Latino students, with 12.2% of Black and 11.4% of Hispanic/Latina females reporting dating violence compared to 7.6% of White females. Furthermore, reports of IPV increased with age. The prevalence of IPV among adolescents was lowest among ninth grade students (7.5%) and highest among 12th graders (10.3%), 11th graders (10.3%), and 10th grade students (9.6%) (Centers for Disease Control and Prevention, 2012).

IPV is linked to sexual relationships among adolescents. Violence between partners is most likely to occur when the relationship is sexual (Kaestle & Halpern, 2005). Also, adolescents who have multiple sexual partners are more likely to experience IPV (Wingood et al., 2001). Research supports a temporal relationship between these two occurrences. Regardless of race and socioeconomic status, sexual intercourse among adolescents is more likely to occur before emotional or physical abuse (Kaestle & Halpern, 2005).

Blacks experience higher rates of violence, in general--a phenomenon of racial/ethnic disparity that is not clearly understood due to a lack of research focused on violence at the individual level (Sampson et al., 2005). A study conducted in Chicago to identify contributors of this racial/ethnic gap, explored the following domains: family structure, socioeconomics, and neighborhood conditions (Sampson et al., 2005). Sampson et al. (2005) determined that immigration status, marriage, length of residency, education, impulse, and neighborhood characteristics are largely responsible for violence that occurs among the main ethnic groups in the U.S.

When considering the stages of adolescence with regard to race/ethnicity, physical and emotional forms of IPV are more prevalent among Hispanic/Latina women in early young

adulthood. Black women, however, are more likely to experience rape/sexual coercion than their Hispanic/Latino and White counterparts. Nonetheless, as they progress into young adulthood, Black women have higher lifetime rates of IPV, overall. All forms of IPV were lower among White women at both early and young adulthood when compared to Hispanic/Latina and Black women (Black et al., 2011; Nowotny & Graves, 2013).

It has been reported that young, urban Black women may use euphemisms such as “drama” and “disrespect” to describe various forms of IPV (Raiford, Wingood, & Diclemente, 2007). In general, “drama” may be used to describe disagreements of physical abuse, while “disrespect” was more commonly associated with verbal and psychological abuse. Physical and sexual violence were most readily identified during a focus group of young Black women. However, these women also recognized and discussed the outcomes of abuse, such as the development of self-doubt and low self-esteem. Furthermore, the abusive behavior that was repetitive in nature was characterized as “crossing the line” or unacceptable (Raiford et al., 2007).

Blacks and members of the Hispanic/Latino population are commonly disenfranchised groups in which higher incidences of violence are expected. Nonetheless, being an undocumented immigrant and likelihood to live in neighborhoods among other immigrants serve as protective factors for Mexican Americans against community-level violence (Sampson et al., 2005). Family dynamic is also a moderating factor of violence as Mexican American children are more likely to live with both biological parents. Though Hispanics/Latinos may thrive under these conditions, the same cannot be said for Blacks (Sampson et al., 2005). Of all factors, neighborhood characteristics, often begotten by racial segregation, have the most profound influence on the said violence gap (Sampson et al., 2005).

In the urban setting, in particular, IPV is often a social issue, as an estimated 65% to 75% of female IPV victims seek informal sources of support, such as family members, friends, and neighbors

(McDonnell, Burke, Gielen, O'Campo, & Weidl, 2011). Women of lower income; however, lack the financial means to leave an abusive situation. Thus, they rely on their social network for support and refuge. Community is an important component among urban, low-income victims of IPV. Nonetheless, a study conducted among current, female IPV victims residing in low-income urban neighborhoods in Baltimore City reported an insufficient amount of support. In this study, women's perceived support from their community and what women thought should be customarily available to assist women in violent relationships were unmatched (Burke, Mahoney, Gielen, McDonnell, & O'Campo, 2009; McDonnell et al., 2011).

1.5 THEORETICAL UNDERPINNINGS OF RACIAL/ETHNIC HEALTH DISPARITIES

The capacity to reproduce is a key biological element of a human (Krieger & Davey Smith, 2004). The social epidemiological term “embodiment” illustrates the influence of one's collective experiences and exposures on physical and mental well-being throughout the course of life. The construct of embodiment was first introduced in the 1800's with the presentation of the inverse association between wealth and health among Parisians (Krieger & Davey Smith, 2004). In the late 1800's, W.E.B. DuBois, a sociologist and famous Black icon, attributed inequitable health outcomes among Blacks to differences in “social advancements” and conditions (DuBois, 1899; Williams & Sternthal, 2010). Specifically, DuBois (1899) mentioned poor working conditions, built environment and sanitation, heredity, and infant neglect as contributors to poor health among Blacks. In his analysis, he also noted gender differences, with Black males experiencing harsher working conditions and poorer health compared to Black females (DuBois, 1899).

As biologic beings, we embody aspects of reproduction, genetic makeup and development, interact with other biologic beings within a system, exist in space and time, progress through the phases of life, and are impacted by locality, and finally, evolution. From a social perspective, we embody the society in which we live; internalizing our experiences within a particular institution or system based on our social position, means of social production, social consumption and social reproduction (Krieger & Davey Smith, 2004). Providing insight into the manifestation of health disparities or “embodied inequalities” (Krieger & Davey Smith, 2004), Krieger (2005) describes embodiment as being a central construct of the eco-social theory framework.

However, to fully understand the impact of social factors on health, a single connection between the health outcome of interest and social condition will not suffice. Instead, the multifaceted relationship must be determined (Link & Phelan, 1995). Race/ethnicity predicts health status (Williams, 1997); a relationship that is not an anomaly given the context of historical race relations. However, specific factors related to race/ethnicity that contribute to racial/ethnic health disparities have not been thoroughly explored, especially not in regard to reproductive health of women and IPV. Race is a social construct, although it is often presented as biological (Karlsen & Nazroo, 2002; Williams & Sternthal, 2010). Particularly, professionals in the social science and medical fields argue that categories of race/ethnicity are socially constructed and have little bearing in explaining the genetic causality of health disparities (Diez Roux, 2012). Additionally, Krieger (2001) presents economic and social deprivation, environment, socially inflicted trauma, targeted marketing commodities, inadequate health care, and resistance to racial oppression as eco-social pathways that lead to the embodiment of racism.

In the following section is a framework developed based on health disparity and disease causality theories by Bronfenbrenner (1977), Link and Phelan (1995), Krieger (2012), and

Williams (1997), and studies by Miller, Decker, et al. (2010). These theories focus on the more distal causes of health disparities and have been applied to conceptualize the mechanisms of racial/ethnic factors associated with unintended pregnancy, reproductive coercion, and IPV.

1.6 RACIAL/ETHNIC DISPARITY AND THE ASSOCIATION BETWEEN IPV, REPRODUCTIVE COERCION, AND UNINTENDED PREGNANCY: CONCEPTUAL FRAMEWORK

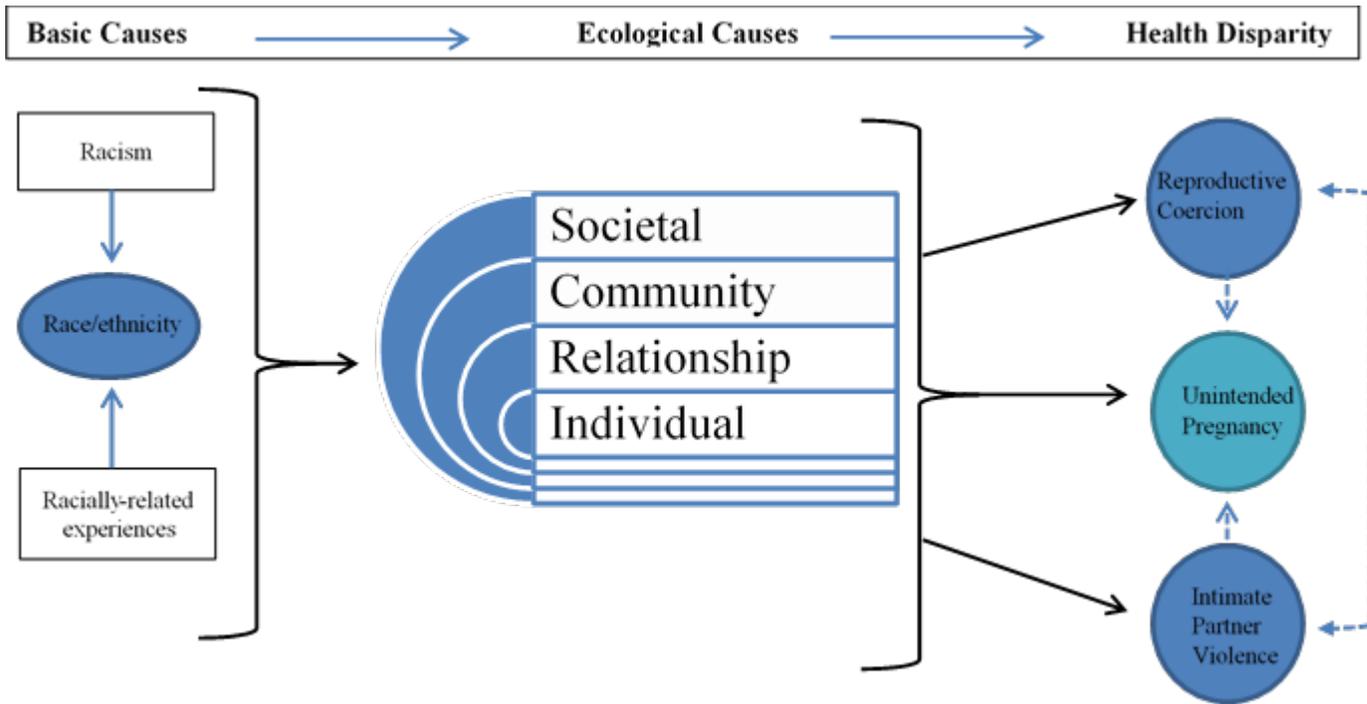
A number of theories have been used to explain constructs associated with violence and reproductive health outcomes among women, such as: learned helplessness, gender-based power and control, societal norms, intention, attitude, and behaviors that contribute to the cycle of violence (Ali & Naylor, 2013). For the purpose of this review, constructs related to unintended pregnancy, reproductive coercion, and IPV will be examined in the context of racial/ethnic disparity, using Bronfenbrenner's (1977) ecological theory. The ecological theory is a widely used framework that is commonly applied to explore mechanisms associated with IPV and other facets of violence (Ali & Naylor, 2013).

The ecological framework highlights all contributors to behavior. Specifically, the interrelationship of intrapersonal (micro-system), interpersonal (meso-system), community (exo-system), and structural (macro-system) factors is demonstrated. In an effort to promote health and reduce racial/ethnic disparities, we must consider these interdependent health determinants (Ali & Naylor, 2013; McLeroy, Bibeau, Steckler, & Glanz, 1988).

However, perhaps a precursor to the structured ecological model presented by Bronfenbrenner (1977) is racism. Racism is defined as an "ideology of superiority" (Williams,

1997); practices imparted by institutions and individuals that enforce systems of oppression concerning race (Krieger, 2003). Racism is a structural inequality that was once an un-namable and understudied contributor to poor health outcomes despite known historical context (Krieger, 2003). Factors associated with race/ethnicity are not only displayed through physical and direct manifestations (i.e. lynching), but through political, economic, and social factors as well (Krieger, 2003). Categorization of individuals by race is a fundamental aspect of society used to set boundaries based on one's group membership (Williams, 1997).

In the proposed conceptual model (Figure 1), racism is an upstream cause or fundamental experience that directly impacts social status and the ultimate outcome of interest, racial/ethnic health disparities. It is proposed that race-related experiences influence ecological causes of health disparities in a trickle-down effect (Bronfenbrenner, 1977; Krieger, 2012; Link & Phelan, 1995; Williams, 1997). As is seen in the work by Dr. Miller and her investigative team (Miller, Decker, et al., 2010; Miller et al., 2013; A. Moore et al., 2010), health disparities can be compounded.



(Bronfenbrenner, 1977; Krieger, 2012; Link & Phelan, 1995; Miller, Decker, et al., 2010; Williams, 1997)

Figure 1. Conceptual Model of Potential Determinants of Unintended Pregnancy, Reproductive Coercion, and IPV

1.6.1 Ecological Causes of Unintended Pregnancy, Reproductive Coercion, and Intimate Partner Violence

To fully understand racial/ethnic experiences that contribute to unintended pregnancy, reproductive coercion, and IPV, an exploration of related ecological factors is needed (Figure 2). Common influences like relationship status, partner influence, lack of peer support, gender, age, unemployment, fear, and economic status are associated with all three of the health outcomes of interest (Chang et al., 2011; Gee et al., 2009; Miller, Decker, et al., 2010; Miller et al., 2013; Wingood et al., 2001).

At the structural level, societal and cultural norms around gender roles and violence are associated with unintended pregnancy (Center for Disease Control and Prevention, 2013). Securing contraception may be perceived as the woman's responsibility (Borrero, Nikolajski, et al., 2009), although men do influence contraception choices, especially related to reproductive coercion (Miller et al., 2013). Reproductive health influences are greatly affected by one's position in society (Karlsen & Nazroo, 2002).

Lower socioeconomic status, which is usually operationalized as a measure of income, education, and class, is associated with all three outcome variables. Lack of health insurance or use of free clinics (Clark et al., 2013), high rates of unemployment, and other economic stressors are associated with a higher prevalence of unintended pregnancy, reproductive coercion, and IPV (Center for Disease Control and Prevention, 2013; Clark et al., 2013). Furthermore, negative social and neighborhood-level attributes are associated with an increase in IPV (Burke, O'Campo, & Peak, 2006).

Neighborhoods that are poverty stricken due to high levels of unemployment, lack social support, and have residents with low levels of education are associated with higher rates of violence (Banyard & Cross, 2008; Burke et al., 2006; Center for Disease Control and Prevention, 2013). The perceptions of urban and suburban women regarding neighborhood characteristics and IPV were explored (Burke et al., 2006). Negative attributes such as criminal activity, loitering, violence, lack of education, unemployment, and racial/ethnic segregation were identified between both groups. Neighborhood factors most strongly related to the perpetration of IPV were community attitudes and behaviors regarding violence, negative social attributes and nightlife, economic stressors and violence (Burke et al., 2006). Similar results were found among a predominately Black, low-income population of women. Furthermore, facilitators and protective

neighborhood factors associated with IPV were explored among this particular group of women. Attitudes and behaviors of violence were highly ranked with regards to prevalence, severity, and perpetration of IPV. Additionally, racial/ethnic segregation was listed as the precursor leading to unemployment and participation in adverse behaviors (i.e. drugs and public drunkenness), ultimately leading to violence and an uncaring neighborhood population (O'Campo, Burke, Peak, McDonnell, & Gielen, 2005).

Partner influence, partner infidelity, relationship status, and peer support are all associated with the health disparity outcomes. Women who are single are more likely to experience unintended pregnancy, reproductive coercion, and IPV. These women are also greatly influenced by their partners in terms of reproductive health, are more likely to have a partner who threatens infidelity, and are without peer-based support (Gee et al., 2009; Miller et al., 2013; Thiel de Bocanegra et al., 2010; Wingood et al., 2001). Having a partner that was recently released from jail, poor parental support, and lack of a religious affiliation are also associated with an increased risk for IPV and unintended pregnancy (Banyard & Cross, 2008; Finer & Zolna, 2013; Swartzendruber et al., 2012). Living alone (Gee et al., 2009) and having a history of sexual violence or family violence is associated with IPV (Rickert et al., 2002; Vezina & Hebert, 2007).

Social structure contributes to patterns at the intrapersonal level, influencing the attitudes, beliefs, behaviors, and resources of an individual. Gender is an intrapersonal variable that is commonly reported in the literature regarding unintended pregnancy, reproductive coercion, and IPV (Centers for Disease Control and Prevention, 2012; Chang et al., 2011; Miller, Decker, et al., 2010). However, individuals experiencing mental disorders like depression, anxiety, bipolar, post-traumatic stress, or substance abuse are nearly twice as likely to report IPV compared to someone without a compromised mental state (Chang et al., 2011; Vezina & Hebert, 2007). Post-traumatic

stress disorder and an addiction to drugs/alcohol increase one's risk for physical and sexual IPV even more (Chang et al., 2011). Fear and inability to negotiate contraception use is a factor associated with all, three health outcomes (Chang et al., 2011; Gee et al., 2009; Wingood et al., 2001).

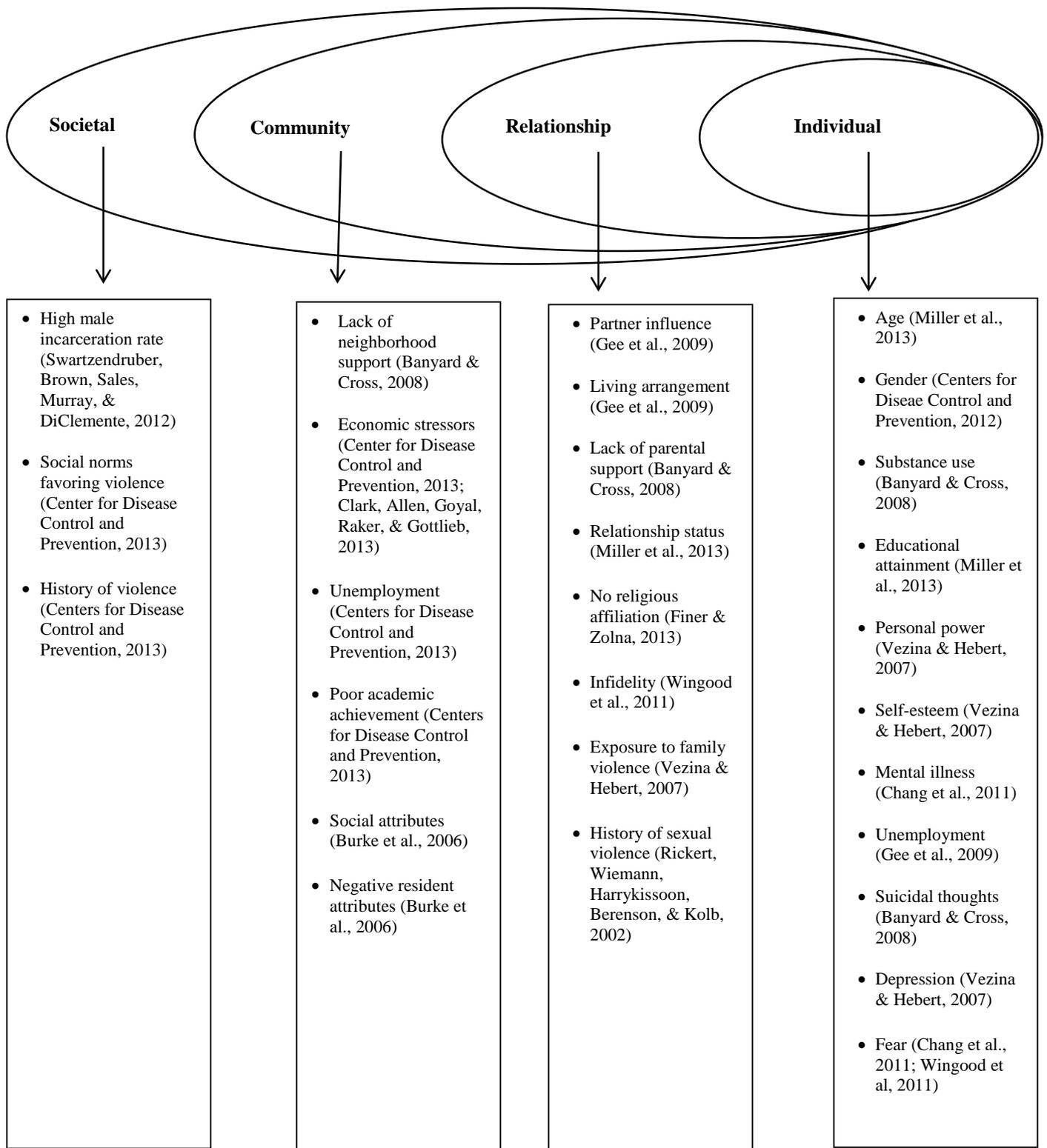


Figure 2. Summary of Ecological Factors Associated with Unintended Pregnancy, Reproductive Coercion, and IPV

1.7 SUMMARY

This review summarizes racial/ethnic experiences across levels of the ecological model that contribute to health disparities among women. Understanding the mechanisms in which unintended pregnancy, reproductive coercion, and IPV occur is necessary for developing informed public health interventions and altering clinical and structural level policies. This information can be used to develop more holistic interventions that consider racial/ethnic differences and to refine the revolutionary health care reform legislation in the U.S, particularly regarding women's health. In addition, a major gap in the literature pertains to the role of men in contributing risk for unintended pregnancy, reproductive coercion, and IPV.

2.0 OVERVIEW OF DISSERTATION AND SPECIFIC AIMS

The purpose of this dissertation is to examine racial/ethnic factors associated with unintended pregnancy using qualitative and quantitative study designs in conjunction with a systematic literature review. Literature regarding race/ethnicity as a mechanism for reproductive health disparities is limited. Thus, this dissertation was designed to conceptually frame racial/ethnic factors associated with unintended pregnancy, including the role of IPV and reproductive coercion. Participants in our study consisted of women between the ages of 16 and 29 who were recruited while seeking care at family planning clinics.

First, a systematic literature review (Aim 1) was conducted to explore the influence of race/ethnicity on unintended pregnancy and associated reproductive health concerns. The second phase of the dissertation includes a cross-sectional analysis (Aim 2) of baseline data collected for a randomized controlled trial (n=1,234). This quantitative portion of the study will be used to explore racial/ethnic differences associated with unintended pregnancy, reproductive coercion, and IPV. Finally, semi-structured interviews (Aim 3) from Black and White women were reviewed to examine and compare participants' experiences associated with unintended pregnancy in the context of IPV. Overall, the purpose of this dissertation was to examine race/ethnicity as a predictor for reproductive health and violence-related health disparities.

2.1 SPECIFIC AIMS AND HYPOTHESES

2.1.1 Aim 1

To develop a conceptual framework to describe how racial/ethnic differences may influence unintended pregnancy.

2.1.2 Aim 2 and Hypotheses

To examine the association of race/ethnicity with: 1) unintended pregnancy, 2) reproductive coercion, and 3) lifetime exposure to IPV among women, ages 16-29, who seek family planning health care.

Hypothesis 1: Black, Hispanic/Latina, multiracial, and Asian/PI women will have a higher prevalence of unintended pregnancy, reproductive coercion, and IPV than White women.

Hypothesis 2: Black, Hispanic/Latina, multiracial, and Asian/PI women will be more likely to experience an unintended pregnancy than White women, even after accounting for exposure to IPV and reproductive coercion.

Hypothesis 3: Reproductive coercion is associated with greater risk for unintended pregnancy among Black women compared to White women.

2.1.3 Aim 3

To explore and compare narratives from low-income, Black and White women from family planning clinics in Pittsburgh, PA, regarding contraceptive use, pregnancy intention, and reproductive control.

**3.0 RACIAL/ETHNIC DISPARITIES IN UNINTENDED PREGNANCY: A
SYSTEMATIC LITERATURE REVIEW**

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3.1 ABSTRACT

Background: Unintended pregnancy is a prevalent health adversity experienced disproportionately by racial/ethnic minorities and women of low socioeconomic status.

Study Design: We reviewed 19, U.S.-based studies that examined correlations between unintended pregnancy and race/ethnicity among women. The objective of the study was to summarize racial/ethnic differences in unintended pregnancy risk.

Results: Five major themes emerged: demographic characteristics (age and education), reproductive health values, contraceptive use, preconception behaviors of mothers, and partner influence.

Conclusion: Findings from these studies provide insight into potential mechanisms that explain disparities in unintended pregnancy by race/ethnicity and strategies to reduce the high prevalence of unintended pregnancy in the U.S.

Keywords: unintended pregnancy, reproductive health, race, ethnicity, health disparity; pregnancy, unplanned pregnancy

3.2 INTRODUCTION

More than half of the pregnancies in the U.S. are unintended (Finer & Zolna, 2013). Given associated health ramifications, *Healthy People 2020* set a goal to improve the reproductive health of adolescents and young women, placing particular emphasis on reducing unintended pregnancy (U.S. Department of Health and Human Services, 2013a). Women who are younger, less educated, of lower socioeconomic status, and/or who are abused physically or sexually by an intimate partner are of greater risk for experiencing an unintended pregnancy (Finer & Zolna, 2013; Miller, Decker, et al., 2010; Miller & McCauley, 2013; Silverman et al., 2011). Additionally, a strong association exists between race/ethnicity and unintended pregnancy. Non-White women have disproportionately more pregnancies that are unintended when compared to their counterparts (Finer & Zolna, 2013; Miller et al., 2013; A. Moore et al., 2010; Ventura et al., 2013). Specifically, unintended pregnancy is highest among Non-Hispanic Black (Black) women, followed by Native American and Hispanic/Latina women. Unintended pregnancy is lowest among Asian women who have a lifetime prevalence of unintended pregnancy similar to that of Non-Hispanic White (White) women (Aquilino & Losch, 2005; Beskulides & Laraque, 2004).

An unintended pregnancy or birth is generally defined as mistimed (occurring sooner than desired) or unwanted (never desired) and is based on a woman's pregnancy intention prior to conception (Finer & Zolna, 2013). While a substantial amount literature documents the prevalence of unintended pregnancy (Beskulides & Laraque, 2004; Santelli et al., 2003; Zolna & Lindberg, 2012), especially among minority women in the U.S., research explaining the context of racial/ethnic disparity and reproductive health among American women remains limited. Therefore, an in-depth, systematic literature review was conducted to examine studies documenting racial/ethnic differences and disparities associated with unintended pregnancy.

The topic of unintended pregnancy is wide-ranging. However, the purpose of this review is to broadly explore factors that may contribute to unintended pregnancy as an outcome. Individual-level and structural-level factors were explored across different race/ethnicity backgrounds with the ultimate goal of developing a framework to explain the mechanisms that may lead to disparities in unintended pregnancy.

An evaluation of evidence related to racial/ethnic disparities in unintended pregnancy was conducted, guided by the following research question: what individual and structural-level factors, specific to race/ethnicity, contribute to unintended pregnancy among women in the U.S.? This review summarizes and critiques studies that present racial/ethnic comparisons regarding (a) demographic characteristics (specifically, age, educational status), (b) reproductive values and behaviors, (c) contraception, (d) preconception behaviors of mothers, and (e) partner influence. We conclude with recommendations for policy, practice, and future research.

3.3 METHODS

The systematic literature review was conducted according to standards outlined in the Cochrane Handbook for Systematic Reviews of Interventions (2006), The PRISM Statement (Moher, Liberati, Tetzlaff, Altman, & Group, 2009), and text presented by Boland, Cherry, and Dickson (2014). The systematic review team consisted of three core members: a doctoral student, a doctoral-level researcher, and a health science librarian. Additional review team members include four doctoral-level researchers who contributed to the design and critique of this review.

3.3.1 Data Sources and Searches

The search strategy was developed in consultation with a health science librarian experienced in conducting systematic literature reviews. The following databases were selected to include both medical and social science literature: PubMed and Web of Science. PubMed is classified as a health database and Web of Science is multi-disciplinary (Boland et al., 2014). Moreover, the Guttmacher Institute was explored for gray literature, due to the institute's strong focus on sexual and reproductive health. Google Scholar was also utilized to find gray literature and articles that were not included in the results from the database searches. These four sources of literature were searched for articles that were published in the English-language between January 1994 and March 2014. Given changes in reproductive health policies, such as the availability of over-the-counter emergency contraception, a shift from abstinence education to comprehensive sex education, coverage of women's preventative services (Kulczycki, 2007; Ranji, 2011), and potential change in cultural, social, and gender norms pertaining to reproduction, a twenty year range was deemed most appropriate. Additional exclusion criteria were studies that were not conducted in the U.S., did not make reference to racial/ethnic differences in the abstract, and focused primarily on pregnancy intentions of men. Unintended pregnancy was the primary outcome of interest.

Preliminary searches were used to determine the scope of the project and extract appropriate search terms from article titles and/or abstracts. Additionally, search terms were drawn from the research question that was developed by the investigative team and inserted in the PubMed Medical Subject Headings (MeSH) database to determine how specific keywords are indexed in the PubMed database (Table 1). The systematic searches were tailored to the respective databases; however, similar search terms were used throughout. A sample of the PubMed search is provided in Table 2. As indicated in Table 2, a number of searches were conducted within each

database. A variety of merging and sorting was used to develop the most comprehensive search and to identify overlap and exclusivity of individual searches.

Table 1. Systematic Literature Review Search Terms

Concepts:	Unintended Pregnancy	Contraception (Use)	Disparity	Racial/Ethnic
Synonyms/ Related Themes:	<ul style="list-style-type: none"> • Reproductive control • Birth control sabotage • Partner interference • Pregnancy, unwanted • Pregnancy, unplanned • Pregnancy intention 	<ul style="list-style-type: none"> • Reproductive techniques • Reproductive behavior • Contraceptive agents • Contraceptive devices • Contraceptive methods • Family planning services • Birth control • Family planning services 	<ul style="list-style-type: none"> • Healthcare disparities • Health status disparities • Race • Racial disparities • Racial differences 	<ul style="list-style-type: none"> • Ethnic groups • Race • Continental population group
Concepts:	Minority	Reproductive Health	Behavior	
Synonyms/ Related Themes:	<ul style="list-style-type: none"> • Minority health • Minority groups 	<ul style="list-style-type: none"> • Sexual health 	<ul style="list-style-type: none"> • Choice behavior • Acceptance • Processes • Health behavior 	

3.3.2 Study Selection

A list of articles was compiled for each of the searches that occurred within all four databases. Duplicate articles were removed using electronic and manual sorting. Subsequently, two reviewers screened all titles and abstracts for relevancy, based on the inclusion criteria. Quantitative studies that focused on unintended pregnancy as a primary outcome among different racial/ethnic groups or that provided insight as to why unintended pregnancy may occur differently among racial/ethnic groups were included in the initial screening phase (Table 3; Figure 3). Discrepancies in the inclusion of abstracts were discussed and then categorized, accordingly. Next, the full-text of potentially eligible articles were obtained and reviewed. Reasons for exclusion of full-text articles are presented in Figure 3. Many articles that focused on contraceptive behaviors also mentioned the health significance of unintended pregnancy. While contraceptive behaviors (i.e. use, knowledge, access) are certainly associated with unintended pregnancy, articles that did not focus on unintended pregnancy as an outcome were excluded from this review. Results from the overall search process are outlined in Figure 3.

Table 2. Example Search History for PubMed

#1	("unwanted pregnancy" OR "unintended pregnancy" OR "unplanned pregnancy") AND ("race" OR "ethnicity")
#2	((("Pregnancy, Unplanned"[Mesh] OR "Pregnancy, Unwanted"[Mesh])) AND ((("Continental Population Groups"[Mesh] OR ("Ethnic Groups"[MeSH]))
#3	#1 or #2
#4	("Minority Groups"[Mesh]) AND (((unplanned pregnancy) OR unintended pregnancy) OR unwanted pregnancy)
#5	("pregnancy intention") AND (((("Continental Population Groups"[Mesh] OR ("Ethnic Groups"[MeSH])))

Table 3. A Comprehensive Description of the Systematic Literature Review

Review Question	What individual and structural level factors, specific to race/ethnicity, contribute to unintended pregnancy among women?
Population	Women at risk for an unintended pregnancy.
Comparator	Individual and structural level factors associated with race/ethnicity
Outcomes	Unintended pregnancy
Setting	All settings in the U.S.
Study Design	Quantitative designs

3.4 RESULTS

Results of the systematic review of the literature produced 19 studies that focused on racial/ethnic factors associated with unintended pregnancy in the U.S. (Table 4; Figure 3). The results are organized by the following themes: demographic characteristics, reproductive values/behaviors, partner influences, preconception behaviors, and contraception (Figure 4).

Unintended pregnancy risk has been documented as cumulative (Shlay, Mayhugh, Foster, & Maravi, 2002). Being non-White; age 19 or younger; having a high school diploma or lower educational attainment; a history of abortion or pregnancy; a first pregnancy before the age of 17; non-use of contraception during most recent sexual encounter; having sex at least once per week; and chlamydia or gonorrhea infection during enrollment in a the study were risk factors associated with incident pregnancy. Women experiencing at least six of these nine demographic/behavioral characteristics had a 50% chance of experiencing an unintended pregnancy. Experiencing five or less characteristics was associated with a 25% chance of having an unintended pregnancy (Shlay et al., 2002).

3.4.1 Measuring Unintended Pregnancy

The frequency of reported unintended pregnancy was as high as 82% for lifetime prevalence (Besculides & Laraque, 2004) and 22% for yearly incidences (Rocca, Harper, & Raine-Bennett, 2013). Though unintended pregnancy may be classified, more specifically, as mistimed or unwanted, discrepancies exist regarding how and when unintended pregnancies are measured. An article by Wildsmith, Guzzo, and Hayford (2010) defined unintended pregnancy, more precisely,

as unwanted, mistimed, or seriously mistimed, with mistimed pregnancies occurring at least two years before desired.

Broadly, many of the articles included in this review relied on recall of study participants (Centers for Disease Control and Prevention, 2012; Coles et al., 2011; Cubbin, Vesely, Braveman, & Oman, 2011; Goldsmith, Kasehagen, Rosenberg, Sandoval, & Lapidus, 2008; Hayford & Guzzo, 2010; Musick, 2002; Naimi, Lipscomb, Brewer, & Gilbert, 2003; Wildsmith et al., 2010), while others assessed unintended pregnancy risk or monitored incident pregnancies--unintended pregnancies occurring within a pre-determined time frame, which did not require patient recall (Aquilino & Losch, 2005; Besculides & Laraque, 2004; Bryant et al., 2010; Buhi, Marhefka, & Hoban, 2010; Foster et al., 2004; Matteson, Peipert, Allsworth, Phipps, & Redding, 2006; Rocca et al., 2013; Shlay et al., 2002). The majority of studies measured unintended pregnancies that resulted in live births rather than pregnancies, alone. For this review, the term “unintended pregnancy” will refer to both unintended pregnancies and unintended births. Studies that only measure unintended births do not include pregnancies that end in abortion. The following is an example of a common question used to assess pregnancy intention: “Thinking back to just before you got pregnant with your new baby, how did you feel about getting pregnant?”

Hayford and Guzzo (2010) categorized births based on contraceptive use. Given a woman’s report of contraception use, probes were used to determine if the pregnancy was explicitly desired or unplanned. In a later study, Hayford and Guzzo (2013) assessed motivation to avoid pregnancy among unmarried women using cognitive and affective reasoning. Specifically, participants were asked to rate the importance of pregnancy avoidance as well as how they would feel upon learning that they were pregnant.

Unlike the other studies, Besculides and Laraque (2004) assessed pregnancy intention before participants received their pregnancy test results. Bryant et al. (2010) gauged unintended pregnancy by asking about the level of difficulty associated with becoming pregnant. Study participants responded, “difficult”, “easy”, or “was not trying.” In summary, while unintended pregnancy is defined differently across studies, papers that included some dimension of unintendedness (not trying, mistimed, not desired) were included in this review.

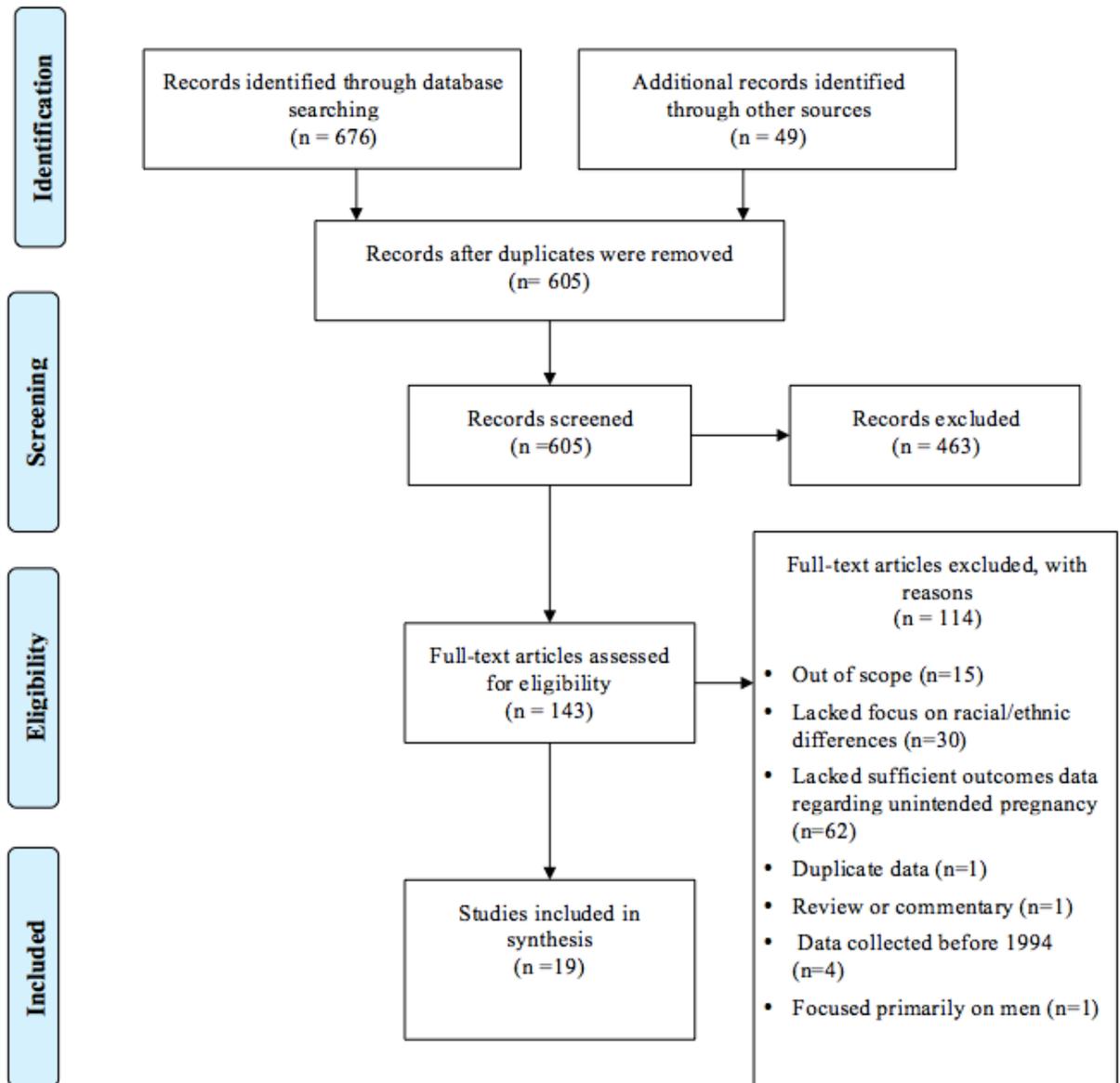


Figure 3. Selection Process of Systematic Literature Review Focusing on the Association between Racial/Ethnic Experiences and Unintended Pregnancy

Table 4. Summary of Publications Included in the Review

First Author, Year	Study Design	Study Sample	Race/Ethnicity	Relevant Topics	Relevant Results	Limitations
Aquilino, 2005	Cross-Sectional; Secondary data analysis State-based/clinic-based	89,485 women participating in the Iowa Barriers to Prenatal Care Project between 1997 and 1999	White: 90.6%; Black: 2.3%; Asian/PI: 1.4%; AI/NA: 13%	Age; Education; SES	<ul style="list-style-type: none"> • Unintended pregnancy was highest among Black women, followed by Native American and Hispanic/Latina women. • Unintended pregnancy decreased as age, income, and education increased 	Recall bias regarding pregnancy intention; potential underestimation of unintended pregnancy due to inclusion criteria.
Besculides, 2004	Cross-Sectional Clinic-based	8,886 urban, poor women from family health clinics in New York.	White: 1.6% Black: 62.3% Hispanic/Latina: 18.8% Asian: 1.5% Other: 15.9%	Marital Status; Preconception Behavior	<ul style="list-style-type: none"> • 82% of women reported an unintended pregnancy, which was highest among Black, unmarried women between the ages of 10-19, who lacked insurance or received Medicaid. • In an adjusted model, unmarried women were 2.5 times more likely than married women to experience an unintended pregnancy. • Compared to women who always used contraception, using contraception sometimes or never were associated with a significantly decreased risk for unintended pregnancy. 	Recall bias; lack of racial/ethnic diversity
Bryant, 2010	Cross-Sectional Clinic-based	1,070 socio-demographically diverse women seeking prenatal care in the San Francisco Bay area.	White: 32% Black: 18.3% Asian: 22.6% Latina: 32%	SES	<ul style="list-style-type: none"> • 34.6% of current pregnancies were unintended, with the highest proportion occurring among Black women. • Women who did not intend to become pregnant, had significantly higher fatalism ($p < 0.001$) scores and significantly lower social standing ($p < 0.001$), in bivariate analyses. • In adjusted models, an increase in social standing was associated with greater likelihood that a pregnancy would be intended among White ($p = 0.001$) women and foreign-born women ($p < 0.001$). 	Low level of generalizability;

Table 4 Continued

Buhi, 2014	Cross-Sectional; Secondary data analysis National study of undergraduates	44,165, unmarried, undergraduates, ages 18-24, participating in the spring 2007 American College Health Association-National-College Health Assessment.	The sample is 95% White and is a comparison between White and Black students, only.	Contraception	<ul style="list-style-type: none"> • The prevalence of unintended pregnancy was 2%, and four times more likely among Black students than White students. • Blacks were significantly more likely than Whites to use condoms and significantly more likely to not use contraception at last vaginal intercourse. • Black students were significantly more likely to have more than four sexual partners within the last school year. • Hormonal contraception use was significantly more prevalent among White students compared to Blacks. 	Results are not fully generalizable to young adults in the U.S.; Under-representation of Black students in the sample; lack of socioeconomic data; exclusion of other races/ethnicities
Centers for Disease Control and Prevention, 2012	Cross-Sectional; Secondary data analysis Multi-state	4,836 women from the Pregnancy Risk Assessment Monitoring System, between 2004 and 2008	White: 48.5% Black: 31.8% Hispanic/Latina: 19.7%	Ambivalence; Fertility Attitude; Insurance; Contraception; Partner Influence	<ul style="list-style-type: none"> • Between 2004 and 2008, 73% of women reported an unintended pregnancy; 50% were not using contraception at the time of pregnancy. • Contraceptive use was not significantly different for White, Black, and Hispanic/Latina women. 	Potential underestimation of unintended pregnancy due to inclusion criteria; recall bias; lack of generalizability
Coles, 2011	Cross-Sectional; Secondary data analysis Multi-state	9,779 women, ages 11-17, from 2000-2005 Pregnancy Risk Assessment Monitoring System	White: 55.2% Black: 31.7% Asian: 4.5% Other: 8.6% Hispanic/Latina: 18.4%	Insurance; Ambivalence	<ul style="list-style-type: none"> • 79% of births were unintended. • Lack of access and being Black were significantly associated with mistimed and unwanted pregnancies. • Compared to White and Hispanic/Latina women, Black women who reported an unintended pregnancy were 7 times more likely to quote side effects of birth control and nearly 11 times more likely to quote lack of access as barriers to contraceptive use. • Participants ambivalent about pregnancy were significantly less likely to report unwanted pregnancy. 	Low level of generalizability; possible underestimation of unintended pregnancies; recall bias

Table 4 Continued

Cubbin, 2002	Cross-Sectional; Secondary data analysis State-wide (CA)	7,044 women from the 1999 and 2000 California Maternal and Infant Health Assessment	European/Middle Eastern: 36.3% Black: 6.8% AI/AN: 0.7% Asian/PI: 10.2% Hispanic/Latina (U.S. Born): 15.6% Hispanic/Latina (Foreign Born): 28.6% Other/unknown: 2.0%	Marital Status; SES	<ul style="list-style-type: none"> • The prevalence of unintended pregnancy was 47%. • Unintended pregnancy was most prevalent among Black and U.S.-born Hispanic/Latina women, and those who were unmarried, recently experienced abuse, and had been pregnant multiple times. • Unadjusted predictions for unintended pregnancy based on race/ethnicity attenuated after adjusting for poverty and maternal and paternal education. • Black, Asian/Pacific Islander, and U.S.-born Hispanic/Latina women were significantly more likely than European/Middle Eastern women to experience an unintended pregnancy. 	Recall bias; lack of generalizability
Foster, 2004	Cross-Sectional; Secondary data analysis State-wide (CA)	8,970 women, ages 18 to 44, from the California Women's Health Survey (1998-2001)	White: 50.7% Black: 5.6% Hispanic/Latina: 34.4% North Asian: 2.8% S/SE Asian: 2.9% Other: 3.5%	Contraception	<ul style="list-style-type: none"> • Use of contraception peaked among women in their late 20s. • Foreign-born women were of significantly greater risk for unintended pregnancy than women born in the U.S. • Asian women were more likely to use condoms or family planning and less likely to use sterilization. • Male sterilization was more common among White and North Asian women, whereas, female sterilization was more common among Black and Hispanic/Latina women. 	Lack of generalizability to younger teens; potential overestimation of unintended pregnancy.
Frost, 2007	Cross-Sectional National	1,978 women, ages 18-44, who were at risk for unintended pregnancy	White: 64.0% Black: 11.5% Hispanic/Latina: 17.6% Asian/Other: 6.7%	Contraception	<ul style="list-style-type: none"> • Pregnancy ambivalence was greatly associated with contraceptive use. • Educational attainment; being of Black race/ethnicity, having infrequent sexual intercourse, being older in age, and single were additional predictors for inadequate contraceptive use. 	Recall bias; non-response bias; inadequate measure of contraceptive use/misuse;

Table 4 Continued

Goldsmith, 2007	Cross-Sectional; Secondary data analysis State-wide (OR)	1,795 post-partum women, age 18 and older, participating in the 2001 Oregon-based PRAMS survey.	White: 74.5% Black: 2.0% Hispanic/Latina: 16.9% AI/AN: 1.6% Asian/PI: 5.0%	Contraception	<ul style="list-style-type: none"> • 38.2% of pregnancies were mistimed or unwanted. • Young, uninsured, lower income, unmarried women with less than 12 years of education were significantly more likely to experience an unintended pregnancy. • Black and American Indian/Alaskan Natives were also significantly more likely to experience an unintended pregnancy. 	Recall bias, potential underestimation of unintended pregnancy; lack of generalizability
Hayford, 2010	Cross-Sectional; Secondary data analysis Nationally representative	7,643 women, aged 15-44, from the 2002 National Survey of Family Growth	White: 68% Black: 15% Native born Hispanic/Latina: 8% Foreign born Hispanic/Latina: 9%	Marital Status; Education	<ul style="list-style-type: none"> • Approximately 50% of births were unplanned. • Pregnancy intention was greatly associated with age. • Planned births were highest among White woman when compared to Black and U.S. born Hispanic/Latina women. • Of all racial/ethnic groups, planned pregnancy was highest among foreign-born Hispanics/Latinas. • Union status and pregnancy planning also varied significantly by race/ethnicity. 	Recall bias; lack of generalizability; lack of socio-economic data
Hayford, 2013	Cross-Sectional; Secondary data analysis Nationally representative	1,573 unmarried men and women, 18-29 years of, from the 2009 National Survey of Reproductive and Contraceptive Knowledge.	White: 52.1% Black: 18.5% U.S. born Hispanic/Latina: 15% Foreign born Hispanic/Latina: 6.7% Other: 7.6%	Age; Ambivalence; Fertility Attitude	<ul style="list-style-type: none"> • Attitudes about fertility differed significantly by race/ethnicity. • Black women were significantly more likely than White women to report that their family did not approve of non-marital childbirth. • A significantly greater number of Black and Hispanic/Latina women (US and foreign born) reported belief that every pregnancy is a blessing. Avoidance of pregnancy was greatest among foreign-born Hispanics/Latinas. 	Response bias due to differential response rates; inability to assess causality

Table 4 Continued

Matteson, 2006	Cross-Sectional Clinic-based (RI)	424 non-pregnant women, ages 14-25, enrolled in a randomized controlled trial regarding reproductive health. Women were high risk for unintended pregnancy and sexually transmitted infections	White: 56% Black: 17% Hispanic/Latina: 15% Other: 11%	Contraception	<ul style="list-style-type: none"> • The prevalence of past, unintended pregnancy was 43% and was significantly associated with women between the age of 23 and 25. • Age, race/ethnicity, educational attainment, and insurance status were significantly associated with a past, unplanned pregnancy. • Black women were 16% less likely than White women to use contraception. • All of the women in the study aimed to prevent pregnancy in the next 24 months yet, 34% were not using any form of contraception. • A past, unintended pregnancy was not significantly associated with contraceptive use. 	Lack of generalizability; lack of assessment of the frequency of unintended pregnancies and/or pregnancy outcomes
Moore, 1995	Cross-Sectional State-based (TX)	341 pregnant or parenting teens, ages 11-19, from pregnant/parenting teen programs in Texas	White: 23% Black: 18% Hispanic/Latina: 59%	Reproductive Values	<ul style="list-style-type: none"> • Two-parent homes fostered significantly more positive parent-teen relationships and made the teens feel good about their self. • Hispanic/Latina teens were most likely to grow up in two-parent homes. • Black teens were significantly more likely to receive information about sex from their parents, compared to White and Hispanic/Latina teens. • Black teens were more likely to attend religious services and feel good about their self. 	Small sample size; lack of demographic information; generalizability
Musick, 2002	Cross-Sectional; Secondary data analysis Nationally-representative	10,847 women from the 1995 National Survey of Family Growth	White: 65% Black: 19% Hispanic/Latina: 11% Other: 4%	Education; Marital Status	<ul style="list-style-type: none"> • Among unmarried women, the odds for both planned and unplanned birth was higher among Blacks and Hispanics/Latinas. • Women who were cohabitating with an intimate partner were significantly more likely to experience both planned and unplanned pregnancies. 	Lack of generalizability; recall bias

Table 4 Continued

Naimi, 2003	Case-Control (Binge drinker vs. non-binge drinker) Multi-state	72,907 White and Black women from 11 states. The women participated in the Pregnancy Risk Assessment Monitoring System 2 to 6 months after having a live birth.	White: 80% (8% Hispanic) Black: 20%	Age; Marital Status; Insurance; Preconception Behavior; Partner Influence	<ul style="list-style-type: none"> • 45% of pregnancies were unintended. • Unintended pregnancies were most likely to occur among women who were young, not married, less educated, and Black. • After adjusting for confounders, preconception binge drinking was significantly higher among White women who reported an unintended pregnancy compared to those whose pregnancy was intended ($p < 0.001$). • Binge drinking and smoking during the preconception period and exposure to physical violence were significant risk factors for unintended pregnancy among White women. 	Low level of generalizability; possible underestimation of unintended pregnancies; recall bias;
Rocca, 2013	Longitudinal (baseline, three, six, and 12 months) Clinic-based (CA)	1,377 unmarried women, between the ages of 15 and 24, seeking contraception, from family planning clinics. Women were not pregnant and did not want to become pregnancy within the next year	White: 13% Black: 41% Hispanic/Latina: 29% Asian/PI: 12% Multiracial/other: 6%	Fertility Attitude	<ul style="list-style-type: none"> • Perceived benefits of childbearing decreased with age. • White women reported fewer childbearing benefits than Black, Hispanic/Latina, and Asian/Pacific Islander women. • Despite obtaining contraception, more than 50% of participants expressed ambivalence toward pregnancy; 75% of women discontinued the birth control they received at baseline; 22% became pregnant. • In unadjusted models, an increase in perceived benefits resulted in an increase in contraception discontinuation ($p < 0.01$) and pregnancy ($p < 0.01$). 	Lack of assessment of drawbacks associated with childbearing in the assessment tool. Pregnancy intentions that may change over time were not consider

Table 4 Continued

Shlay, 2001	Longitudinal, (4, 8, and 12 months) Clinic-based	877 adolescents and women seeking care from a STD clinic in Denver. The women a sub-cohort of women recruited for a randomized controlled trial	White: 40% Black: 26% Hispanic/Latina: 30% Other: 4%	Contraception; Incident pregnancy; Cumulative risk for unintended pregnancy	<ul style="list-style-type: none"> • Women expressing six of nine indicators had a 51% risk of experiencing an unintended pregnancy, compared to women with five characteristics (25% risk). • In an adjusted model, being 19 or younger, having a previous abortion, frequent sexual encounters, and a chlamydial infection at baseline were significantly associated with unintended pregnancy. • In a crude analysis, women who were not White were at significantly higher odds for experiencing unintended pregnancy. 	Lack of generalizability; attrition
Windsmith, 2010	Cross-Sectional; Secondary data analysis Nationally-representative	1,977 women from the NSFG were divided into two age cohorts 33-37 years and 40-44 years.	White: 54% Black: 22% Hispanic/Latina: 20%	Age	<ul style="list-style-type: none"> • Unintended birth was greater in the younger cohort (33-37 years) when compared to experiences of an older cohort of women (40-44 years). • Unintended births were highest among Black women and lowest among White women. • Black women were more likely than White and Hispanic/Latina women to experience a repeated unintended birth. 	Lack of generalizability; recall bias; inability to assess causality; possible underestimation of unintended pregnancy

3.4.2 Maternal Age, Education, Income, and Related Socio-demographic Factors

Thirteen studies focused on socio-demographic characteristics with regard to race/ethnicity. All studies were cross-sectional in design, with the exception of one case-control study conducted by Naimi et al. (2003). The studies included a range of clinical, state-based, and nationally representative samples.

Risk for unintended pregnancy was inversely related to age and educational attainment for minority women (Aquilino & Losch, 2005). Black and Hispanic/Latina women were more likely to experience unintended pregnancy at an earlier age than White women (Hayford & Guzzo, 2013). Similarly, Black and Hispanic/Latina women had less education than their White counterparts (Hayford & Guzzo, 2010). Regardless of social standing, Black, Asian, and Hispanic/Latina women are at greater risk for unintended pregnancy than White women (Bryant et al., 2010). Also, for Blacks and Hispanics/Latinas, unintended pregnancy is likely to occur outside of wedlock (Musick, 2002).

3.4.2.1 Maternal Age

Young age is a risk factor for unintended pregnancy, especially among racial/ethnic minorities (Aquilino & Losch, 2005; Hayford & Guzzo, 2010). Unintended pregnancy was highest among women under the age of 18, with a prevalence of 80%. However, the annual prevalence of unintended pregnancy for women in the 31-35 age category ranged from 19% to 20% (Aquilino & Losch, 2005). Overall, as age increased, the likelihood of planned pregnancy also increased (Hayford & Guzzo, 2010).

Across racial/ethnic groups, age at first sexual experience differed significantly ($p < 0.001$) (Hayford & Guzzo, 2013). Black and Hispanic/Latina (U.S. and foreign-born) women and women classified as “other” were more likely to have their first sexual encounter at a younger age than White women. The majority of Black and U.S. born Hispanic/Latina women reported that their first sexual encounter occurred before the age of 15 up to 17 years of age. Fifteen years and beyond were the most reported age ranges for first sexual encounters among White and foreign-born Hispanic/Latina women (Hayford & Guzzo, 2013). In a multivariate analysis, participants who had sex before age 15 were significantly less likely to believe that avoiding pregnancy was important (Hayford & Guzzo, 2013). These findings are consistent with findings from Wildsmith et al. (2010), which document a difference in unintended pregnancy incidences based on age.

In a presentation of two cohorts of women, ages 40-44 and 33-37, allowing for a quasi-life-course perspective, Black and Hispanic/Latina women experienced unintended and unwanted births at a younger age than White women. The first unintended birth for White women was nearly three years later than that of Black women and 2.6 years later than that of Hispanic/Latina women. Less difference was noted concerning the average age at first seriously mistimed birth (Wildsmith et al., 2010).

3.4.2.2 Educational Attainment

Unintended pregnancy was inversely correlated with educational attainment (Aquilino & Losch, 2005; Finer & Henshaw, 2006). Educational attainment was lowest among Hispanic/Latina and Black women compared to White women (Hayford & Guzzo, 2010). Relative to having a high school diploma, earning a college degree was associated with a significant decrease in odds for unplanned birth among Blacks and Whites. Among Black women only, an increase from lacking a high school diploma to having one was also associated with a decrease in unintended pregnancy

risk. Among Hispanic/Latina women, an increase in educational attainment decreased their odds for unintended pregnancy, however, the decrease was not significant (Musick, 2002).

3.4.2.3 Socio-economic Status and Social standing

Regardless of social standing, women of color were more likely to experience an unintended pregnancy when compared to White women (Bryant et al., 2010; Finer & Zolna, 2013). Social standing is a subjective measure that is associated with social, physical, and emotional aspects of health (Bryant et al., 2010). Among White women, an increase in social standing was significantly associated with a decrease in unintended pregnancy. This association, however, was not observed among racial/ethnic minorities. Women who reported an unintended pregnancy were of significantly lower social standing and had a significantly higher fatalism score, or belief that pregnancy was due to an external locus of control (Bryant et al., 2010).

Cubbin et al. (2002) examined the influence of three SES measures: poverty, and maternal and paternal educational attainment in association with unintended pregnancy and race/ethnicity. Upon inserting the SES measures, stepwise, into the logistic regression model, the odds for unintended pregnancy based on race/ethnicity attenuated. Nonetheless, even in the full logistic regression model, race/ethnicity was significantly associated with unintended pregnancy among Black, Asian/Pacific Islander, and Hispanic/Latina women (U.S, and foreign born) when compared to European/Middle Eastern women. Unintended pregnancy risk was greatest among Black women (Cubbin et al., 2002).

3.4.2.4 Health Insurance

Non-use of contraception due to lack of health care access was most prevalent among Black adolescents when compared to Whites and Hispanic/Latinas (Centers for Disease Control and

Prevention, 2012; Coles et al., 2011). Specifically, Black adolescents were 11 times more likely to report difficulty in obtaining birth control than White and Hispanic/Latina youth. Overall, among all racial/ethnic groups, neither Matteson et al. (2006) nor Foster et al. (2004) found significant associations between insurance type (i.e. private, public, self-pay) and unintended pregnancy. Nonetheless, not having health insurance prior to an unintended pregnancy was associated with significant risk for unintended pregnancy among Black and White women (Naimi et al., 2003).

3.4.2.5 Marital Status

Unplanned pregnancy was significantly more prevalent among unmarried Black and Hispanic/Latina women when compared to unmarried White women ($p < 0.01$) (Musick, 2002). Marital status was strongly associated with unintended pregnancy (Besculides & Laraque, 2004). Among a diverse sample, women who were not married were 2.51 times more likely to have experienced an unintended pregnancy ($p < 0.001$) (Besculides & Laraque, 2004). However, wedlock did not reduce the odds for unintended pregnancy among minorities. In a study by Cubbin et al. (2002), Black, Asian/Pacific Islander, and U.S.-born Hispanic/Latina women who were married experienced significantly more unintended pregnancies than European/Middle Eastern women. Of all married women, unintended pregnancy risk was significantly greater among Black women, with an adjusted odds ratio of 2.1, when compared to Middle Eastern/European women. Unintended pregnancy, however, was significantly lower among unmarried Hispanic/Latinas born outside of the U.S. when compared to European/Middle Eastern women (Cubbin et al., 2002). In a stratified model by Musick (2002), Hispanic/Latina women were four times more likely to report a planned birth outside of marriage when compared to White and Black women.

3.4.3 Reproductive Values/Behaviors

Seven studies focused on beliefs and values related to health behaviors and pregnancy intentions. Familial influences, perceptions of childbirth, and attitudes about pregnancy (ambivalence and fatalism) are specific topics that emerged. All of the studies were cross-sectional, with the exception of one longitudinal study by Rocca et al. (2013). The National Survey of Family Growth (NSFG) and the Pregnancy Risk Assessment Monitoring Survey (PRAMS) were used in some of the secondary analyses. Overall, study participants were from family planning clinics, teen parenting programs, or participants of multistate surveys of post-partum women. Some participants were as young as 10 years of age, ranging upward to include women in their forties.

3.4.3.1 Reproductive Values and Household Structure

Among pregnant and parenting teens in Texas, nearly 60% of teens grew up in single-parent household, and of the two-parent households, 62% were the result of re-marriage. Hispanic/Latina teens were most likely to grow up with two parents when compared to White and Black teens, and White teens were more likely to experience parental divorce (N. B. Moore & Rodriguez, 1995). Musick (2002) found planned and unplanned pregnancy to be significantly higher among White women growing up in a single parent family ($p < 0.01$), when compared to Blacks and Hispanics/Latinas. Unplanned pregnancy statistically significant among Black teens who spent time in a single parent family as well ($p < 0.05$) (Musick, 2002).

3.4.3.2 Pregnancy Ambivalence and Fatalism

Some women had a fatalistic attitude, were ambivalent about pregnancy, or motivated by other means to become pregnant (Bryant et al., 2010; Centers for Disease Control and Prevention, 2012;

Rocca et al., 2013). Despite taking active steps to prevent unintended pregnancy, pregnancy intention and contraceptive use were not always matched. Among a sample of teens, ages 15-19, nearly a quarter of teens reported that they did not mind getting pregnant; this attitude was most prevalent among Hispanic/Latina teens (Centers for Disease Control and Prevention, 2012). To explore these attitudes more deeply, Rocca et al. (2013) asked young women about the perceived benefits of childbearing to gauge pregnancy ambivalence. Having someone to love and having someone to give love to were the most frequently reported benefits of childbirth. Mean scores on the benefits of childbearing scale were highest among Hispanic/Latina women when compared to White and Asian/Pacific Islanders ($p < 0.01$), and among Asian/Pacific Islanders when compared to Black women ($p < 0.01$). White women's benefits of childbirth were rated significantly lower than that of Blacks. Also, the frequency of pregnancies within a one-year time frame was significantly higher among women with higher benefits of childbearing scores ($p < 0.01$) as well as those who reported some level of ambivalence ($p < 0.001$) (Rocca et al., 2013). Among White, Black, and Hispanic/Latina adolescents, those who expressed pregnancy ambivalence were significantly less likely to report an unwanted pregnancy (Coles et al., 2011). N. B. Moore and Rodriquez (1995) reported the influence on love seeking behavior on unintended pregnancy. A possible connection between pregnancy ambivalence and perceived benefits of childbearing was not documented in the literature. However, both factors were associated with discontinuation of contraceptive use (Rocca et al., 2013).

3.4.3.3 Fertility Attitudes

Hayford and Guzzo (2013) explored fertility attitudes by race/ethnicity, more deeply. Though not significant across all races/ethnicities, a significant difference ($p < 0.01$) existed between Black and White women regarding the acceptance of non-marital childbirth. Black women were more likely

to report lack of acceptance of non-marital childbirth by their family. Nonetheless, Black and Hispanic/Latina women, both foreign and U.S.-born, were more likely to report that they believe every pregnancy is a blessing ($p < 0.001$) (Hayford & Guzzo, 2013).

3.4.4 Contraception

Seven studies examined components of contraceptive use related to unintended pregnancy and race/ethnicity. All of the studies were cross-sectional, except for one longitudinal study that measured incident pregnancy at four time points (Rocca et al., 2013). The study samples are representative of national, state, and clinic-based populations. Black women were more likely to not use contraception (Frost, Singh, & Finer, 2007). Additional racial/ethnic differences were documented in the context of method choice, and knowledge around pregnancy and contraception use (Foster et al., 2004; Goldsmith et al., 2008; Rocca et al., 2013).

3.4.4.1 Contraceptive use

Black women were nearly two times more likely than White women to not use contraception ($p < 0.05$) (Frost et al., 2007). When exploring racial/ethnic components associated with contraception, Matteson et al. (2006) found contraceptive use to be 16% less likely among Black women when compared to White women; nonetheless, no significant difference in contraceptive use among White, Black, and Hispanic/Latina women was noted. Regarding adherence to contraceptive use, Black women were significantly more likely to continue with the same contraceptive method or to use no method at all ($p < 0.05$), while Hispanic/Latina women were more likely to use no method at all ($p < 0.05$) (Frost et al., 2007). White and Asian women were more likely to continue with the same method, with no significant variation in contraception use.

Additional racial/ethnic differences and contraceptive patterns were noted among non-married, undergraduate students. Specifically, Black students were four times more likely to experience an unintended pregnancy when compared to White students. Overall, condom use was significantly higher among Black students. However, Black students were more likely to report that their last vaginal, sexual encounter took place without contraception (Buhi et al., 2010).

Furthermore, women who perceived greater benefits of childbearing were less likely to adhere to a contraceptive regimen, which was later evidenced by an increase in incident pregnancies (Rocca et al., 2013). Non-White women reported more benefits of childbearing, therefore, increasing their risk for incident pregnancy. Among this cohort of women, the one-year pregnancy incidence was highest among Black, Hispanic/Latina, and multiracial women (Rocca et al., 2013).

3.4.4.2 Contraceptive Method Choice

Contraceptive method choice also varied by racial/ethnic background. Foreign-born women were of greater risk for unintended pregnancy due to lack of contraceptive use (Foster et al., 2004). North and South Asian women were more likely to use condoms or natural family planning and less likely to be sterilized, compared to women from other racial/ethnic groups. Male sterilization was more likely among White and North Asian women, whereas, female sterilization was more common among Black and Hispanic/Latina women (Foster et al., 2004).

Contraceptive non-use and inconsistent use was associated with pregnancy ambivalence, a risk factor for unintended pregnancy (Frost et al., 2007). Among women who participated in the Oregon-based PRAMS study, lack of knowledge of emergency contraception prior to becoming pregnant was significantly associated with unintended pregnancy risk; unintended pregnancy was significantly higher among Black and American Indian/Alaskan Native women (Goldsmith et al.,

2008). A similar knowledge gap was documented among teens. More than 40% of Hispanic/Latina teens did not believe that they could become pregnant, compared to 27% of White teens (Centers for Disease Control and Prevention, 2012).

3.4.5 Preconception Behaviors

Contraceptive use was not the only pre-pregnancy predictor for unintended pregnancy. Two studies examined the association between the behavior of women prior to conception and unintended pregnancy. The designs of these empirical studies are classified as case-control and longitudinal.

Risky sexual encounters resulting in an unintended pregnancy can be partly explained by use of drugs and alcohol, which varies between White and Black women (Naimi et al., 2003). Naimi et al. (2003) characterized alcohol use prior to conception as binge drinking, or having five or more drinks in one sitting. White women who experienced unintended pregnancy were significantly more likely to smoke and/or binge drink prior to conceiving ($p \leq 0.05$), compared to women who did not binge drink (Naimi et al., 2003).

Additionally, a cohort of women presenting at an urban, sexually transmitted infection (STI) clinic were followed for one year. In an unadjusted model, non-White women who were infected with Chlamydia or Gonorrhea at the time of enrollment were at significantly greater risk for experiencing an incident pregnancy. Having an STI and being of non-White racial/ethnic background were significantly associated with incident pregnancy (Shlay et al., 2002).

3.4.6 Partner Influence

Three studies examined the role of male partners on unintended pregnancy. However, only two examined racial/ethnic differences. Of the two studies of primary interest, one is cross-sectional, and the other is a case-control study. Partner influence is measured as lifetime or recent abuse (Centers for Disease Control and Prevention, 2012; Naimi et al., 2003).

Women who experienced IPV in their lifetime were significantly more likely to experience an unintended pregnancy ($p \leq 0.05$) (Naimi et al., 2003). Exposure to violence was greatest among White women when compared to Black women (AOR 1.48, 95% CI 1.25-1.75) (Naimi et al., 2003). Though no racial/ethnic comparisons were documented, recent abuse was also associated with unintended pregnancy (Matteson et al., 2006).

Men also influenced contraception use. Among a sample of adolescent females, nearly a quarter reported that their male partner did not want to use contraception (Centers for Disease Control and Prevention, 2012). White women were most likely to report their partner's disinclination to use contraception, though there was no significant difference between the racial/ethnic groups (Centers for Disease Control and Prevention, 2012).

3.4.7 Thematic Synthesis

In this analysis, five major themes emerged regarding the relationship between unintended pregnancy and race/ethnicity (Figure 4). These themes were explored in greater detail, resulting in the compilation of sub-themes. A conceptual model or thematic synthesis of this review is provided in Figure 4.

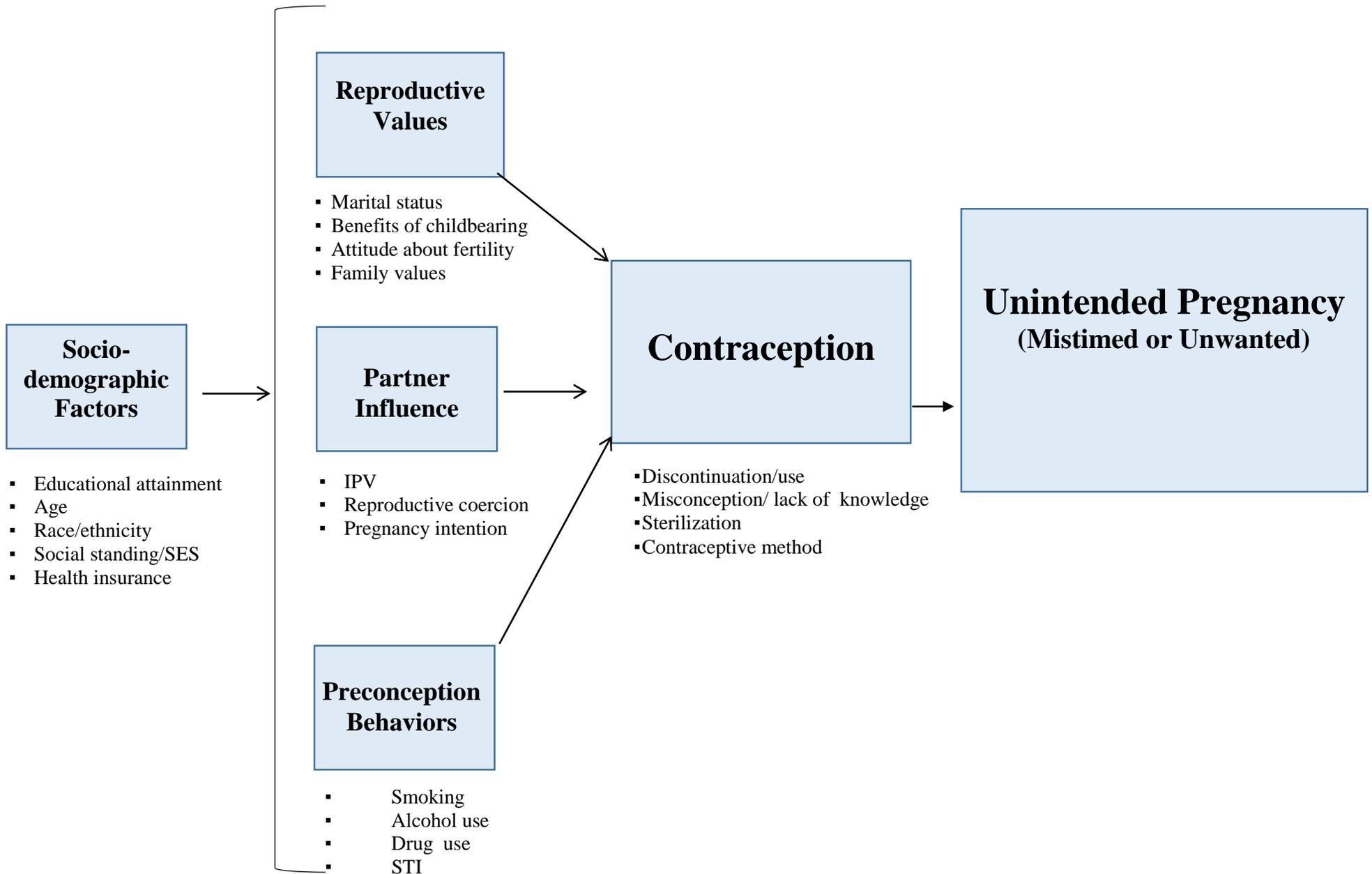


Figure 4. Thematic Synthesis Demonstrating the Correlation of Unintended Pregnancy with Race/Ethnicity

3.5 DISCUSSION

This systematic literature review is a synthesis of published studies that examined the relationship between unintended pregnancy and racial/ethnic differences among women in the U.S. While not all relevant studies may have been captured, a thorough search strategy was developed, including multiple approaches to identifying studies. This review was intentionally limited to individual and structural level factors associated with unintended pregnancy and racial/ethnic differences given the novelty of this subject area. Specifically, 19 studies were reviewed concerning reproductive values, contraception use, partner influence, and pre-pregnancy behaviors in the context of race/ethnicity.

Unintended pregnancy was most prevalent among non-White women, particularly, Black and Hispanic/Latina women (Besculides & Laraque, 2004; Goldsmith et al., 2008). When considering socio-demographic factors, disparity in unintended pregnancy prevalence can be explained, in part, by younger age at first sexual encounter (Hayford & Guzzo, 2013) and lower educational attainment (Goldsmith et al., 2008) and social standing (Aquilino & Losch, 2005; Bryant et al., 2010). Furthermore, the relationship between marital status and unintended pregnancy differed between racial/ethnic groups. Overall, unintended pregnancy was highest among non-marital unions, except among Blacks (Cubbin et al., 2002). In fact, unintended pregnancy was most prevalent among Black women who were married, which is consistent with a study that sampled men of different racial/ethnic groups (Lindberg & Kost, 2013). Though these findings are supported by commonly cited theories related to social determinants of health (Braveman, Egerter, & Williams, 2011; Krieger, 2003; Krieger & Davey Smith, 2004; Williams,

1997), additional research is needed to explore racial/cultural influences of union status and unintended pregnancy.

Moreover, due to recent policy changes, emergency contraception is available over-the-counter and health insurance policies now provide contraception free-of-charge, according to the Affordable Care Act. Intuitively, one may assume that these policies should result in marked decreases in incidences of unintended pregnancy. However, as elucidated in this review, additional mechanisms that may lead to unintended pregnancy must also be considered. When asked why they did not use contraception, some young women stated that they, “did not mind getting pregnant” (Centers for Disease Control and Prevention, 2012), despite their young age; other reasons included partner pressure, pregnancy misconceptions, socio-demographic characteristics, and values regarding reproductive behavior (Cubbin et al., 2002; Matteson et al., 2006; Naimi et al., 2003). Pregnancy pressure in terms of contraceptive use was greatest among White women (Centers for Disease Control and Prevention, 2012). Pregnancy ambivalence and fatalistic attitudes were more common among Black, American Indian/Alaskan Native, and Hispanic/Latina women (Bryant et al., 2010), which may indicate differences in male influence and culture between racial/ethnic groups.

Some of the studies in this review highlighted cultural differences in pregnancy intention by union status (Cubbin et al., 2002; Hayford & Guzzo, 2010) and family-based ideology. Particularly, Hispanic/Latina women were more likely to report a planned pregnancy outside of marriage. Also, despite lack of familial acceptance of non-marital childbirth, unintended pregnancy (Hayford & Guzzo, 2013) outside of wedlock was significantly higher among Black women (Besculides & Laraque, 2004).

One explanation may be that Black women are influenced by other factors, despite family values. Reduced stigma, differing ideologies of family structure, or perhaps, an increase in familial support may explain differences in planned and unplanned pregnancies by race/ethnicity (Musick, 2002). Reproductive values are influenced by household structure. Permissive sexual attitudes and non-marital childbearing are associated with growing up in a single parent home (Axinn & Thornton, 1996). Correspondingly, self-esteem, expectations for the future, and closeness with parents have been shown to reduce risky sexual behavior among adolescents (Barnett, Papini, & Gbur, 1991).

Furthermore, the association between unintended pregnancy and abuse was documented (Cubbin et al., 2002; Matteson et al., 2006; Naimi et al., 2003). This relationship is supported, more specifically, by research conducted by Miller, Decker, et al. (2010), which established an association between IPV, reproductive coercion (pregnancy coercion or birth control sabotage), and unintended pregnancy. Both singly as well as combined, IPV and reproductive coercion are associated with unintended pregnancy, which differ, significantly, by race/ethnicity (Miller, Decker, et al., 2010).

Aside from reports from female adolescents regarding their partners' aversion to contraception use (Centers for Disease Control and Prevention, 2012), reproductive coercion was not explored in any of the studies. Also, none of the studies examined differences in experiences of abuse and pregnancy outcomes by race/ethnicity. Given the racial/ethnic differences associated with unintended pregnancy (Aquilino & Losch, 2005) and what is known about IPV, more research is needed to explore potential racial/ethnic disparity associated with unintended pregnancy, IPV, and reproductive coercion.

Finally, unintended pregnancy predicts female tubal sterilization (Borrero, Moore, Qin, et al., 2010), which was more prevalent among Black women in the study by Foster et al. (2004). Structural reasons of SES, being a carrier of private health insurance, and higher education levels have been documented as reasons why racial/ethnic disparity exists regarding contraceptive method choice (Shih et al., 2013).

3.5.1 Limitations

This review is certainly not without limitations. The study selection process was limited to two major research databases and two other search engines. Therefore, it is possible that this systematic review is not fully representative of all studies published pertaining to racial/ ethnic experiences and unintended pregnancy among female adolescents and young women. This limitation may result in publication bias. Furthermore, location bias may also be of concern as conference abstracts and gray literature that were not listed within the Guttmacher Institute and Google scholar venues were not included in this analysis.

3.5.1.1 Critique of the Evidence

Several limitations among the research articles included in this review were also noted. First, inconsistencies exist regarding the measurement of unintended pregnancy. Studies that only measure unintended births certainly underestimate unintentional pregnancies, as this measurement does not include pregnancies that end in abortion (Jones & Kost, 2007; Trussell, Vaughan, & Stanford, 1999). Also, the lack of consistency in the measurements of unintended pregnancy makes the studies less comparable.

Many of the studies were retrospective in design, relying on participants to recall their pregnancy intention two to six months postpartum. In assessing pregnancy intention after the baby was born, it is possible that the mother's reported pregnancy intention may have shifted after delivery (Trussell et al., 1999). Perhaps, the study by Besculides and Laraque (2004) is the least biased in terms of recollection of pregnancy intention. Pregnancy intention was assessed prior to a woman receiving the results from her pregnancy test. While social desirability bias may impact the results of this study, the methodology limits recall bias. Shlay et al. (2002) and Wildsmith et al. (2010) monitored incident pregnancy among women who wished to prevent pregnancy, which may be an ideal design for determining racial/ethnic differences in odds for unintended pregnancy risk.

3.5.2 Implications for Practice, Policy, and Research

The topic of unintended pregnancy is extensive and spans a number of health concerns. A systematic literature review focusing on unintended pregnancy and racial/ethnic differences was not found in the literature. Thus, to begin to integrate existing literature, succinctly, we chose to focus on individual and structural level factors, only. Stringent screening criteria were used to determine eligibility for this review. In the future, additional studies are needed to explore, in greater detail, correlates that are likely to contribute to racial/ethnic differences among women experiencing unintended pregnancy.

3.5.2.1 Practice

Unintended pregnancy is influenced by a number of factors that should be considered in public health and clinical practice. For example, practitioners should take into account cultural

differences in fertility intention and acceptance as well as reproductive values like ambivalence and cultural beliefs. Additionally, practitioners should consider socio-demographics factors, particularly, race/ethnicity and the influence of intimate partners, when designing public health interventions and caring for patients.

3.5.2.2 Policy

This review has implications for policies regarding comprehensive sex education, public health intervention, and screening practices. Despite access to contraception, gaps in knowledge still exist regarding pregnancy prevention. Policies that call for implementation of comprehensive sex education, particularly related to contraceptive use, are needed. Furthermore, partner influence was a major theme among the articles reviewed. Given what is known about partner influence, assessment for such partner influences should be incorporated into clinical encounters.

3.5.2.3 Research

This review presents a broad overview of factors specific to race/ethnicity that may influence one's risk for unintended pregnancy. The conceptual framework, developed based on the findings from this review, provides some understanding of factors associated with unintended pregnancy and race/ethnicity, however, additional research is needed.

Given the insignificant effect of social standing on unintended pregnancy risk for women of color (Bryant et al., 2010), other factors or experiences must be impacting their health. An exploration of racism and racial/ethnic experiences regarding reproductive health is needed (Williams & Sternthal, 2010). Also, men impact pregnancy outcomes and the reproductive health of women (Miller, Decker, et al., 2010; Miller et al., 2007; A. Moore et al., 2010), yet are not traditionally the focus of studies of unintended pregnancy. Additional qualitative and quantitative

studies are needed to examine reasons for pregnancy coercion and perceived benefits of childbearing.

4.0 METHODS

In this section, a review of the methods for this dissertation will be presented, along with an overview of the datasets that were analyzed. A mixed-methods approach was used to study racial/ethnic-based experiences that may contribute to unintended pregnancy, reproductive coercion, and IPV risk. The methods consist of three components: 1) a systematic review of the literature exploring racial/ethnic differences associated with unintended pregnancy; 2) quantitative analysis of baseline data collected from women seeking care at a family planning clinic and; 3) qualitative analysis of semi-structured interviews of women who experienced IPV or reproductive coercion. The population of interest includes adolescent females and young women. These data are from two separate, parent studies that are described in greater detail, below.

4.1 DATA

4.1.1 Dataset One: Quantitative

A cross-sectional survey ([Appendix A](#)) was developed by Miller, Decker, et al. (2010) and used to collect data from female patients from five family planning clinics, in Northern California. The survey constitutes the baseline examination of family planning patients who consented to participate in a larger randomized control trial intervention. A total sample size of 1,319 is available. Between August 2008 and March 2009, the baseline survey was collected in both English and Spanish, via Audio Computer Assisted Survey Instrument. This survey method

allowed for the self-administration of the survey, which was read aloud to participants through headphones.

The survey probed for experiences of unintended pregnancy, reproductive coercion, and IPV through specific references to: relationship status, contraception (use, negotiation, sabotage), partner attitudes and behaviors, pregnancy (i.e. frequency, intent, miscarriage, abortion), perception of abuse, and knowledge and use of available resources (Miller, Decker, et al., 2010). The purpose of this baseline information, originally, was to determine the prevalence of pregnancy coercion and birth control sabotage among the patient population, examine women's experiences with reproductive coercion, the relationship between reproductive coercion and unintended pregnancy, and whether or not these associations co-occurred among patients seeking reproductive health services at the selected family planning clinics (Miller, Decker, et al., 2010).

The intervention that followed the initial screening was designed to be an enhanced screening of IPV that would serve multiple purposes. First, patients seeking care at the intervention clinics would be educated about reproductive coercion and IPV as well as the associated reproductive health effects. Patients reporting experience with IPV or reproductive coercion would receive consultation on harm reduction strategies (i.e. changing to a hidden form of birth control). And, finally, patients were educated about local IPV and sexual assault resources (Miller et al., 2011).

In the study that is currently being proposed, participants' experiences will be examined singly and collectively for racial/ethnic differences, via a secondary analysis of the baseline survey data (Miller, Decker, et al., 2010). Specifically, the purpose of this quantitative analysis is to compare factors related to unintended pregnancy, reproductive coercion, and IPV across racial/ethnic categories. This study builds on studies that have focused on the associations among

unintended pregnancy, reproductive coercion, and IPV (Miller, Decker, et al., 2010; Miller et al., 2011; Miller, Jordan, et al., 2010; Miller & McCauley, 2013; Miller et al., 2013; Miller & Silverman, 2010). Preliminary findings from Borrero's (Borrero, Farkas, et al., 2013; Borrero, Moore, Qin, et al., 2010; Borrero, Nikolajski, et al., 2009; Borrero, Schwarz, et al., 2009; Borrero, Zhao, et al., 2013) and Miller's (Miller, Decker, et al., 2010; Miller et al., 2011; Miller, Jordan, et al., 2010; Miller & McCauley, 2013; Miller et al., 2013) studies of unintended pregnancy include significantly higher levels of reproductive coercion among Black women. Given the detailed demographic data, including the five common classifications of race/ethnicity and the content included in the survey, this dataset fits the pre-determined aims of this dissertation.

4.1.1.1 Sample

Women, 16 to 29 years of age, who were seeking care from one of five family planning health clinics in Northern California, were recruited for this study (N=1,479). Women who fell within the predetermined age range and did not plan on moving out of the area within three months were eligible. Eighty nine percent of eligible women agreed to participate. Both English-speaking and Spanish-speaking women were included in the sample. However, women were excluded from this analysis if they had never been sexually active or were missing data associated with the key indicators. Thus, the total sample size is 1,234.

4.1.2 Dataset Two: Qualitative Analysis

A comparison of experiences of unintended pregnancy, reproductive coercion, and IPV between different racial/ethnic groups is needed, in addition to knowledge regarding potential mechanisms for these differences in reproductive health and reproductive decision-making. Thus, semi-

structured interviews ([Appendix B](#)), conducted by Miller and her research team, were examined to compare reproductive experiences of low-income Black and White women residing in the greater Pittsburgh, Pennsylvania region. Specifically, topics of pregnancy intention, reproductive coercion, and IPV were explored among women who were abused physically or sexually by a partner during their lifetime.

As it is outlined in the interview script ([Appendix B](#)), study participants were asked to draw a life history timeline, including key life events and relationships. The women were then asked about current and previous experiences of partner abuse. The interview is segmented to include questions about seeking care for IPV, health care utilization, norms about IPV and sexual assault, pregnancy experiences, contraception use, including partner influence, sexuality, including first sexual experiences, and their reaction to an information card about reproductive coercion.

4.1.2.1 Sample

Low-income women, ages 18 to 29, are among a sample of participants recruited by Miller and her research team to take part in a larger randomized controlled trial that is ongoing in family planning clinics in western Pennsylvania. At the conclusion of their participation in a computerized survey, women older than 17 years of age were asked if they were interested in another study and were invited to answer a series of questions on a laptop (using the same audio computer assisted survey instrument as mentioned, previously) about their health, including questions about lifetime exposure to IPV. All women reporting any IPV, ever, on this questionnaire, were automatically invited to participate in an in-depth interview. The women were compensated for their time with a \$50 gift card. For the purpose of this dissertation, Black (n=10) and White (n= 34) women were the focus of the analysis.

4.1.3 Data Storage and Management

This dissertation was submitted to the Institutional Review Board at the University of Pittsburgh and received approval as an “exempt” study. According to the Code of Federal Regulation, Title 45 CFR Part 46.101(b), the study fits within the exempt category as it is an analysis of existing data that does not include information that would allow for direct or indirect identification of study participants (Department of Health and Human Services, 2009).

The qualitative and quantitative data that was received was stored in an electronic format. The data was stored on a password-protected computer and was not shared with anyone.

4.2 APPROACH

In this section, the overall approach to the dissertation will be described for each of the three components: systematic literature review, quantitative analysis, and qualitative analysis.

4.2.1 Systematic Literature Review Component

The systematic literature review was conducted according to standards outlined in the Cochrane Handbook for Systematic Reviews of Interventions (2006), The PRISM Statement (Moher et al., 2009), and text presented by Boland et al. (2014). The systematic review team consisted of three core members: a doctoral student, a doctoral-level researcher, and a health science librarian. Additional review team members include four doctoral-level researchers who contributed to the design and critique of this review.

4.2.2 Data Sources and Searches

The search strategy was developed in consultation with a health science librarian experienced in conducting systematic literature reviews. The following databases were selected to include both medical and social science literature: PubMed and Web of Science. PubMed is classified as a health database and Web of Science is multi-disciplinary (Boland et al., 2014). Moreover, the Guttmacher Institute was explored for gray literature, due to the institute's strong focus on sexual and reproductive health. Google Scholar was also utilized to find gray literature and articles that were not included in the results from the database searches. These four sources of literature were searched for articles that were published in the English-language between January 1994 and March 2014. Given changes in reproductive health policies, such as the availability of over-the-counter emergency contraception, a shift from abstinence education to comprehensive sex education, coverage of women's preventative services (Kulczycki, 2007; Ranji, 2011), and potential change in cultural, social, and gender norms pertaining to reproduction, a twenty year range was deemed most appropriate. Additional exclusion criteria were studies that were not conducted in the U.S., did not make reference to racial/ethnic differences in the abstract, and focused primarily on pregnancy intentions of men. Unintended pregnancy was the primary outcome of interest.

Preliminary searches were used to determine the scope of the project and extract appropriate search terms from article titles and/or abstracts. Additionally, search terms were drawn from the research question that was developed by the investigative team and inserted in the PubMed Medical Subject Headings (MeSH) database to determine how specific keywords are indexed in the PubMed database (Table 5). The systematic searches were tailored to the respective databases; however, similar search terms were used throughout. A sample of the PubMed search is provided in Table 6. As indicated in Table 6, a number of searches were conducted within each

database. A variety of merging and sorting was used to develop the most comprehensive search and to identify overlap and exclusivity of individual searches.

4.2.2.1 Study Selection

A list of articles was compiled for each of the searches that occurred within all four databases. Duplicate articles were removed using electronic and manual sorting. Subsequently, two reviewers screened all titles and abstracts for relevancy, based on the inclusion criteria. Quantitative studies that focused on unintended pregnancy as a primary outcome among different racial/ethnic groups or that provided insight as to why unintended pregnancy may occur differently among racial/ethnic groups were included in the initial screening phase (Table 7). Discrepancies in the inclusion of abstracts were discussed and then categorized, accordingly. Next, the full-text of potentially eligible articles were obtained and reviewed. Many articles that focused on contraceptive behaviors also mentioned the health significance of unintended pregnancy. While contraceptive behaviors (i.e. use, knowledge, access) are certainly associated with unintended pregnancy, articles that did not focus on unintended pregnancy as an outcome were excluded from this review.

Table 5. Systematic Literature Review Search Terms

Concepts:	Unintended Pregnancy	Contraception (Use)	Disparity	Racial/Ethnic
Synonyms/ Related Themes:	<ul style="list-style-type: none"> • Reproductive control • Birth control sabotage • Partner interference • Pregnancy, unwanted • Pregnancy, unplanned • Pregnancy intention 	<ul style="list-style-type: none"> • Reproductive techniques • Reproductive behavior • Contraceptive agents • Contraceptive devices • Contraceptive methods • Family planning services • Birth control • Family planning services 	<ul style="list-style-type: none"> • Healthcare disparities • Health status disparities • Race • Racial disparities • Racial differences 	<ul style="list-style-type: none"> • Ethnic groups • Race • Continental population group
Concepts:	Minority	Reproductive Health	Behavior	
Synonyms/ Related Themes:	<ul style="list-style-type: none"> • Minority health • Minority groups 	<ul style="list-style-type: none"> • Sexual health 	<ul style="list-style-type: none"> • Choice behavior • Acceptance • Processes • Health behavior 	

Table 6. Example Search History for PubMed

#1	("unwanted pregnancy" OR "unintended pregnancy" OR "unplanned pregnancy") AND ("race" OR "ethnicity")
#2	((("Pregnancy, Unplanned"[Mesh] OR "Pregnancy, Unwanted"[Mesh])) AND ((("Continental Population Groups"[Mesh] OR ("Ethnic Groups"[MeSH]))
#3	#1 or #2
#4	("Minority Groups"[Mesh]) AND (((unplanned pregnancy) OR unintended pregnancy) OR unwanted pregnancy)
#5	("pregnancy intention") AND (((("Continental Population Groups"[Mesh] OR ("Ethnic Groups"[MeSH])))

Table 7. A Comprehensive Description of the Systematic Literature Review

Review Question	What individual and structural level factors, specific to race/ethnicity, contribute to unintended pregnancy among women?
Population	Women at risk for an unintended pregnancy.
Comparator	Individual and structural level factors associated with race/ethnicity
Outcomes	Any racial/ethnic attribute or experience that may contribute to an unintended pregnancy.
Setting	All settings in the U.S.
Study Design	Quantitative designs

4.2.3 Quantitative Component

4.2.4 Sample

This study is an analysis of baseline survey data collected by Miller, Decker, et al. (2010) from young women (ages 16-29) seeking family planning services at five clinics in northern California. The surveys, conducted in both English and Spanish, were collected between August 2008 and March 2009.

The research staff pre-screened all women who entered the clinic for age eligibility. Patients who met the age requirement for participation in the study and agreed to participate were escorted to a private area in the clinic to provide verbal consent and to complete the survey. In an effort to mitigate literacy challenges and fears of disclosure, the surveys were collected via the Audio Computer Assisted Survey Instrument (ACASI). Through ACASI, survey questions were read to patients through headphones, and they were able to select the most appropriate response, without face-to-face interaction with the research staff. Parental consent was waived for study participants under the age of 18, given the confidential nature of the services they were receiving.

Overall, the response rate for the collection of the survey was 89%, with 1,319 of 1,479 eligible patients agreeing to participate in the randomized controlled trial. For the purpose of this analysis, participants were deleted from the dataset if key variables were missing. Sixty-five women who reported never having sex were excluded from the analysis. Furthermore, participants who were missing indicators for race (n=3), unintended pregnancy (n=3), reproductive coercion (n=13), and IPV (n=3) were also excluded from the current study, resulting in a sample size of 1,234.

The current study has been reviewed and approved by the Institutional Review Board at the University of Pittsburgh.

4.2.5 Measures

Self-reported race/ethnicity as well as lifetime experiences of unintended pregnancy, reproductive coercion, and IPV are primary interests of this analysis. Key demographic characteristics include age, relationship status, education, and country of origin, which are categorized in Table 8. These variables were included in the analysis as covariates, along with the variable that represents the study site.

4.2.5.1 Primary Predictor Variable

Race/ethnicity is the predictor variable. Individuals were grouped into five categories of race/ethnicity (White, Black, Hispanic/Latina, multiracial, and Asian). This measure of race/ethnicity is considered a proxy for racial/ethnic experiences that may impact the overall outcomes of interest: reproductive health and exposure to IPV among young women and adolescents.

4.2.5.2 Unintended Pregnancy

Unintended pregnancy is the primary outcome of interest. For the purpose of this study, an unintended pregnancy is a pregnancy that is mistimed, unplanned or unwanted, based on a woman's pregnancy intention before conception (Finer & Zolna, 2013). Participants who provided an affirmative response to the following question were characterized as having an unintended pregnancy in their lifetime, "How many times have you been pregnant when you didn't want to be?" (Miller, Decker, et al., 2010).

4.2.5.3 Reproductive Coercion

Reproductive coercion includes sub-measures of pregnancy coercion and birth control sabotage developed by Miller, Decker, et al. (2010). The birth control sabotage measures were established using a previous qualitative study (Miller et al., 2007); the investigative team developed the pregnancy coercion measures. Participants who provided a positive response to at least one of eleven indicators probing for coercive, reproductive behaviors were included in this category. Examples of coercive behaviors enacted by male partners include: threatening physical harm for not becoming pregnant, pressuring the female to not use birth control, poking holes in the condom, or removing the condom during intercourse.

4.2.5.4 Intimate Partner Violence

Physical and sexual violence occurring in the context of “your sexual and dating relationships” (Miller, Decker, et al., 2010) was assessed using modified items from the Conflict Tactics Scale-2 (Straus, Hamby, Boney-McCoy, & Sugarman, 1996) and the Sexual Experiences Survey (Koss & Gidycz, 1985)--both reliable and valid measures. Participants who offered an affirmative response to one of the following questions were characterized as having a history of IPV: “In your lifetime: (1) have you ever been hit, pushed, slapped, choked or otherwise physically hurt by someone you were dating or going out with? (2) Has someone you were dating or going out with insisted (without using force or threats) on having sex (vaginal, oral, or anal sex) with you when you didn’t want to? (3) Has someone you were dating or going out with used threats to make you have sex (vaginal, oral, or anal sex) with them? (4) Has someone you were dating or going out with used force (hitting, holding down, using a weapon) to make you have sex (vaginal, oral, or anal sex) with them?”

4.2.6 Analysis Plan

All analyses were conducted in SAS, version 9.4 (SAS Institute, 2013), and a p-value less than or equal to 0.05 was considered significant. The estimates for key demographic characteristics as well as unintended pregnancy, reproductive coercion, and IPV were calculated across categories of race/ethnicity (White, Black, Hispanic/Latina, multiracial, and Asian/Pacific Islander) to describe the sample (Table 8). Differences in outcomes and independent variables, by race/ethnicity were tested using chi-square analyses.

Lifetime prevalence estimates for unintended pregnancy, reproductive coercion, and IPV were calculated by race/ethnicity as well as by each of the covariates (age, relationship status, grade level, and country of origin) (Table 8). Subsequently, bivariate associations were calculated for unintended pregnancy, reproductive coercion, and IPV by race, age, relationship status, education, and country of origin and were reported as unadjusted odds ratios and 95% confidence intervals (Table 9).

A series of logistic regression models were conducted to predict differences in experiences of unintended pregnancy based on race/ethnicity as well as in experiences of reproductive coercion and IPV (Table 10, Table 11). All logistic regression models were reported as adjusted or unadjusted odds ratios and 95% confidence intervals. Potential differences in study sites were controlled (Table 10). Reproductive coercion and IPV were added to the existing model, stratified by exposure, to assess risk for unintended pregnancy based on experiencing or not experiencing these indicators. Finally, after adjusting for IPV and other potential confounders, the interaction effect of race/ethnicity and reproductive coercion on unintended pregnancy was calculated (Table 10).

To further elucidate any racial/ethnic differences between White and Black women regarding the association of race/ethnicity and reproductive coercion with unintended pregnancy, additional adjusted and unadjusted logistic regression models were conducted. These models for exposure to reproductive coercion and IPV are included in Table 11.

4.2.7 Qualitative Component

Previously conducted semi-structured interviews ([Appendix B](#)) were reviewed to compare reproductive experiences of low-income Black and White women residing in the greater Pittsburgh, Pennsylvania region. Specifically, topics of pregnancy intention, reproductive coercion, and IPV were explored among women who were abused, physically or sexually, or experienced reproductive coercion during their lifetime.

4.2.8 Recruitment

Fifty low-income women, ages 16 to 29, were recruited to participate in an ongoing, randomized controlled trial that is being conducted in family planning clinics in Western Pennsylvania. Following the completion of a computerized survey, participants who were age 18 or older were asked if they were interested in learning about an additional study. Those who declared interest in the study were asked to complete screening questions to assess eligibility. Women who had vaginal sex with a male partner within the past year and who had ever experienced any type of IPV or reproductive coercion were invited to participate in the study.

For the purpose of this analysis, Black (N=10) and White (N= 34) women only were included.

4.2.9 Interview Procedures

The interviews were conducted using the life history narrative approach which has been shown to yield richer data, especially when discussing difficult topics like IPV and reproductive coercion (Hollway & Jefferson, 1997). At the start of the interviews, which lasted an average of 60 minutes, a timeline was drawn. Participants were asked to provide information for their life history timeline, including key life events (i.e. age, education status, family events) and intimate relationships. The women were then asked about current and previous experiences of IPV (Interview Script). The interview was segmented to include questions about seeking care for IPV, health care utilization, norms about IPV and sexual assault, pregnancy experiences, contraceptive use, including partner influence, first sexual experiences, and the women's reaction to an information card about reproductive coercion. Specific themes that will serve as the focus of this analysis include: pregnancy intention, sexual assault, and reproductive coercion; contraceptive use and the influences of male partners; and pregnancy experiences. These topics of interest were derived from a systematic literature that examined racial/ethnic differences associated with unintended pregnancy (Holliday et al., 2014).

All sessions were audio recorded and transcribed verbatim. However, participants' names and any other identifying information were omitted to maintain confidentiality. Each participant received \$50 as compensation for her time. The University of Pittsburgh Institutional Review Board approved this study.

4.2.10 Analysis Plan

Semi-structured interviews were managed in ATLAS.ti 7 and thematic coding (ATLAS.ti Scientific Software Development GmbH, 2013) was used to analyze the qualitative. Based on a preliminary review of several interviews and pre-determined themes based on the literature (Holliday et al., 2014), a codebook was developed reflecting major themes and sub-themes. The codebook was refined throughout the analysis phase to add emergent themes (Code Book).

For the current research question, themes of contraceptive use and birth control sabotage, unintended pregnancy, and pregnancy pressure were analyzed in the context of physical and or sexual partner abuse. All transcripts were coded by two independent investigators and compared to assess inter-rater reliability. Discrepancies in coding were discussed, resolved, and re-coded accordingly. Finally, codes were categorized into major themes, and patterns and differences were assessed by race/ethnicity. For each emergent theme, we selected illustrative codes that were most representative of the narratives.

**5.0 RACIAL/ETHNIC DISPARITIES ASSOCIATED WITH UNINTENDED
PREGNANCY, REPRODUCTIVE COERCION, AND INTIMATE PARTNER
VIOLENCE**

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5.1 ABSTRACT

Background: Unintended pregnancy is associated with reproductive coercion and intimate partner violence (IPV). Race/ethnic-related exposures, particularly those experienced by young, minority women, may increase one's odds for experiencing an unintended pregnancy, reproductive coercion, and/or IPV.

Study Design: A secondary data analysis was conducted to examine the association of race/ethnicity with experiences of unintended pregnancy, reproductive coercion, and IPV among female patients, ages 16-29, from family planning clinics in northern California (n=1,234). The cross-sectional survey data used for this study constitute the baseline time point of a randomized controlled trial.

Results: Significant differences in experiences of unintended pregnancy ($p=0.002$), IPV ($p=0.046$), and reproductive coercion ($p<0.001$) were reported among the racially/ethnically diverse sample. Unintended pregnancy prevalence was highest among Non-Hispanic Black (Black) (50.29%) and multiracial (47.19%) women. Furthermore, when compared to Non-Hispanic White (White) women in a logistic regression model adjusted for age, educational attainment, relationship status, and country of origin, a significant and independent association existed between Black (AOR 1.76, 95% CI 1.09-2.83) and Asian/Pacific Islander (AOR 1.56, 95% CI 1.25-1.94) and unintended pregnancy. Reproductive coercion was also highest among Black (OR 2.69, 95% CI 1.90-3.80) and multiracial (OR 1.88, 95% CI 1.46-2.41) women. In an adjusted model stratified by White and Black women, reproductive coercion was significantly associated with unintended pregnancy in both groups (AOR 2.23, 95% CI 1.51-3.31; AOR 1.89, 95% CI 1.24-2.87), respectively.

Conclusion: The current study illustrates racial/ethnic differences and associations between unintended pregnancy, IPV, and reproductive coercion. However, the mechanisms that contribute to these outcomes are not clear. Future research should explore how exposures of racial/ethnic minorities may increase their odds for experiencing unintended pregnancy, reproductive coercion, and IPV.

Keywords: unintended pregnancy, reproductive coercion, intimate partner violence, race, ethnicity, pregnancy

5.2 INTRODUCTION

Unintended pregnancies, often characterized as mistimed or unwanted, account for more than half of all pregnancies in the U.S. and is indicative of the reproductive health of minority sub-populations (Finer & Zolna, 2013; U.S. Department of Health and Human Services, 2013a). In 2008, approximately 6.6 million unintended pregnancies were reported (Finer & Zolna, 2013). Though all racial/ethnic populations experience unintended pregnancy, the prevalence is highest among Black and Hispanic/Latina women (Finer & Zolna, 2011; Hamilton et al., 2013; Ventura et al., 2013).

In general, an unintended pregnancy can be debilitating to health, with consequences such as low birth weight, lack of prenatal care, and low educational attainment for the mother and child (Gipson, Koenig, & Hindin, 2008). These effects are amplified among adolescent mothers (Dehlendorf et al., 2010). Studies have documented the short and long-term consequences of unintended pregnancy, yet little information is known regarding how underlying racial/ethnic factors contribute to women's risk for unintended pregnancy (Dehlendorf et al., 2010).

Unintended pregnancy should be approached from an ecological perspective, as differences in the incidence of unintended pregnancy are noticeable across race/ethnicity, age, and socioeconomic status (SES) (Dehlendorf et al., 2010; Finer & Henshaw, 2006; Ventura et al., 2013). At the individual level, contraception use/adherence, age, and past sexual experiences increase the odds for unintended pregnancy (Borrero, Zhao, et al., 2013; Finer & Zolna, 2013). In a national study, Black and Hispanic/Latina women were more likely to report early onset of sexual intercourse (before the age of 13), having more than four sexual partners in their lifetime, and to not have used any form of pregnancy prevention during their last sexual encounter (Center for Disease Control and Prevention, 2012). Research supports that racial/ethnic disparities also exist

regarding family planning practices, interpersonal relationships, and community status (Bryant et al., 2010; Shih et al., 2013). Additional predictors of unintended pregnancy include: paternal age, nativity, religion, previous live births, access to care, educational attainment, and social standing (Bryant et al., 2010).

Recently, the association between unintended pregnancy, reproductive coercion (pregnancy coercion or birth control sabotage), and IPV was introduced (Miller, Decker, et al., 2010). However, a gap in the literature exists regarding the relationship between reproductive coercion, unintended pregnancy, and IPV in regard to racial/ethnic disparity. The combined effect of reproductive coercion and IPV heightens a woman's risk for poor family planning. Specifically, women who reported experiencing reproductive coercion and IPV within a one-year time frame were twice as likely to experience an unintended pregnancy (Miller et al., 2013).

The purpose of this study is to better understand the complexities and relationships that result in racial/ethnic health disparities. We will examine the association of race/ethnicity with unintended pregnancy, reproductive coercion, and lifetime exposure to IPV among women, ages 16-29, seeking family planning care. To our knowledge, this paper will present the first quantitative exploration of differences in unintended pregnancy, IPV and reproductive coercion by race/ethnicity.

We hypothesize that Black, Hispanic/Latino, multiracial, and Asian/other women will have a higher prevalence of unintended pregnancy, reproductive coercion, and IPV than White women. Odds of experiencing unintended pregnancy will be higher among Non-White women, even after accounting for exposure to IPV and reproductive coercion. When comparing Black and White women, reproductive coercion will be associated with greater risk for unintended pregnancy among Black women.

5.3 METHODS

5.3.1 Sample

This study is an analysis of baseline survey data collected by Miller, Decker, et al. (2010) from young women (ages 16-29) seeking family planning services at five clinics in northern California. The surveys, conducted in both English and Spanish, were collected between August 2008 and March 2009.

The research staff pre-screened all women who entered the clinic for age eligibility. Patients who met the age requirement for participation in the study and agreed to participate were escorted to a private area in the clinic to provide verbal consent and to complete the survey. In an effort to mitigate literacy challenges and fears of disclosure, the surveys were collected via the Audio Computer Assisted Survey Instrument (ACASI). Through ACASI, survey questions were read to patients through headphones, and they were able to select the most appropriate response, without face-to-face interaction with the research staff. Parental consent was waived for study participants under the age of 18, given the confidential nature of the services they were receiving.

Overall, the response rate for the collection of the survey was 89%, with 1,319 of 1,479 eligible patients agreeing to participate in the randomized controlled trial. For the purpose of this analysis, participants were deleted from the dataset if key variables were missing. Sixty-five women who reported never having sex were excluded from the analysis. Furthermore, participants who were missing indicators for race (n=3), unintended pregnancy (n=3), reproductive coercion (n=13), and IPV (n=3) were also excluded from the current study, resulting in a sample size of 1,234.

The current study has been reviewed and approved by the Institutional Review Board at the University of Pittsburgh.

5.3.2 Measures

Self-reported race/ethnicity as well as lifetime experiences of unintended pregnancy, reproductive coercion, and IPV are primary interests of this analysis. Key demographic characteristics include age, relationship status, education, and country of origin, which are categorized in Table 8. These variables were included in the analysis as covariates, along with the variable that represents the study site.

5.3.2.1 Primary Predictor Variable

Race/ethnicity is the predictor variable. Individuals were grouped into five categories of race/ethnicity (White, Black, Hispanic/Latina, multiracial, and Asian). This measure of race/ethnicity is considered a proxy for racial/ethnic experiences that may impact the overall outcomes of interest: reproductive health and exposure to IPV among young women and adolescents.

5.3.2.2 Unintended Pregnancy

Unintended pregnancy is the primary outcome of interest. For the purpose of this study, an unintended pregnancy is a pregnancy that is mistimed, unplanned or unwanted, based on a woman's pregnancy intention before conception (Finer & Zolna, 2013). Participants who provided an affirmative response to the following question were characterized as having an unintended

pregnancy in their lifetime, “How many times have you been pregnant when you didn’t want to be?” (Miller, Decker, et al., 2010).

5.3.2.3 Reproductive Coercion

Reproductive coercion includes sub-measures of pregnancy coercion and birth control sabotage developed by Miller, Decker, et al. (2010). The birth control sabotage measures were established using a previous qualitative study (Miller et al., 2007); the investigative team developed the pregnancy coercion measures. Participants who provided a positive response to at least one of eleven indicators probing for coercive, reproductive behaviors were included in this category. Examples of coercive behaviors enacted by male partners include: threatening physical harm for not becoming pregnant, pressuring the female to not use birth control, poking holes in the condom, or removing the condom during intercourse.

5.3.2.4 Intimate Partner Violence

Physical and sexual violence occurring in the context of “your sexual and dating relationships” (Miller, Decker, et al., 2010) was assessed using modified items from the Conflict Tactics Scale-2 (Straus et al., 1996) and the Sexual Experiences Survey (Koss & Gidycz, 1985)--both reliable and valid measures. Participants who offered an affirmative response to one of the following questions were characterized as having a history of IPV: “In your lifetime: (1) have you ever been hit, pushed, slapped, choked or otherwise physically hurt by someone you were dating or going out with? (2) Has someone you were dating or going out with insisted (without using force or threats) on having sex (vaginal, oral, or anal sex) with you when you didn’t want to? (3) Has someone you were dating or going out with used threats to make you have sex (vaginal, oral, or

anal sex) with them? (4) Has someone you were dating or going out with used force (hitting, holding down, using a weapon) to make you have sex (vaginal, oral, or anal sex) with them?”

5.3.3 Analysis Plan

All analyses were conducted in SAS, version 9.4 (SAS Institute, 2013), and a p-value less than or equal to 0.05 was considered significant. The estimates for key demographic characteristics as well as unintended pregnancy, reproductive coercion, and IPV were calculated across categories of race/ethnicity (White, Black, Hispanic/Latina, multiracial, and Asian/Pacific Islander) to describe the sample (Table 8). Differences in outcomes and independent variables, by race/ethnicity were tested using chi-square analyses.

Lifetime prevalence estimates for unintended pregnancy, reproductive coercion, and IPV were calculated by race/ethnicity as well as by each of the covariates (age, relationship status, grade level, and country of origin) (Table 8). Subsequently, bivariate associations were calculated for unintended pregnancy, reproductive coercion, and IPV by race, age, relationship status, education, and country of origin and were reported as unadjusted odds ratios and 95% confidence intervals (Table 9).

A series of logistic regression models were conducted to predict differences in experiences of unintended pregnancy based on race/ethnicity as well as in experiences of reproductive coercion and IPV (Table 10, Table 11). All logistic regression models were reported as adjusted or unadjusted odds ratios and 95% confidence intervals. Potential differences in study sites were controlled (Table 10). Reproductive coercion and IPV were added to the existing model, stratified by exposure, to assess risk for unintended pregnancy based on experiencing or not experiencing these indicators. Finally, after adjusting for IPV and other potential confounders, the interaction

effect of race/ethnicity and reproductive coercion on unintended pregnancy was calculated (Table 10).

To further elucidate any racial/ethnic differences between White and Black women regarding the association of race/ethnicity and reproductive coercion with unintended pregnancy, additional adjusted and unadjusted logistic regression models were conducted. These models for exposure to reproductive coercion and IPV are included in Table 11.

5.4 RESULTS

5.4.1 Sample Characteristics

A diverse sample (n=1,234) comprised of White (22.9%), Black (27.7%), Hispanic/Latina (29.3%), and Asian/Pacific Islander women (10.1%), and women who self-reported being of multiple races (7.2%) was used for this analysis (Table 8). The large proportion of participants who did not identify as White (74%) as well as the percentage of participants born outside of the U.S. (15.5%) was expected, given the community that the family planning clinics serve. For all racial/ethnic groups, a large proportion of women fell within the range of 16-20 years (43%). However, the age of multiracial women was equally distributed between the 16-20 and 21-24 age ranges. Overall, three quarters of the women in the sample were under 25 years of age.

When looking at the distribution of educational attainment within the racial/ethnic groups, multiracial, Asian/Pacific Islander, and White women were more likely than Black and Hispanic/Latina women to have at least some level of college education (>50% vs. <40%, respectively). The greatest difference in terms of educational attainment was seen among

Asian/Pacific Islander women. Specifically, a greater percentage of Asian/Pacific Islander women received some college credit or graduated from college.

Though the majority of the study population was born in the U.S., more Hispanic/Latina (36.8%) and Asian/Pacific Islander (32.8%) women were born outside of the U.S. than any other group. Given reports in the literature about the potential impact of acculturation on risk for adverse reproductive health behaviors (Brindis, Wolfe, McCarter, Ball, & Starbuck-Morales, 1995; Newcomb et al., 1998; Unger & Molina, 2000), additional analyses were conducted. Specifically, Hispanic/Latina women born in the U.S. were significantly more likely to experience an unwanted pregnancy ($p=0.030$) compared to those born outside of the U.S. Also, among Asian/Pacific Islander women, those born within the U.S. were significantly more likely to experience forms of reproductive coercion ($p=0.001$) as well as IPV ($p=0.020$) than Asian/Pacific Islander women born outside of the U.S.

Among all racial/ethnic groups, the majority of the women reported being single/dating or in a serious relationship (78.2%). However, significant differences in relationship status existed between the racial/ethnic groups ($p<0.001$). Half of the White and multiracial women in the study reported being in serious relationships, while the same proportion of Black women reported being single or dating. A greater percentage of Asian/Pacific Islander women reported being in a serious relationship or either married or cohabitating with an intimate partner (76.8%). Nearly three quarters of Hispanic/Latina women reported being in a serious relationship or either married or living with an intimate partner. Compared to other racial/ethnic distributions, Hispanic/Latina women were more likely than any other group to be married or co-habiting with an intimate partner.

When considering all racial/ethnic categories, the prevalence of reproductive coercion, relationship status, education, and country of origin differed significantly, with p-values less than 0.001. Unintended pregnancy ($p=0.002$) and IPV ($p=0.046$) were also significantly different in regard to race/ethnicity (Table 8).

5.4.2 Intimate Partner Violence

IPV was the most prevalent experience among the entire sample of women. Except among women who identified as Asian/Pacific Islander, more than 50% of women from all other racial/ethnic groups experienced IPV in their lifetime. IPV exposure was highest in the multiracial group (64.0%).

Results from the chi-square analysis conducted by race/ethnicity and IPV indicated no crude associations (Table 9). However, IPV did differ significantly by age, relationship status, and country of origin. Younger women, ages 16-20 (OR 0.62, 95% CI 0.50-0.76) and 21-24 (OR 0.63, 96% CI 0.46-0.84) were significantly less likely to experience IPV than women 25-29 years of age. A similar result was noted regarding relationship status. Women who were single or dating (OR 0.55, 95% CI 0.43-0.71), in a serious relationship (OR 0.49, 95% CI 0.37-0.66), or who were married or co-habiting with an intimate partner (OR 0.45, 95% CI 0.37-0.54) were less likely to experience IPV when compared to women who were widowed or divorced. Finally, women born outside of the U.S. had decreased odds for reporting IPV compared to native-born Americans (OR 0.59, 95% CI 0.43-0.81) (Table 9).

5.4.3 Reproductive Coercion

One in every four participants experienced reproductive coercion. The most common forms of reproductive coercion experienced among all women were removal of condoms during sex (12.2%) and being told not to use birth control (13.1%). Overall, in terms of reproductive coercion, pregnancy coercion was more prevalent than birth control sabotage (19.4% versus 14.5%, respectively). Experiences of reproductive coercion were particularly high among Black women (37.1%) and multiracial women (29.2%)--a similar result was noted regarding unintended pregnancy between these two groups. One in two Black women reported at least one unintended pregnancy, closely followed by 47.19% of multiracial women (Table 8).

Both Black and multiracial women had significantly greater odds for experiencing reproductive coercion (OR 2.69, 95% CI 1.90-3.80 and OR 1.88, 95% CI 1.46-2.41, respectively), when compared to White women. Asian/Pacific Islander women, however, were less likely than their White counterparts to report reproductive coercion (OR 0.77, 95% CI 0.52-1.14) (Table 9).

5.4.4 Unintended Pregnancy

Overall, significant differences in unintended pregnancy reports existed across the racial/ethnic groups. In unadjusted models, Black women were significantly more likely to experience unintended pregnancy (OR 1.72, 95% CI 1.20-2.45) (Table 9). Furthermore, when compared to college graduates, women with some college were significantly more likely to experience unintended pregnancy (OR 1.27, 95% CI 1.07-1.50). In a model adjusted for age, education, relationship status, and country of origin (Table 10, Model 1), Black (AOR 1.76, 95% CI 1.09-

2.83) and Asian/Pacific Islander (AOR 1.56, 95% CI 1.25-1.94) women were significantly more likely than White women to report an unintended pregnancy.

5.4.5 Unintended Pregnancy, Reproductive Coercion, and Intimate Partner Violence

When including reproductive coercion and IPV as dichotomous variables (Table 10, Model 2), the data showed that experiencing reproductive coercion was significantly associated with increased risk for an unintended pregnancy (AOR 1.48, 95% CI 1.06-2.07). After adding reproductive coercion and IPV to the model, however, the association between Black race/ethnicity and unintended pregnancy diminished. In the final model (Table 10, Model 3), the independent effects of reproductive coercion and IPV were not associated with unintended pregnancy. However, being of Asian/Pacific Islander racial/ethnic background significantly increased odds for unintended pregnancy (AOR 1.65, 95% CI 1.20-2.27). Though all three main effects were not significant, interactions between race and reproductive coercion were explored as potential predictors for unintended pregnancy, given the uncertainties of racial/ethnic disparity surrounding reproductive coercion and unintended pregnancy (Table 10, Model 3).

The effect of reproductive coercion on the probability for experiencing an unintended pregnancy was significantly greater among Black women when compared to women of other races/ethnicities (AOR 1.47, 95% CI 1.05-2.07) (Table 10, Model 3). In exploring the association between reproductive coercion and race/ethnicity, significant differences in experiences of reproductive coercion were noted between Asian/Pacific Islander and multiracial women when compared to White women. So, Asian/Pacific Islander and multiracial women were subsequently excluded from the interaction analysis; odds for unintended pregnancy among Black women, based on the effect of reproductive coercion, were still significantly greater when compared to White and

Hispanic/Latina women (AOR 1.48, 95% CI 1.02-2.15). Nonetheless, odds for unintended pregnancy based on the interaction effect of reproductive coercion and race/ethnicity was not significant when comparing Black and White women (AOR 0.80, 95% CI 0.48-1.31) (Table 10, Model 3).

Given the disproportionate reports of reproductive coercion and IPV between the racial/ethnic groups, independent effects of reproductive coercion and IPV, stratified by White and Black race/ethnicity, were assessed via additional logistic regression models (Table 11). For White women, after adjusting for IPV exposure, the odds for an unintended pregnancy were 2.19 times greater (OR 2.19, 95% CI 1.61-2.96) among women who experienced reproductive coercion—these odds increased after adjusting for covariates (AOR 2.23, 95% CI 1.51-3.31). Reports of reproductive coercion were also significantly associated with unintended pregnancy among Black women in both unadjusted (OR 1.77, 95% CI 1.30-2.41) and adjusted models (AOR 1.89, 95% CI 1.24-2.87), after controlling for IPV. However, IPV exposure, after controlling for reproductive coercion, was not a significant predictor for unintended pregnancy in unadjusted (OR 1.44, 95% CI 0.44-4.70) or adjusted models (AOR 1.40, 95% CI 0.41-4.77) among White women. Conversely, when controlling for reproductive coercion only and not the other covariates, IPV was significantly associated with unintended pregnancy among Black women (OR 1.20, 95% CI 1.05-1.36); this relationship did not hold after adjusting for covariates (AOR 1.11, 95% CI 0.95-1.29) (Table 11).

5.5 DISCUSSION

Unintended pregnancy is a significant indicator for reproductive health in the U.S. (Finer & Zolna, 2011; U.S. Department of Health and Human Services, 2013a). The current study documents racial/ethnic differences in reports of reproductive coercion, IPV, and unintended pregnancy, with particular emphasis on unintended pregnancy. Unintended pregnancy disparities attributed to SES, age, and race/ethnicity have been reported in the literature; however, to our knowledge, a study has not yet documented how racial/ethnic disparities manifest in the context of IPV and reproductive coercion, specifically.

Some of the findings from the current study are consistent with our hypotheses. Overall, significant differences existed between the racial/ethnic groups regarding unintended pregnancy, reproductive coercion, and IPV. Our first hypothesis was partially true. With the exception of Hispanic/Latina women, the prevalence of unintended pregnancy was greater among minority groups when compared to White women. Similarly, with the exception of Asian/PI women, women from racial/ethnic minorities were more likely to experience reproductive coercion relative to White women. Yet, the prevalence of IPV among White women was only second to multiracial women. Regarding the second hypothesis, only Asian/Pacific Islander women, when compared to White women, had significantly greater odds for experiencing an unintended pregnancy after considering reproductive coercion and IPV exposure. Finally, we did not reject the final hypothesis. Though experiencing reproductive coercion (versus not experiencing reproductive coercion) was a significant predictor for unintended pregnancy for both Black and White women, the likelihood of experiencing reproductive coercion was significantly greater among Blacks when compared to Whites.

Additional factors were examined as potential predictors for unintended pregnancy. Age is one predictor for unintended pregnancy. A previous study has reported that unintended pregnancy is most prevalent among women under the age of 19 (Finer & Zolna, 2011). However, in the current study, older age (25-29) was associated with a significant risk for at least one unintended pregnancy. It is important to note that lifetime prevalence of IPV, reproductive coercion, and unintended pregnancy were used in this analysis. Therefore, the potential decrease in incidences of unintended pregnancies with increasing age was not explored in this cross-sectional design.

The data showed that, when compared to college graduates, women with some college education were significantly more likely to experience an unintended pregnancy. Unintended pregnancy was not significantly associated with lower levels of education in an unadjusted model. Possibly due to career aspirations, women who are pursuing a college degree are more likely to report a pregnancy as mistimed or unwanted than women who are not enrolled in college. Another explanation is that women who are college graduates are older in age and, thus, less likely to report an unintended pregnancy.

Reports of IPV were significantly different between the different racial/ethnic groups. Lifetime prevalence of IPV was significantly higher among multiracial women. This finding is consistent with results from multi-state (Breiding, Black, & Ryan, 2007) and national analyses (Moracco, Runyan, Bowling, & Earp, 2007). In a study conducted among adolescents, it was suggested that multiracial children grapple with social isolation, negative self-image, and race-based discrimination (Choi, Harachi, Gillmore, & Catalano, 2006). Perhaps, such experiences impact adulthood, resulting in low self-esteem and a woman's inability to negotiate with an intimate partner. An additional explanation is the existence of cultural differences between

multiracial women and their intimate partners, which may lead to an increase in conflict (Martin, Cui, Ueno, & Fincham, 2013).

However, IPV was not a significant predictor for unintended pregnancy when considering the effect of reproductive coercion among all racial/ethnic groups or between Black and White women. Possibly, the relatively young population can explain these findings. Older women (ages 25-29), who comprised nearly 24% of the sample, were significantly more likely to experience IPV when compared to women ages 16-24. It is conceivable that age is a moderating factor; perhaps with age, women are exposed to more intimate partners, thus, increasing their risk for experiencing IPV. IPV prevalence was significantly higher among women who were divorced/widowed and may help to explain the existence of divorce among a relatively young sample.

Health disparities are often linked to racial/ethnic experiences, particularly discrimination and segregation, which impact social factors, limit resources, and cause chronic stress. The current study builds on theories of race and social ecology that support the influence of race-related experiences in the expression of health disparities like unintended pregnancy, reproductive coercion, and IPV. Based on initial crude analyses, risk for reproductive coercion was significantly greater among Black and multiracial women. However, in a stratified logistic regression model conducted to explore the main effects of race and reproductive coercion more deeply, the data showed that reproductive coercion was a significant predictor for unintended pregnancy among White women, even after adjusting for IPV and other covariates. This same relationship was documented among Black women. When exploring the interaction between reproductive coercion and race, dichotomized by Black women and White women, the interaction effect was not significant; this means that reproductive coercion is associated with unintended pregnancy

regardless of race/ethnicity. Nonetheless, the prevalence of reproductive coercion was significantly higher among Black women when compared to Whites.

Also, when considering the insignificant interaction between reproductive coercion and race (Black vs. White women) as a predictor for unintended pregnancy and the odds of reproductive coercion compared between the two groups, it is probable that Black women have additional experiences that may contribute to increased likelihood of an unintended pregnancy. Given the knowledge that racial/ethnic disparities persist despite similar exposures (like reproductive coercion), the data suggests that there is something unmeasured contributing to such stark differences among Black women. One explanation for this is a difference in race-related experiences or exposures, such as racism, which may be internalized and expressed as adverse biological and/or physiological traits (Braveman et al., 2011; Krieger, 2003; Nuru-Jeter et al., 2009).

The association between race/ethnicity and health is often entangled in socioeconomic factors (Williams & Sternthal, 2010), which is not surprising given the racialization of social class (Krieger, 2003). The social epidemiological term “embodiment” illustrates the influence of one’s collective experiences and exposures on physical and mental well-being throughout the life-course (Krieger & Davey Smith, 2004). Social epidemiologists argue that key factors such as race are embedded or embodied in biological beings (Krieger & Davey Smith, 2004). Correspondingly, previous research has shown that SES is not necessarily a primary predictor of reproductive health outcomes. In study by Finer and Henshaw (2006), race/ethnicity was found to be a predictor of unintended pregnancy despite income level--a proxy for overall SES. When exploring social standing among Black women, an increase in social standing was not directly related with

decreased unintended pregnancy risk, in spite of decreases in risk for unintended pregnancy among White women as their social standing increased (Bryant et al., 2010; Finer & Zolna, 2013).

Additional qualitative and quantitative studies should be conducted to explore specific factors related to race/ethnicity that may result in reproductive health disparities. This information should also be used to better inform public health interventions as well as clinical practice.

5.5.1 Limitations

This study is not without limitations. The cross-sectional, quantitative study design does not allow for temporal assessment of unintended pregnancy, reproductive coercion, or IPV. A longitudinal study would provide greater understanding of the associations between the variables of interest and the mechanisms in which these relationships take place. Also, the sample used is restricted to family planning clients in northern California; thus, results may not be generalizable to other geographic and clinical settings or to the population. Selection bias may also exist, because the sample was solely clinical and was drawn for a randomized controlled trial. This analysis seeks to identify racial/ethnic differences between populations with regard to unintended pregnancy, reproductive coercion, and IPV; yet, a number of indicators about racial/ethnic experiences that may lend to the ultimate outcome of racial/ethnic disparity are not included in this analysis. Finally, socially stigmatized events that may be perceived as shameful are often under-reported. When comparing missing values for race/ethnicity to variables associated with pregnancy coercion and birth control sabotage, the data showed that the latter two variables had 10 times more missing variables. It is possible that participants skipped questions due to irrelevancy or because the women were unwilling to disclose such personal information.

Table 8. Characteristics of the Study Population by Race/Ethnicity

	Total Sample		White		Black		Hispanic/Latino		Multiracial		Asian/PI		p-value
	n	%	n	%	n	%	n	%	n	%	n	%	
Total	1,234	100.0	283	22.9	342	27.7	361	29.3	89	7.2	125	10.1	--
Age													
16-20 years	531	43.0	113	39.9	138	40.4	179	49.5	33	37.1	57	45.6	0.204
21-24 years	412	33.4	99	35.0	117	34.2	103	28.5	33	37.1	44	35.2	
25-29 years	291	23.6	71	25.1	87	25.4	80	22.1	23	25.8	24	19.2	
Relationship Status													
Single/Dating	395	32.0	81	28.6	169	49.4	85	23.6	25	28.1	26	20.8	
Serious Relationship	570	46.2	141	49.8	136	39.8	154	42.7	44	49.4	78	62.4	<0.001
Married/Cohabiting	235	19.1	48	17.0	32	9.4	113	31.3	18	20.2	18	14.4	
Divorced/Widowed	33	2.7	13	4.6	5	1.5	9	2.5	2	2.3	3	2.4	
Education													
Less Than or Some High School	267	21.7	61	21.6	63	18.5	114	31.5	13	14.8	9	7.2	<0.001
High School Graduate	419	34.1	76	26.9	146	42.9	117	32.3	25	28.4	46	36.8	
Some College	409	33.3	109	38.5	93	27.4	105	29.0	41	46.6	49	39.2	
College Graduate	135	11.0	37	13.1	38	11.2	26	7.2	9	10.2	21	16.8	
Country of Origin													
Born Outside US	191	15.5	6	2.1	4	1.2	133	36.8	3	3.4	41	32.8	<0.001
US Born	1,040	84.5	277	97.9	338	98.8	228	63.2	85	96.6	84	67.2	
Unintended Pregnancy													
Yes	509	41.3	105	37.1	172	50.3	126	34.8	42	47.2	51	40.8	0.002
No	725	58.8	178	62.9	170	49.7	236	65.2	47	52.8	74	59.2	
Reproductive Coercion													
Yes	320	25.9	51	18.0	127	37.1	87	24.0	26	29.2	18	14.4	<0.001
No	914	74.1	232	82.0	215	62.9	275	76.0	63	70.8	107	85.6	
Intimate Partner Violence													
Yes	666	54.0	161	56.9	187	54.7	183	50.6	57	64.0	56	44.8	0.046
No	568	46.0	122	43.1	155	45.3	179	49.5	32	36.0	69	55.2	

*Column percentages

Table 9. Crude Associations of Unintended Pregnancy, Reproductive Coercion, and Intimate Partner Violence across Race/Ethnicity and Other Socio-Demographic Variables, N=1,234

Variable	Unintended Pregnancy*				Reproductive Coercion*				Intimate Partner Violence*			
	n	%	OR	95% C.I.	n	%	OR	95% C.I.	n	%	OR	95% C.I.
Race/Ethnicity												
White	105	20.63	reference	--	51	15.94	reference	--	161	24.17	reference	--
Black	172	33.79	1.72	1.20-2.45	127	39.69	2.69	1.90-3.80	187	28.08	0.91	0.52-1.61
Hispanic/Latino	126	24.75	0.91	0.56-1.47	87	27.20	1.44	0.92-2.26	183	27.48	0.78	0.60-1.01
Multiracial	42	8.25	1.52	0.84-2.73	26	8.13	1.88	1.46-2.41	57	8.56	1.35	0.77-2.37
Asian/Pacific Islander	51	10.02	1.17	0.94-1.45	18	5.63	0.77	0.52-1.14	56	8.41	0.62	0.35-1.07
Age												
25-29 years	167	32.81	reference	--	86	26.88	reference	--	183	27.48	reference	--
21-24 years	199	39.10	0.69	0.45-1.06	112	35.00	0.89	0.61-1.29	212	31.83	0.63	0.46-0.84
16-20 years	143	28.09	0.27	0.15-0.49	122	38.13	0.71	0.49-1.03	271	40.69	0.62	0.50-0.76
Relationship Status												
Divorced/Widowed	16	3.14	reference	--	10	3.13	reference	--	23	3.45	reference	--
Married/Cohabiting	107	21.02	0.89	0.41-1.94	52	16.25	0.66	0.24-1.75	119	17.87	0.45	0.37-0.54
Serious Relationship	212	41.65	0.63	0.24-1.67	133	41.56	0.70	0.29-1.71	303	45.50	0.49	0.37-0.66
Single/Dating	174	34.18	0.84	0.31-2.27	125	39.06	1.05	0.41-2.74	221	33.18	0.55	0.43-0.71
Education												
College Graduate	52	10.28	reference	--	36	11.32	reference	--	78	11.75	reference	--
Some College	181	35.77	1.27	1.07-1.50	104	32.70	0.94	0.60-1.46	228	34.34	0.92	0.56-1.51
High School graduate	174	34.39	1.13	0.68-1.90	108	33.96	0.96	0.68-1.34	213	32.08	0.76	0.50-1.15
Less Than or Some High School	99	19.57	0.94	0.75-1.20	70	22.01	0.98	0.64-1.50	145	21.84	0.87	0.51-1.49
Country of Origin												
US Born	440	86.79	reference	--	279	87.19	reference	--	584	87.69	reference	--
Born Outside US	67	13.21	0.74	0.46-1.17	41	12.81	0.75	0.41-1.36	82	12.31	0.59	0.43-0.81

* Column Percentage

Table 10. Logistic Regression Models Assessing Associations of Race, Reproductive Coercion, and Intimate Partner Violence with Unintended Pregnancy

Variable	Model 1 AOR (95% CI)	Model 2 AOR (95% CI)	Model 3 AOR (95% CI)
Race/Ethnicity			
White (n=283)	Reference	Reference	Reference
Black (n=342)	1.76 (1.09-2.83)	1.66 (0.99-2.79)	1.71 (0.95-3.08)
Hispanic/Latino (n=361)	1.13 (0.68-1.87)	1.10 (0.66-1.83)	1.11 (0.63-1.95)
Multiracial (n=89)	1.44 (0.85-2.46)	1.35 (0.78-2.34)	1.32 (0.83-2.12)
Asian/Pacific Islander (n=125)	1.56 (1.25-1.94)	1.62 (1.22-2.15)	1.65 (1.20-2.27)
Reproductive Coercion			
No (n=914)	---	Reference	Reference
Yes (n=320)	---	1.48 (1.06-2.07)	1.33 (0.66-2.69)
Intimate Partner Violence			
No (n=568)	---	Reference	Reference
Yes (n=666)	---	1.40 (0.77-2.52)	1.39 (0.77-2.52)
Reproductive Coercion * Race			
1	---	---	1.04 (0.83-1.29)
2	---	---	1.47 (1.05-2.07)
3	---	---	1.48 (1.02-2.15)
4	---	---	0.80 (0.48-1.31)

Model 1 = Adjusted for age, education, relationship status, and country of origin

Model 2 = Model 1 + reproductive coercion, intimate partner violence

Model 3 = Model 2 + race*reproductive coercion interaction

Where race=

- 1) Race (entire sample, n=1,234)
- 2) Black (n=342) versus all other races/ethnicities (n=892)
- 3) Black (n=342) versus White and Hispanic/Latina (n=645)
- 4) Black (n=342) versus White (n=283)

Table 11. Logistic Regression Models Assessing Associations of Race/Ethnicity (White and Black) and Reproductive Coercion with Unintended Pregnancy

Variable	Odds of Unintended Pregnancy			
	White (n=283)		Black (n=342)	
	Unadjusted (OR, 95% CI)	Adjusted (AOR, 95% CI)	Unadjusted (OR, 95% CI)	Adjusted (AOR, 95% CI)
IPV	1.44 (0.44-4.70)	1.40 (0.41-4.77)	1.20 (1.05-1.36)	1.11 (0.95-1.29)
Reproductive Coercion	2.19 (1.61-2.96)	2.23 (1.51-3.31)	1.77 (1.30-2.41)	1.89 (1.24-2.87)

Model 1 = Unadjusted

Model 2 = Adjusted for age, education, relationship status, and country of origin

**6.0 RACIAL/ETHNIC DIFFERENCES IN PREGNANCY INTENTION,
REPRODUCTIVE COERCION, AND PARTNER VIOLENCE AMONG FAMILY
PLANNING CLIENTS: A QUALITATIVE EXPLORATION**

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6.1 ABSTRACT

Background: Unintended pregnancy is of public health concern in the U.S. and is disproportionately distributed among racial/ethnic minorities and women of low socioeconomic status. Unintended pregnancy often coexists among experiences of reproductive coercion and intimate partner violence. The purpose of the study is to compare predictors for unintended pregnancy risk between Non-Hispanic Black (Black) and Non-Hispanic White (White) women utilizing family planning clinics.

Study Design: We reviewed semi-structured interviews from low-income Black and White women, ages 18-29, recruited from family planning clinics in Pittsburgh, PA.

Results: Interviews from 10 Black women and 34 from White women were included in the analysis. Themes supported by the literature emerged from the interviews: pregnancy intention, pregnancy ambivalence, love seeking, reproductive coercion, and unwanted sexual encounters. The greatest difference between the groups was in regard to unwanted sex; White women were more likely to report sexual abuse as a child. Black women were more likely to mention hiding their birth control as a response to reproductive coercion and that their partners preferred not to use condoms because of alleged male sterility. Childhood experiences of neglect impacted pregnancy intention and love-seeking behaviors of Black women. More White women mentioned being happy upon finding about a pregnancy.

Conclusion: Racial/ethnic differences exist with regards to the experiences of unintended pregnancy. These findings should be used to inform clinical practice and the development of public health interventions.

Keywords: Unintended pregnancy, reproductive coercion, intimate partner violence, health disparity, unplanned pregnancy, pregnancy

6.2 INTRODUCTION

Unintended pregnancy, reproductive coercion (pregnancy coercion and birth control sabotage), and intimate partner violence (IPV) are concerning health issues, particularly among younger women and racial/ethnic minorities (Miller, Decker, et al., 2010; U.S. Department of Health and Human Services, 2013a). Independently, reproductive coercion and IPV are significantly associated with unintended pregnancy. However, the odds of unintended pregnancy are further increased when both IPV and reproductive coercion are examined simultaneously (Miller et al., 2013).

Unintended pregnancy is a complex public health problem that is influenced by a number of predictors (Holliday et al., 2014). For instance, substance abuse, family structure, pregnancy intention, socio-demographic characteristics, and partner persuasion impact a woman's pregnancy intention—that is, whether she was planning to become pregnant at the time she became pregnant (Aquilino & Losch, 2005; Holliday et al., 2014; N. B. Moore & Rodriguez, 1995; Naimi et al., 2003). Children who grow up in single parent homes and who lack close relationships with their parents are likely to have low self-esteem, which might increase the risk for early sexual initiation, resulting in unintended pregnancy (N. B. Moore & Rodriguez, 1995; Rocca et al., 2013). Also, socio-demographic characteristics such as age and educational attainment also influence pregnancy intention (Aquilino & Losch, 2005).

Partner influences also impact unintended pregnancy in a number of ways. Lack of partner support concerning contraceptive use may result in an unintended pregnancy (Coles et al., 2011). Furthermore, adolescent females who experience IPV are more likely to have an unintended pregnancy due to adverse interactions with their partners, which may include forced condom nonuse, forced intercourse, as well as preventing her from using contraception (Coles et al., 2011; Miller, Decker, et al., 2010; Roberts et al., 2005). In an analysis of repeat pregnancy among young mothers aged 12 to 18, Raneri and Wiemann (2007) found that women who were abused by their partner were significantly more likely to experience a repeat pregnancy within 24 months of their previous delivery (Raneri & Wiemann, 2007).

Work by Miller, Decker, et al. (2010) supports an association among IPV, reproductive coercion, and unintended pregnancy, and suggests that race/ethnicity is a potential underlying influence affecting all three of the health outcomes. The purpose of this study is to explore and compare narratives from low-income, Non-Hispanic Black (Black) and White (White) women, from family planning clinics in Pittsburgh, PA, regarding pregnancy intention, contraceptive use, reproductive decision making, and other relevant factors surrounding pregnancy and sexual health. We hypothesize that the reported experiences related to unintended pregnancy will differ by race/ethnicity.

6.3 METHODS

Previously conducted semi-structured interviews ([Appendix B](#)) were reviewed to compare reproductive experiences of low-income Black and White women residing in the greater Pittsburgh, Pennsylvania region. Specifically, topics of pregnancy intention, reproductive

coercion, and IPV were explored among women who were abused, physically or sexually, or experienced reproductive coercion during their lifetime.

6.3.1 Recruitment

Fifty low-income women, ages 16 to 29, were recruited to participate in an ongoing, randomized controlled trial that is being conducted in family planning clinics in Western Pennsylvania. Following the completion of a computerized survey, participants who were age 18 or older were asked if they were interested in learning about an additional study. Those who declared interest in the study were asked to complete screening questions to assess eligibility. Women who had vaginal sex with a male partner within the past year and who had ever experienced any type of IPV or reproductive coercion were invited to participate in the study.

For the purpose of this analysis, Black (N=10) and White (N= 34) women only were included.

6.3.2 Interview Procedures

The interviews were conducted using the life history narrative approach which has been shown to yield richer data, especially when discussing difficult topics like IPV and reproductive coercion (Hollway & Jefferson, 1997). At the start of the interviews, which lasted an average of 60 minutes, a timeline was drawn. Participants were asked to provide information for their life history timeline, including key life events (i.e. age, education status, family events) and intimate relationships. The women were then asked about current and previous experiences of IPV (Interview Script). The interview was segmented to include questions about seeking care for IPV, health care utilization,

norms about IPV and sexual assault, pregnancy experiences, contraceptive use, including partner influence, first sexual experiences, and the women's reaction to an information card about reproductive coercion. Specific themes that will serve as the focus of this analysis include: pregnancy intention, sexual assault, and reproductive coercion; contraceptive use and the influences of male partners; and pregnancy experiences. These topics of interest were derived from a systematic literature that examined racial/ethnic differences associated with unintended pregnancy (Holliday et al., 2014).

All sessions were audio recorded and transcribed verbatim. However, participants' names and any other identifying information were omitted to maintain confidentiality. Each participant received \$50 as compensation for her time. The University of Pittsburgh Institutional Review Board approved this study.

6.3.3 Analysis Plan

Semi-structured interviews were managed in ATLAS.ti 7 and thematic coding (ATLAS.ti Scientific Software Development GmbH, 2013) was used to analyze the qualitative. Based on a preliminary review of several interviews and pre-determined themes based on the literature (Holliday et al., 2014), a codebook was developed reflecting major themes and sub-themes. The codebook was refined throughout the analysis phase to add emergent themes (Code Book).

For the current research question, themes of contraceptive use and birth control sabotage, unintended pregnancy, and pregnancy pressure were analyzed in the context of physical and or sexual partner abuse. All transcripts were coded by two independent investigators and compared to assess inter-rater reliability. Discrepancies in coding were discussed, resolved, and re-coded accordingly. Finally, codes were categorized into major themes, and patterns and differences were

assessed by race/ethnicity. For each emergent theme, we selected illustrative codes that were most representative of the narratives.

6.4 RESULTS

6.4.1 Study Sample

A total of 44 women participated in the study (Table 7). A majority of the women (n=34) were White, and more than half of all the women reported an unintended pregnancy (57%), while nearly 100% reported being abused by an intimate partner. When focusing on race/ethnicity, reports of reproductive coercion were higher among Black women (60% vs. 24%). Fifty percent of Black women reported having at least one pregnancy. Sixty two percent of White women experienced childbirth, with 59% of the sub-population reporting an unintended pregnancy. Reported unintended pregnancy was more frequent among White women (59% vs. 50%) (Table 7).

The narratives provide insight into potential factors associated with unintended pregnancy in the context of IPV. Specifically, conversations about pregnancy intention and prevention; pregnancy ambivalence, denial, and lack of awareness; reproductive coercion; contraceptive use; and various forms of sexual abuse and IPV are themes that were elucidated. These associations are discussed below, with illustrative quotations.

6.4.2 Intimate Partner Violence

IPV was similar between both groups of women. Reports of physical and emotional abuse, controlling behaviors, rape, sexual coercion, and fatal threats were most common. The follow is one example of unintended pregnancy in the context of IPV:

I never wanted kids or to get married. The kids were kinda an accident and so was the marriage so. But you know. [...] once I was knocked up he started beating the shit out of me and then I had to marry him or I was going to be alone and no one would want me because I had a kid and blah blah blah.

Table 12. Participant Demographics by Race, Percentage, and Frequency

	Total	Non-Hispanic Black	White
Total	100% (44)	21% (10)	72% (34)
Age			
18-24	50% (22)	60% (6)	47% (16)
25-30	50% (22)	40% (4)	53% (18)
Education			
< H.S. Diploma	18% (8)	10% (1)	21% (7)
H.S. Diploma/GED	25% (11)	20% (2)	26% (9)
Some College	39% (17)	30% (3)	41% (14)
College Degree	39% (17)	40% (4)	12% (4)
Parity			
0	20% (9)	50% (5)	38% (13)
1	20% (9)	20% (2)	21% (7)
2	18% (8)	10% (1)	21% (7)
3	9% (4)	10% (1)	9% (3)
≥4	11% (5)	10% (1)	12% (4)
Unintended Pregnancy			
Yes	57% (25)	50% (5)	59% (20)
No	43% (19)	50% (5)	41% (14)
Intimate Partner Violence			
Yes	98% (43)	90% (9)	100% (34)
No	2% (1)	10% (1)	0% (0)
Reproductive Coercion			
Yes	32% (14)	60% (6)	24% (8)
No	68% (30)	40% (4)	76% (26)

Column percentages

6.4.3 Pregnancy Intention

Respondents discussed both planned and unplanned pregnancy intentions, with the majority of the reporting having had an unintended pregnancy (57%). For more of the women, learning about their pregnancy was the worst thing to happen to them, “It breaks my heart every time they told me yes.” (White woman, age 22). Nonetheless, some women expressed a level of happiness upon learning that they were pregnant. Unlike Black women, three White women expressed happiness about their pregnancy whether it was planned or not.

“I found out on my 19th birthday that I was pregnant and I was so happy.” (White woman)

“I wasn’t doing anything to prevent it because I did, I knew that I wanted a baby eventually and he did too [...]. I was freaking out [upon learning about the pregnancy], but at the same time I was really happy. So.” (White woman)

However, among three White women, feelings about pregnancy shifted from feelings of happiness to regret or relief that a pregnancy did not occur.

I remember when I was 19 going off of my birth control because he wanted to have a baby. I don’t know what I was thinking. But, my friends all were having kids and that was something that we wanted, but it didn’t happen; I had endometriosis really bad. (White woman)

I did [want the pregnancy], but now when I think about it, I’m glad that it didn’t happen. He has two kids already, and then, I don’t know if like-what our relationship will be like later on down the line, but that would be kind of messed up on my part to just be irresponsible and have a kid. (White woman)

While pregnancy intention among White women shifted from intentional pregnancy planning to desired pregnancy prevention for some, Black women cited past experiences with children as reasons for preventing pregnancy.

I never said I didn't want kids, I always wanted kids, just not that soon. I had to grow up fast. I raised my two brothers. Living with the one foster mother who was an alcoholic, she didn't do a lot of things, so I had to cook and clean at the age of 12 or 13, so I grew up so fast. So, I don't know, I don't even know, my whole life is a blur. Nothing was planned, except for my last child. (Black woman)

"I take care of my nephew and I'm glad I don't have any babies." (Black woman)

Conversely, one White woman reported the positive influence of her early interaction with children as a reason why she desired to become pregnant.

I love kids, I've been babysitting [...] I mean throughout all these years I was always been nannying, babysitting, just [inaudible] different families. I'm obsessed with babies like obsessed. And I always said like my mom had me when she was 20 and I always said 25 you know after school and everything [...] And I didn't care whether or not I didn't have a baby at the time. Like I knew that we would be okay and we would make it together. (White woman)

6.4.3.1 Pregnancy Ambivalence

Within the topic of pregnancy intention is ambivalence toward pregnancy or perhaps, lack of awareness/naïveté, which was mentioned by three White and three Black participants.

We've, we both agree that we don't want to have kids right now. If it was to happen then it would happen, but like, he's not stable enough in his life for him to support a child kind of thing. (White woman)

“Well before I got pregnant I was thinking that I couldn't get pregnant because I was so young and I was just like, oh, it won't happen to me. I was really sad and I cried.” (White woman)

I didn't think much of it, I didn't. And honestly-oh, it won't happen. We would say things, he would say things like, 'oh I'll pull out', and usually he did, but, I don't know, it didn't, in my head it didn't go in that I can get pregnant some type of way. (Black woman)

One Black woman's pregnancy ambivalence was projected onto her male partner, “So I always let it be known, if you don't wanna use protection, if that's what we decide to do, just know if I end up getting pregnant, that's your responsibility.” This approach to pregnancy was not mentioned by any of the White women.

6.4.4 Love Seeking

The desires to be loved or receive attention are reasons why women sought or remained in relationships that may be considered less than ideal. Insecurities were reported as stemming from lack of love as a child, feelings of unworthiness, and the need to be with someone.

Some participants said that they did not deserve a better partner or that their current partner was the only man who would want them.

It was the low insecurities, just made me feel like I didn't deserve better. So I constantly, I'm like well this is what I get for what I did. Even though I didn't do anything, I knew in my heart, but I was like well he says he loves me and this is all I'm going to get like no one else is going to love me. (White woman)

All White women related their love seeking behaviors to intimate relationships, while one only Black woman specifically reported insecurities brought on by her childhood experiences.

I'm realizing like, what happens, it's kind of like me growing up I didn't experience love from anybody. I grew up in foster homes so it was like the first boyfriend I got I was so excited because he was showing me something different but I should've got to know him first before anything started, and now I see, I see all that now. (Black woman)

Other respondents mentioned the use of sex to maintain relationships. When asked if she wanted to have sex at age 14, one woman mentioned, "it was kind of like I was young, I was just trying to keep the guy that I liked. Because I thought at the time that I loved him." (White woman)

6.4.5 Reproductive Coercion

A difference in the prevalence of reproductive coercion was noted between Black and White women. In comparing the reports of women in these two racial/ethnic groups, participants experienced similar as well as different reproductive coercion experiences. Overall, birth control sabotage, such as hiding condoms, flushing birth control pills down the toilet, throwing birth control out of a window, or feeding birth control pills to the dog were commonly cited by both White and Black participants. Furthermore, male partners used intentional impregnation to

persuade women to remain in relationships and accusations of cheating to get the women to have sexual intercourse without a condom. Nonetheless, Black and White women reported different experiences with reproductive coercion regarding deception and rape to promote pregnancy. Three Black women reported partner pressure to not use contraception due to alleged male sterilization. One White participant mentioned being raped by her partner while she slept, as he hoped to impregnate her.

Only Black participants mentioned hiding their birth control pills or not informing their partners that they were using a medically-inserted form of contraception, such as an intra-uterine device.

Yeah, it [birth control pill] was hidden. I had like a secret compartment in a purse, like, I had to buy a special purse just to hide it because I knew even if he went through it, he wouldn't see this one section. So I would take it in the bathroom with like, sink water, so just when he would think I was going to the bathroom (Black woman).

One White woman mentioned no longer having sex with a partner who raped her as a way to counteract reproductive coercion.

Also, Black women often mentioned that men used deception to persuade their partners not to use contraception. Many women reported that their partners claimed to be sterile. This excuse was commonly cited, "a lot of guys say that they can't have kids just to have unprotected sex or just so they can do whatever they want to do." (Black woman). Furthermore, one woman reported that her partner was adamant that birth control was the devil and would harm her body. Other men would remove the condom during sex.

“So if I ever told him to use a condom he would tell me no he couldn’t have kids, there’s no point in it. Or, in the middle of it, he would take his condom off.” (Black woman)

One White woman reported male deception, recalling an incident when her partner intentionally tried to impregnate her.

He wanted me to get pregnant. He told me once that he had sex with me while I was sleeping, passed out drunk, but, you know, that he had sex with me while sleeping because he wanted to have a baby. (White woman)

White and Black women said that their partners used birth control sabotage to promote pregnancy. One woman reported that her boyfriend discarded her birth control pills because he wanted her to get pregnant.

One day we were riding and he threw my pills out the window. That’s whenever I was like, “What are you doing? Why would you do that?” And he’s like, “Oh we should work on having a kid.” And I’m like, “Well I’m not really ready to have a kid.” And the conversation was left at that. But I guess in his mind he still had plans on having a kid because he never discussed it until I got pregnant and then he was like, “Oh okay, I knew you were going to get pregnant,” so he always had intentions on having a baby I guess by me, but I didn’t want to have a kid at that point. (Black woman)

Furthermore, condom removal and aggression were also forms of reproductive coercion mentioned by both groups. Women reported that their partner removed the condom during intercourse and became verbally abusive when asked about condom use. Some men interfered with

their partner trying to place the condom, while other men left or threatened to leave to have a relationship with another woman.

“He said no. He said he doesn’t do it with it and he got up and left. And I’m pretty sure he went to have sex with somebody else.” (Black women)

“At one point he completely ignored me.” He would push my hand and just do what he wanted. (Black woman)

“Well, I’m not using a condom.” And, I wasn’t comfortable with that but he would take it off anyways, so that, I was really not happy about that. So every time I was like, please don’t let me have a baby, like I just, I did not. (White woman)

6.4.6 Unwanted Sexual Experiences

Child abuse was the most commonly noted difference between the White and Black women in this sample. Seven White women reported being sexually abused by immediate family members, trusted family friends/associates, and individuals in their neighborhood; none of the Black women reported such sexual abuse.

Some of the White women discussed the negative consequences after they notified their family of the child sexual abuse. For example, when asked if she told her mom that she had been molested by her mother’s boyfriend, a 20 year old, White woman responded, “Yeah, my mom actually told me that I was just jealous of her relationship [with the alleged abuser].” In another instance, a respondent mentioned:

Once when I was younger, like my brother had experimented with me and I told my dad and my dad ended up calling children and youth and my mom flipped out and said it wasn't true and she hated me and she never wanted to see me again. (White woman)

Rape by an intimate partner or stranger was mentioned by women of both racial/ethnic groups, sometimes in conjunction with voluntary and involuntary substance abuse. One White woman discussed rape by an intimate partner in the context of reproductive coercion, "I believe he raped me to get me pregnant." (White woman)

One White woman reported sexual coercion in exchange for secrecy.

I mean my friends, we were starting to get a little crazy drinking a lot and always going to older guys' parties. Like we'd go to the 12th graders [party] when we were in ninth grade, like, if I was laying there going to sleep, they would always come over, 'oh you have to do this, or if you don't do this like we will tell everybody that you are over here.' So I mean that kind of stuff happened like all the time in ninth grade. (White woman)

In incidences where rape did not occur, women spoke of male control exhibited through intentional harm during sexual intercourse, "He never forced me to have sex with him, but when we did have sex, he was very abusive. He would like try to hurt me on purpose." (Black woman)

Hopelessness, a desire to please, and dependency on a male partner were reported among the respondents. One Black woman reported the need for financial assistance as a reason for remaining with a partner who consistently raped her without a condom.

He was, he was like, verbally abusive [...] emotionally. He would just make me feel like crap on a daily basis [...]. He was also sexually abusive [...]. He would like, with him it would be forced sex with no condom, that's why I got back on birth control, because I

started being so concerned about it. But, I mainly had to do it, because I was financially dependent on him. (Black woman)

White women described feelings of hopelessness and wanting to appease their partners as reasons why they gave in to rape and sexual coercion.

“I always felt like I had to make them happy regardless of how it made me feel.” (White woman)

Well, he took me outside and beat me. Took his clothes off of me, naked in the woods, beat me, and left me outside half-naked. And I didn't know what to do. Somehow I ended up in the car and he had sex with me and I didn't even try to fight it- I just was- I gave up, so I just laid there and let it happen, and I slept in the car that night. (White woman)

Additional factors associated with unwanted sexual experiences that were mentioned by White women only include a change in sexual behavior and neighborhood influence. One woman mentioned that, subsequent to unwanted sexual experiences, she became uncharacteristically promiscuous and slept with at least 100 men. She believed that her unwanted encounter impacted future sexual experiences with men, “From that point on [being raped by a stranger] until just recently, I was very careless sexually. Multiple sexual partners, no protection, no birth control.” (White woman)

One White woman mentioned her environment as a reason for sexual abuse:

I was touched so many times there. Touched and just, that's why, that's why I consider not losing my virginity at 18, because I had like, you know, lost all that in, when I was there.

But I was a child in its ghetto place. So many times had I been touched there, and just, like, completely ravaged. (White woman)

6.5 DISCUSSION

Strength of this study is that all women were of low-income and sought reproductive care from local family planning clinics. Therefore, with somewhat consistent socioeconomic factors, this study allowed for qualitative synthesis of elements in which unintended pregnancy may occur and provides insights into racial differences contributing to unintended pregnancy. The current study, through comparative analyses, elucidated factors that contribute to a relatively high prevalence of unintended pregnancy among American women and potential racial/ethnic differences. Key differences were noted regarding attitude about pregnancy, the influence of childhood experiences on love-seeking behavior and pregnancy intention, child abuse, and partner influence.

Broadly, White women were more likely to report happiness as their response upon learning about an unplanned pregnancy. Women from both racial/ethnic groups mentioned caring for children during youth, however, Black women were more likely than White women to cite negative experiences with children. Also, the need for love was expressed among both White and Black women, but in different ways. For Black women, the desire for love resulted from childhood neglect, whereas, White women emphasized the need to feel wanted and cared for. Reproductive coercion and child sexual abuse are issues where Black and White women differed most. One in five White women reported experiencing sexual abuse as a child when asked about their reproductive health. However, none of the Black women associated being sexually abused as a

child with their reproductive well-being. Partner deception/reproductive pressures were commonly reported among Black participants.

Findings from this study underscore the often-ignored impact of men on risk for unintended pregnancy. Male control exhibited via reproductive coercion and deception was noted by both groups of women. White women were more likely to share stories about rape by their intimate partner, whereas, Black women said their male partners were more likely to be deceptive in stating that they could not have children as a reason to not use condoms. The frequency of reproductive coercion was highest among Black women (60% compared to 24% of White women of this sample). Perhaps, as a result of a greater frequency of reproductive coercion, Black women mentioned hiding birth control as a way to evade pregnancy coercion.

White women were more likely to report being happy upon learning about their pregnancy, whether it was planned or unplanned. White women perceived a greater number of benefits associated with childbearing when compared to Black women. Black participants in this study cited previous experiences with children as reasons why they wanted to prevent or delay pregnancy. This finding is not consistent with the study by Rocca et al. (2013) which documented that Black women perceive greater benefits to childbearing when compared to their White counterparts. The qualitative findings here suggest more nuance is needed to understand a woman's pregnancy intention that may shift over time and be formed by multiple life experiences, beliefs, and partner and community influences.

The topic of unwanted sexual encounters is where experiences of White and Black women differed the most. Among women in this study, White women reported a number of incidences of sexual abuse that occurred during their childhood. These incidences were equated to the neighborhood in which they lived and adverse sexual relationships in the future. The literature

supports that children who experience child abuse and neglect are at greater odds for experiencing IPV in the future (Renner & Slack, 2006; Widom, Czaja, & Dutton, 2014). Specifically, Widom et al. (2014) reported that child abuse and neglect predicted a higher frequency of IPV incidences as well as a variety of IPV types experienced by the victim. Among women who experienced child abuse and neglect, IPV was more likely (Widom et al., 2014). Experiencing maltreatment during childhood is strongly associated with learned helplessness and IPV in adulthood (Renner & Slack, 2006) which was captured in some of the quotes from White participants.

6.5.1 Limitations

This study has numerous limitations. The study was focused, specifically, on understanding racial/ethnic differences in unintended pregnancy in the context of IPV or reproductive coercion; that is, interviews with women who had not experienced such abusive experiences were not included. Factors associated with unintended pregnancy that were derived from this study may not be generalizable to low-income women in the Pittsburgh region outside of partner coercion and abuse. Furthermore, participants were asked to recall specific incidences from their previous and current intimate relationships. While this approach provides contextual and historical information, recall bias may exist. Finally, sensitive topics regarding reproductive health and abuse was the focus of the qualitative interviews, which may have been challenging topics for the participants to discuss, particularly when face-to-face with a research associate. Discomfort and/or feelings of shame or embarrassment may result in under-reported experiences with unintended pregnancy, reproductive and sexual health, and IPV.

6.5.2 Implications for Research and Practice

These findings have implications for future research and the refinement of public health and clinical practice. Despite having similar income levels and exposure to IPV, narratives from this study illustrate racial/ethnic differences in experiences that contribute to unintended pregnancy among Black and White women. In some instances, participants mentioned similar factors, yet different mechanisms that may have increased their odds for unintended pregnancy. For instance, love-seeking behavior was reported among women from both racial/ethnic groups, however, their reason for doing so differed.

Subsequent studies are needed to explore racial/ethnic differences associated with unintended pregnancy more deeply. Specifically, we may only speculate why reproductive coercion is more prevalent among Black women than White women. Also, sexual abuse was disproportionately reported between the two groups, which is not understood by the researches as child sexual abuse is experienced among all racial/ethnic groups. Finally, these findings demonstrate the need for public health interventions and clinical practices that are population and patient specific, placing special consideration on racial/ethnic differences.

7.0 DISCUSSION

7.1 AIM 1

This systematic literature review is a synthesis of published studies that examined the relationship between unintended pregnancy and racial/ethnic differences among women in the U.S. While not all relevant studies may have been captured, a thorough search strategy was developed, including multiple approaches to identifying studies. This review was intentionally limited to individual and structural level factors associated with unintended pregnancy and racial/ethnic differences given the novelty of this subject area. Specifically, 19 studies were reviewed concerning reproductive values, contraception use, partner influence, and pre-pregnancy behaviors in the context of race/ethnicity.

Unintended pregnancy was most prevalent among non-White women, particularly, Black and Hispanic/Latina women (Besculides & Laraque, 2004; Goldsmith et al., 2008). When considering socio-demographic factors, disparity in unintended pregnancy prevalence can be explained, in part, by younger age at first sexual encounter (Hayford & Guzzo, 2013) and lower educational attainment (Goldsmith et al., 2008) and social standing (Aquilino & Losch, 2005; Bryant et al., 2010). Furthermore, the relationship between marital status and unintended pregnancy differed between racial/ethnic groups. Overall, unintended pregnancy was highest among non-marital unions, except among Blacks (Cubbin et al., 2002). In fact, unintended pregnancy was most prevalent among Black women who were married, which is consistent with a study that sampled men of different racial/ethnic groups (Lindberg & Kost, 2013). Though these findings are supported by commonly cited theories related to social determinants of health

(Braveman et al., 2011; Krieger, 2003; Krieger & Davey Smith, 2004; Williams, 1997), additional research is needed to explore racial/cultural influences of union status and unintended pregnancy.

Moreover, due to recent policy changes, emergency contraception is available over-the-counter and health insurance policies now provide contraception free of charge, according to the Affordable Care Act. Intuitively, one may assume that these policies should result in marked decreases in incidences of unintended pregnancy. However, as elucidated in this review, additional mechanisms that may lead to unintended pregnancy must also be considered. When asked why they did not use contraception, some young women stated that they, “did not mind getting pregnant” (Centers for Disease Control and Prevention, 2012), despite their young age; other reasons included partner pressure, pregnancy misconceptions, socio-demographic characteristics, and values regarding reproductive behavior (Cubbin et al., 2002; Matteson et al., 2006; Naimi et al., 2003). Pregnancy pressure in terms of contraceptive use was greatest among White women (Centers for Disease Control and Prevention, 2012). Pregnancy ambivalence and fatalistic attitudes were more common among Black, American Indian/Alaskan Native, and Hispanic/Latina women (Bryant et al., 2010), which may indicate differences in male influence and culture between racial/ethnic groups.

Some of the studies in this review highlighted cultural differences in pregnancy intention by union status (Cubbin et al., 2002; Hayford & Guzzo, 2010) and family-based ideology. Particularly, Hispanic/Latina women were more likely to report a planned pregnancy outside of marriage. Also, despite lack of familial acceptance of non-marital childbirth, unintended pregnancy (Hayford & Guzzo, 2013) outside of wedlock was significantly higher among Black women (Besculides & Laraque, 2004).

One explanation may be that Black women are influenced by other factors, despite family values. Reduced stigma, differing ideologies of family structure, or perhaps, an increase in familial support may explain differences in planned and unplanned pregnancies by race/ethnicity (Musick, 2002). Reproductive values are influenced by household structure. Permissive sexual attitudes and non-marital childbearing are associated with growing up in a single parent home (Axinn & Thornton, 1996). Correspondingly, self-esteem, expectations for the future, and closeness with parents have been shown to reduce risky sexual behavior among adolescents (Barnett et al., 1991).

Furthermore, the association between unintended pregnancy and abuse was documented (Cubbin et al., 2002; Matteson et al., 2006; Naimi et al., 2003). This relationship is supported, more specifically, by research conducted by Miller, Decker, et al. (2010) which established an association between IPV, reproductive coercion (pregnancy coercion or birth control sabotage), and unintended pregnancy. Both singly as well as combined, IPV and reproductive coercion are associated with unintended pregnancy, which differ, significantly, by race/ethnicity (Miller, Decker, et al., 2010).

Aside from reports from female adolescents regarding their partners' aversion to contraception use (Centers for Disease Control and Prevention, 2012), reproductive coercion was not explored in any of the studies. Also, none of the studies examined differences in experiences of abuse and pregnancy outcomes by race/ethnicity. Given the racial/ethnic differences associated with unintended pregnancy (Aquilino & Losch, 2005) and what is known about IPV, more research is needed to explore potential racial/ethnic disparity associated with unintended pregnancy, IPV, and reproductive coercion.

Finally, unintended pregnancy predicts female tubal sterilization (Borrero, Moore, Qin, et al., 2010), which was more prevalent among Black women in the study by Foster et al. (2004).

Structural reasons of SES, being a carrier of private health insurance, and higher education levels have been documented as reasons why racial/ethnic disparity exists regarding contraceptive method choice (Shih et al., 2013).

7.1.1 Limitations

This review is certainly not without limitations. The study selection process was limited to two major research databases and two other search engines. Therefore, it is possible that this systematic review is not fully representative of all studies published pertaining to racial/ ethnic experiences and unintended pregnancy among female adolescents and young women. This limitation may result in publication bias. Furthermore, location bias may also be of concern as conference abstracts and gray literature that were not listed within the Guttmacher Institute and Google scholar venues were not included in this analysis.

7.1.1.1 Critique of the Evidence

Several limitations among the research articles included in this review were also noted. First, inconsistencies exist regarding the measurement of unintended pregnancy. Studies that only measure unintended births, certainly, underestimate unintentional pregnancies, as this measurement does not include pregnancies that end in abortion (Jones & Kost, 2007; Trussell et al., 1999). Also, the lack of consistency in the measurements of unintended pregnancy makes the studies less comparable.

Many of the studies were retrospective in design, relying on participants to recall their pregnancy intention two to six months postpartum. In assessing pregnancy intention after the baby was born, it is possible that the mother's reported pregnancy intention may have shifted after

delivery (Trussell et al., 1999). Perhaps, the study by Besculides and Laraque (2004) is the least biased in terms of recollection of pregnancy intention. Pregnancy intention was assessed prior to a woman receiving the results from her pregnancy test. While social desirability bias may impact the results of this study, the methodology limits recall bias. Shlay et al. (2002) and Wildsmith et al. (2010) monitored incident pregnancy among women who wished to prevent pregnancy which may be an ideal design for determining racial/ethnic differences in odds for unintended pregnancy.

7.1.2 Implications for Practice, Policy, and Research

The topic of unintended pregnancy is extensive and spans a number of health concerns. A systematic literature review focusing on unintended pregnancy and racial/ethnic differences was not found in the literature. Thus, to begin to integrate existing literature, succinctly, we chose to focus on individual and structural level factors, only. Stringent screening criteria were used to determine eligibility for this review. In the future, additional studies are needed to explore, in greater detail, correlates that are likely to contribute to racial/ethnic differences among women experiencing unintended pregnancy.

7.1.2.1 Practice

Unintended pregnancy is influenced by a number of factors that should be considered in public health and clinical practice. For example, practitioners should take into account cultural differences in fertility intention and acceptance as well as reproductive values such as ambivalence and cultural beliefs. Additionally, practitioners should consider socio-demographics, in particular, race/ethnicity and the influence of intimate partners when designing public health interventions and caring for patients.

7.1.2.2 Policy

This review has implications for policies regarding comprehensive sex education, public health intervention, and screening practices. Despite access to contraception, gaps in knowledge still exist regarding pregnancy prevention. Policies that call for implementation of comprehensive sex education, particularly, related to contraceptive use are needed. Furthermore, partner influence was a major theme among the articles reviewed. Given what is known about partner influence, assessment for such partner influences should be incorporated into clinical encounters.

7.1.2.3 Research

This review presents a broad overview of factors specific to race/ethnicity that may influence one's risk for unintended pregnancy. The conceptual framework developed based on the findings from this review provides some understanding of factors associated with unintended pregnancy and race/ethnicity. However, additional research is needed.

Given the insignificant effect of social standing on unintended pregnancy risk for women of color (Bryant et al., 2010), other factors or experiences must be impacting their health. An exploration of racism and racial/ethnic experiences regarding reproductive health is needed (Williams & Sternthal, 2010). Also, men impact pregnancy outcomes and the reproductive health of women (Miller, Decker, et al., 2010; Miller et al., 2007; A. Moore et al., 2010), yet are not traditionally the focus of studies of unintended pregnancy. Additional qualitative and quantitative studies are needed to examine reasons for pregnancy coercion and perceived benefits of childbearing.

7.2 AIM 2

Unintended pregnancy is a significant indicator for reproductive health in the U.S. (Finer & Zolna, 2011; U.S. Department of Health and Human Services, 2013a). The current study documents racial/ethnic differences in reports of reproductive coercion, IPV, and unintended pregnancy, with particular emphasis on unintended pregnancy. Unintended pregnancy disparities attributed to SES, age, and race/ethnicity have been reported in the literature; however, to our knowledge, a study has not yet documented how racial/ethnic disparities manifest in the context of IPV and reproductive coercion, specifically.

Some of the findings from the current study are consistent with our hypotheses. Overall, significant differences existed between the racial/ethnic groups regarding unintended pregnancy, reproductive coercion, and IPV. Our first hypothesis was partially true. With the exception of Hispanic/Latina women, the prevalence of unintended pregnancy was greater among minority groups when compared to White women. Similarly, with the exception of Asian/PI women, women from racial/ethnic minorities were more likely to experience reproductive coercion relative to White women. Yet, the prevalence of IPV among White women was only second to multiracial women. Regarding the second hypothesis, only Asian/Pacific Islander women, when compared to White women, had significantly greater odds for experiencing an unintended pregnancy after considering reproductive coercion and IPV exposure. Finally, we did not reject the final hypothesis. Though experiencing reproductive coercion (versus not experiencing reproductive coercion) was a significant predictor for unintended pregnancy for both Black and White women, the likelihood of experiencing reproductive coercion was significantly greater among Blacks when compared to Whites.

Additional factors were examined as potential predictors for unintended pregnancy. Age is one predictor for unintended pregnancy. A previous study has reported that unintended pregnancy is most prevalent among women under the age of 19 (Finer & Zolna, 2011). However, in the current study, older age (25-29) was associated with a significant risk for at least one unintended pregnancy. It is important to note that lifetime prevalence of IPV, reproductive coercion, and unintended pregnancy were used in this analysis. Therefore, the potential decrease in incidences of unintended pregnancies with increasing age was not explored in this cross-sectional design.

The data showed that, when compared to college graduates, women with some college education were significantly more likely to experience an unintended pregnancy. Unintended pregnancy was not significantly associated with lower levels of education in an unadjusted model. Possibly due to career aspirations, women who are pursuing a college degree are more likely to report a pregnancy as mistimed or unwanted than women who are not enrolled in college. Another explanation is that women who are college graduates are older in age and, thus, less likely to report an unintended pregnancy.

Reports of IPV were significantly different between the different racial/ethnic groups. Lifetime prevalence of IPV was significantly higher among multiracial women. This finding is consistent with results from multi-state (Breiding et al., 2007) and national analyses (Moracco et al., 2007). In a study conducted among adolescents, it was suggested that multiracial children grapple with social isolation, negative self-image, and race-based discrimination (Choi et al., 2006). Perhaps, such experiences impact adulthood, resulting in low self-esteem and a woman's inability to negotiate with an intimate partner. An additional explanation is the existence of cultural differences between multiracial women and their intimate partners, which may lead to an increase in conflict (Martin et al., 2013).

However, IPV was not a significant predictor for unintended pregnancy when considering the effect of reproductive coercion among all racial/ethnic groups or between Black and White women. Possibly, the relatively young population can explain these finding. Older women (ages 25-29), who comprised nearly 24% of the sample, were significantly more likely to experience IPV when compared to women ages 16-24. It is conceivable that age is a moderating factor; perhaps with age, women are exposed to more intimate partners, thus, increasing their risk for experiencing IPV. IPV prevalence was significantly higher among women who were divorced/widowed and may help to explain the existence of divorce among a relatively young sample.

Health disparities are often linked to racial/ethnic experiences, particularly discrimination and segregation, which impact social factors, limit resources, and cause chronic stress. The current study builds on theories of race and social ecology that support the influence of race-related experiences in the expression of health disparities like unintended pregnancy, reproductive coercion, and IPV. Based on initial crude analyses, risk for reproductive coercion was significantly greater among Black and multiracial women. However, in a stratified logistic regression model conducted to explore the main effects of race and reproductive coercion more deeply, the data showed that reproductive coercion was a significant predictor for unintended pregnancy among White women, even after adjusting for IPV and other covariates. This same relationship was documented among Black women. When exploring the interaction between reproductive coercion and race, dichotomized by Black women and White women, the interaction effect was not significant; this means that reproductive coercion is associated with unintended pregnancy regardless of race/ethnicity. Nonetheless, the prevalence of reproductive coercion was significantly higher among Black women when compared to Whites.

Also, when considering the insignificant interaction between reproductive coercion and race (Black vs. White women) as a predictor for unintended pregnancy and the odds of reproductive coercion compared between the two groups, it is probable that Black women have additional experiences that may contribute to increased likelihood of an unintended pregnancy. Given the knowledge that racial/ethnic disparities persist despite similar exposures (like reproductive coercion), the data suggests that there is something unmeasured contributing to such stark differences among Black women. One explanation for this is a difference in race-related experiences or exposures, such as racism, which may be internalized and expressed as adverse biological and/or physiological traits (Braveman et al., 2011; Krieger, 2003; Nuru-Jeter et al., 2009).

The association between race/ethnicity and health is often entangled in socioeconomic factors (Williams & Sternthal, 2010), which is not surprising given the racialization of social class (Krieger, 2003). The social epidemiological term “embodiment” illustrates the influence of one’s collective experiences and exposures on physical and mental well-being throughout the life-course (Krieger & Davey Smith, 2004). Social epidemiologists argue that key factors such as race are embedded or embodied in biological beings (Krieger & Davey Smith, 2004). Correspondingly, previous research has shown that SES is not necessarily a primary predictor of reproductive health outcomes. In study by Finer and Henshaw (2006), race/ethnicity was found to be a predictor of unintended pregnancy despite income level--a proxy for overall SES. When exploring social standing among Black women, an increase in social standing was not directly related with decreased unintended pregnancy risk, in spite of decreases in risk for unintended pregnancy among White women as their social standing increased (Bryant et al., 2010; Finer & Zolna, 2013).

Additional qualitative and quantitative studies should be conducted to explore specific factors related to race/ethnicity that may result in reproductive health disparities. This information should also be used to better inform public health interventions as well as clinical practice.

7.2.1 Limitations

This study is not without limitations. The cross-sectional, quantitative study design does not allow for temporal assessment of unintended pregnancy, reproductive coercion, or IPV. A longitudinal study would provide greater understanding of the associations between the variables of interest and the mechanisms in which these relationships take place. Also, the sample used is restricted to family planning clients in northern California; thus, results may not be generalizable to other geographic and clinical settings or to the population. Selection bias may also exist, because the sample was solely clinical and was drawn for a randomized controlled trial. This analysis seeks to identify racial/ethnic differences between populations with regard to unintended pregnancy, reproductive coercion, and IPV; yet, a number of indicators about racial/ethnic experiences that may lend to the ultimate outcome of racial/ethnic disparity are not included in this analysis. Finally, socially stigmatized events that may be perceived as shameful are often under-reported. When comparing missing values for race/ethnicity to variables associated with pregnancy coercion and birth control sabotage, the data showed that the latter two variables had 10 times more missing variables. It is possible that participants skipped questions due to irrelevancy or because the women were unwilling to disclose such personal information.

7.3 AIM 3

Strength of this study is that all women were of low-income and sought reproductive care from local family planning clinics. Therefore, with somewhat consistent socioeconomic factors, this study allowed for qualitative synthesis of elements in which unintended pregnancy may occur and provides insights into racial differences contributing to unintended pregnancy. The current study, through comparative analyses, elucidated factors that contribute to a relatively high prevalence of unintended pregnancy among American women and potential racial/ethnic differences. Key differences were noted regarding attitude about pregnancy, the influence of childhood experiences on love-seeking behavior and pregnancy intention, child abuse, and partner influence.

Broadly, White women were more likely to report happiness as their response upon learning about an unplanned pregnancy. Women from both racial/ethnic groups mentioned caring for children during youth, however, Black women were more likely than White women to cite negative experiences with children. Also, the need for love was expressed among both White and Black women, but in different ways. For Black women, the desire for love resulted from childhood neglect, whereas, White women emphasized the need to feel wanted and cared for. Reproductive coercion and child sexual abuse are issues where Black and White women differed most. One in five White women reported experiencing sexual abuse as a child when asked about their reproductive health. However, none of the Black women associated being sexually abused as a child with their reproductive well-being. Partner deception/reproductive pressures were commonly reported among Black participants.

Findings from this study underscore the often-ignored impact of men on risk for unintended pregnancy. Male control exhibited via reproductive coercion and deception was noted by both groups of women. White women were more likely to share stories about rape by their intimate

partner, whereas, Black women said their male partners were more likely to be deceptive in stating that they could not have children as a reason to not use condoms. The frequency of reproductive coercion was highest among Black women (60% compared to 24% of White women of this sample). Perhaps, as a result of a greater frequency of reproductive coercion, Black women mentioned hiding birth control as a way to evade pregnancy coercion.

White women were more likely to report being happy upon learning about their pregnancy, whether it was planned or unplanned. White women perceived a greater number of benefits associated with childbearing when compared to Black women. Black participants in this study cited previous experiences with children as reasons why they wanted to prevent or delay pregnancy. This finding is not consistent with the study by Rocca et al. (2013), which documented that Black women perceive greater benefits to childbearing when compared to their White counterparts. The qualitative findings here suggest more nuance is needed to understand a woman's pregnancy intention that may shift over time and be formed by multiple life experiences, beliefs, and partner and community influences.

The topic of unwanted sexual encounters is where experiences of White and Black women differed the most. Among women in this study, White women reported a number of incidences of sexual abuse that occurred during their childhood. These incidences were equated to the neighborhood in which they lived and adverse sexual relationships in the future. The literature supports that children who experience child abuse and neglect are at greater odds for experiencing IPV in the future (Renner & Slack, 2006; Widom et al., 2014). Specifically, Widom et al. (2014) reported that child abuse and neglect predicted a higher frequency of IPV incidences as well as a variety of IPV types experienced by the victim. Among women who experienced child abuse and neglect, IPV was more likely (Widom et al., 2014). Experiencing maltreatment during childhood

is strongly associated with learned helplessness and IPV in adulthood (Renner & Slack, 2006) which was captured in some of the quotes from White participants.

7.3.1 Limitations

This study has numerous limitations. The study was focused, specifically, on understanding racial/ethnic differences in unintended pregnancy in the context of IPV or reproductive coercion; that is, interviews with women who had not experienced such abusive experiences were not included. Factors associated with unintended pregnancy that were derived from this study may not be generalizable to low-income women in the Pittsburgh region outside of partner coercion and abuse. Furthermore, participants were asked to recall specific incidences from their previous and current intimate relationships. While this approach provides contextual and historical information, recall bias may exist. Finally, sensitive topics regarding reproductive health and abuse was the focus of the qualitative interviews, which may have been challenging topics for the participants to discuss, particularly when face-to-face with a research associate. Discomfort and/or feelings of shame or embarrassment may result in under-reported experiences with unintended pregnancy, reproductive and sexual health, and IPV.

7.3.2 Implications for Research and Practice

These findings have implications for future research and the refinement of public health and clinical practice. Despite having similar income levels and exposure to IPV, narratives from this study illustrate racial/ethnic differences in experiences that contribute to unintended pregnancy among Black and White women. In some instances, participants mentioned similar factors, yet

different mechanisms that may have increased their odds for unintended pregnancy. For instance, love-seeking behavior was reported among women from both racial/ethnic groups, however, their reason for doing so differed.

Subsequent studies are needed to explore racial/ethnic differences associated with unintended pregnancy more deeply. Specifically, we may only speculate why reproductive coercion is more prevalent among Black women than White women. Also, sexual abuse was disproportionately reported between the two groups, which is not fully understood by the research team as child sexual abuse is experienced among all racial/ethnic groups. Finally, these findings demonstrate the need for public health interventions and clinical practices that are population and patient specific, placing special consideration on racial/ethnic differences.

7.4 SYNTHESIS OF KEY FINDINGS

Racial/ethnic disparities do exist in risk for unintended pregnancy, reproductive coercion, and IPV. Through a systematic literature review and quantitative and qualitative analyses of data from patients seeking care at family planning clinics, we examined race/ethnicity in correlation with risk for unintended pregnancy, reproductive coercion, and IPV.

This dissertation study included the first systematic literature review to document correlates of unintended pregnancy risk with race/ethnicity. We explored racial/ethnic differences in socio-demographic factors, reproductive values, partner influence, maternal behaviors prior to conceiving, and contraception use with regard to unintended pregnancy risk. Overall, Black and Hispanic/Latina women were more likely to experience factors that increased their risk for unintended pregnancy. We also found that literature focusing on unintended pregnancy and

race/ethnicity is rare. Furthermore, the influence of men in unintended pregnancy risk is not greatly reported in the literature. Thus, reproductive coercion and IPV, mechanisms in which men may contribute to unintended pregnancy risk, were the focus of subsequent aims of this study.

In a quantitative analysis, associations between male partner influence and race/ethnicity were measured in regard to unintended pregnancy risk. Specifically, we examined racial/ethnic differences in the prevalence of and odds for experiencing unintended pregnancy, reproductive coercion, and IPV; the association between race/ethnicity, reproductive coercion, and IPV in the prediction of unintended pregnancy; and the influence of experiencing reproductive coercion as a predictor for an unintended pregnancy among Black and White women. Overall, we saw significant racial/ethnic differences in experiences of IPV, reproductive coercion, and unintended pregnancy. After adjusting for covariates, Asian/PI was the only racial/ethnic group in which risk for unintended pregnancy was significantly different from White women. Regarding the influence of male intimate partners, reproductive coercion was significantly associated with unintended pregnancy risk, overall, and for White and Black women, individually. However, when compared to White women, Black and multiracial women were significantly more likely to experience reproductive coercion. Reproductive coercion as a contributor for unintended pregnancy was not a prominent factor in the systematic literature, but was greatly documented in the qualitative and quantitative components of the study.

The qualitative study supported and contributed to results from the previous components of the dissertation regarding the influence of men on risk for unintended pregnancy. Nearly the entire sample experienced IPV within their lifetime; however, a difference in the prevalence of reproductive coercion was higher among Black women, which we also found in the quantitative component, and the experiences of reproductive coercion differed between the two groups. Black

women mentioned ways that they coped with reproductive coercion like hiding their birth control in a covert compartment of their purse. The report of child sexual abuse in the perspective of reproductive health also differed between the two groups and was only reported by White women. Nonetheless, additional childhood experiences such as neglect or having to care for children at a young age were experiences that either contributed to or deterred experiences of unintended pregnancy.

In this dissertation study, each component provided a foundation for subsequent components in the examination of factors that contribute to racial/ethnic differences in risk for unintended pregnancy, reproductive coercion, and IPV. Through the systematic literature review, we identified a gap in the literature pertaining to the impact of male partners in adverse reproductive health. The quantitative analysis allowed for the study of associations between male influence (IPV and reproductive coercion) and race/ethnicity in terms of unintended pregnancy risk. Finally, the qualitative component provided deeper insight into how men contribute to risk for an unwanted pregnancy. These findings contribute to the existing body of literature, provide knowledge to enhance policy development and refinement, and highlight areas where research is needed.

7.5 IMPLICATIONS FOR POLICY AND PRACTICE

Literature pertaining to the association between unintended pregnancy, IPV, and reproductive coercion in the context of racial/ethnic disparities is relevant for public health practice as well as clinical and structural-level policies (Miller, Jordan, et al., 2010). The prevalence of IPV among adolescents and younger women has remained fairly consistent for the last decade (Centers for

Disease Control and Prevention, 2012), and the majority of births in the U.S. are unintentional (Finer & Zolna, 2013), indicating a need for policy refinement. Furthermore, the influence of race/ethnicity persists in health outcomes (Borrero, Schwarz, et al., 2009; Borrero et al., 2007; Wingood et al., 2001).

Recent implementation of the Affordable Care Act (ACA) addresses IPV and reproductive health of women. Under this health insurance reform legislation, women are able to receive gynecological examinations and other reproductive health screenings free of charge. Women are also able to receive contraception and be screened and counseled for health issues such as IPV and HIV (U.S. Department of Health and Human Services, 2013b). Nonetheless, aside from potentially increasing access to care among individuals of low SES and racial/ethnic minorities, the ACA does not fully remedy the issue of unintended pregnancy, reproductive coercion, and IPV as these outcomes are the results of a number of ecological factors (Center for Disease Control and Prevention, 2013), like the influence of male partners.

This dissertation is applicable to public health practice and highlights the need for refinement at all levels of prevention. For primary prevention of unintended pregnancy, these findings should be used to enhance sexual education practices to include information specific to racial/ethnic minorities. In particular, this education should include information about contraception (i.e. proper use) and the reproductive cycle of women (when conception can occur). Increased awareness and coping strategies pertaining to reproductive coercion and IPV should be inserted into comprehensive sexual education courses. Also, implementation of interventions for young men to promote healthy and respectful relationships (Miller, Jordan, et al., 2010) are needed. Through public health interventions such as “Coaching Boys into Men”, we may abate violence against women by promoting gender-equitable social norms among men, in particular, but also

within society as a whole. At the secondary level of prevention, public health interventions should be developed to prevent repeated unintended pregnancies among young women. And finally, at the tertiary level, early detection of unintended pregnancy is needed, especially among racial/ethnic groups that are more likely to lack health coverage, to promote early onset prenatal care early.

In a previous study, women seeking general obstetric and gynecological care stated that they wished their health care provider had discussed covert methods of contraception (20%) and asked about pregnancy coercion (14%) (Clark et al., 2013). From the qualitative data analyzed in this study, we found that reproductive coercion and IPV were concerning issues, especially among Black and multiracial women. Both clinical-based and public health interventions are needed to teach women how to cope with issues like birth control sabotage and pregnancy prevention. In urban family planning clinics in northern California, women who reported experiencing IPV within the last three months were invited to complete a clinical intervention. As a result, these women were less likely to experience pregnancy coercion, with a 71% odds reduction (Miller et al., 2011). Despite consistent reports of IPV between baseline and follow-up, women in the intervention group were significantly more likely than women in the control group to detach from an abusive intimate partner and to end an unhealthy relationship (Miller et al., 2011). More widespread implementation of such an intervention is needed to address the concerns of reproductive coercion and IPV.

Providers' screening methodologies for patients visiting family planning clinics or seeking routine care should be altered to probe for reproductive coercion and IPV, taking into account differences in race-related experiences and culture. While legislation encourages health professionals to inquire about IPV (U.S. Department of Health and Human Services, 2013b), more

information may be required for health care providers to analyze the intricacies of this behavior and link patients with appropriate public health resources. Namely, brief questions tailored to pregnancy coercion and birth control sabotage have been shown to reduce the likelihood of pregnancy coercion among abused women. It is also important for health care providers to consider underlying implications for why a woman is not compliant to prescribed contraception regimens or experience multiple unintended pregnancies, for example.

Policies regarding contraception may result in large cost savings (Finer & Zolna, 2013) given that the ecological factors outlined are considered. Younger women aged 18 to 24, the sub-population that has highest rate of unintended pregnancy, are less likely to use long-acting forms of contraception that may be hidden from male partners. Given the relationship between reproductive coercion and unintended pregnancy (Miller et al., 2013), women at risk for unintended pregnancy should be counseled on long-acting contraception (Finer & Sonfield, 2013). Such methods may prevent acts of sabotage and other pregnancy prevention barriers.

7.6 NEXT STEPS FOR RESEARCH

This study included women from family planning clinics in northern California and western Pennsylvania. These findings highlight the need to develop more targeted research studies that focus, specifically, on race-related experiences. The findings should be translated into both public health and clinical practices. In the future, an expansion of the study to include a socioeconomically diverse population would increase generalizability of the findings and allow for comparison between socioeconomic groups. Furthermore, a deeper exploration of the influence of male partners on risk for unintended pregnancy, reproductive coercion, and IPV is needed. To

achieve this, quantitative and qualitative studies that include men should be conducted. Finally, considering the similarities among Black and multiracial women, a qualitative study that compares experiences between these racial/ethnic groups may provide a deeper understanding of race-related factors that influence reproductive health.

8.0 CONCLUSION

Of all pregnancies that occur in the U.S., half are unintended. This outcome is of particular public health significance due to disproportionate experiences of unintended pregnancy among sub-populations (racial/ethnic minorities and younger women) and adverse health outcomes incurred by women who experience an unintended pregnancy and their offspring. The association between unintended pregnancy and race/ethnicity is not commonly cited in the literature, outside of basic epidemiological findings.

As a collective document, this dissertation presents common factors experienced by women of different racial/ethnic groups, which may contribute to their risk of having an unintended pregnancy. The influence of socio-demographic characteristics (specifically, age and education), pregnancy intention, male partners, women's behavior prior to conception, and contraceptive use are topics that emerged while we explored the literature for associations between race/ethnicity and unintended pregnancy. Findings from the systematic literature review were then used to inform the analysis of both quantitative and qualitative datasets.

As findings from this dissertation reflect, odds for unintended pregnancy differ by race/ethnicity. Thus, this dissertation has implications for future public health interventions and clinical policy. Next steps should include a more thorough look at correlates of unintended pregnancy in the context of race/ethnicity and other confounding variables.

APPENDIX A: SURVEY QUESTIONS

- Q1. Please Enter Your I.D. Number ____ _
- Q2. Please tell us the health center where you are taking this survey right now. (Choose one) (Choose one)
- 0 [:nr] Antioch
 - 1 [:nr] Central Richmond
 - 2 [:nr] Fairfield
 - 3 [:nr] Hilltop
 - 4 [:nr] Vallejo

Q6.

What is the main reason you're at the health center today? (check all that apply) (Check all that apply)

- [:nr] Pap smear
- [:nr] STD test
- [:nr] H.I.V. test
- [:nr] Condoms
- [:nr] Birth control other than condoms
- [:nr] Yeast Infection Check
- [:nr] Irregular periods
- [:nr] Pregnancy test
- [:nr] Pregnancy termination/Abortion
- [:nr] Abortion Follow-up
- [:nr] Morning after pill (Emergency Contraception)
- [:nr] Painful urinations/sores/pain around genitals
- [:nr] S.T.D. Treatment
- [:nr] TB Test
- [:nr] Rash
- [:nr] Prenatal visit
- [:nr] Other
- Refuse to Answer

Q7.

What is your age?

Enter your age below and then click "next question".

98 Refuse to Answer

Q8.

Which of these groups best represents your race or ethnic background? (Choose one) (Choose one)

- 0 [:nr] American Indian or Alaska Native
- 1 [:nr] Asian
- 2 [:nr] Black or African American
- 3 [:nr] Hispanic or Latina
- 4 [:nr] Native Hawaiian or other Pacific Islander
- 5 [:nr] White
- 6 [:nr] Multiracial/More than one race
- 7 [:nr] Other

If Q8 is less than 7, then skip to Q9.

Q8A. You chose "Other" as your race or ethnicity. Please type in your race/ethnicity

Q9.

What is your current relationship status? (Choose one) (Choose one)

- 01 [:nr] Single
- 02 [:nr] Dating more than 1 person
- 03 [:nr] Dating 1 person/In a serious relationship
- 04 [:nr] Married
- 05 [:nr] Living with a partner, not married
- 06 [:nr] Divorced/Separated, not in a relationship now
- 07 [:nr] Divorced/Separated, in a relationship now
- 08 [:nr] Widowed, not in a relationship now
- 09 [:nr] Widowed, in a relationship now
- 98 Refuse to Answer

Q11.

Have you ever had vaginal sex with a male? (*by vaginal sex with a male we mean the penis enters the vagina*) (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes

Q12. How many regular sex partners do you currently have? (Choose one)

- 0 [:nr] 0
- 1 [:nr] 1
- 2 [:nr] 2 or more
- 8 Refuse to Answer

Q13. In **your lifetime**, have you ever been hit, pushed, slapped, choked or otherwise physically hurt by someone you were dating or going out with? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

Q14. In **your lifetime**, has someone you were dating or going out with **insisted** (without using force or threats) on having sex (vaginal, oral, or anal sex) with you when you didn't want to? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

- Q15. In **your lifetime**, has someone you were dating or going out with **used threats** to make you have sex (vaginal, oral, or anal sex) with them? (Choose one)
- 0 [:nr] No
 - 1 [:nr] Yes
 - 8 Refuse to Answer
- Q16. In **your lifetime**, has someone you were dating or going out with **used force** (hitting, holding down, using a weapon) to make you have sex (vaginal, oral, or anal sex) with them? (Choose one)
- 0 [:nr] No
 - 1 [:nr] Yes
 - 8 Refuse to Answer
- Q17. In the **past three months**, have you been hit, pushed, slapped, choked or otherwise physically hurt by someone you were dating or going out with? (Choose one)
- 0 [:nr] No
 - 1 [:nr] Yes
 - 8 Refuse to Answer
- Q18. In the past **three months**, has someone you were dating or going out with **insisted** (without using force or threats) on having sex (vaginal, oral or anal sex) with you when you didn't want to? (Choose one)
- 0 [:nr] No
 - 1 [:nr] Yes
 - 8 Refuse to Answer
- Q19. In the past **three months**, has someone you were dating or going out with **used threats** to make you have sex (vaginal, oral or anal sex) with them? (Choose one)
- 0 [:nr] No
 - 1 [:nr] Yes
 - 8 Refuse to Answer
- Q20. In the past **three months**, has someone you were dating or going out with **used force** (hitting, holding down, using a weapon) to make you have sex (vaginal, oral, or anal sex) with them? (Choose one)
- 0 [:nr] No
 - 1 [:nr] Yes
 - 8 Refuse to Answer

The remaining survey items will ask you about sexual encounters with non-paying partners. Please answer the rest of the questions thinking only about male sex partners that you have NOT received money, drugs, gifts or shelter from.

Q30. During **your lifetime**, how many men have you had vaginal sex with? (Choose one)

- 1 [:nr] 1 person
- 2 [:nr] 2 to 5 people
- 3 [:nr] 6 to 10 people
- 4 [:nr] 11 to 25 people
- 5 [:nr] 26 to 50 people
- 6 [:nr] More than 50 people
- 8 Refuse to Answer

The next questions are about talking to your partners about birth control or condoms.

Q31. I feel confident in my ability to discuss condom use with any partner I might have. (Choose one)

- 1 [:nr] Strongly agree
- 2 [:nr] Agree
- 3 [:nr] Undecided
- 4 [:nr] Disagree
- 5 [:nr] Strongly disagree
- 8 Refuse to Answer

Q32. I feel confident in my ability to suggest using condoms with a new partner. (Choose one)

- 1 [:nr] Strongly agree
- 2 [:nr] Agree
- 3 [:nr] Undecided
- 4 [:nr] Disagree
- 5 [:nr] Strongly disagree
- 8 Refuse to Answer

Q33. If I were to ask my partner to use a condom, I would be afraid that he would be upset with me. (Choose one)

- 1 [:nr] Strongly agree
- 2 [:nr] Agree
- 3 [:nr] Undecided
- 4 [:nr] Disagree
- 5 [:nr] Strongly disagree
- 8 Refuse to Answer

Q34. If I were unsure of my partner's feelings about using condoms, I would not ask him to use one. (Choose one)

- 1 [:nr] Strongly agree
- 2 [:nr] Agree
- 3 [:nr] Undecided
- 4 [:nr] Disagree
- 5 [:nr] Strongly disagree
- 8 Refuse to Answer

Q35. If my partner didn't want to use a condom during sex, I feel confident in my ability to refuse to have sex with him. (Choose one)

- 1 [:nr] Strongly agree
- 2 [:nr] Agree
- 3 [:nr] Undecided
- 4 [:nr] Disagree
- 5 [:nr] Strongly disagree
- 7 Don't Know
- 8 Refuse to Answer
- 9 Not Applicable

Q36. When you don't ask your male sex partner to use a condom, what are the reasons? (check all that apply) (Check all that apply)

- ___ [:nr] My sex partners always use a condom.
- ___ [:nr] I use another birth control method
- ___ [:nr] I am not concerned about getting pregnant
- ___ [:nr] I am not concerned about getting an infection (STD, sexually transmitted disease)
- ___ [:nr] Sometimes I have been afraid to ask a sex partner to use a condom
- ___ [:nr] I don't like using condoms
- ___ [:nr] My partner doesn't like using condoms
- ___ [:nr] I am worried about what my partner would think if I asked.
- ___ [:nr] Sometimes we don't have a condom
- ___ [:nr] I don't always talk about using condoms with my sex partners.
- ___ [:nr] Some other reason
- ___ Refuse to Answer

Q37. Has a male sex partner ever done the following because you asked him to use a condom: (Check all that apply) (Check all that apply)

- [nr] Accused you of cheating or say you were accusing them of cheating
- [nr] Physically hurt you
- [nr] Made you have sex or do something sexual when you didn't want to
- [nr] Thought you had a disease (STD) or said you were accusing them of having a disease (STD)
- [nr] None of these have happened
- Refuse to Answer

If Q37E is equal to 1, then skip to Q39.

Q38. In the **past three months**, has a male sex partner done the following because you asked him to use a condom: (Check all that apply) (Check all that apply)

- [nr] Accused you of cheating or say you were accusing them of cheating
- [nr] Physically hurt you
- [nr] Made you have sex or do something sexual when you didn't want to
- [nr] Thought you had a disease (STD) or say you were accusing them of having a disease (STD)
- [nr] No, none of these have happened
- Refuse to Answer

Q39. Have you ever been afraid to ask your male sex partner to use a condom because he might: (Check all that apply) (Check all that apply)

- [nr] Accuse you of cheating or say you were accusing him of cheating
- [nr] Physically hurt you
- [nr] Make you have sex or do something sexual when you didn't want to
- [nr] Thought you had an STI or say you were accusing him of having an STI
- [nr] No, I have never been afraid to ask a sex partner to use a condom
- Refuse to Answer

If Q39E is equal to 1, then skip to Q41.

Q40. In the **past three months**, have you been afraid to ask your male sex partner to use a condom because he might: (Check all that apply) (Check all that apply)

- [nr] Accuse you of cheating or say you were accusing him of cheating
- [nr] Physically hurt you
- [nr] Make you have sex or do something sexual when you didn't want to
- [nr] Thought you had an STI or say you were accusing him of having an STI
- [nr] No, I have never been afraid to ask my partner to use a condom
- Refuse to Answer

- Q41. Have you ever been afraid to discuss birth control with your male sex partner because he might: (Check all that apply) (Check all that apply)
- [:nr] Physically hurt you
 - [:nr] Make you have sex or do something sexual when you didn't want to
 - [:nr] No, I have never been afraid to talk to my partner about birth control
 - Refuse to Answer

If Q41 is equal to 1, then skip to Q43.

- Q42. In the **past three months**, have you been afraid to discuss birth control with your male sex partner because he might: (Check all that apply) (Check all that apply)
- [:nr] Physically hurt you
 - [:nr] Make you have sex or do something sexual when you didn't want to
 - [:nr] No, I have not been afraid to discuss birth control in the past three months.
 - Refuse to Answer

- Q43. Have you ever been afraid to refuse sex with a male sex partner because he might: (Check all that apply) (Check all that apply)
- [:nr] Not have sex with you
 - [:nr] Have sex with other people
 - [:nr] Leave you
 - [:nr] Accuse you of cheating or say you were accusing him of cheating
 - [:nr] Physically hurt you
 - [:nr] Make you have sex or do something sexual when you didn't want to
 - [:nr] No, I have never been afraid to refuse sex
 - Refuse to Answer

If Q43G is equal to 1, then skip to Q45.

- Q44. In the **past three months**, have you been afraid to refuse sex with a male sex partner because he might: (Check all that apply) (Check all that apply)
- [:nr] Not have sex with you
 - [:nr] Have sex with other people
 - [:nr] Leave you
 - [:nr] Accuse you of cheating or say you were accusing him of cheating
 - [:nr] Physically hurt you
 - [:nr] Make you have sex or do something sexual when you didn't want to
 - [:nr] No, I have never been afraid to refuse sex.
 - Refuse to Answer

Q45. How often can you refuse sex if you aren't interested? (Choose one)

- 0 [:nr] None of the time
- 1 [:nr] Some of the time
- 2 [:nr] Most of the time
- 3 [:nr] All the time
- 8 Refuse to Answer

The next few questions are going to ask you about vaginal sex in the past 3 months

Q46. During the **past 3 months**, how many men did you have vaginal sex with? (Choose one)

- 1 [:nr] More than 10 people
- 2 [:nr] 6 to 10 people
- 3 [:nr] 2 to 5 people
- 4 [:nr] 1 person
- 5 [:nr] I have not had vaginal sex in the past 3 months.
- 8 Refuse to Answer

If Q46 is equal to 5, then skip to Q48.

Q47. During the **past 3 months**, when you had vaginal sex, how often did you or your sex partner(s) use a condom? (Choose one)

- 0 [:nr] Never
- 1 [:nr] Rarely
- 2 [:nr] Sometimes
- 3 [:nr] Usually
- 4 [:nr] Always
- 8 Refuse to Answer

Q48. In the past **three months**, how many times have you had sex without a condom when you wanted to use one? (Choose one)

- 0 [:nr] Never
- 1 [:nr] Once
- 2 [:nr] Twice
- 3 [:nr] Three or more times
- 8 Refuse to Answer

Q49. During the **past 3 months**, did you have vaginal sex with someone when you did not want to? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

Q54. In the past **3 months**, did someone cheat on you by having sex with someone else when they were supposed to only be having sex with you?
(Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 7 Don't Know
- 8 Refuse to Answer

Q68. Do you currently want to get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

If Q68 is equal to 0, then skip to instruction before Q70.

Q69. You said you currently want to get pregnant. (Choose one) (Choose one)

- 0 [:nr] This is something I want.
- 1 [:nr] This is something my partner wants
- 2 [:nr] This is something me and my partner BOTH want.
- 8 Refuse to Answer

If Q11 is equal to 0, then skip to instruction before Q97.

Q70. How many times have you been pregnant? (Please include any pregnancies that ended in miscarriage or abortion.) (Choose one)

- 0 [:nr] Never
- 1 [:nr] 1 time
- 2 [:nr] 2 to 4 times
- 3 [:nr] 5 to 9 times
- 4 [:nr] 10 or more times
- 7 Don't Know
- 8 Refuse to Answer

If Q70 is equal to 0, then skip to Q78.

Q71. How many times have you been pregnant **when you didn't want to be**? (Choose one)

- 0 [:nr] Never
- 1 [:nr] 1 time
- 2 [:nr] 2 to 4 times
- 3 [:nr] 5 to 9 times
- 4 [:nr] 10 or more times
- 8 Refuse to Answer

- Q72. How many times have you had an abortion? (Choose one)
- 0 [:nr] Never
 - 1 [:nr] 1 time
 - 2 [:nr] 2 to 4 times
 - 3 [:nr] 5 to 9 times
 - 4 [:nr] 10 or more times
 - 8 Refuse to Answer
- Q73. How many times have you had a miscarriage? (Choose one)
- 0 [:nr] Never
 - 1 [:nr] 1 time
 - 2 [:nr] 2 to 4 times
 - 3 [:nr] 5 to 9 times
 - 4 [:nr] 10 or more times
 - 8 Refuse to Answer
- Q74. How many children did you give birth to? __ __
- 98 Refuse to Answer
- Q75. In any of your pregnancies did the man that got you pregnant ever respond to the pregnancy by (Check all that apply) (Check all that apply)
- __ [:nr] saying that it was not his baby or accuse you of cheating
 - __ [:nr] trying to make you get an abortion
 - __ [:nr] stop calling you back after you told him you were pregnant
 - __ [:nr] threaten to hurt you physically or actually hurt you physically (shaking, hitting, punching, choking, slapping)
 - __ [:nr] none of these
 - __ Refuse to Answer
- Q76. In any of your pregnancies did you ever argue with your partner about how to handle it? (Choose one)
- 0 [:nr] No
 - 1 [:nr] Yes, because I wanted to have an abortion and he wanted to continue the pregnancy
 - 2 [:nr] Yes, because I wanted to continue the pregnancy and he wanted me to get an abortion
 - 8 Refuse to Answer
- Q77. Has someone you were dating or going out with ever tried to force or pressure you to become pregnant? (Choose one)
- 0 [:nr] No
 - 1 [:nr] Yes
 - 8 Refuse to Answer

Q78. Has someone you were dating or going out with **ever** told you not to use any birth control (like the pill, shot, ring, etc.)? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

If Q78 is equal to 0, then skip to Q80.

Q79. In the **past three months**, has someone you were dating or going out with told you not to use any birth control (like the pill, shot, ring, etc.)? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

Q80. Has someone you were dating or going out with **ever** said he would leave you if you didn't get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

If Q80 is equal to 0, then skip to Q82.

Q81. In the **past three months**, has someone you were dating or going out with said he would leave you if you didn't get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

Q82. Has someone you were dating or going out with **ever** told you he would have a baby with someone else if you didn't get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

If Q82 is equal to 0, then skip to Q84.

Q83. In the **past three months**, has someone you were dating or going out with told you he would have a baby with someone else if you didn't get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

Q84. Has someone you were dating or going out with **ever** taken off the condom while you were having sex, so that you would get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

If Q84 is equal to 0, then skip to Q86.

Q85. In the **past three months**, has someone you were dating or going out with taken off the condom while you were having sex, so that you would get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

Q86. Has someone you were dating or going out with **ever** put holes in the condom so you would get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

If Q86 is equal to 0, then skip to Q88.

Q87. In the **past three months**, has someone you were dating or going out with put holes in the condom so you would get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

Q88. Has someone you were dating or going out with **ever** broken a condom on purpose while you were having sex so you would get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

If Q88 is equal to 0, then skip to Q90.

Q89. In the past **three months**, has someone you were dating or going out with broken the condom on purpose while you were having sex so you would get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

Q90. Has someone you were dating or going out with **ever** taken your birth control (like pills) away from you or kept you from going to the clinic to get birth control, so you would get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

If Q90 is equal to 0, then skip to Q92.

Q91. In the **past three months**, has someone you were dating or going out with taken your birth control (like pills) away from you or kept you from going to the clinic to get birth control, so you would get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

Q92. Has someone you were dating or going out with **ever** made you have sex without a condom so you would get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

If Q92 is equal to 0, then skip to Q94.

Q93. In the **past three months**, has someone you were dating or going out with made you have sex without a condom so you would get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

Q94. Has someone you were dating or going out with **ever** hurt you physically because you did not agree to get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

If Q94 is equal to 0, then skip to instruction before Q96.

Q95. In the **past three months**, has someone you were dating or going out with hurt you physically because you did not agree to get pregnant? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

The next question is about birth control.

Q96. What methods in the past 3 months have you used to **prevent pregnancy**? (Check all that apply) (Check all that apply)

- [:nr] I have not had sex in the past 3 months
- [:nr] I do not use anything to prevent pregnancy
- [:nr] Birth control pills
- [:nr] Condoms
- [:nr] Depo-Provera (injectable birth control)
- [:nr] Withdrawal
- [:nr] Patch
- [:nr] Nuva ring
- [:nr] IUD
- [:nr] The morning after pills or Plan B
- [:nr] Some other method
- Refuse to Answer

Q97. How abusive do you think this is:

pressuring you to have sex with him when you've said no (Choose one)

- 0 [:nr] Not abusive
- 1 [:nr] A Little Abusive
- 2 [:nr] Very Abusive
- 3 [:nr] Extremely Abusive
- 7 Don't Know

Q98. How abusive do you think this is:

refusing to use a condom when you ask (Choose one)

- 0 [:nr] Not abusive
- 1 [:nr] A Little Abusive
- 2 [:nr] Very Abusive
- 3 [:nr] Extremely Abusive
- 7 Don't Know

Q99. How abusive do you think this is:
preventing you from using birth control when you want to use it (Choose one)

- 0 [:nr] Not abusive
- 1 [:nr] A Little Abusive
- 2 [:nr] Very Abusive
- 3 [:nr] Extremely Abusive
- 7 Don't Know

Q100. How abusive do you think this is:
trying to get you pregnant when you don't want to be (Choose one)

- 0 [:nr] Not abusive
- 1 [:nr] A Little Abusive
- 2 [:nr] Very Abusive
- 3 [:nr] Extremely Abusive
- 7 Don't Know

Q101. How abusive do you think this is:
trying to make you have an abortion when you don't want one (Choose one)

- 0 [:nr] Not abusive
- 1 [:nr] A Little Abusive
- 2 [:nr] Very Abusive
- 3 [:nr] Extremely Abusive
- 7 Don't Know

Q102. How abusive do you think this is:
trying to make you keep a pregnancy that you don't want (Choose one)

- 0 [:nr] Not abusive
- 1 [:nr] A Little Abusive
- 2 [:nr] Very Abusive
- 3 [:nr] Extremely Abusive
- 7 Don't Know

Q103. How abusive do you think this is:

accusing you of cheating when you ask him to use a condom (Choose one)

- 0 [:nr] Not abusive
- 1 [:nr] A Little Abusive
- 2 [:nr] Very Abusive
- 3 [:nr] Extremely Abusive
- 7 Don't Know

Q104. How abusive do you think this is:

threatening to leave you if you don't have sex with him (Choose one)

- 0 [:nr] Not abusive
- 1 [:nr] A Little Abusive
- 2 [:nr] Very Abusive
- 3 [:nr] Extremely Abusive
- 7 Don't Know

Q105. How abusive do you think this is:

threatening to have sex with others if you don't have sex with him (Choose one)

- 0 [:nr] Not abusive
- 1 [:nr] A Little Abusive
- 2 [:nr] Very Abusive
- 3 [:nr] Extremely Abusive
- 7 Don't Know

Q106. Have you ever hidden birth control from a sexual partner because you were afraid he'd get upset with you for using it? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

Q107. Have you ever changed your birth control method so that you would have more say in how and when you use it instead of your partner telling you this? (Choose one)

- 0 [:nr] No
- 1 [:nr] Yes
- 8 Refuse to Answer

- Q108. Have you ever not told a sexual partner about having an STD (sexual disease) because you were afraid he'd get upset with you? (Choose one)
- 0 [:nr] No
1 [:nr] Yes
8 Refuse to Answer
- Q109. Have you ever brought your partner into the clinic to tell him you have an STD because it would be the safest place to tell him? (Choose one)
- 0 [:nr] No
1 [:nr] Yes
8 Refuse to Answer
- Q110. Have you ever tried to protect yourself from a partner by asking friends or family to check in when you were with him? (Choose one)
- 0 [:nr] No
1 [:nr] Yes
8 Refuse to Answer
- Q111. If you have ever been forced into sex, have you ever tried to get help from or tell any of the following: (Check all that apply) (Check all that apply)
- ___ [:nr] I have never been forced into having sex
___ [:nr] I have been forced into sex but I have never told anyone
___ [:nr] a friend
___ [:nr] a sister, brother or cousin
___ [:nr] a parent/guardian
___ [:nr] a religious leader
___ [:nr] a Health Care Provider (doctor, nurse, or other health care person)
___ [:nr] someone else
___ [:nr] Looked for help on the internet
___ [:nr] the Police
___ [:nr] a domestic violence or rape hotline
___ Refuse to Answer
- Q112. Do you know about the following services in your area (Check all that you know about)? (Check all that apply)

- ___ [:nr] STAND!
- ___ [:nr] Counseling offered at Planned Parenthood
- ___ [:nr] Community Violence Solutions (CVS)
- ___ [:nr] Familias Unidas
- ___ [:nr] Safe Passages
- ___ [:nr] National Domestic Violence hotline
- ___ [:nr] SafeQuest
- ___ [:nr] Sanctuary in Abused Family Emergencies (SAFE)
- ___ [:nr] No, I do not know about any of these services.

Q113. Have you used any of the following services in the past 3 months? (Check all that apply) (Check all that apply)

- ___ [:nr] STAND!
- ___ [:nr] Counseling services offered at Planned Parenthood
- ___ [:nr] Community Violence Solutions (CVS)
- ___ [:nr] Familias Unidas
- ___ [:nr] Safe Passages
- ___ [:nr] National Domestic Violence Hotline
- ___ [:nr] SafeQuest
- ___ [:nr] Sanctuary in Abused Family Emergencies (SAFE)
- ___ [:nr] No, I have not used any of these services

Q115. Would you say that in general your health is: (Choose one) (Choose one)

- 1 [:nr] Excellent
- 2 [:nr] Very good
- 3 [:nr] Good
- 4 [:nr] Fair
- 5 [:nr] Poor
- 7 Don't Know
- 8 Refuse to Answer

If Q11 is equal to 0, then skip to instruction before Q120.

Q116. In the **past three months**, how many times have you come into a family planning clinic for a pregnancy test? (Choose one)

- 0 [:nr] Not at all
- 1 [:nr] 1 time
- 2 [:nr] 2 times
- 3 [:nr] 3 or more times
- 7 Don't Know
- 8 Refuse to Answer

Q117. In the **past three months**, how many times have you taken the morning after pill, Plan B or emergency contraception? (Choose one)

- 0 [:nr] Not at all
- 1 [:nr] 1 time
- 2 [:nr] 2 times
- 3 [:nr] 3 or more times
- 7 Don't Know
- 8 Refuse to Answer

Q118. In the **past 3 months**, how many times have you had an abortion? (Choose one)

- 0 [:nr] Not at all
- 1 [:nr] 1 time
- 2 [:nr] 2 times
- 3 [:nr] 3 or more times
- 7 Don't Know
- 8 Refuse to Answer

These last few questions will help us better know where you come from.

Q120. What is the highest grade or year of school you completed? (Choose one) (Choose one)

- 1 [:nr] Never attended school or attended only through kindergarten
- 2 [:nr] Grades 1 through 8 (elementary)
- 3 [:nr] Grades 9-11 (some high school)
- 4 [:nr] Grades 12 or GED (high school graduate)
- 5 [:nr] Some college or technical school
- 6 [:nr] Graduated from college or technical school
- 8 Refuse to Answer

- Q121. What is your US citizenship status? (Choose one)
- 01 [:nr] US citizen
 - 02 [:nr] Permanent resident
 - 03 [:nr] Student visa
 - 04 [:nr] Dependent visa
 - 05 [:nr] Other visa status
 - 06 [:nr] Undocumented (no legal US immigration status)
 - 07 [:nr] Don't want to tell
 - 97 Don't Know
 - 98 Refuse to Answer
 - 99 Not Applicable

- Q122. Were you born in the United States? (Choose one)
- 0 [:nr] No
 - 1 [:nr] Yes
 - 8 Refuse to Answer

If Q122 is equal to 1, then skip to end of questionnaire.

Q122A. Where were you born? (Choose one) (Choose one)

- 00 [:nr] Cape Verde
- 01 [:nr] Ethiopia
- 02 [:nr] Another African Country
- 03 [:nr] Dominican Republic
- 04 [:nr] Haiti
- 05 [:nr] Puerto Rico
- 06 [:nr] Another Caribbean country
- 07 [:nr] India
- 08 [:nr] China
- 09 [:nr] Vietnam
- 10 [:nr] Cambodia
- 11 [:nr] Japan
- 12 [:nr] Another Asian Country
- 13 [:nr] Mexico
- 14 [:nr] Nicaragua
- 15 [:nr] Guatemala
- 16 [:nr] El Salvador
- 17 [:nr] Honduras
- 18 [:nr] Costa Rica
- 19 [:nr] Brazil
- 20 [:nr] Another South or Central American country
- 21 [:nr] Another country not listed here
- 97 Don't Know
- 98 Refuse to Answer

APPENDIX B: INTERVIEW SCRIPT AND CODE BOOK

QUALITATIVE INTERVIEW SCRIPT

Screening

[If age >17, then skips to this page; if age 16 or 17, respondent sees, “Thank you so much for participating in this study! You have made a difference in women’s lives by volunteering to be in this study. We are truly thankful for your time and effort.”]

Thank you for completing our computer survey! We are also conducting another study, where we talk with women face-to-face about some of their experiences -- Our goal is to really understand women’s experiences through their words not just through a computer survey because we know it leaves important details out that give us insight in to the kinds of things women need from health care providers and health education materials - so your voice really matters.

Are you interested in participating in this study? If so please click “Yes” and you will go to a different short survey to determine whether you might qualify to be in this other study. **[If client clicks, “No,” they are taken to the summary page, “Thank you so much for participating in this study.” If client clicks, “Yes,” then presented with the following questions]**

1) In the past year, have you had vaginal sex with a male partner?

[1] Yes

[0] No

[8] Refuse to answer

SKIP TO END OF SURVEY IF THEY ANSWER “NO” TO QUESTION 1

2) Are you currently in a relationship?

[1] Yes

[0] No

[8] Refuse to answer

3) In the past 12 months, how often did you use a condom when you had sex?

[5] Always

[4] Almost always

[3] Sometimes

[2] Rarely

[1] Never

[8] Refuse to answer

4) In your lifetime have you ever had a partner that has hit, slapped, choked, kicked, physically hurt or threatened you in any way?

[1] Yes

[0] No

[8] Refuse to answer

5) In your lifetime has a partner ever made you do something sexual when you did not want to? That can include making you have sex when you didn't want to as well as threats to hurt you if you didn't do what they wanted.

[1] Yes

[0] No

[8] Refuse to answer

6) Has a current or former sexual partner tried to pressure you or actively tamper or mess with your birth control or the condom to get pregnant when you did not want to be pregnant?

[1] Yes

[0] No

[8] Refuse to answer

7) Since you started having sex, how often have you used drugs or alcohol before having sex?

[5] Always

[4] Almost always

[3] Sometimes

[2] Rarely

[1] Never

[8] Refuse to answer

If Q1=1 and (Q4=1 or Q5=1 or Q6=1) then client is eligible for the study.

Script for those women who do not qualify:

“Thank you so much for being interested in participating in our study. Based on your responses to the questions, your history does not match with whom we were hoping to interview for this next study. We really want to thank you so much for your time and interest, and for your participation in this study. You have really made a difference in helping women be safer and healthier. THANK YOU!”

Script for those women who qualify:

“Thanks you so much for being interested in participating in this study—we would very much like to interview you about your experiences in detail and think that understanding your story will benefit so many women. Please let the research assistant know that you have finished these questions and she will schedule a time for you to meet with one of our research staff members.”

Research assistant script to follow-up and schedule an interview:

“We will be conducting the interviews at _____. The interviews will take about 90 minutes, and you will receive a \$50 gift certificate for your time and effort. No one will know your answers. These interviews are completely anonymous, meaning absolutely no names attached. The interviewer records the interviews just so that we can be accurate when we listen to your story. Does that sound okay to you? [pause] Will it be safe for you to talk about these issues I just asked you about?”

Just so you know how this next part will work, we will be recording the interview. All the questions the interviewer will be talking with you about are anonymous, meaning we will not share your voice recording with anyone but the study team and we will not use your name or the names of any of your partners or anyone else you may mention in the interview. Any questions about this?

And just to make sure you understand— you may stop the interview at any time, skip any questions you do not wish to answer and still receive the \$50 gift card to thank you for your time. Do you have any questions for me?”

Interview Schedule

Thank you so much for agreeing to participate in this interview. The goal of this interview is to explore the links between birth control, decision making around sex and healthy and unhealthy relationships. We are doing this study to inform health care providers how to help women who are in unhealthy relationships.

During the interview I will be asking you about birth control, pregnancy, wanted and unwanted sexual experiences, and experiences of violence. I really want to make sure that I hear your story, for you to tell me whatever you feel comfortable sharing about your experiences and your health, as well as how you’ve shared any of these experiences with a health care provider. If you don’t feel like answering a question or talking about a particular subject, please feel free to just tell me to move on. I want to make sure you’re comfortable and that you don’t feel obligated to answer any questions you don’t want to. You can stop the interview completely at any time. You’re in charge of this interview.

First, do you have any additional questions about the research consent information we just reviewed together?

Life History Narrative Interview

Using large white paper to make timeline of key life events:

I’d like then to begin with a timeline.

- How old are you now?
- How far did you get in school?
- Have you lived here all your life?
- What other important life events should we put on this timeline?

Now please tell me about different relationships you’ve been in. Where are they on this timeline we just drew together?

Now I want to ask you about your safety right now. You have told us that you have been hurt physically or sexually by a current or former partner. Is this something that is happening to you right now?

Assess for safety:

Because my main concern is for your safety, before we go any further, I want to make sure you feel comfortable continuing with the interview and your participation isn't putting you in any danger

- Would you like help for what is happening to you right now?
- I'm the researcher on this project, but am also a violence prevention advocate; I can connect you to the right person who can help.
- If you're safe, we will continue the interview but at any time if you would like to stop – just let me know.
- Thank you so much for participating--what you share will help us understand how to help others.

IF the client says she is NOT currently being abused proceed with:

Because we know that being hurt by a partner can happen with different partners at different times in your life—tell me how old you were the first time a partner hurt you and a little bit about this person. Can you tell me about an incident that stands out most in your mind?

If client described physical abuse first, probe:

So you mentioned that your partner hurt you, I want to understand more about how your sexual relationship worked —because sometimes control or being hurt can carry over to this part of your life with a partner too.

If the client described sexual abuse first, proceed with sexual relationship questions and then probe for physical abuse:

- Did this partner ever hurt you physically?

Then proceed with more questions about their sexual relationship:

- Did your partner ever make you have sex when you didn't want to? Can you tell me more about that?
- Did you ever do sexual things you didn't want to because you were afraid of what he would do if you didn't?
- Did you ever have sex because you thought the partner would do something bad to you?
- Did you ever have sex because you thought the partner would do something bad to someone else?
- In addition to the things you just told me, was there ever any time when someone made you to do something sexual you didn't want to do or that you felt humiliated by?
- Do you think these experiences affected your relationships? Can you describe how? Did this ever happen with another partner? Can you show me how old you were on this timeline and tell me what was going on there?

If this did happen with another partner, ask questions (above) about their sexual relationship. Probe again to see if this has happened with any other partners.

Care seeking:

- Did you ever seek help from anyone or go anywhere get away from what was happening to you?
- Did you ever go to the doctor or hospital because of what was going on in your relationship? This could have been because of an injury, or an infection, or something else like this?
- Was there a time when you did not go when you thought you should?
- Were there strategies you used to take care of yourself or keep you safer when this was going on?
 - Call a hotline or contact some other agency?
 - *Probe for social supports, community response to partner violence or sexual assault*

Thank you for sharing that with me--nobody deserves to have that happen to them. You're not alone and we know many women have experienced these things and that's why we're doing this research. We really appreciate your help — your story helps us understand what it is like for women who have experienced what you have—and how we might do a better job of helping them.

Norms around partner violence and sexual assault:

We've talked a lot about your own experiences around relationships. How similar or different do you feel your experiences are from other women in your community? [*probe for examples*]

We're going to switch gears now to talk about your health, starting with pregnancies. Are you doing okay with this interview so far? Would you like to take a break?

Pregnancy

Have you ever been pregnant—when I say pregnant this could include having an abortion, a miscarriage or having delivered a baby? [*If no skip section*]

When was the first time you got pregnant? How old were you? [*place on timeline*]

Tell me about the person who got you pregnant? [*If she says she was raped victim of incest, etc.—“I am so sorry that happened to you, it happens so often. You didn't deserve to have that happen to you”*]

IF SHE says it was a partner ask: Were you hoping or planning to be pregnant at this time? Tell me more about that.

Did your partner know you were pregnant? (probe for partner involvement in pregnancy decision making)

What was the outcome of that pregnancy? (Abortion? Carried to term? Miscarriage? Adoption?)

Were you under any pressure one way or another about what to do with the pregnancy—pressure to have an abortion, have the baby or give the baby up for adoption? Tell me about where these pressures came from (was it resolved?)

Now think about any pregnancies you may have had:

- How many times you've been pregnant altogether, including live births, abortions, and miscarriages. *[Three or fewer pregnancies, then go through each pregnancy, place on timeline]*
- Did you ever want to get pregnant at a time when your partner wouldn't let you? *[tell me more]*
- Have you ever tried to get pregnant because you thought it would protect you? *[tell me more]*
- Have you ever gotten pregnant as a result of your partner preventing you from using birth control? How did that pregnancy end?

IF ANY ABORTION DESCRIBED:

- Have you ever had (or did you have) an abortion because you were afraid of what he would do because you were pregnant? (tell me more)
- Have you ever had an abortion and not told the person who got you pregnant??
- From the time you decided to have an abortion, did you feel delayed in any way when trying to get the abortion?
- Did you ever want to have an abortion but you weren't able to get it?

Pregnancy norms

We've talked about your own pregnancy experiences and pressures that you may have felt. How similar or different do you feel your experiences are from other women in your community? *[probe for examples]*

Birth Control

Now I'd like switch topics and talk about birth control.

- Have you ever done or used anything to prevent pregnancy? (Give examples? Withdrawal /pull out etc.?) *[place on timeline]*
 - Were your partners aware you were using BC?
- Have your sexual partners made decisions for you about what you could use or not use for birth control?
- Has a partner ever tried to prevent you from using birth control when you wanted to?
- Have you ever hidden your birth control from a partner?
- Do you think a partner has ever tried to get you pregnant when you didn't want to be? *[if yes]* How did you find out?
- Did you ever not use birth control because your partner didn't want you to?
- Have you used emergency contraception (some call it the morning after pill) before?
- Is this something you could easily get in your community?
 - *[IF client has not used EC]* Would you have used it if you could get it? Can you tell me more *(if available)* about why you didn't use it?

- *[If client HAS used EC]* How many times? Did your partner know you used it? When you used emergency contraception was the sex you had with that partner before you used EC sex that you wanted to have?
- What do you think your partner's reaction would have been if you had become pregnant?
- In that/those relationship(s) that you just described, were there times when you wanted to become pregnant?
- What was your thinking behind the decision to try and get pregnant at that time?
- Have you ever tried to get pregnant because you thought it would protect you?
- Tell me about the times you didn't want to get pregnant but you weren't using any kind of birth control. *[Probe for thoughts]*

Sexuality

We know a lot of women have sexual experiences, including first sexual experiences, that they did not want to have—and the person who had sex with them could have been anyone from a family member, to an adult family friend, to stranger they didn't know, to an abusive boyfriend.

- How old were you when you had sex for the first time? Please tell me more about that *[place on timeline]* Tell me about the person you were with? (age, relationship duration)
- At that time, what were your thoughts about getting pregnant? (who brought up contraception, any methods used, which ones)
- Looking back, would you say that you wanted to have sex then? Tell me more about your thoughts.
- (If it was unwanted): Has there been a time when you wanted to have sex?
- How old were you then? Tell me more about that. What was different?
- Have you ever exchanged sex for money, shelter drugs, and safety of someone else?
 - (if yes) Can you tell me more about that?
- How often do you get drunk or high before you have sex?
- When you have used drugs/alcohol right before or during sex, would you say that the sex was the same or different than when you were sober? How so?
- The last time you had sex drunk or high, can you describe that in some more detail? Tell me the story about what happened. *(Follow-up question: Has this happened in other relationships?)*
- You've described some of the abuse you've experienced in your relationships. Was substance use ever a part of that? *Probe: Did your sexual partner ever use drugs or alcohol before he hurt you?*
- How many people would you say you have had sex with? Go ahead and take a minute to think about it--.
[If deemed many, probe for consensual, non-consensual as well as sexual exploitation]
- Are there times when you feel like you've lost your power around sex? When? What was going on?
- Do you get pleasure from sex? Are you more interested in his pleasure or yours?

- Have you ever been surprised by your own sexual behavior? Have you ever been surprised to find yourself in sexual situations or having sex when you didn't plan on it?
- Have there been times when you haven't felt present or in your body in sexual situations, like you weren't really there? Could you describe when that happened?
- Have you ever worried about having an infection? Tell me more.
- Have you ever had a sexual infection? If yes, probe for narrative about infection.
 - Did you tell your partner(s) about it? [Did you have testing before you were with him?]
 - What made you decide (not) to tell your partner?
 - Did he find out another way?
 - How did he react?
 - Did he go for treatment?

Health care utilization and care seeking

We've talked a lot about birth control and pregnancy, and now I want to ask you a little bit about your experience going to the a clinic or to see your doctor.

- How old were you the first time you had a pelvic exam? How was that?
 - How often do you think you should go get a pelvic exam?
 - How often do you get a pelvic exam?
 - What might keep you from going to get a pelvic exam?
- Did a partner ever insist on going with you to see the health care provider when you didn't want him to?
- Did a partner ever stop you from seeing a doctor for (reproductive health) care? Tell me about what happened.
- Did you ever not go to the doctor when you thought you should?
- Has a health care provider ever asked you about violence or sexual abuse in your relationships? If YES, have you ever told a health care provider about what happened?
 - IF PROVIDER KNEW:
 - What did they do or say?
 - Was it helpful? What did they do right? Wrong?
 - Do you feel this improved your health? Safety?
 - IF NOT:
 - What would you have liked them to do?
- What do you think other women who are in a violent situation generally need from health care providers?
- What do you think is the most important thing a health care providers can do to help women exposed to abuse?

Summary

I'd like to go back now that we've also talked about your health, your body, and your experiences in relationships to try to summarize some thoughts with you.

What does a healthy relationship mean to you? If someone asked you (like a nurse or doctor) whether your relationship feels healthy, what would that mean to you?

What does the word ‘consent’ mean to you? How does being in a relationship with someone change that?

Are there experiences that you have had that you would want to protect your daughter from (if you had a daughter) and if so, what are they?

What message would you want pass on to your daughters (if you had daughters)? How would you teach them about healthy sexuality? What they deserve and don’t deserve, what is consent? How do we send those messages to reduce the amount of sexual violence for the next generation of girls?

And what about to your sons? What messages do you want to pass on to your sons?

Reaction to Reproductive Coercion card

One of the reasons we are doing these interviews is to figure out what women need to hear from their health care providers to feel comfortable receiving information from their doctors, nurses, and counselors, and also to feel safe sharing information about themselves in order to get help.

We created this card for women, and wanted to get your impression. Can we please go through this panel-by-panel? I want to know whether the information makes sense, and how you would reword things. Is anything about this confusing? Anything you think we should add? (NOTE please ask a couple of times about add and or change about ...)

- Did you receive the card from a clinician?
 - (IF yes) Do you remember what they said when they gave it to you?
 - (if no, not given by clinician) did you take it off of a desk? In a packet of materials?
 - Or from the study person?
 - How did it make you feel when you received the card?
 - Did you read the card when you received it? (why /why not) • Did you read it later? (If yes, tell me more about that) • Did you keep the card? (If yes, why—If no, why) If yes, where do you keep the card?
 - How many cards were you given?
 - Did they tell you that you could share the card with friends and family?
 - (If yes), how did that make you feel?
 - Did you share the card or info on the card with someone else? (If yes, tell me more about that) •
- How do you think you could use the information that is on the card?

How do you think you could use the information that is on the card?

When was the first time you came to this clinic? In your experiences as a patient here, how have staff from the clinic talked to you about your relationships? (If SA) How have clinic staff asked you about having sex you didn’t want to have or doing sexual things that you didn’t want to do?

(If no convo with clinicians) Tell me about help you sought out- Did you call a hotline to talk to someone about what happened? Did you go to a shelter or other agency to get help? How did you know to do this? How was the experience?

Reaction to interview

- Is there anything else you wish I had asked about that I didn't?
- Is there anything I should not have asked about?
- What was it like to participate in this interview?

Reassess for safety, and provide resources.

SEMI-STRUCTURED INTERVIEW CODEBOOK

Primary Code: Pregnancy Intention

Sub-Codes:

Mistimed
Unwanted
Planned
Intended Prevention
Abortion

Primary Code: Ambivalence

Sub-Codes:

Denial
Lack of Awareness

Primary Code: Love Seeking

Sub-Codes:

Self-Esteem
Reason for Staying/Leaving Relationship

Primary Code: Intimate Partner Violence and Sexual Pressure

Sub-Codes:

Rape/Sex She Did Not Want
Sexual Abuse
Controlling Behavior
Physical Abuse
Verbal/Emotional Abuse
Interparental IPV

Police Involvement
Mutual Partner Violence/ Returned Aggression

Primary Code: Reproductive Coercion

Sub-Codes:

Birth Control Sabotage
Pregnancy Pressure

Primary Code: Condom Use

Sub-Codes:

Inconsistent Use
Consistent Use
Conversation about Condom Use
Use of Hormonal Birth Control

Primary Code: Sexual Experiences

Sub-Codes:

Age at First Sexual Experience
First Sexual Experience-Consensual
First Sexual Experience-Non-Consensual

BIBLIOGRAPHY

- Akers, A. Y., Schwarz, E. B., Borrero, S., & Corbie-Smith, G. (2010). Family discussions about contraception and family planning: a qualitative exploration of black parent and adolescent perspectives. *Perspect Sex Reprod Health*, 42(3), 160-167. doi: 10.1363/4216010
- Ali, P. A., & Naylor, P. B. (2013). Intimate partner violence: A narrative review of the feminist, social and ecological explanations for its causation. *Aggression and Violent Behavior*, 18(6), 611-619. doi: <http://dx.doi.org/10.1016/j.avb.2013.07.009>
- Alleyne-Green, B., Coleman-Cowger, V. H., & Henry, D. B. (2012). Dating violence perpetration and/or victimization and associated sexual risk behaviors among a sample of inner-city African American and Hispanic adolescent females. *J Interpers Violence*, 27(8), 1457-1473. doi: 10.1177/0886260511425788
- Anachebe, N. F., & Sutton, M. Y. (2003). Racial disparities in reproductive health outcomes. *Am J Obstet Gynecol*, 188(4), S37-42.
- Aquilino, M. L., & Losch, M. E. (2005). Across the fertility lifespan: desire for pregnancy at conception. *MCN Am J Matern Child Nurs*, 30(4), 256-262.
- ATLAS.ti Scientific Software Development GmbH. (2013). ATLAS.ti 7 (Version 7). Berlin, Germany.
- Axinn, W. G., & Thornton, A. (1996). The influence of parents' marital dissolutions on children's attitudes toward family formation. *Demography*, 33(1), 66-81.
- Banyard, V. L., & Cross, C. (2008). Consequences of teen dating violence: understanding intervening variables in ecological context. *Violence Against Women*, 14(9), 998-1013. doi: 10.1177/1077801208322058
- Barnett, J. K., Papini, D. R., & Gbur, E. (1991). Familial correlates of sexually active pregnant and nonpregnant adolescents. *Adolescence*, 26(102), 457-472.
- Besculides, M., & Laraque, F. (2004). Unintended pregnancy among the urban poor. *J Urban Health*, 81(3), 340-348. doi: 10.1093/jurban/jth122
- 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,.

- Boland, A., Cherry, M. G., & Dickson, R. (2014). *Doing a systematic review : a student's guide*. Washington DC: Sage.
- Borrero, S., Farkas, A., Dehlendorf, C., & Rocca, C. H. (2013). Racial and ethnic differences in men's knowledge and attitudes about contraception. *Contraception*, 88(4), 532-538. doi: 10.1016/j.contraception.2013.04.002
- Borrero, S., Moore, C. G., Creinin, M. D., & Ibrahim, S. A. (2010). Low rates of vasectomy among minorities: a result of differential receipt of counseling? *Am J Mens Health*, 4(3), 243-249. doi: 10.1177/1557988309337619
- Borrero, S., Moore, C. G., Qin, L., Schwarz, E. B., Akers, A., Creinin, M. D., & Ibrahim, S. A. (2010). Unintended pregnancy influences racial disparity in tubal sterilization rates. *J Gen Intern Med*, 25(2), 122-128. doi: 10.1007/s11606-009-1197-0
- Borrero, S., Nikolajski, C., Rodriguez, K. L., Creinin, M. D., Arnold, R. M., & Ibrahim, S. A. (2009). "Everything I know I learned from my mother...Or not": perspectives of African-American and white women on decisions about tubal sterilization. *J Gen Intern Med*, 24(3), 312-319. doi: 10.1007/s11606-008-0887-3
- Borrero, S., Schwarz, E. B., Creinin, M., & Ibrahim, S. (2009). The Impact of Race and Ethnicity on Receipt of Family Planning Services in the United States. *Journal of Women's Health*, 18(1), 91-96.
- Borrero, S., Schwarz, E. B., Reeves, M. F., Bost, J. E., Creinin, M. D., & Ibrahim, S. A. (2007). Race, insurance status, and tubal sterilization. *Obstet Gynecol*, 109(1), 94-100. doi: 10.1097/01.AOG.0000249604.78234.d3
- Borrero, S., Zhao, X., Mor, M. K., Schwarz, E. B., Good, C. B., & Gellad, W. F. (2013). Adherence to hormonal contraception among women veterans: differences by race/ethnicity and contraceptive supply. *Am J Obstet Gynecol*, 209(2), 103.e101-103.e111. doi: 10.1016/j.ajog.2013.03.024
- Braveman, P., Egerter, S., & Williams, D. R. (2011). The social determinants of health: coming of age. *Annu Rev Public Health*, 32, 381-398. doi: 10.1146/annurev-publhealth-031210-101218
- Breiding, M. J., Black, M. C., & Ryan, G. W. (2007). Prevalence and Risk Factors of Intimate Partner Violence in Eighteen U.S. States/Territories, 2005. *Am J Prev Med*, 34(2), 112-118. doi: 10.1016/j.amepre.2007.10.001
- Brindis, C., Wolfe, A. L., McCarter, V., Ball, S., & Starbuck-Morales, S. (1995). The associations between immigrant status and risk-behavior patterns in Latino adolescents. *J Adolesc Health*, 17(2), 99-105. doi: 10.1016/1054-139x(94)00101-j
- Bronfenbrenner, U. (1977). Toward an Experimental Ecology of Human-Development. *American Psychologist*, 32(7), 513-531. doi: Doi 10.1037/0003-066x.32.7.513

- Bryant, A. S., Nakagawa, S., Gregorich, S. E., & Kuppermann, M. (2010). Race/Ethnicity and pregnancy decision making: the role of fatalism and subjective social standing. *J Womens Health (Larchmt)*, 19(6), 1195-1200. doi: 10.1089/jwh.2009.1623
- Buhi, E. R., Marhefka, S. L., & Hoban, M. T. (2010). The State of the union: sexual health disparities in a national sample of US college students. *J Am Coll Health*, 58(4), 337-346. doi: 10.1080/07448480903501780
- Burke, J. G., Mahoney, P., Gielen, A., McDonnell, K. A., & O'Campo, P. (2009). Defining appropriate stages of change for intimate partner violence survivors. *Violence Vict*, 24(1), 36-51.
- Burke, J. G., O'Campo, P., & Peak, G. L. (2006). Neighborhood influences and intimate partner violence: does geographic setting matter? *J Urban Health*, 83(2), 182-194. doi: 10.1007/s11524-006-9031-z
- Campbell, J. C. (2002). Health consequences of intimate partner violence. *The Lancet*, 359(9314), 1331-1336. doi: [http://dx.doi.org/10.1016/S0140-6736\(02\)08336-8](http://dx.doi.org/10.1016/S0140-6736(02)08336-8)
- Center for Disease Control and Prevention. (2012). Youth Risk Behavior Surveillance System: Selected 2011 National Health Risk Behaviors and Health Outcomes by Race/Ethnicity1. from http://www.cdc.gov/healthyyouth/yrbs/pdf/us_disparityrace_yrbs.pdf
- Center for Disease Control and Prevention. (2013). Intimate Partner Violence: Consequences. from <http://www.cdc.gov/violenceprevention/intimatepartnerviolence/consequences.html>
- Centers for Disease Control and Prevention. (2012). Youth Risk Behavior Surveillance-United States, 2011 *Morbidity and Mortality Weekly Report* (Vol. 61).
- Centers for Disease Control and Prevention. (2012). Prepregnancy contraceptive use among teens with unintended pregnancies resulting in live births - Pregnancy Risk Assessment Monitoring System (PRAMS), 2004-2008. *MMWR Morb Mortal Wkly Rep*, 61(2), 25-29.
- Chamberlain, L., & Levenson, R. (2012). Addressing Intimate Partner Violence, Reproductive and Sexual Coercion: A Guide for Obstetric, Gynecologic and Reproductive Health Care Settings (2nd ed.).
- Chang, J. C., Cluss, P. A., Burke, J. G., Hawker, L., Dado, D., Goldstrohm, S., & Scholle, S. H. (2011). Partner violence screening in mental health. *Gen Hosp Psychiatry*, 33(1), 58-65. doi: 10.1016/j.genhospsych.2010.11.009
- Choi, Y., Harachi, T. W., Gillmore, M. R., & Catalano, R. F. (2006). Are multiracial adolescents at greater risk? Comparisons of rates, patterns, and correlates of substance use and violence between monoracial and multiracial adolescents. *Am J Orthopsychiatry*, 76(1), 86-97. doi: 10.1037/0002-9432.76.1.86

- Clark, L. E., Allen, R. H., Goyal, V., Raker, C., & Gottlieb, A. S. (2013). Reproductive coercion and co-occurring intimate partner violence in obstetrics and gynecology patients. *Am J Obstet Gynecol*(0). doi: <http://dx.doi.org/10.1016/j.ajog.2013.09.019>
- Cochrane Handbook for Systematic Reviews of Interventions*(2006). J. Higgins & S. Green (Eds.), Retrieved from <http://www.cochrane.org/resources/handbook/hbook.htm>
- Coker, A. L., Smith, P. H., Bethea, L., King, M. R., & McKeown, R. E. (2000). Physical health consequences of physical and psychological intimate partner violence. *Arch Fam Med*, 9(5), 451-457.
- Coles, M. S., Makino, K. K., & Stanwood, N. L. (2011). Contraceptive experiences among adolescents who experience unintended birth. *Contraception*, 84(6), 578-584. doi: 10.1016/j.contraception.2011.03.008
- Cubbin, C., Braveman, P. A., Marchi, K. S., Chavez, G. F., Santelli, J. S., & Gilbert, B. J. (2002). Socioeconomic and racial/ethnic disparities in unintended pregnancy among postpartum women in California. *Matern Child Health J*, 6(4), 237-246.
- Cubbin, C., Vesely, S. K., Braveman, P. A., & Oman, R. F. (2011). Socioeconomic factors and health risk behaviors among adolescents. *Am J Health Behav*, 35(1), 28-39.
- Decker, M. R., Miller, E., McCauley, H. L., Tancredi, D. J., Levenson, R. R., Waldman, J., . . . Silverman, J. G. (2011). Intimate partner violence and partner notification of sexually transmitted infections among adolescent and young adult family planning clinic patients. *Int J STD AIDS*, 22(6), 345-347. doi: 10.1258/ijsa.2011.010425
- Dehlendorf, C., Rodriguez, M. I., Levy, K., Borrero, S., & Steinauer, J. (2010). Disparities in family planning. *Am J Obstet Gynecol*, 202(3), 214-220. doi: 10.1016/j.ajog.2009.08.022
- Department of Health and Human Services. (2009). Code of Federal Regulations. from <http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html>
- Diez Roux, A. V. (2012). Conceptual approaches to the study of health disparities. *Annu Rev Public Health*, 33, 41-58. doi: 10.1146/annurev-publhealth-031811-124534
- DuBois, W. E. B. (1899). *The Philadelphia Negro : a social study*. Philadelphia: Published for the University.
- Finer, L. B., & Henshaw, S. K. (2006). Disparities in rates of unintended pregnancy in the United States, 1994 and 2001. *Perspect Sex Reprod Health*, 38(2), 90-96. doi: 10.1363/psrh.38.090.06
- Finer, L. B., & Sonfield, A. (2013). The evidence mounts on the benefits of preventing unintended pregnancy. *Contraception*, 87(2), 126-127. doi: 10.1016/j.contraception.2012.12.005

- Finer, L. B., & Zolna, M. R. (2011). Unintended pregnancy in the United States: incidence and disparities, 2006. *Contraception*, *84*(5), 478-485. doi: 10.1016/j.contraception.2011.07.013
- Finer, L. B., & Zolna, M. R. (2013). Shifts in Intended and Unintended Pregnancies in the United States, 2001-2008. *Am J Public Health*. doi: 10.2105/AJPH.2013.301416
- Foster, D. G., Bley, J., Mikanda, J., Induni, M., Arons, A., Baumrind, N., . . . Stewart, F. (2004). Contraceptive use and risk of unintended pregnancy in California. *Contraception*, *70*(1), 31-39. doi: 10.1016/j.contraception.2004.01.012
- Frost, J. J., Singh, S., & Finer, L. B. (2007). Factors associated with contraceptive use and nonuse, United States, 2004. *Perspect Sex Reprod Health*, *39*(2), 90-99. doi: 10.1363/3909007
- 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. *Am J Obstet Gynecol*, *201*(2), 148.e141-148.e147. doi: <http://dx.doi.org/10.1016/j.ajog.2009.04.048>
- Gipson, J., Koenig, M., & Hindin, M. (2008). The Effects of Unintended Pregnancy on Infant, Child, and Parental Health: A Review of the Literature. *Stud Fam Plann*, *39*(1), 18-38. doi: 10.2307/20454434
- Goldsmith, K. A., Kasehagen, L. J., Rosenberg, K. D., Sandoval, A. P., & Lapidus, J. A. (2008). Unintended childbearing and knowledge of emergency contraception in a population-based survey of postpartum women. *Matern Child Health J*, *12*(3), 332-341. doi: 10.1007/s10995-007-0252-x
- Grady, W. R., Klepinger, D. H., Billy, J. O., & Cubbins, L. A. (2010). The role of relationship power in couple decisions about contraception in the US. *J Biosoc Sci*, *42*(3), 307-323. doi: 10.1017/s0021932009990575
- Hamilton, B. E., Martin, J. A., & Ventura, S. J. (2013). Births: Preliminary Data for 2012 *National Vital Statistics Reports* (3 ed., Vol. 62): U.S. Department of Health and Human Services.
- Hayford, S. R., & Guzzo, K. B. (2010). Age, relationship status, and the planning status of births. *Demographic Research*, *23*, 365-398.
- Hayford, S. R., & Guzzo, K. B. (2013). Racial and ethnic variation in unmarried young adults' motivation to avoid pregnancy. *Perspect Sex Reprod Health*, *45*(1), 41-51. doi: 10.1363/4504113
- Heise, L., & Garcia-Moreno, C. (2002). Violence by intimate partners. In E. Krug, L. L. Dahlberg, J. A. Mercy & e. al. (Eds.), *World report on violence and health* (pp. 87-121). Geneva, Switzerland: World Health Organization.

- Holliday, C., McCauley, H. L., Burke, J., Documet, P., Ricci, E., & Miller, E. (2014). Racial/Ethnic Disparities in Unintended Pregnancy: A Systematic Literature Review. *in preparation*.
- Hollway, W., & Jefferson, T. (1997). Eliciting Narrative Through the In-Depth Interview. *Qualitative Inquiry*, 3(1), 53-70. doi: 10.1177/107780049700300103
- Jones, R. K., & Kost, K. (2007). Underreporting of induced and spontaneous abortion in the United States: an analysis of the 2002 National Survey of Family Growth. *Stud Fam Plann*, 38(3), 187-197.
- Kaestle, C. E., & Halpern, C. T. (2005). Sexual intercourse precedes partner violence in adolescent romantic relationships. *J Adolesc Health*, 36(5), 386-392. doi: 10.1016/j.jadohealth.2004.02.030
- Karlsen, S., & Nazroo, J. Y. (2002). Relation between racial discrimination, social class, and health among ethnic minority groups. *Am J Public Health*, 92(4), 624-631.
- Koss, M. P., & Gidycz, C. A. (1985). Sexual experiences survey: reliability and validity. *J Consult Clin Psychol*, 53(3), 422-423.
- Krieger, N. (2001). Theories for social epidemiology in the 21st century: an ecosocial perspective. *International Journal of Epidemiology*, 30(4), 668-677. doi: 10.1093/ije/30.4.668
- Krieger, N. (2003). Does racism harm health? Did child abuse exist before 1962? On explicit questions, critical science, and current controversies: an ecosocial perspective. *Am J Public Health*, 93(2), 194-199.
- Krieger, N. (2005). Embodiment: a conceptual glossary for epidemiology. *J Epidemiol Community Health*, 59(5), 350-355. doi: 10.1136/jech.2004.024562
- Krieger, N. (2012). Methods for the scientific study of discrimination and health: an ecosocial approach. *Am J Public Health*, 102(5), 936-944. doi: 10.2105/ajph.2011.300544
- Krieger, N., & Davey Smith, G. (2004). "Bodies Count," and Body Counts: Social Epidemiology and Embodying Inequality. *Epidemiologic Reviews*, 26(1), 92-103. doi: 10.1093/epirev/mxh009
- Kulczycki, A. (2007). Ethics, ideology, and reproductive health policy in the United States. *Stud Fam Plann*, 38(4), 333-351.
- Lindberg, L. D., & Kost, K. (2013). Exploring U.S. Men's Birth Intentions. *Matern Child Health J*. doi: 10.1007/s10995-013-1286-x
- Link, B. G., & Phelan, J. (1995). Social Conditions As Fundamental Causes of Disease. *Journal of Health and Social Behavior, Extra Issue*, 80-94.

- Martin, B. A., Cui, M., Ueno, K., & Fincham, F. D. (2013). Intimate Partner Violence in Interracial and Monoracial Couples. *Fam Relat*, *61*(1), 202-211. doi: 10.1111/j.1741-3729.2012.00747.x
- Matteson, K. A., Peipert, J. F., Allsworth, J., Phipps, M. G., & Redding, C. A. (2006). Unplanned pregnancy: does past experience influence the use of a contraceptive method? *Obstet Gynecol*, *107*(1), 121-127. doi: 10.1097/01.AOG.0000192170.16746.ea
- McDonnell, K. A., Burke, J. G., Gielen, A. C., O'Campo, P., & Weidl, M. (2011). Women's perceptions of their community's social norms towards assisting women who have experienced intimate partner violence. *J Urban Health*, *88*(2), 240-253. doi: 10.1007/s11524-011-9546-9
- McKenzie, J. F., Neiger, B. L., & Thackeray, R. (2009). *Planning, implementing, and evaluating health promotion programs : a primer* (5th ed.). San Francisco: Pearson/Benjamin Cummings.
- McLeroy, K. R., Bibeau, D., Steckler, A., & Glanz, K. (1988). An Ecological Perspective on Health Promotion Programs. *Health Education & Behavior*, *15*(4), 351-377. doi: 10.1177/109019818801500401
- 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*(4), 316-322.
- 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*(3), 274-280. doi: 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. *Ambul Pediatr*, *7*(5), 360-366. doi: 10.1016/j.ambp.2007.05.007
- Miller, E., Jordan, B., Levenson, R., & Silverman, J. G. (2010). Reproductive coercion: connecting the dots between partner violence and unintended pregnancy. *Contraception*, *81*(6), 457-459.
- Miller, E., & McCauley, H. L. (2013). Adolescent relationship abuse and reproductive and sexual coercion among teens. *Curr Opin Obstet Gynecol*, *25*(5), 364-369. doi: 10.1097/GCO.0b013e328364ecab
- Miller, E., McCauley, H. L., Tancredi, D. J., Decker, M. R., Anderson, H., & Silverman, J. G. (2013). Recent reproductive coercion and unintended pregnancy among female family planning clients. *Contraception*. doi: 10.1016/j.contraception.2013.10.011

- Miller, E., & Silverman, J. G. (2010). Reproductive coercion and partner violence: implications for clinical assessment of unintended pregnancy. *Expert Rev Obstet Gynecol*, 5(5), 511-515. doi: 10.1586/eog.10.44
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & Group, P. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *J Clin Epidemiol*, 62(10), 1006-1012. doi: 10.1016/j.jclinepi.2009.06.005
- Moore, A., Frohwirth, L., & Miller, E. (2010). Male reproductive control of women who have experienced intimate partner violence in the United States. *Soc Sci Med*, 70(11), 1737-1744. doi: <http://dx.doi.org/10.1016/j.socscimed.2010.02.009>
- Moore, N. B., & Rodriguez, C. (1995). Perceptions of Pregnancy Parenting Teens- Reframing Issues for an Integrated Approach to Pregnancy Problems. *Adolescence*, 30(119), 685-706.
- Moracco, K. E., Runyan, C. W., Bowling, J. M., & Earp, J. L. (2007). Women's experiences with violence: A national study. *Women's Health Issues*, 17(1), 3-12. doi: <http://dx.doi.org/10.1016/j.whi.2006.03.007>
- Mosher, W. D., Jones, J., & Abma, J. C. (2012). Intended and Unintended Births in the United States: 1982–2010 *National Health Statistics Report* (Vol. 55). Washington, DC: National Center for Health Statistics.
- Musick, K. (2002). Planned and unplanned childbearing among unmarried women. *Journal of Marriage and Family*, 64(4), 915-929. doi: 10.1111/j.1741-3737.2002.00915.x
- Naimi, T. S., Lipscomb, L. E., Brewer, R. D., & Gilbert, B. C. (2003). Binge drinking in the preconception period and the risk of unintended pregnancy: implications for women and their children. *Pediatrics*, 111(5 Pt 2), 1136-1141.
- Newcomb, M. D., Wyatt, G. E., Romero, G. J., Tucker, M. B., Wayment, H. A., Carmona, J. V., . . . Mitchell-Kernan, C. (1998). Acculturation, sexual risk taking, and HIV health promotion among Latinas. *Journal of Counseling Psychology*, 45(4), 454-467. doi: 10.1037//0022-0167.45.4.454
- Nowotny, K. M., & Graves, J. L. (2013). Substance Use and Intimate Partner Violence Victimization Among White, African American, and Latina Women. *J Interpers Violence*. doi: 10.1177/0886260513496903
- Nuru-Jeter, A., Dominguez, T. P., Hammond, W. P., Leu, J., Skaff, M., Egarter, S., . . . Braveman, P. (2009). "It's the skin you're in": African-American women talk about their experiences of racism. an exploratory study to develop measures of racism for birth outcome studies. *Matern Child Health J*, 13(1), 29-39. doi: 10.1007/s10995-008-0357-x
- O'Campo, P., Burke, J., Peak, G. L., McDonnell, K. A., & Gielen, A. C. (2005). Uncovering neighbourhood influences on intimate partner violence using concept mapping. *J Epidemiol Community Health*, 59(7), 603-608. doi: 10.1136/jech.2004.027227

- Raiford, J. L., Diclemente, R. J., & Wingood, G. M. (2009). Effects of fear of abuse and possible STI acquisition on the sexual behavior of young African American women. *Am J Public Health, 99*(6), 1067-1071. doi: 10.2105/ajph.2007.131482
- Raiford, J. L., Wingood, G. M., & Diclemente, R. J. (2007). Prevalence, incidence, and predictors of dating violence: a longitudinal study of African American female adolescents. *J Womens Health (Larchmt), 16*(6), 822-832. doi: 10.1089/jwh.2006.0002
- Raneri, L. G., & Wiemann, C. M. (2007). Social Ecological Predictors of Repeat Adolescent Pregnancy. *Perspect Sex Reprod Health, 39*(1), 39-47. doi: 10.2307/30042925
- Ranji, U. R. (2011). Reproductive Health Care Policy for Women in the United States Tutorial. Retrieved July 7, 2014, 2014, from <http://kff.org/interactive/reproductive-health-care-policy-for-women-in-the-united-states-tutorial/>
- Renner, L. M., & Slack, K. S. (2006). Intimate partner violence and child maltreatment: Understanding intra- and intergenerational connections. *Child Abuse Negl, 30*(6), 599-617. doi: <http://dx.doi.org/10.1016/j.chiabu.2005.12.005>
- Rennison, C. M., & Welchans, S. (2000). Intimate Partner Violence *Bureau of Justice Statistics Special Report*. Washington, DC.: U.S. Department of Justice.
- Rickert, V. I., Wiemann, C. M., Harrykissoon, S. D., Berenson, A. B., & Kolb, E. (2002). The relationship among demographics, reproductive characteristics, and intimate partner violence. *Am J Obstet Gynecol, 187*(4), 1002-1007. doi: <http://dx.doi.org/10.1067/mob.2002.126649>
- Roberts, T. A., Auinger, P., & Klein, J. D. (2005). Intimate partner abuse and the reproductive health of sexually active female adolescents. *Journal of Adolescent Health, 36*(5), 380-385. doi: <http://dx.doi.org/10.1016/j.jadohealth.2004.06.005>
- Rocca, C. H., Harper, C. C., & Raine-Bennett, T. R. (2013). Young women's perceptions of the benefits of childbearing: associations with contraceptive use and pregnancy. *Perspect Sex Reprod Health, 45*(1), 23-32. doi: 10.1363/4502313
- Sampson, R. J., Morenoff, J. D., & Raudenbush, S. (2005). Social anatomy of racial and ethnic disparities in violence. *Am J Public Health, 95*(2), 224-232. doi: 10.2105/ajph.2004.037705
- Santelli, J., Rochat, R., Hatfield-Timajchy, K., Gilbert, B. C., Curtis, K., Cabral, R., . . . Unintended Pregnancy Working, G. (2003). The measurement and meaning of unintended pregnancy. *Perspect Sex Reprod Health, 35*(2), 94-101.
- SAS Institute, I. (2013). SAS 9.3. Cary, NC: SAS Institute, Inc. .
- Shih, G., Dube, K., Sheinbein, M., Borrero, S., & Dehlendorf, C. (2013). He's a real man: a qualitative study of the social context of couples' vasectomy decisions among a racially diverse population. *Am J Mens Health, 7*(3), 206-213. doi: 10.1177/1557988312465888

- Shlay, J. C., Mayhugh, B., Foster, M., & Maravi, M. E. (2002). Predicting pregnancy risk in women attending an STD clinic. *Sex Transm Dis*, 29(8), 491-496.
- 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. *Perspect Sex Reprod Health*, 43(1), 60-65. doi: 10.1363/4306011
- St Mars, T., & Valdez, A. M. (2007). Adolescent dating violence: understanding what is "at risk?". *J Emerg Nurs*, 33(5), 492-494. doi: 10.1016/j.jen.2007.06.009
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The Revised Conflict Tactics Scales (CTS2): Development and Preliminary Psychometric Data. *Journal of Family Issues*, 17(3), 283-316. doi: 10.1177/019251396017003001
- Swartzendruber, A., Brown, J. L., Sales, J. M., Murray, C. C., & DiClemente, R. J. (2012). Sexually transmitted infections, sexual risk behavior, and intimate partner violence among African American adolescent females with a male sex partner recently released from incarceration. *J Adolesc Health*, 51(2), 156-163. doi: 10.1016/j.jadohealth.2011.11.014
- 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(5), 601-612. doi: 10.1177/1077801210366965
- Trussell, J., Vaughan, B., & Stanford, J. (1999). Are all contraceptive failures unintended pregnancies? Evidence from the 1995 National Survey of Family Growth. *Fam Plann Perspect*, 31(5), 246-247, 260.
- U.S. Department of Health and Human Services. (2013a). 2020 Topics & Objectives. *Healthy People 2020*. from <http://healthypeople.gov/2020/topicsobjectives2020/default.aspx>
- U.S. Department of Health and Human Services. (2013b). Affordable Care Act Expands Prevention Coverage for Women's Health and Well-Being. Retrieved 01/15/2014, from <http://www.hrsa.gov/womensguidelines/>
- Unger, J. B., & Molina, G. B. (2000). Acculturation and attitudes about contraceptive use among Latina women. *Health Care Women Int*, 21(3), 235-249. doi: 10.1080/073993300245285
- Ventura, S. J., Hamilton, B. E., & Mathews, T. J. (2013). Pregnancy and childbirth among females aged 10-19 years - United States, 2007-2010. *MMWR Surveill Summ*, 62 Suppl 3, 71-76.
- Vezina, J., & Hebert, M. (2007). Risk factors for victimization in romantic relationships of young women: a review of empirical studies and implications for prevention. *Trauma Violence Abuse*, 8(1), 33-66. doi: 10.1177/1524838006297029

- Widom, C. S., Czaja, S., & Dutton, M. A. (2014). Child abuse and neglect and intimate partner violence victimization and perpetration: A prospective investigation. *Child Abuse Negl*, 38(4), 650-663. doi: <http://dx.doi.org/10.1016/j.chiabu.2013.11.004>
- Wildsmith, E., Guzzo, K. B., & Hayford, S. R. (2010). Repeat unintended, unwanted and seriously mistimed childbearing in the United States. *Perspect Sex Reprod Health*, 42(1), 14-22. doi: 10.1363/4201410
- Williams, D. R. (1997). Race and health: Basic questions, emerging directions. *Annals of Epidemiology*, 7(5), 322-333. doi: [http://dx.doi.org/10.1016/S1047-2797\(97\)00051-3](http://dx.doi.org/10.1016/S1047-2797(97)00051-3)
- Williams, D. R., & Sternthal, M. (2010). Understanding Racial-ethnic Disparities in Health: Sociological Contributions. *Journal of Health and Social Behavior*, 51(1 suppl), S15-S27. doi: 10.1177/0022146510383838
- Wingood, G. M., DiClemente, R. J., McCree, D. H., Harrington, K., & Davies, S. L. (2001). Dating violence and the sexual health of black adolescent females. *Pediatrics*, 107(5), E72.
- Zolna, M. R., & Lindberg, L. D. (2012) Unintended Pregnancy: Incidence and Outcomes Among Young Adult Unmarried Women in the United States, 2001 and 2008. New York: Guttmacher Institute.