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Familial Socialization of Black Girls About Black Womanhood and Sexual and Reproductive Health

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Familial Socialization of Black Girls About Black Womanhood and Sexual and Reproductive Health

A dissertation submitted in partial satisfaction of the

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in Psychology

by

Joni Alanis Brown

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ABSTRACT OF THE DISSERTATION

Familial Socialization of Black Girls About Black Womanhood

and Sexual and Reproductive Health

by

Joni Alanis Brown

Doctor of Philosophy in Psychology

University of California, Los Angeles, 2024

Professor Christine Dunkel Schetter, Chair

Black women in the United States disproportionately experience adverse sexual and reproductive health outcomes related to the process of family planning, including high rates of unintended pregnancy and short interpregnancy intervals. There are sociocultural factors that may be uniquely significant to the reproductive experiences of Black women and adolescent girls, such as familial socialization processes that teach Black girls about Black womanhood. However, there is limited empirical research on the links between the childhood socialization experiences of Black women and adolescent girls, and aspects of their sexual and reproductive health that involve family planning.

The purpose of this dissertation research was to use a mixed methods approach to investigate the socialization experiences of young Black women and adolescent girls that address their intersectional status as being both Black and female, and examine how these socialization

experiences relate to their sexual and reproductive health attitudes and behaviors concerning family planning. Study 1 used qualitative research methodology to investigate the socialization experiences of young African American women (Mean age = 26 years) and the perceived influence on their sexual and reproductive health values, attitudes, and behaviors. Several themes on their socialization experiences were identified (e.g., Preparation for prejudice against Black women, and Guidance on sexual and reproductive health). Two themes were also identified on the perceived influence of these experiences on women's adult health attitudes and behaviors.

Study 2 utilized population-based survey data from the National Survey of Family Growth (NSFG) of young Black women and adolescent girls (ages 15–24) to examine the associations between sexual socialization experiences and contraceptive behaviors at the first and most recent sexual intercourse. Patterns of sexual socialization experiences in this sample were also identified using latent class analysis. Results indicated that parental sexual socialization did not predict whether any contraceptive was used at the first or most recent intercourse, nor did it predict the most effective method used. However, more parental sexual socialization significantly predicted greater odds of using multiple methods versus a single method at the first and most recent intercourse. Furthermore, four patterns of sexual socialization experiences were identified in this sample using latent class analysis: (1) Comprehensive Socialization; (2) Limited Socialization; (3) Abstinence-focused Socialization; (4) Contraception-focused Socialization.

Finally, Study 3 also uses data from the NSFG to examine the associations between parental sexual socialization and pregnancy intentions in a sample of young Black women and adolescent girls (ages 15–24) who have had a pregnancy. Results indicated no significant associations between sexual socialization and the measures of pregnancy intentions in the primary analyses. However, in the sensitivity analyses, more socialization messages were

associated with a greater likelihood of having a pregnancy that was *mistimed* versus *intended*, and greater pregnancy mistiming. Parental sexual socialization was not significantly associated with pregnancy desire in these analyses.

In sum, the findings from this research helps to improve our understanding of how the socialization experiences of African American women and girls relate to their sexual and reproductive attitudes and behaviors around family planning. In addition, the findings may have important implications for future research and theory, and ideally for African American families, educators and healthcare providers as they engage with Black women and girls.

The dissertation of Joni Alanis Brown is approved.

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2024

Dedication

I dedicate this dissertation to Black women everywhere who continue to inspire my research, and to little Black girls who will grow to be strong, capable Black women.

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Acknowledgments

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SELECTED PRESENTATIONS

1. **Brown, J.** (2024). *Sexual Socialization Experiences and Perceived Effects on Sexual and Reproductive Health in Young African American Women*. Oral presentation at the 2024 All-UC Demography Conference (Los Angeles, CA).

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3. **Brown, J.**, Robles, T., & Dunkel Schetter, C. (2023). *Experiences of Microaggressions in UCLA Staff*. Poster presented at the 2023 Society for Personality and Social Psychology Annual Convention (Atlanta, GA).

4. **Brown, J.** (2021). *Racial socialization, racial discrimination and cardiometabolic health in African American women*. Oral presentation at the 2021 Society for Personality and Social Psychology Health Preconference (virtual conference).

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General Introduction

In the United States, many women experience unfavorable reproductive health outcomes related to family planning. According to the United Nations Population Fund (2022), family planning refers to "the information, means and methods that allow individuals to decide if and when to have children." Notably, almost half (45%) of all pregnancies in the U.S. were classified as unintended (Finer & Zolna, 2016). Furthermore, about one-third (35%) of pregnancies occur less than 18 months after a preceding birth, which is considered to be a short interpregnancy interval (Gemmill & Lindberg, 2013). It is important to note that these indicators of reproductive health in the population are primarily due to structural barriers such as lack of access to reproductive health services that undermine women's reproductive autonomy, and their ability to engage in their desired family planning practices (Potter et al., 2019).

Research also indicates that there are profound racial disparities in rates of unintended pregnancy and short interpregnancy interval. Compared to non-Hispanic White women who have the lowest rate of unintended pregnancy, non-Hispanic Black women experience a higher rate of unintended pregnancy (Finer & Zolna, 2016). Similarly, non-Hispanic Black women experience higher incidence of short interpregnancy intervals compared to Hispanic women who have one of the lowest rates (Gemmill & Lindberg, 2013). Research shows that these reproductive health issues pose significant risk to the health and well-being of women and their offspring, including preterm birth, low birthweight, and maternal morbidity (Conde-Agudelo et al., 2006; Gipson et al., 2008; Hall et al., 2017; Nelson et al., 2022; Shah et al., 2011; Stamilio et al., 2007). Furthermore, racial and ethnic disparities exist in contraceptive use, which is a critical health behavior for family planning. Research shows that non-Hispanic Black women report lower use

of contraceptives in general and lower use of highly or moderately effective contraceptive methods, compared to non-Hispanic White women (Dehlendorf et al., 2014).

These racial differences in reproductive health behaviors and in adverse outcomes may be partly attributed to pervasive structural racial inequalities that affect Black women (Prather et al., 2016). For instance, research shows that Black women disproportionately experience barriers to accessing reproductive health care services (Sutton et al., 2021). Furthermore, the harmful effects of historical eugenic practices that lead to the forced sterilization of African American women still persist (Thorburn & Bogart, 2005). Presently, African American women are more likely than White women to undergo sterilization procedures that permanently terminate fertility compared to White women (Borrero et al., 2007). Moreover, the mistreatment of Black women in historical and contemporary times has contributed to persistent mistrust of the health care system (Prather et al., 2018; Treder et al., 2022). In addition to structural factors, there are important sociocultural factors that may contribute to the reproductive experiences of Black women and girls such as socialization processes that teach Black girls about Black womanhood.

Socialization is a fundamental process whereby children are taught the accepted norms and values of a society in order to become functional members (Maccoby, 1992). The family is the first agent of socialization and is typically the first source of information on the norms and expectations around important social constructs such as race and gender (Hughes & Chen, 1997; Witt, 1997). Thus, African American caregivers such as parents, grandparents, and other parental figures may relay messages to Black girls in childhood and adolescence about their intersectional status to prepare them for navigating society as Black women. In particular, the processes of racial socialization, gendered-racial socialization, and sexual socialization are significant for teaching African American girls about their dual racial and gendered status. Furthermore, these

processes may be influential to the health and well-being of Black women and girls in important ways. However, there is limited empirical research on the effects of Black women's childhood socialization experiences on aspects of their sexual and reproductive health that are related to family planning.

The purpose of this dissertation research was to investigate the socialization experiences of young Black women and girls that address their intersectional status as being both Black and female, and examine how these socialization experiences relate to their sexual and reproductive health attitudes and behaviors concerning family planning. This dissertation involves mixed methods research and three empirical studies. The first study uses qualitative research methodology to investigate the socialization experiences of young African American women in higher education and the perceived influence on sexual and reproductive health values, attitudes, and behaviors. The second and third studies utilize nationally representative samples of young Black women and adolescent girls, and quantitative research methodology to examine whether sexual socialization experiences are associated with contraceptive use and pregnancy intentions, respectively. Throughout this dissertation, the terms *Black* and *African American* are used interchangeably. However, *African American* is used when explicitly referring to members of the Black diaspora who descended from enslaved people in the U.S.

The following sections provide a review of the literature on racial socialization, gendered-racial socialization, and sexual socialization, and the empirical evidence linking these socialization processes to sexual and reproductive health attitudes and behaviors in Black women and girls. The conceptual model for the dissertation research and the guiding theoretical frameworks are also presented.

Socialization of African American Girls

African American families often socialize Black girls about their racial status through the process of racial socialization. Furthermore, African American caregivers may socialize Black girls about their intersectional status through the processes of gendered-racial and sexual socialization. This section reviews these socialization processes and the various practices in which African American families engage.

Racial Socialization

Racial socialization is a process whereby African American families transmit race-related messages to children to prepare them for life as people of color (Hughes, 2003). The racial socialization of African American children goes beyond the developmental functions of typical familial socialization by incorporating messages about race, a social construct that will play a significant role throughout their lifetime. Thus, Black caregivers often assume responsibility for managing the race-related messages their children receive and for communicating attitudes and values about their racial group and intergroup relations (Hughes & Chen, 1997; Lesane-Brown, 2006). In addition to verbal practices of racial socialization, there are nonverbal ways in which parents impart their beliefs about race such as staying silent about race, engaging in cultural experiences, or modeling and reinforcing culturally acceptable behaviors (Lesane-Brown, 2006).

Types of Racial Socialization Messages. There are four common types of verbal racial socialization messages: (1) Cultural socialization; (2) Preparation for bias; (3) Egalitarianism; (4) Promotion of mistrust.

Cultural Socialization. Cultural socialization describes messages and practices whereby African American children are taught African American history and culture (i.e., customs, traditions, beliefs, and values) (Hughes & Chen, 1997). It is used to foster positive images of

African Americans by enabling children to engage in culturally relevant experiences which then encourages racial/ethnic pride (Blanchard et al., 2019). A review of the literature indicates that of the four types of racial socialization, the most commonly used is cultural socialization (Hughes et al., 2006). Examples of cultural socialization include taking children to African American historical museums, teaching children how to prepare African American soul food, and reading African American folklores to children.

Preparation for Bias. Preparation for bias describes messages and practices wherein children are educated about the racial discrimination they will likely encounter (Hughes et al., 2006). This strategy enables African American parents to disclose to children the reality of social prejudices within American society. Parents may also teach their children adaptive strategies to help them to function within the mainstream culture, such as speaking standard English in public or refraining from wearing Afrocentric hairstyles (like dreadlocks and cornrows) (Coard et al., 2004). Research suggests that preparation for bias is frequently used by African American families (Hughes et al., 2006).

Egalitarianism. Egalitarianism refers to messages and practices that promote the principle that all races/ethnicities have equal opportunities and deemphasize the importance of race in society (Blanchard et al., 2019). African American parents may choose to emphasize individual qualities over those that are typically associated with their racial group, to help children successfully navigate spaces where the mainstream culture is more dominant (Farago et al., 2019). Example of such qualities include perseverance, strong work ethic, and integrity. Research shows that many African American parents report communicating egalitarian values to their children (Hughes et al., 2006).

Promotion of Mistrust. Promotion of mistrust describes messages and practices that teach African American children to be vigilant when engaging in interracial interactions (Hughes et al., 2006). Similar to preparation of bias, Black parents emphasize caution when interacting with members of other racial/ethnic groups. However, the two practices differ in that preparation of bias may provide some coping strategies to utilize, whereas promotion of mistrust does not (Hughes et al., 2006). Research suggests that African American parents who often use promotion of mistrust may have been personally impacted by a racially traumatic event themselves (Blanchard et al., 2019). Unlike the other types of racial socialization, families rarely report communicating promotion of mistrust messages to children (Hughes et al., 2006).

Gender Differences in Racial Socialization Messages. There are various factors that may influence the types of racial socialization messages transmitted by African American families, most notably the gender of the child (Hughes et al., 2006). However, gender differences in the transmission of the four types of racial socialization messages vary considerably.

Cultural Socialization. A majority of the studies that have found significant gender differences in the transmission of cultural socialization messages indicate that Black girls receive these messages more than Black boys (T. L. Brown et al., 2010; T. N. Brown et al., 2006; Davis & Stevenson, 2006; Kapungu et al., 2010; McHale et al., 2006; Stevenson et al., 2002; Thomas & Speight, 1999; Varner et al., 2018). For instance, Bowman & Howard (1985) found that among 377 Black adolescents and young adults, girls reported receiving more racial pride messages from their parents than boys. Similarly, Peck and colleagues (2014) found that parents of Black girls were more likely to report relaying cultural socialization messages compared to parents of Black boys.

Conversely, the findings from three studies suggest that Black boys receive more cultural socialization messages than Black girls (McHale et al., 2006; Stevenson & Arrington, 2009; Williams & Smalls-Glover, 2014). For example, among a sample of 108 African American youth, boys reported receiving more cultural legacy appreciation messages than girls (Stevenson & Arrington, 2009). However, there are many studies which have found non-significant gender differences in cultural socialization messages (e.g., (Banerjee et al., 2015; Barr & Neville, 2014; Burt & Simons, 2015; Caughy et al., 2002; Dotterer et al., 2009; French & Coleman, 2013; Gaston & Doherty, 2018; Hughes & Johnson, 2001; Metzger et al., 2020).

Preparation for Bias. Most studies showing significant gender differences in the transmission of preparation for bias messages report that boys receive more of these messages than girls (Bentley-Edwards & Stevenson, 2016; Bowman & Howard, 1985; Butler-Barnes et al., 2019; Edwards & Few-Demo, 2016; Holman, 2012; Lloyd, 2022; Peck et al., 2014; Stevenson et al., 2002; Stevenson & Arrington, 2009; Thomas & Speight, 1999; Varner et al., 2018). For example, Lambert and colleagues (2015) found that among 106 African American adolescents, boys reported receiving more cultural alertness to discrimination messages than did girls. Likewise, in a qualitative study by Thomas and Blackmon (2015), African American parents who indicated gender differences in their worries of racial violence also reported being more concerned for boys than girls.

A few studies have found the converse, such that girls report receiving more messages of this type than boys (T. L. Brown et al., 2010; Richardson et al., 2015). For instance, Richardson et al. (2015) found that in a sample of 491 African American adolescents, girls reported receiving significantly more parental preparation for bias messages than did boys. Despite these findings, there are many studies that did not find significant gender differences in preparation for

bias messages (e.g., (Banerjee et al., 2015; Barr & Neville, 2014; Caughy et al., 2002; Dotterer et al., 2009; French & Coleman, 2013; Gaston & Doherty, 2018; Hughes & Johnson, 2001; Kurtz-Costes et al., 2019; McHale et al., 2006; Metzger et al., 2020).

Egalitarianism. Similar to the findings on cultural socialization and preparation for bias messages, the studies on gender differences in the transmission of egalitarian messages have mixed results. While some studies show no significant gender differences (Barr & Neville, 2014; French & Coleman, 2013; Gaston & Doherty, 2018; Metzger et al., 2020), others report significant differences in opposite directions (Bowman & Howard, 1985; Lloyd, 2022; Varner et al., 2021). For example, Bowman and Howard (1985) found that Black boys reported receiving more messages about egalitarianism than Black girls. In contrast, Varner et al. (2021) found that among 307 African American parents, parents of girls were more likely to give egalitarian messages than parents of boys.

Promotion of Mistrust. There are only a few studies on gender differences in the transmission of promotion of mistrust messages, with most reporting no significant difference between Black boys and girls (Caughy et al., 2002; French & Coleman, 2013; Gaston & Doherty, 2018; Hughes & Johnson, 2001). However, in a study of 497 African American adolescents and their mothers, Saleem and colleagues (2020) found that mothers reported providing slightly more promotion of mistrust messages to boys than girls, although this finding was only marginally significant.

Summary. The empirical evidence on gender differences in the four types of racial socialization messages that parents may transmit is mixed. This may be explained in part by differences in measures used in each study and by the composition of the different samples. Nonetheless, two notable patterns emerge regarding gender differences in the transmission of

cultural socialization and preparation for bias messages. The studies suggest that Black girls typically receive more cultural socialization messages than Black boys, whereas Black boys typically receive more preparation for bias messages than Black girls. The findings underscore a limitation of racial socialization in addressing gender differences that also affect the experiences of African American children. Socialization concerning race constitutes only one segment of the socialization process that may occur for Black girls; gender socialization processes are also relevant to Black women and girls.

Gendered-Racial Socialization

Another objective of the process of familial socialization is to develop children's understanding of gender and their gender identity. Caregivers contribute to children's gender development through the types of clothing they are dressed in, the gendered forms of play they are encouraged to engage in, and the household chores they are assigned (Lytton & Romney, 1991; Pomerleau et al., 1990; Rheingold & Cook, 1975; Witt, 1997). Furthermore, the race of the family may influence how children come to understand gender norms and roles. An earlier study by Bardwell and colleagues (1986) found that among Black and White kindergarteners, Black children held less gender stereotypes than White children. Nonetheless, research shows that African American families still relay gendered messages to children, especially to Black girls (Hill, 2002).

In addition to socializing Black girls about their race and gender, African American caregivers also teach Black girls about their intersectional status through a process known as gendered-racial socialization. Gendered-racial socialization describes a process whereby Black girls are taught about the realities of being both Black and female, and ways to cope with the gendered racism they may experience (D. L. Brown et al., 2017). Gendered-racial socialization

may function as a tool for African American caregivers to help Black girls navigate intersecting systems of oppression and increase their self-esteem and gendered racial identity (D. L. Brown et al., 2017; Shambley-Ebron et al., 2016; Thomas et al., 2013).

Qualitative studies have been conducted to identify gendered-racial socialization messages that are transmitted to Black girls (Davis Tribble et al., 2019; Edmondson Bell & Nkomo, 1998; Holman, 2012; Thomas et al., 2013; Thomas & King, 2007). Edmondson Bell and Nkomo (1998) conducted one of the first studies in this area among 60 African American professional women. They found that gendered-racial socialization messages differed based on the participants' childhood familial structures, such that women who were raised in nurturing and supportive homes were taught to be respectable and courageous, while those from homes that endured traumatic events were taught to be self-reliant and strong. Likewise, Thomas and King, (2007) examined the types of gendered-racial socialization messages as reported by 36 African American mother-daughter dyads, and found concordance regarding the communication of messages about self-determination, self-pride, racial pride and spirituality. Mothers also reported having discussions about being respectful and about male-female relationships, while daughters reported having discussions about the value of an education. Similar findings were reported by Thomas et al. (2013), such that Black girls reported receiving messages from their parents that emphasized self-determination and the importance of being educated and successful.

Another significant issue in gendered-racial socialization concerns that of physical beauty, particularly regarding Black girls' hair and skin color. Davis Tribble et al. (2019) interviewed 29 Black women about familial messages they received about skin color and hair. Regarding skin color, some women reported receiving messages from their families that expressed preference for lighter skin over darker skin, and messages that contained advice on

how Black girls can maintain a lighter complexion. Additionally, the women discussed how their families provided advice about maintaining and styling their hair, as well as criticisms about wearing their natural hair. Likewise, another study of 16 African American mothers also found that much attention was placed on Black girls' hair texture and skin color (Holman, 2012). In particular, mothers discussed how they often complimented their daughters on their Afrocentric features to protect them from negative peer messages and to bolster their self-esteem.

Taken together, these studies highlight the gendered nature of socialization practices that are involved in raising Black girls. This is also demonstrated in a related form of socialization that may be influenced in part by Black girls' intersectional status, specifically as it relates to the sexual development of young Black women and girls.

Sexual Socialization

As children begin to mature physically, caregivers may engage in sexual socialization, whereby children are taught about sexuality and other related topics to guide their behaviors and attitudes around sex (Widman et al., 2016). Research shows that parents report talking about sex in general with their adolescents and children, and that they may also discuss more specific topics, such as menstruation, contraceptives, and pregnancy (DiIorio et al., 2003). Furthermore, there are various factors that influence the types and frequency of sex-related messages that are relayed to children, including the gender of the child. Research suggests that parents have more discussions about sex and related topics with girls than with boys (DiIorio et al., 2003; Murray et al., 2014). Parents' gender also influences sexual socialization practices, such that mothers are more likely to engage in these discussions than fathers.

A review of the literature suggests that the findings on whether race predicts sexual socialization practices are not consistent (DiIorio et al., 2003). Nonetheless, studies with African

Americans suggest that many Black parents and extended family members do engage in some form of sexual socialization with children (Bonafide et al., 2020; DeSouza et al., 2022). Moreover, African American families are more likely to discuss topics of sexuality with Black girls than with Black boys (Anderson et al., 2011; Causey & High, 2020; DiIorio et al., 1999; Fletcher et al., 2015; Jaccard et al., 2000; Kapungu et al., 2010; Pluhar et al., 2008), and these discussions tend to reflect familial concerns over Black girls' sexuality in relation to their intersectional status in society.

Throughout the history of the United States, negative images of Black womanhood have been used to persecute Black women (Collins, 1990). These include historical and contemporary stereotypes of Black women, such as the welfare mother stereotype (i.e., an unfit, financially dependent mother), the Jezebel stereotype (i.e., a promiscuous and sexually aggressive woman), and the Gold Digger stereotype (i.e., a woman who provides sexual favors in exchange for financial or material gifts) (Collins, 1990; Leath & Mims, 2021). These images characterize Black women's sexuality in a negative manner and influence how they are perceived in society. Thus, African American families' socialization practices tend to involve teaching Black girls about these harmful stereotypes to deter them from perpetuating these images (Leath & Mims, 2021). Furthermore, African American families may relay messages about sexuality that convey their disapproval of behaviors that would associate Black girls with such stereotypes (Leath et al., 2021).

Researchers have investigated the types of familial sexual socialization messages that are communicated to Black girls through qualitative research methodology. Some qualitative studies suggest that Black girls receive educational messages about sex and other related topics (Dennis & Wood, 2012; E. Evans & Dyson, 2015; Fasula et al., 2007; Grange et al., 2011; Nwoga, 2000;

Pluhar & Kuriloff, 2004; Sosina, 2023; Tarantino et al., 2020; Warren-Jeanpiere, 2006). For example, in a qualitative study of 11 African American mothers with adolescent daughters, mothers revealed that they taught their daughters about menstruation and pregnancy, often through sharing their own personal experiences (Nwoga, 2000). Similarly, Evans and Dyson (2015) found that some Black women in their study reported having educational discussions with their mothers about menstruation and hygiene.

Research also shows that Black girls receive messages about the consequences of sex, and messages that encourage abstinence (Crooks et al., 2019; Dennis & Wood, 2012; DiIorio et al., 1996; E. Evans & Dyson, 2015; Fasula et al., 2007; Grange et al., 2011; Leath et al., 2020; Nwoga, 2000; Pluhar & Kuriloff, 2004). For instance, Grange et al. (2011) interviewed 25 young African American women about the content of sex and relationship-focused communication they received from family members. The results showed that some women reported receiving messages from older female relatives about the consequences of having sex, such as pregnancy and child rearing, and sexually transmitted infections (STIs). Likewise, another qualitative study of 20 young Black women found that a majority of the participants reported receiving messages that emphasized the danger and harms of engaging in sex (Dennis & Wood, 2012).

Qualitative studies also indicate that some Black girls do not receive any form of sexual socialization from their parents or other family members (Crooks et al., 2019; E. Evans & Dyson, 2015; Leath et al., 2020; Tarantino et al., 2020; Warren-Jeanpiere, 2006). For example, a recent study by Leath et al. (2020) investigated familial sexual socialization messages during adolescence among 50 Black female college students and found that although many of the women reported receiving some type of familial sexual socialization in adolescence, some reported that they did not receive any messages around sex. Crooks et al. (2019) reported similar

findings among 20 young Black women, with most reporting that their mothers did not speak with them about sex during childhood.

Taken together, these findings suggest that African American girls receive varying socialization messages about sex and related topics throughout childhood and adolescence. Understanding how these socialization experiences relate to sexual and reproductive health in Black women and girls is necessary for conceptualizing the significance of these experiences for issues of family planning.

Socialization Processes and Sexual Health in Black Women and Girls

Researchers have examined the role of racial socialization, gendered-racial socialization, and sexual socialization in various psychological and behavioral outcomes in Black women and girls, including sexual behaviors and attitudes. However, there are notable differences in the number of quantitative studies that have been conducted for each type of socialization process. In particular, there is limited quantitative research that have investigated the links between racial socialization and sexual behaviors and attitudes in young Black women and girls. Likewise, few studies have been conducted to examine the association between gendered-racial socialization and sexual behaviors and attitudes. In contrast, there is a larger body of research that has investigated the relationship between familial sexual socialization and sexual behaviors and attitudes in Black women and girls.

Racial Socialization and Sexual Behaviors

Only one study was identified on the relationships between racial socialization messages and sexual behaviors in young Black women. Brown and colleagues (2014) examined the associations between maternal and paternal messages regarding cultural embeddedness (i.e., exposure to African American art and media) and ethnic pride and sexual practices among 262

African American women. The researchers assessed socialization experiences and sexual behaviors using a self-report questionnaire. The findings indicated that none of the socialization messages significantly predicted condom use. However, only paternal cultural embeddedness socialization significantly predicted women's inquiry into their sexual partner's history, such that higher paternal cultural embeddedness socialization was associated with lower inquiry into partner's history. This finding suggests that the types of African American-related media that fathers share with their daughters may relate to how they interact with sexual partners. The researchers posited that fathers may be exposing their daughters to media that promote traditional gender norms and roles which often emphasize that women show deference to men in heterosexual relationships.

Gendered-Racial Socialization and Sexual Behaviors and Attitudes

Only two studies have investigated the associations between gendered-racial socialization and sexual behaviors and attitudes in Black women and girls using data collected via self-report questionnaires (D. L. Brown et al., 2018; R. Evans et al., 2022). One study examined the association between gendered-racial socialization messages (as measured by the Gendered Racial-Ethnic Socialization Scale for Black Women) and adolescent's intentions to have early sex (i.e., at or before the age of 17 years) in a sample of 287 Black adolescent girls and their parents (R. Evans et al., 2022). The findings showed that receiving more frequent gendered-racial pride messages (but not gendered-racial oppression messages) was significantly associated with lower reported likelihood of intentions to have sex early. Furthermore, gendered-racial pride messages significantly moderated the relationship between parental monitoring and adolescent's intentions, such that among girls who received less frequent gendered-racial pride messages,

greater parental monitoring was associated with lower likelihood of intentions to have sex early. However, this was not true of girls who received more frequent gendered-racial pride messages.

Likewise, Brown et al. (2018) used cluster analyses to examine the relationships between racial-ethnic socialization, gender socialization, and sexual behaviors in 116 African American college women. They found that ethnic-gender socialization profiles (i.e., clusters of messages about gender and cultural and ethnic pride), but not racial-gender profiles (i.e., clusters of messages about gender and racism-related issues), were significantly associated with sexual assertiveness and safe sexual practices. Women who were in the cluster characterized by high ethnic socialization and low traditional gender socialization reported greater sexual assertiveness and safe sex behavior than women in the cluster characterized by high ethnic and traditional gender socialization, and women in the cluster characterized by minimal ethnic and traditional gender socialization. Furthermore, mediation analysis indicated that sexual assertiveness mediated the association between ethnic-gender socialization profiles and safe sex practices, such that women in the cluster characterized by high ethnic socialization and low traditional gender socialization reported greater sexual assertiveness than women in the other clusters, and greater sexual assertiveness predicted greater safe sex behavior. Although this study provides empirical evidence of the links between socialization practices and sexual behaviors and attitudes in young Black women, it is important to note that it did not directly measure gendered-racial socialization messages, which is different from employing an additive approach of measuring gender socialization and racial/ethnic socialization messages to assess intersectional socialization experiences.

Sexual Socialization and Sexual Attitudes and Behaviors

Quantitative research has been conducted to examine the associations between sexual socialization messages and sexual health attitudes and behaviors in Black women and girls using data collected via self-report questionnaires. Regarding sexual attitudes, King (2022) found that in a sample of 95 young African American women, higher parental sexual risk communication was significantly associated with higher assertiveness when initiating sex, refusing sex, and discussing sexual satisfaction and sexual history with their intimate partners. Another study also found that more parental messages about sex in the context of romantic relationships was associated with higher sexual assertiveness and positive affect (i.e., positive moods or emotions) about one's level of sexual experience in a subsample of African American female college students (Fletcher et al., 2015). Likewise, Day (2010) found that more parental messages that encouraged sexual agency significantly predicted higher sexual assertiveness among 334 Black female college students, but not sexual affect.

Other studies have examined parental sexual socialization messages in relation to the anticipation of sexual activity. Using a sample of 562 African American 5th grade students, Anderson et al. (2011) found that among girls, those who reported more frequent parental sex-related communication were more likely to anticipate engaging in sexual activity than those who reported less frequent communication. Similarly, Evans and colleagues (2022) found that among 287 Black adolescent girls, greater parental sex communication was significantly associated with an increased likelihood of girls intending to have sex early (i.e., at or before the age of 17 years). Another study also found that greater maternal communication about sexual topics significantly predicted more permissive attitudes about premarital sex among 75 Black female college students (Bynum, 2007). Given the cross-sectional design of these studies, the directionality of the relationship between sexual socialization messages and anticipation of sexual activity cannot

be inferred. However, these findings may suggest that young Black women and girls who anticipate engaging in sexual activities may seek more guidance from their parents about sex than those who do not anticipate engaging in sexual activities.

Regarding sexual behaviors, Donenberg et al. (2011) found that among 266 African American adolescent girls, more frequent maternal sex-related communication and higher number of sexual topics discussed were both significantly associated with an increased likelihood of Black adolescent girls ever having sex. Likewise, another study of 274 African American adolescent girls and their mothers found that greater maternal communication about general sexual topics was significantly associated with higher likelihood that daughters were sexually active, but greater communication about mother's sexual values was significantly associated with lower likelihood that daughters were sexually active (Usher-Seriki et al., 2008). Bynum (2007) also found that greater maternal communication about sexual topics was significantly associated with greater sexual experience in Black girls. Similar to the previous set of studies, these studies all use cross-sectional designs which limit inference about the directionality of the relationship. It is possible that parents may engage in more discussions with girls about sex after learning that they are sexually active, or if sexually active girls seek more of their support.

Furthermore, Day (2010) examined the relationship between parental sexual communication and condom-use self-efficacy among 334 African American female college students, and found that receiving more parental messages that encouraged sexual agency was significantly associated with higher condom use self-efficacy. Likewise, DiClemente et al. (2001) examined the associations between parent-adolescent communication about sex and contraceptive risk behaviors in a sample of 522 African American adolescent girls. The results

indicated that girls who discussed sex less frequently with their parents had a greater likelihood of never having used condoms in the last 30 days, during the last five sexual encounters, and during the last act of sexual intercourse. Furthermore, girls who discussed sex less frequently with their parents had a greater likelihood of never having used any form of contraception during the last 5 sexual encounters. Another study of 488 African American college students found that among young women, greater parent–teen sexual risk communication with mothers was negatively associated with reports of unprotected sex (Hutchinson & Montgomery, 2007). However, Donenberg et al. (2011) did not find a statistically significant association between mother-daughter communication about sex and condom use in a subsample of 81 sexually active Black girls. They also did not find a significant association between mother-daughter communication about sex and number of sexual partners.

Regarding sexual risk communication with partners, Donenberg and colleagues (2018) found that among 266 Black adolescent girls and their mothers, girls' rejection sensitivity (i.e., anxious expectations of experiencing rejection) significantly mediated the relationship between mother-daughter sexual risk communication and girls' sexual risk communication with partners, such that higher risk communication measured at baseline predicted lower levels of rejection sensitivity 12 months later, which predicted more frequent partner risk communication at 12-months. Interestingly, more frequent partner risk communication significantly predicted greater sexual risk behavior 24 months later. Similarly, DiClemente et al. (2001) found that among 522 African American adolescent girls, those who discussed sex less frequently with their parents had lower self-efficacy in communicating with sexual partners about condom use and refusing unsafe sexual encounters. However, other studies that have examined the direct links between

sexual socialization practices and sexual risk behaviors in Black women and girls did not report significant findings (Kapungu et al., 2010; King, 2022).

Summary of Research on Socialization Processes and Sexual Health

In summary, there is a growing empirical literature on the associations between racial socialization, gendered-racial socialization, and sexual socialization and sexual behaviors and attitudes in young Black women and girls. The findings suggest that the types and frequency of socialization practices are differentially associated with various sexual and reproductive health attitudes and behaviors in Black women and girls, including sexual assertiveness, sexual affect, and engagement in sexual activities. Despite the methodological limitations of these studies, this body of research provides preliminary evidence that these socialization processes may be significant to sexual and reproductive attitudes and behaviors related to family planning.

Theoretical Frameworks and Conceptual Model of Familial Socialization Processes and Sexual and Reproductive Health

The empirical evidence to date underscores the significance of the various socialization processes for the sexual health and well-being of Black women and girls. However, little attention has been directed toward understanding the implications of these socialization processes on attitudes and behaviors about family planning. Thus, this dissertation research seeks to develop this area of the literature by investigating these issues as illustrated in the conceptual model in Figure 1.

The conceptual model is guided in part by the analytic framework of intersectionality. The term *intersectionality* was coined by legal scholar, Kimberlé Crenshaw (1989) to describe the interconnectedness of multiple systems of oppression or domination (e.g., race, gender, class), and the effects on the lives of individuals living at the intersection of these systems.

Intersectionality challenges the practice of focusing on singular forms of oppression by emphasizing the need to acknowledge the interconnectedness of people's various statuses, and how it affects people's social, economic, and political standing in society (Collins, 1990; Crenshaw, 1989). Black women, in particular, experience not only racial and gender discrimination (Beale, 1970), but also discrimination that is specifically related to their dual status as Black women (i.e., gendered racism) (Essed, 1991). Therefore, it is useful to apply the framework of intersectionality when thinking about how Black girls are socialized because their intersectional status may influence the types of messages their caregivers relay to them intentionally and unintentionally.

The model is also guided by the *ecological systems theory*, which was developed by Urie Bronfenbrenner to explain how child development is impacted by an individual's immediate environments and the larger society in which these environments exist in (Bronfenbrenner, 1977). The theory posits that there are four nested ecological environments that influence the course of child development, which include the *microsystem, mesosystem, exosystem, and macrosystem*. The *microsystem* refers to the relations between an individual and the immediate physical environments or settings in which they live (Bronfenbrenner, 1977). The *mesosystem* refers to the interconnections between an individual's immediate environments at a specific time in their life. The *exosystem* describes the other formal and informal social systems that indirectly affect an individual by influencing how the immediate settings function (Bronfenbrenner, 1977). Finally, the *macrosystem* refers to the models or templates of the society's broader culture or subculture that govern the ways in which the micro-, meso-, and exosystems exist.

The socialization practices of African American caregivers are influenced by their immediate environments and their position in society, and these influence how they socialize

Black girls about the social constructs of that society. In particular, within the context of the United States, African American caregivers may relay messages to Black girls regarding the norms and expectations around the social constructs of race and gender. Furthermore, Black caregivers may also socialize Black girls on the expectations about being Black and female. Therefore, the ecological systems theory provides a theoretical framework for understanding child development as a process that involves interactions between immediate and distant ecological systems.

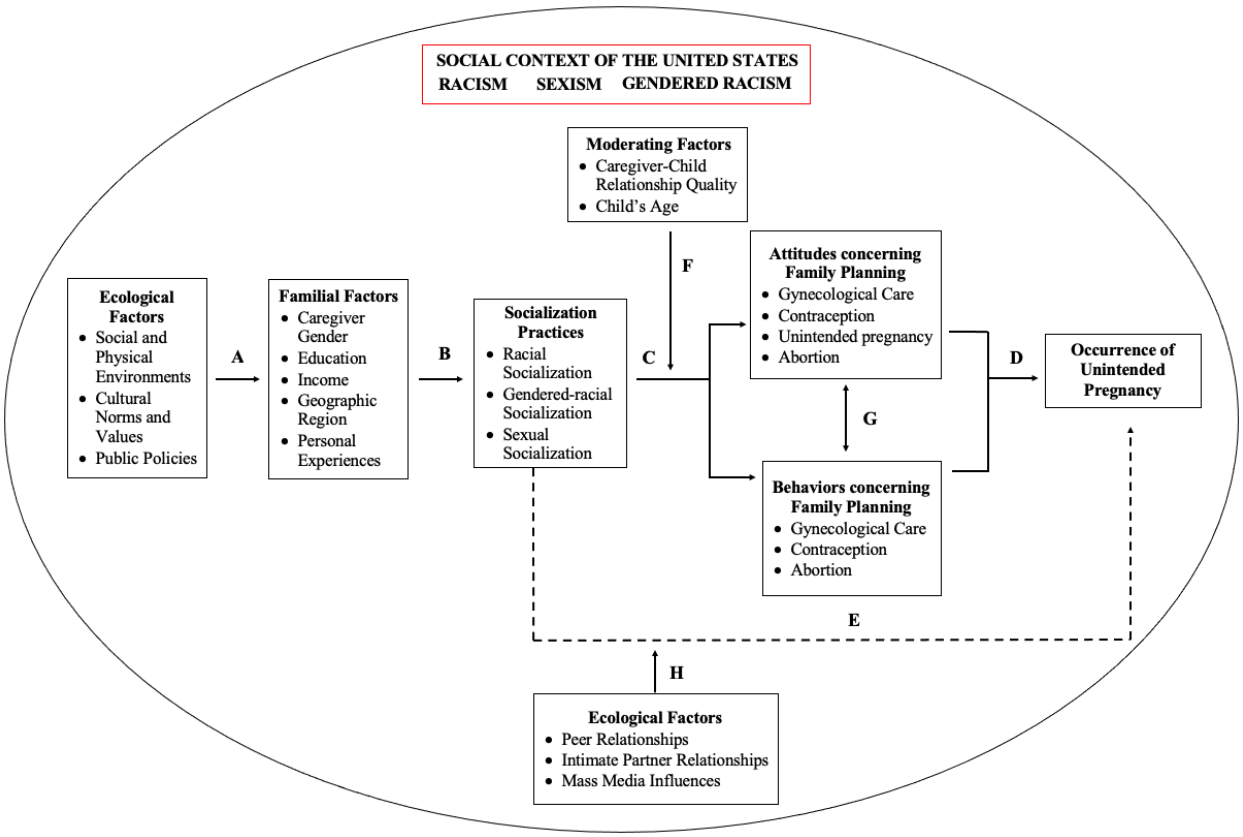
Using the frameworks of intersectionality and ecological systems, the conceptual model in Figure 1 that underlies the present research illustrates how the various socialization processes may relate to sexual and reproductive health issues regarding family planning for Black women and girls. **Paths A and B** in Figure 1 illustrate how African American families' engagement in different socialization practices concerning race, gender and sexuality may be influenced by various familial factors such as socioeconomic status, and other ecological factors such as cultural norms and values. **Path C** illustrates how the socialization practices that African American families engage in may influence attitudes and behaviors relevant to family planning, including gynecological care, contraception, unintended pregnancy, and abortion.

Furthermore, **Path E** illustrates how socialization experiences may play a direct role in the occurrence of unintended pregnancies, or alternatively **Path D** illustrates and indirect effect through family planning-related attitudes and behaviors which are interconnected (**Path G**). **Path F** illustrates how individual and interpersonal factors such as the child's age and the quality of the caregiver-child relationship may influence how socialization messages are received by Black girls. Likewise, **Path H** illustrates how ecological factors such as peer and partner relationships may affect the influence of familial socialization messages on the occurrence of unintended

pregnancies. Moreover, the larger social context of the U.S. influences the socialization processes and the sexual and reproductive health of Black women and girls through pervasive systems of oppression including racism, sexism, and gendered racism.

Thus, the purpose of this dissertation research is to provide empirical evidence to support two of the eight pathways in this conceptual model. The goal of Study 1 is to provide support for **Path C** by investigating the childhood socialization experiences of young African American women in higher education and the perceived influence on their sexual and reproductive health values, attitudes, and behaviors in adulthood. Study 2 aims to provide further support for **Path C** by testing the association between sexual socialization messages and contraceptive use in young Black women and adolescent girls. Finally, Study 3 aims to provide support for **Path E** by examining the relationship between sexual socialization messages and pregnancy intentions in young Black women and adolescent girls.

Figure 1. Conceptual Model of Familial Socialization Processes and Sexual and Reproductive Health



Sexual Socialization Experiences and Perceived Effects on Sexual and Reproductive Health in Young African American Women

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Author Contributions
Joni Brown and Christine Dunkel Schetter contributed to the study conception, study design and material preparation. Data collection was completed by Joni Brown. All authors contributed to the qualitative data analysis. The first draft of the manuscript was written by Joni Brown and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Abstract

Socialization is a process whereby people learn the norms and values of society. African American caregivers often engage in socialization processes that teach girls about Black womanhood, and female sexual and reproductive health. African American women experience high rates of adverse sexual and reproductive health outcomes that may be explained in part by socialization processes. The present study investigated the childhood socialization experiences of young Black women, and perceptions of the influence of these experiences on women's adult sexual and reproductive health attitudes and behaviors. In-depth interviews were conducted with 25 Black women enrolled at a large public university. We identified several themes in their socialization experiences: Endorsement of traditional feminine gender norms/roles; Preparation for prejudice; Promotion of ambition and independence; Promotion of racial pride; Guidance on sexual and reproductive health; Limited engagement in sexual socialization. We also identified themes related to the perceived influence of these experiences, such as the adoption or rejection of caregivers' socialization messages by participants. These findings, as illustrated in quotes from participants, elucidate sociocultural processes in Black women's sexual and reproductive health, and provide guidance for how families, educators, and healthcare providers engage with Black women and girls about sexual and reproductive health.

Keywords: socialization, reproductive health, African American, women, intersectionality

Sexual Socialization Experiences and Perceived Effects on Sexual and Reproductive Health in Young African American Women

African American women in the United States disproportionately experience adverse sexual and reproductive health outcomes, particularly around issues of family planning and the process of determining if and when one decides to have children and the number of children (Haider et al., 2013). Research shows that Black women experience a high incidence of unintended pregnancy and shorter interpregnancy intervals (Lonhart et al., 2019; Mosher et al., 2012). Additionally, Black women report low use of any contraceptives, and low use of highly or moderately effective contraceptives such as intrauterine devices (IUDs) (Dehlendorf et al., 2014). While these behavioral patterns may be explained in part by social, economic, and political inequalities due to racism (Prather et al., 2016), there are also relevant sociocultural factors that may contribute. Studying the familial socialization process that teaches Black girls about being a Black woman (i.e., gendered-racial socialization), and the related process that teaches them about sexual and reproductive health topics (i.e., sexual socialization), may improve our understanding of sexual and reproductive health among Black women. The current study employed qualitative methods to investigate the childhood socialization experiences of African American women, and the perceived influence on their sexual and reproductive health attitudes and behaviors in adulthood. Of note, we use the terms “African American” and “Black” interchangeably throughout the paper, because some of the studies cited use one or the other and often do not make distinctions about which ethnic groups of the African diaspora are being referenced.

Socialization of African American Children and the Role of Intersectionality

Socialization is the process by which children are taught the accepted norms and values of a society in order to become functional members (Maccoby, 1992). For African American families, this often involves engaging in racial socialization, a process whereby race-related messages are relayed to prepare children for life as people of color (Hughes & Chen, 1997; Lesane-Brown, 2006). Importantly, there are various factors which may influence the types of racial socialization messages relayed by African American families, including the child's gender (Hughes et al., 2006). Multiple studies have found gender differences in the types of messages that Black girls and boys receive(Bowman & Howard, 1985; T. L. Brown et al., 2010; Grills et al., 2016; Malone Gonzalez, 2019; Thomas & Blackmon, 2015; Thomas & Speight, 1999).

For African American girls in particular, the possession of two marginalized social statuses makes them targets of racial and gender discrimination (Beale, 1970), as well as discrimination that is specifically related to their status as both Black and female (i.e., gendered racism) (Essed, 1991). Thus, intersectionality may play a role in how African American families socialize Black girls. The term *intersectionality* refers to the interconnectedness of multiple systems of oppression such as racism, sexism and classism, and provides a lens for examining the experiences of individuals living at the intersection of these systems (Crenshaw, 1989). Furthermore, intersectionality emphasizes the interconnectedness of people's multiple social statuses and its influences on their social, economic, and political standing in society (Collins, 1986; Crenshaw, 1989). Thus, intersectionality serves as an important approach for understanding the lived realities of Black women and girls.

Gendered-Racial Socialization of African American Girls

Gendered-racial socialization is the process whereby African American girls are taught about the realities of being a Black woman, and ways to cope with the gendered racism they

experience (D. L. Brown et al., 2017). Several studies have identified gendered-racial socialization messages that Black women and girls receive, including messages about respectability, independence, and self-pride (Edmondson Bell & Nkomo, 1998; Thomas et al., 2013; Thomas & King, 2007). Families also relay messages to Black girls about their physical beauty, particularly regarding their hair and skin color (Davis Tribble et al., 2019).

There is a growing body of research on the associations between different gendered-racial socialization messages (e.g., gendered-racial pride and empowerment, gendered-racial oppression, etc.) and various psychosocial outcomes in Black women and girls (Moody & Lewis, 2019; Stokes et al., 2020; Winchester et al., 2021). Recent studies have also linked gendered-racial socialization messages to sexual behaviors and attitudes in African American women and girls. Evans et al. (2022) found that gendered-racial pride messages were significantly associated with lower likelihood of intentions to have sex early in a sample of 287 Black female adolescents. They also found that these messages moderated the relationship between parental monitoring and adolescent's intentions to have early sex; among girls who received low gendered-racial pride messages, greater parental monitoring was associated with lower likelihood of intentions to have sex early, but this was not true of girls with high levels of pride messages. Likewise, Brown and colleagues (2018) found that ethnic-gender socialization profiles were associated with sexual assertiveness and safe sexual practices in a sample of 116 African American college women, and that sexual assertiveness mediated the relationship between ethnic-gender socialization profiles and safe sex practices.

These studies provide preliminary evidence linking gendered-racial socialization to sexual attitudes and behaviors, which suggests that this socialization process may be relevant to Black girls' sexual development. However, they do not examine the breadth of sexual and

reproductive health issues related to family planning. For example, we do not know whether gendered-racial socialization messages in childhood and adolescence influence attitudes and behaviors concerning gynecological care, unintended pregnancy, abortion, and contraceptive use besides condom use.

Sexual Socialization of African American Girls

As children develop and begin to mature physically, parents often start to relay messages about sexuality and other related topics to guide their behaviors around sex (Widman et al., 2016). Furthermore, research shows that parents have more discussions about these issues with girls than with boys (DiIorio et al., 2003), and this is also true in African American families (Anderson et al., 2011; Fletcher et al., 2015; Kapungu et al., 2010; Pluhar et al., 2008). For African American families, socialization of Black girls may involve teaching them about historical and contemporary stereotypes of Black womanhood to deter them from perpetuating these images (Leath & Mims, 2021). Stereotypes of Black women as "gold-diggers," "Jezebels," and "Welfare Queens" often characterize Black women as hypersexual, materialistic, and irresponsible, which influences how they are perceived in society. Thus, African American families may relay messages about sexuality that convey their disapproval of behaviors that would associate Black girls with such stereotypes (Leath et al., 2021).

Qualitative studies suggest that Black girls receive a range of messages about sexuality from their families, such as educational messages concerning sex and related topics, messages about the potential consequences of engaging in sexual activities, and messages that promote abstinence (Crooks et al., 2019; Dennis & Wood, 2012; E. Evans & Dyson, 2015; Grange et al., 2011; Leath et al., 2020; Warren-Jeanpiere, 2006). Furthermore, quantitative studies have linked sexual socialization messages in Black adolescent girls to various sexual health attitudes and

behaviors. These include sexual assertiveness and positive affect about their level of sexual experience (Fletcher et al., 2015), permissive attitudes about premarital sex and sexual experience (Bynum, 2007), greater anticipation and intentions of engaging in sexual activity (Anderson et al., 2011; R. Evans et al., 2022), and likelihood of girls ever having sex (Donenberg et al., 2011; Usher-Seriki et al., 2008). While these studies provide quantitative evidence of the associations between sexual socialization messages and sexual health attitudes and behaviors in Black girls, they do not address other reproductive health attitudes and behaviors related to family planning. Furthermore, unlike qualitative methods, quantitative methods do not capture the meaning-making process of childhood experiences and sexual development in Black women and girls which was an underlying rationale for this study's method.

The Current Study

Previous qualitative studies have not sufficiently investigated Black girls' sexual socialization concerning topics relevant to family planning, particularly gynecological healthcare and abortion, nor have they looked at the effects of sexual socialization practices on values, attitudes, and behaviors related to reproductive health in adulthood. The purpose of the current study is to take an intersectional approach to investigate the childhood gendered-racial and sexual socialization experiences of Black women, and the influence of socialization experiences on their sexual and reproductive health values, attitudes, and behaviors in adulthood. This study also takes a developmental approach to examine how messages received in childhood may influence sexual and reproductive health later in life. Using qualitative research methods, we investigated the childhood socialization experiences of young African American women, and the perceived influence on their adult sexual and reproductive health values, attitudes, and behaviors.

Method

Participants

The sample was composed of 25 African American women who were enrolled as undergraduate, graduate, or professional students at a large university in the western United States. The inclusion criteria for this study were: (a) self-identified as a Black or African American cisgender woman; (b) born in the U.S.; and (c) 18 years of age or older. In addition, individuals were eligible only if they had at least one primary caregiver of African American descent while growing up before the age of 18. Primary caregivers included parents, stepparents, grandparents, and/or any other guardian. For this study, African American was defined as an individual who is a descendant of enslaved Africans in the U.S.

The mean age of the sample was 26 years (*SD* = 8.11; Range = 18 to 53 years). Approximately half of the women (*n* = 13, 52%) were enrolled as graduate or professional students, while 48% (*n* = 12) were enrolled as undergraduate students of varying years in school. A majority of the sample (*n* = 15, 60%) grew up in the Western region of the U.S., while the remainder grew up in other regions of the U.S. Slightly over half of the women (*n* = 14, 56%) reported coming from a low- or low to middle-income background (see Table 1.1 for full demographic information). About one-half of the sample (*n* = 13, 52%) were raised by two primary caregivers of African American descent. Specifically, nine women were raised by their mother and father, three were raised by their mother and grandmother, and one woman was raised by her mother and great-grandmother. The other half were raised by one primary caregiver of African American descent. Of the 23 women who reported their sexual attraction, most women (*n* = 15) reported attraction to men only, while three reported attraction to women only and five reported attraction to both.

Study Design and Procedures

This study was approved by the institutional review board at the University of California, Los Angeles prior to data collection. Participants were recruited via a standardized email that was sent to all Black female undergraduate, graduate, and professional students by the university's registrar. The email contained the study objectives, eligibility criteria, and a hyperlink to the study information sheet. The study information sheet explained in detail the purpose of the study, description of study participation, participants' rights, and the risks and benefits of participation. The first author (principal investigator) contacted 57 students who initially expressed interest in the study, of whom 30 students agreed to be screened to confirm their eligibility. The investigator screened the prospective participants verbally via video conferencing, and 25 individuals were eligible to participate in the study. Prior to the start of the interview, participants completed a brief background questionnaire on questions about age, enrollment status, region of origin, family income level while growing up, and sexual attraction. All interviews were conducted by the investigator using a standard interview protocol and were conducted via video conferencing and were audio recorded with participants' verbal consent. The mean length of the interviews was 42 minutes. It was determined that data saturation was achieved after conducting 25 interviews (Fusch & Ness, 2015).

A semi-structured interview protocol was used for this study, which included open-ended interview questions and probes about childhood messages about race, gender, and sexual and reproductive health topics related to family planning. There were also open-ended questions about the perceived influence of these messages on sexual and reproductive health values, attitudes and behaviors. The design of the interview protocol was informed by previous research on gendered-racial socialization, sexual socialization, and sexual and reproductive health.

Furthermore, the questions and probes and the organization of the interview protocol were guided in part by the framework of intersectionality. For example, participants were asked questions such as "Can you tell me about any messages that your caregiver(s) may have told you that were specifically about being a Black girl, or what it means to be a Black woman?" and "To what extent did your caregiver(s) communicate messages to you about abortion? In what ways were any of these messages specifically about Black women?" The interview protocol was piloted with four Black female students and revised prior to recruitment.

Researcher Positionality and Reflexivity

The first author is a doctoral student whose research centers on psychosocial and sociocultural factors affecting Black women's health. She holds a mixed insider/outsider status as a young Black cisgender woman from the Caribbean, which enabled her to relate to the participants, and also learn from them. To initiate rapport, video conferencing was specifically used to screen participants to allow them a chance to see the investigator and ask questions about the study and her research interests. Furthermore, the investigator formed a research team by intentionally recruiting and training three young Black women who served as undergraduate research assistants for the study. The research assistants were strongly encouraged to share their thoughts with the investigator throughout the entirety of the study. During the data analysis stage, the research team also engaged in reflexivity by frequently discussing how their own childhood experiences and differing experiences as Black women affect their thoughts and feelings about the study topics and the contents of the transcripts.

Additionally, the second author of this paper is a Black male professor who was trained in community psychology. His work has examined sexual and mental health outcomes among racial/ethnic and sexual minority populations, and he has substantial experience conducting

qualitative research. He worked with the first author in the analysis of the qualitative data collected and interpretation of themes but, as a part of his reflexive practice, acknowledged his limitations in personally understanding the lived experiences of Black women and his privilege as a cisgender male. The third author is a White/European American female professor trained in social and health psychology who conducts research in women's reproductive health, especially with low-income pregnant Black and Latina women. Over the course of her career, she has conducted and supervised qualitative and quantitative research on topics such as cancer, diabetes, HIV, and pregnancy in Black and Latina women in clinical and community settings. She advised the first author in the design of the study and the interpretation of themes. However, she also recognized her limitations as a White woman in supporting this research and provided other suitable mentors. Altogether, this research reflects the influence of the varying identities and backgrounds of the researchers involved (Merriam & Tisdell, 2016).

Data Analysis

Audio recordings of the interviews were first transcribed using Otter.ai, a transcription software. After the transcription, the research team reviewed all transcripts for accuracy by listening to the recordings and reading through the transcripts to correct any discrepancies. The data were analyzed using an inductive and deductive approach to thematic analysis (Fereday & Muir-Cochrane, 2006). Thematic analysis is a commonly used method in qualitative research that identifies and organizes existing themes and patterns within the data. This hybrid approach to thematic analysis involves data-driven inductive techniques to identify themes, as well as deductive techniques that were guided by the interview protocol and the literature on the topics.

Prior to starting the analysis, a priori codes were derived from previous qualitative studies on gendered-racial socialization and sexual socialization in Black women and girls. The research

team then became familiar with the data by reading through the transcripts twice and making notes and memos. New codes were identified from the data through discussions of these notes. The codes from the literature and from the transcript review were consolidated into an initial codebook that contained the code definitions and examples. The transcripts were uploaded into the software Dedoose (Version 9.0.54, 2022), and the research team independently coded four randomly selected transcripts using the initial codebook. The team then discussed and resolved disagreements about the codes and amended the codebook accordingly. This process was repeated twice by the entire research team and four times by the PI and one of the research assistants to finalize the codebook. Afterwards, the PI and research assistant independently coded four randomly selected transcripts using the finalized codebook, and the interrater reliability was calculated by dividing the total number of agreements and disagreements by the number of agreements (Miles & Huberman, 1994). The final interrater reliability was 79%.

After all the transcripts were coded with the finalized codebook, the codes were collated into themes and subthemes. The themes and subthemes were then reviewed by evaluating frequencies of the code applications and the co-occurrences between codes using Dedoose. Finally, each theme and subtheme were labeled and described. All participants were assigned pseudonyms to protect their confidentiality. The data and research materials for this study are available upon request.

Results

African American women in our sample reported varying childhood and adolescent socialization experiences regarding what it means to be a Black woman and concerning female sexual and reproductive health. We identified several distinct themes relevant to sexual development. Almost all participants reported receiving messages in childhood from their

caregiver(s) that endorsed traditional feminine gender norms and roles. Most participants reported receiving messages designed to prepare them for prejudice they might encounter as a Black woman. One-half of the participants reported receiving caregiver messages that emphasized independence, education, and careers. Similarly, one-half of the participants reported receiving messages that promoted racial pride. All participants reported receiving messages that provided some guidance on sexual and reproductive health. However, some women reported having limited engagement with caregivers about specific reproductive health issues such as abortion. Also, most participants reported receiving messages that opposed sexual exploration among girls. We also identified two themes regarding influences of caregiver messages, including the influence of caregiver's direct engagement, and influence of caregiver's limited engagement in sexual socialization. All themes are described in detail in Table 1.2.

Endorsement of Traditional Feminine Gender Norms/Roles

A large majority of women (n = 24) reported receiving messages in childhood from their caregiver(s) that endorsed traditional feminine gender norms and roles. Such messages often encouraged girls to conform to traditional societal gender stereotypes of women, including performing gendered household duties, wearing feminine clothes and accessories, and playing with toys that are typically associated with being a girl. For example, Nia, a 29-year-old senior undergraduate student, stated, "My mom … she would buy us [her and her younger sister] toys that are mostly for girls, like kitchen sets, or fake nail polish, Barbie dolls."

Some of the messages within this theme were focused on the appearance of women, notably about hair. For example, Esther, a 23-year-old graduate/professional student, discussed a long-standing conflict between her and her mother regarding her hair:

> [The] big thing with my mom was my hair. My hair has always been a conversation … But in my teenage years and even when I was younger, I used to get my hair done every two weeks. I used to go to the beauty shop, get my hair pressed, or at least just blow dried, washed, conditioned, etc. I never got a perm. But I think she made me feel as if like my beauty and femininity was tied to that, because of how constant I got my hair done.

Additionally, some participants reported receiving messages about how they are expected to conduct themselves as women. When asked about the messages she received about being a girl, Eve (a 42-year-old graduate/professional student) shared that her mother relayed to her that, "… you always had to present yourself as a young lady," suggesting that she was expected to always behave in a respectable and dignified manner.

Preparation for Prejudice Against Black Women

Most participants (n = 20) reported receiving messages from their caregiver(s) that were intended to prepare them for prejudice they may encounter as a Black person and a woman. Participants discussed how their caregivers' communicated expectations of Black women, such as Black women having to actively combat negative stereotypes, perform "codeswitching" when interacting with White people (i.e., switching between languages or dialects based on the social context), be self-sacrificing for their families' needs, and be very mindful of the decisions they make because of their intersectional status. For example, Priscilla, a 32-year-old graduate/professional student, discussed a message she received from her mother about how men take advantage of Black women:

> … you're Black, and men will try to take advantage of you. So, you need to make sure that you check on yourself after sex with men because … you can encounter somebody

> who has herpes, and they might not be having an outbreak at the time, but you know, they could possibly be transmitted to you and men don't really care about Black women … Be skeptical about who you decide to share your body with. Men just want you for your body because you're a Black woman, and you look like this. And you're going to be targeted because of the way that you look and because of the color of your skin.

This example illustrates ways in which African American caregivers prepare girls for harmful experiences of sexualization. African American caregivers may also relay messages to Black girls on how to navigate different social contexts in society as Black women, such as healthcare settings which are pertinent to sexual and reproductive healthcare. For instance, Stella, a 30-year-old graduate/professional student, recalled how her mother taught her the importance of having a Black healthcare provider:

> … she never really talked in the same way that we do now about Black women's reproductive health. But it was like— she would just say things like, "Oh, we need to make sure that you get a Black woman doctor, because we wouldn't want anybody else looking at you. No one else really understands your body the way that a Black woman doctor would.

Promotion of Ambition and Independence

Almost one-half of participants (n = 13) reported receiving caregiver messages that emphasized qualities such as independence, and valuing education and a career. For example, Rebecca, a 37-year-old graduate/professional student, spoke about the conflicting messages she received from her mother and father regarding expectations of women:

> I think it was different though maybe from my mom's perspective ….I feel like she grew up with… serving your man and doing all that. That wasn't my picture of a strong Black

> woman. I don't necessarily think it was my dad's picture of a strong Black woman, even though he benefited from it … I do think he grew to accept it from my mom, but for my sisters and I, it was like, "No. Get an education. You don't have to do any of that. You don't need a man to do all that."

In this example, although Rebecca's father accepts her mother's subservience towards him, he is in favor of his daughters prioritizing their education and valuing being independent of men. Similarly, Halima, a 21-year-old senior undergraduate student, shared how her mother and grandmother emphasized the importance of her being self-sufficient, particularly as it relates to male partners:

> … they were very adamant about not depending on a man for literally anything. So, they're very much like, "Fight for yourself. Fight for what you wanna do. Prioritize yourself. And don't let a man take anything from you." They're very focused on what it means to have agency as a young woman and what that looks like.

African American caregivers' encouragement of independence and ambition may be important for Black girls in navigating intimate relationships with men and prioritizing their sexual and reproductive health and needs.

Promotion of Racial Pride

About one-half of the participants (n = 14) reported receiving messages from their caregiver(s) that promoted value and pride in being Black/African American and/or being a Black woman. African American caregivers may relay these types of messages in an effort to bolster Black girls' self-esteem. For example, Eve discussed how her parents helped to instill pride about being a Black woman during her younger years:

> … the message that I got from her and really from both of them, is that, "You are a beautiful, strong, Black woman. Doesn't matter what you look like, what size you are, how you speak… you're made in God's image, but also… wherever you are, that's where you belong. So don't ever let anyone tell you that you shouldn't be somewhere because you're a Black woman.

African American caregivers may also encourage racial pride in Black girls through non-verbal cues. For instance, Tess, a 20-year-old junior undergraduate student, discussed how her childhood environment helped to foster racial pride:

> I was always raised around Black art, Black Renaissance. My parents displayed like, hieroglyphics, African art, like this was just always around me and so I became a product of my environment specifically.

In addition to these messages, caregivers relayed messages that encouraged Black girls to appreciate their Black physical features. For example, because her parents emphasized pride in having Black features, Noelle (a 20-year-old junior undergraduate student) shared that, "I really do love that I'm Black."

Guidance on Sexual and Reproductive Health

There were two subthemes that were identified from the analysis: One is focused on verbal messages and actions that provide guidance, and the other is focused on messages received via observation of caregiver(s) intimate relationships and expression of sexuality.

Subtheme 1: Caregiver Support through Verbal Messages and Actions

All participants in the sample without exception reported receiving some verbal guidance from their caregiver(s) about sexual and reproductive health topics. This included medically accurate education on sex and other related topics, as well as informative messages about

intimate relationships. Participants also reported caregiver actions that supported their sexual and reproductive health, such as caregivers providing contraceptives and taking them to receive gynecological care. For example, Priscilla recounted how her mother emphasized the importance of contraceptives:

> Contraceptives are like, "If you're not going to use it, then you don't need to have sex. Like, it's not an option for you to not use a contraceptive." That was really, really strong and I think that was equal for both my brothers and I. Contraceptives and the birth control piece. Since I went and done it on my own, she just kind of encouraged me to stick with it.

Another way in which caregivers provided sexual and reproductive guidance to participants was through discussions of their own experiences or that of others. In her interview, Esther spoke about a story her mother relayed to her that happened during her time in college:

> … she told me a story about her RA in college. She had to drive her RA in college to go get an abortion. I think she was telling me that she was okay with it, but maybe not for me. And she hopes I would make the … responsible decisions to prevent that, even though sometimes for people getting an abortion that is the responsible decision.

This conversation between Esther and her mother provided an opportunity for her mother to educate her about making sound decisions around sex, and to communicate her wish for Esther to avoid having an abortion. However, this quote illustrates the complexity of caregiver sexual socialization messages in informing reproductive health attitudes and beliefs. Esther is caught between her mother's message to avoid abortion and her belief that terminating an unintended pregnancy is a responsible decision.

Subtheme 2: Observations of Caregivers' Sexuality and Intimate Relationships

About half of participants (n = 11) reported receiving indirect messages through observing their caregivers own intimate relationships. For example, Tara, a 32-year-old graduate/professional student, described what she observed about her parents' different romantic relationships:

> So, my mom did have a serious boyfriend while I was a kid … separately, my dad had a serious girlfriend around the same time and then married my stepmom when I was nine … So, I learned early on … about adult relationships, like changing. Yeah, and like that Mommy can have a boyfriend, you know. So at least I was aware or conscious of adult relationships not being like some static thing.

In this example, Tara's observation of her parents' romantic relationships taught her that it was normal for adults to change partners, even if they have children with a different partner. Additionally, some participants reported observations they made as it relates to their Black mother's concealed sexual expression. For instance, Ruth, a 24-year-old graduate/professional student, stated:

> My mom never dated really when I was growing up, to my knowledge. And if she did, it was not visible to us, and we never really had men in the house. And so I think that shaped… my views on dating in the sense that it never… has been a big part of my life.

African American mothers may conceal their intimate relationships and sexuality from their daughters to deter them from openly expressing their own sexuality.

Limited Engagement in Sexual Socialization

Many participants (n = 23) reported having limited engagement with caregivers about sexual and reproductive health topics. This includes participants reports of receiving unclear

messages about sexual and reproductive health issues, and absence of sexual and reproductive health messages. For example, Sherrie, a 23-year-old graduate/professional student, stated:

> … I remember one time I got caught on the internet, like looking at something sexual or doing something that I had no business doing at that age, and it was like sexually related, but instead of using that moment as a teaching opportunity or a time to actually have that conversation, they didn't. And so like, they never really talked about, you know, sex or things like that.

Additionally, many of the women (n = 22) who discussed this type of socialization also reported receiving messages about *Guidance on Sexual and Reproductive Health*. There are at least two possible explanations for why participants may have had discussions related to these two themes. First, although all participants reported receiving some guidance about sexual and reproductive health issues, there was variability in the topics discussed across participants; while some women may have received guidance regarding certain issues, others may not have received similar guidance. Furthermore, for most participants, there were certain topics that were discussed only briefly with their caregiver(s) or were not discussed at all. For example, about one-half of participants (n = 13) reported that they did not speak with their caregiver(s) at all about abortion. Second, for women who had two primary caregivers, certain messages may have been relayed by one caregiver, but not the other. For instance, Eve stated, "So, the short answer is my dad didn't talk about it [sex] at all. He left that totally to my mom to have that conversation with me, but he did have it with my brother."

Opposition to Sexual Exploration among Girls

The two subthemes identified on sexual exploration were differences in messages about sexual expression by gender and messages conveying the personal ethics and morals of caregivers.

Subtheme 1: Caregiver Messages for Girls' Sexual Expression Compared to Boys'

Over one-half of participants (n = 18) reported receiving messages from caregiver(s) that attempted to control their sexual expression. These types of messages were often discussed by participants in relation to how boys were treated. More than one-half of participants (n = 14) grew up with one or more brothers in their households, and a majority of these women (n = 12) reported differences in their caregivers' messages and attitudes regarding sexual expression for boys versus girls. For instance, Tess shared:

> I think the difference with my brother growing up is he got a lot of slack for certain things. And I think this is a mutual experience, or a common experience within the Black household, because it's almost like, from a young age, I can easily be shunned for wearing something, you know, that had my shoulders out or that was too short. And you know … shameful comments like, "That outfit is 'fast,'" or "You're showing too much skin," right. And my brother didn't have that, at all. He could go around shirtless for all he cares, right.

Caregiver communication of contradictory gendered norms around sexual expression may help to reinforce traditional gender expectations of women behaving in a demure manner.

Subtheme 2: Messages about Girls' Sexual Expression Based on Ethics or Morals

Around one-half of participants (n = 12) reported receiving messages from caregiver(s) opposing sexual exploration by girls that were guided by their ethics or morals. This theme involved messages that were influenced by caregivers' religious beliefs, which often emphasized

abstinence until marriage and having children in wedlock. For example, Nia spoke about her mother's messages regarding marriage:

> … she made such an emphasis on purity, especially with me. She would always tell me, "Wait until marriage. Wait until you fall in love. If y'all don't wait until marriage … you're committing a sin," or "You're not clean," and so many other different things.

Additionally, the messages within this theme concerned caregivers' attitudes that opposed the use of contraceptives and other preventive measures due to their morality. For instance, Justine discussed her mother's negative views about birth control:

> … when I became a teenager … I would hear her to talk about birth control, and not be like positive about it. … there's this one conversation we were talking about birth control … she was like, "We don't know … it possibly could like— you could have a fertilized egg and birth control could like terminate that pregnancy."

Influence of Caregiver's Direct Engagement

There are three subthemes concerning the influence of caregivers' direct engagement in socialization, one concerning that women adopted caregiver values and attitudes, another on rejection of caregiver beliefs, and the third on conflicting personal opinions as a result of caregiver values and attitudes.

Subtheme 1: Adoption of Caregiver Values and Attitudes

Most participants (n = 23) reported *accepting* or *retaining* the values and attitudes their caregivers relayed to them as children. For example, Priscilla described how the messages from her mother have influenced her sexual activity in adulthood:

> … just based on my mom's teachings of, "Some people may just want you for your body or how you look or because, you know, you're Black or, you know, your skin is so dark.

> They might be like just fascinated or whatever." So, I kind of have a radar and can tell, you know, when a person is genuine, versus when they're, you know, "I just want to add you to the list." So it definitely helps me to make a decision as to participate or not participate.

In addition, many participants discussed how childhood guidance and support around gynecological health have influenced their behaviors as adults. For instance, Stella stated, "… I went to the gynecologist when I started having sex because my mom— that was a part of the talks that we would have in trying to be safe."

Subtheme 2: Rejection of Caregiver Values and Attitudes

Over one-half of participants (n = 16) reported *rejecting* the values and attitudes that their caregivers relayed to them during childhood. In her interview, Noelle stated, "I don't really prioritize their [her parents] opinions, especially on sexuality and all of that stuff, or their messages, because I know that it's simply their opinion." Similarly, Rebecca, in thinking about messages she received from her mom, noted "I would say that that has not played into anything that I do, in terms of my interactions with men."

Subtheme 3: Conflicting Views due to Caregiver Values and Attitudes

Few participants (n = 3) reported holding *conflicting* views about sexual and reproductive health issues, partially because of the messages their caregivers relayed during childhood. For example, Felisha, a 25-year-old graduate/professional student, discussed her attitudes around unintended pregnancy and how she retained some, but not all, of her parents' beliefs:

> … I still think that having an unwanted pregnancy, that's hard. You're not responsible for not just yourself. And so now — I still have the same thoughts as my parents in a lot of

> ways, but there's less shame and the path to getting there is a lot deeper in terms of understanding systemic oppression in terms of Black women, specifically.

Similarly, regarding the topic of abortion, Justine, a 26-year-old graduate/professional student, shared, "…when it comes to abortion … I agree that, personally, I wouldn't prefer to get an abortion. However, I don't agree with, like I said, the strict-harsh judgmental part of it."

Influence of Caregiver's Limited Sexual Socialization

A majority of participants (n = 21) perceived some impact of their caregivers' limited engagement in sexual socialization on their sexual and reproductive health values, attitudes and behaviors. For example, Noelle described how her parents' lack of guidance around gynecological healthcare has influenced her as an adult:

> I think because I haven't had a bunch of guidance, it's made me seek it out a bit more. … I try to be proactive. … I have done my best to be aware … to try to be cognizant of different changes … that I feel in my body and trying to just respond to them more proactively …Yeah, I think I'm just more encouraged to learn. And then I can pass that knowledge on to my cousin…

Other participants also spoke about how the lack of messages they received about sex and related topics in childhood has influenced them to independently research these issues. However, for some participants, the lack of messages has prevented them from being proactive about preventive measures. For example, Tess, who is sexually active, stated, "I have yet to really … take part in birth control yet, because of my fears and the fact that I'm not fully educated on it."

Additionally, most participants who reported receiving indirect messages through observing their caregiver's intimate relationships spoke about how those observations have influenced their views on romantic relationships. For instance, Halima shared that, "there's

almost nothing I do now in a relationship without their [parents] influence in the back of my mind." These findings suggest that caregivers' limited engagement in sexual socialization is just as impactful as their direct engagement in these topics.

Discussion

The purpose of this study was to use an intersectional approach to investigate childhood and adolescent socialization experiences and the perceived influence on their adult sexual and reproductive health values, attitudes, and behaviors in a sample of adult Black women. The findings underscore differences in socialization practices among African American families. Furthermore, the results suggest that the socialization practices are not mutually exclusive, and that African American caregivers may engage in various practices simultaneously or at different times, even if they are sometimes contradictory. Moreover, the findings from this study provide further evidence of the perceived influence of childhood socialization experiences on African American women's adult sexual and reproductive health values, attitudes, and behaviors, particularly as it relates to family planning.

African American families may socialize Black girls to embrace traditional feminine gender norms as a way of distancing themselves from negative racial stereotypes (Hill, 2002). Furthermore, Black families may relay messages that encourage girls to conform to mainstream beauty expectations as a way to protect them from experiencing gendered-racial discrimination (Awad et al., 2015; Davis Tribble et al., 2019). However, messages that endorse patriarchal gender norms and roles may inadvertently uphold gender inequality by encouraging young girls to adopt attitudes and behave in ways that prioritize the needs and desires of men. This can be especially harmful for women who engage in intimate relationships with men (Sanchez et al., 2012). Additionally, African American families may teach Black girls about the hardships of

Black womanhood and impart adaptive skills to help them navigate the larger society (Logan et al., 2021). Families may also communicate cultural expectations of Black women, such as being a strong Black woman (Beauboeuf-Lafontant, 2009).

African American caregivers may choose to promote ambition and independence in Black girls to encourage them to pursue their goals, despite societal barriers (Thomas et al., 2013; Thomas & King, 2007). Furthermore, caregivers may promote independence, particularly financial independence, to discourage Black girls from relying primarily on the financial support of male partners. In addition, some African American families may seek to instill a sense of racial pride in Black girls to protect them from the harms of anti-Black messages and images, and this could involve communicating positive messages about Black girls' hair and skin color to enhance their self-image (D. L. Brown et al., 2017; Shambley-Ebron et al., 2016). Moreover, previous research has found that higher gendered-racial pride messages were significantly associated with lower likelihood of intentions to have sex early in Black adolescent girls (R. Evans et al., 2022). The researchers theorized that messages that promote gendered-racial pride in Black girls may promote positive self-concept, which may deter risky sexual behaviors.

Our finding that all participants reported receiving either direct and indirect guidance and support from their caregivers on sexual and reproductive health issues is consistent with previous research (Crooks et al., 2019; E. Evans & Dyson, 2015; Grange et al., 2011; Kapungu et al., 2010; Logan et al., 2021; Nwoga, 2000; Pluhar & Kuriloff, 2004). Furthermore, our finding that several participants received guidance about the importance of gynecological care and healthcare in general contributes to the limited research on Black women's socialization about gynecological health-seeking practices (Warren-Jeanpiere, 2006). However, similar to other studies (Crooks et al., 2019; Leath et al., 2020; Logan et al., 2021), we also found that most

participants in our sample reported receiving limited information about these issues. Abortion was the topic that was discussed the least by participants and their caregivers. Although most Black adults in the United States support the legalization of abortion (Pew Research Center, 2022), it may be that some African American caregivers avoid these discussions so as to discourage Black girls from even thinking about sex (Tarantino et al., 2020; Warren-Jeanpiere, 2006). Caregivers may also avoid discussions about sex due to discomfort about discussing these issues, lack of knowledge, and fear of not knowing the answers to questions (Dennis & Wood, 2012; DiIorio et al., 2003).

The finding that some participants received socialization that explicitly opposed girls' sexual exploration, and especially when there were brothers in the households, is consistent with previous studies showing that some African American families endorse double standards for Black boys and girls when it comes to sex. That is, girls experience more sexual restrictions than boys (Fasula et al., 2007; Stewart et al., 2022). Additionally, Black families may relay messages about sex that are rooted in their religious beliefs, and they may communicate conservative beliefs about sex to children even if they are not religious (Leath et al., 2020; Logan et al., 2021; Shambley-Ebron et al., 2016). Furthermore, caregivers' opposition of contraceptives may be related to widespread mistrust of contraception among African Americans due to historical reproductive abuses within public health (Thorburn & Bogart, 2005).

Participants had varying perceptions of how their caregivers' direct socialization practices have influenced their adult sexual and reproductive health values, attitudes, and behaviors around issues of family planning. There are different factors which can affect how parental sexual socialization messages are received by children such as interpersonal factors like the quality of parent-child relationships (DiIorio et al., 2003; Pluhar & Kuriloff, 2004).

Additionally, limited engagement in sexual socialization by African American caregivers may encourage some Black women to seek information from other sources (Crooks et al., 2019). However, it may discourage some women from engaging in proactive health measures altogether, increasing their risk of adverse sexual and reproductive health experiences. Furthermore, witnessing caregivers' intimate relationships may influence Black women to seek out or avoid similar types of relationships in adulthood (Grange et al., 2011).

Limitations and Future Research Directions

There were many strengths of the present study including the rigorous qualitative methodology and relevance to important issues of African American women's sexual and reproductive health. However, there were several limitations. First, the participants were recruited at a large, public university. Thus, the findings may not be generalizable to the larger population of Black women in the U.S. Future studies should investigate the socialization experiences of Black women outside of the higher education setting. Second, the socialization experiences that were discussed were limited only to those imparted by African American primary caregivers. Further research should be conducted to investigate the socialization experiences of Black women whose primary caregivers identify as Black but who are not descendants of enslaved Africans in the U.S.; these experiences may differ based on the sociocultural context from which their Black caregivers originated. Third, our sample included women who did not identify as heterosexual, but with limited interrogation of how they perceived the influence of their socialization experiences on their sexual and reproductive health behaviors in adulthood. Research is needed on whether and/or how Black LGBTQ+ women incorporate early socialization messages into their family planning practices in adulthood. Finally, this study relied on the retrospective reports of childhood and adolescent socialization

experiences, which may be subject to recall bias. Nonetheless, participants' reports of their socialization experiences may reflect the experiences that are most meaningful to them, and thus most influential in their adult sexual and reproductive health values, attitudes, and behavior.

Practice Implications

The results of this study underscore the relevance of African American caregivers' socialization practices in childhood and adolescence to the lives of adult Black women today in contemporary life. African American caregivers may be able to contribute to the healthy sexual development of Black girls through cultivating open and supportive relationships with them. Furthermore, with the recent U.S. Supreme Court ruling in *Dobbs v. Jackson Women's Health Organization* which overturned the constitutional right to abortion (Nash & Ephross, 2022), and as public discourse about the state of abortion rights continue, families will need to engage in more discussions with children about issues concerning family planning. This is especially critical for African American families who are raising Black girls, as Black women and girls already have limited access to sexual and reproductive health services, experience high rates of unintended pregnancies, and are disproportionately affected by maternal morbidity and mortality (Bornstein et al., 2020; Hoyert, 2023; Lonhart et al., 2019; Louis et al., 2015).

Educators and healthcare providers should aim to demonstrate sensitivity during their interactions with Black women and girls regarding sexual and reproductive health practices and utilization of health services, as there are historical and cultural factors that may affect their attitudes and behaviors. For example, although long-acting reversible contraceptive methods such as intrauterine devices and hormonal implants are highly effective at preventing pregnancies, it is important that educators and healthcare providers consider how historical eugenic practices have affected attitudes among African Americans about those contraceptive

methods (Higgins, 2014). Furthermore, educators may need to assist in preparing African Americans parents and guardians for having discussions about sex and related topics with Black girls.

Conclusion

Gendered-racial and sexual socialization are important sociocultural processes that shape the lives of many young African American women. Through use of the framework of intersectionality, the findings from this study highlight the variety of messages that African American caregivers impart to Black girls in childhood and adolescence about what it means to be a Black woman, and about sexual and reproductive health issues related to family planning that play a role in their sexual development. Furthermore, these results underscore the perceived influence of childhood socialization messages on the sexual and reproductive health values, attitudes, and behaviors of Black women in adulthood. Additional empirical research on this topic is warranted to better understand heterogeneity among Black women and to identify those who may be at greater risk of adverse sexual and reproductive health outcomes related to family planning. The findings from this study can help to inform the socialization practices of African American caregivers, and how educators and healthcare providers engage with African American women and girls.

Table 1.1

Sample Demographic Information (N = 25)

Pseudonym	Age	Year in School	Income Level	Region of Origin	Primary African American Caregiver(s)	Sexual Attraction
Aliyah	18	Undergraduate/Freshman	Middle to high	South	Mother and Father	Men
Esther	23	Graduate/Professional	Low to middle	West	Mother	Men
Sherrie	23	Graduate/Professional	Middle	South	Mother and father	Men and women
Rebecca	37	Graduate/Professional	Low to middle	West	Mother and father	Men
Jeanine	19	Undergraduate/Sophomore	Middle to high	West	Mother	Men
Cheryl	25	Graduate/Professional	Low	South	Mother and father	Men
Monifa	30	Undergraduate/Senior	Middle	West	Mother	Women
Eve	42	Graduate/Professional	Middle to high	South	Mother and father	Men
Justine	26	Graduate/Professional	Low to middle	Northeast	Mother and great-grandmother	Men
Racquel	20	Undergraduate/Sophomore	Low to middle	West	Father	Men
Felisha	25	Graduate/Professional	Middle	Midwest	Mother and father	Men

Simone	28	Graduate/Professional	Middle to high	West	Father	Men and women
Halima	21	Undergraduate/Senior	Low to middle	South	Mother and grandmother	Men and women
Essence	20	Undergraduate/Sophomore	Low	West	Mother	–
Tara	32	Graduate/Professional	Middle to high	South	Mother and grandmother	Women
Gina	22	Undergraduate/Senior	Low to middle	West	Father	Men
Priscilla	32	Graduate/Professional	Low	West	Mother	Men
Jada	22	Undergraduate/Senior	Low	West	Mother and grandmother	Men and women
Noelle	20	Undergraduate/Junior	Low to middle	West	Mother and father	Men and women
Tess	20	Undergraduate/Junior	Low to middle	West	Father	Men
Levina	53	Graduate/Professional	Low to middle	West	Mother and father	Men
Stella	30	Graduate/Professional	Middle	South	Mother	Women
Ruth	24	Graduate/Professional	Middle	West	Mother	–
Shanice	21	Undergraduate/Junior	Middle	West	Mother and father	Men
Nia	29	Undergraduate/Senior	Low	Northeast	Mother	Men

Table 1.2

Themes and Subthemes for Socialization Experiences and the Perceived Influence on Sexual and Reproductive Health

Theme	Subtheme	Description	Example Quote
Endorsement of Traditional Feminine Gender Norms/Roles (*n* = 24; 96%)	–	Caregiver messages that endorse traditional feminine gender norms and roles	Related to those Southern traditions, it was like you make your man's plate … You clean the house. You are responsible for the indoor work, and the cooking. (Rebecca)
Preparation for Prejudice against Black Women (*n* = 20; 80%)	–	Caregiver messages on what it means to be Black and a woman in society	Just being that, you know, typical, strong, independent Black woman, like, I would hear that a lot. "Like, you have to be a strong Black woman. Like, you're gonna have so many adversities." (Cheryl)
Promotion of Ambition and Independence (*n* = 13; 52%)	–	Caregiver messages that emphasize qualities to instill a sense of ambition	My mom definitely instilled that it's important for women to have a life of their own, to make sure that you have interests and things that

		and independence in Black girls	you're passionate about outside of other people, particularly men. (Shanice)
Promotion of Racial Pride (*n* = 14; 56%)		Caregiver messages that promote appreciation of and pride in being Black/African American or being a Black woman	… my grandmother was always just really explicitly encouraging of me having Black friends and Black dolls… she was very pro-Black, I'll put it that way. (Tara)
Guidance on Sexual and Reproductive Health (*n* = 25; 100%)	Caregiver Support through Verbal Messages and Actions (*n* = 25; 100%)	Caregiver verbal messages and actions in support of sexual and reproductive health	… a big thing for my mom was making sure I'm vaccinated for everything. So HPV, I did that as early as possible. (Aliyah)
	Observations of Caregivers' Sexuality	Guidance received through observing caregivers' own intimate relationships	… I feel like I just learned a lot, just not even from her [mother] telling me but just watching

	and Intimate Relationships (n = 11; 44%)	and/or expression of sexuality	the dynamic of my parents' relationship. (Cheryl)
Limited Engagement in Sexual Socialization (n = 23; 92%)	–	Caregiver's limited engagement in discussions about sexual and reproductive health topics	The only thing they [mother and grandmother] told me about was like, "That's a vagina," or "You have a vagina," and that's it. Nothing else. (Jada)
Opposition to Sexual Exploration among Girls (n = 20; 80%)	Caregiver Messages for Girls' Sexual Expression Compared to Boys' (n = 18; 72%)	Caregiver messages that attempt to control girls' sexual expression, in contrast to boys	… that whole mindset of "boys will be boys" when it comes down to how they attract women, or how they hit on women, but that, you know, "As a girl, you shouldn't want to have too many men looking at you, or you should always want to cover up." (Sherrie)
	Messages About Girls' Sexual Expression Based on Ethics or Morals	Caregiver messages opposing sexual exploration by girls that are	And they [her parents] would talk about it too that, "You should not have kids until you get married." That was very important to them.

	(*n* = 12; 48%)	guided by their ethics or morals	You know, that you do things, "the right way." (Levina)
Influence of Caregiver's Direct Engagement (*n* = 23; 92%)	Adoption of Caregiver Values and Attitudes (*n* = 23; 92%)	Black women accepting/retaining the values and attitudes that their caregivers relayed to them as children	… I think my mom's kind of thing got into my head, and so I would like bow out of situations related to sex just because I could feel or hear her voice or her potential judgement in the back of my head. (Esther)
	Rejection of Caregiver Values and Attitudes (*n* = 16; 64%)	Black women rejecting the values and attitudes relayed to them during childhood	… growing up was so much like, "Just don't have sex! Just don't have sex!" I'm like, "I'm gonna do what I wanna do!" So, I was having sex a good amount in high school, and throughout college… (Felisha)
	Conflicting Views Due to Caregiver Values and Attitudes (*n* = 3; 12%)	Black women hold conflicting views about sexual and reproductive health issues, partially due	… when it comes to abortion … I agree that, personally, I wouldn't prefer to get an abortion. However, I don't agree with, like I said, the strict-harsh judgmental part of it, and

		to the messages they received in childhood	that I understand that women will make decisions they need to make that's best for them. (Justine)
Influence of Caregiver's Limited Engagement in Sexual Socialization (n = 22; 84%)	–	Impact of caregiver's limited engagement in sexual socialization on Black women's sexual and reproductive health values, attitudes and behaviors	I have yet to really like, take part in birth control yet, because of my fears and the fact that I'm not fully educated on it. (Tess)

Study 2

Sexual Socialization and Contraceptive Use in Young Black Women and Adolescent Girls

Contraception plays an essential role in achieving one's desired number of children and the timing of pregnancies. There are many types of contraceptive methods that are available, and they vary in the mechanisms of action, effectiveness, and side effects (Ott et al., 2014; Rivera et al., 1999). These include sterilization methods, long-acting reversible contraceptive methods, short-acting reversible methods, and coital methods (Centers for Disease Control and Prevention, 2023). Sterilization methods such as tubal ligation and vasectomy are permanent methods that are highly effective at preventing pregnancy. Long-acting reversible contraceptives such as intrauterine devices (IUDs) and hormonal implants are highly effective methods for preventing pregnancy over many years, and they can be removed to restore fertility. Short-acting reversible methods such as oral contraceptive pills and the hormonal vaginal ring are moderately effective methods that must be taken or administered periodically to maintain the contraceptive benefits. Finally, coital methods including barrier methods such as condoms, the withdrawal method, and fertility awareness-based methods are methods that do not administer hormones and must be used for each act of sexual intercourse for the contraceptive benefits. These methods have lower effectiveness compared to all the other methods.

There are various factors that are associated with the use of contraception, the types of contraceptive methods used, and the number of methods used, including socioeconomic status, relationship status, and attitudes about avoiding pregnancy (Frost et al., 2007; Frost & Darroch, 2008). Furthermore, familial factors such as comprehensive sexual socialization may play an important role in promoting safe sexual practices that reduce risk of pregnancy and sexually transmitted infections. Indeed, a meta-analysis of 52 studies found a significant positive

association between parental communication about sex and contraceptive use in adolescents and young adults (Widman et al., 2016). For African American families, in particular, engaging in instructive sexual socialization practices may contribute to healthy sexual development in Black girls, which may encourage them to make informed decisions about contraception to protect themselves from adverse sexual and reproductive experiences. However, only three studies to date have examined the association between parental sexual socialization and contraceptive behavior exclusively in young Black women and adolescent girls, and the findings are mixed (DiClemente et al., 2001; Donenberg et al., 2011; Hutchinson & Montgomery, 2007). Furthermore, these studies have primarily focused on examining the link between parental sexual socialization and condom use in this population. Moreover, no published study has examined whether parental sexual socialization is related to the number of contraceptive methods that young Black women and girls use during sexual intercourse, despite research indicating that concurrent use of multiple methods is increasing among women of reproductive age for the purpose of preventing unintended pregnancies and/or sexually transmitted infections (Kavanaugh et al., 2021). Thus, further research is needed to investigate the associations between parental sexual socialization, and use of various types of contraceptive methods and the number of methods.

The purpose of this study is to examine the associations between parental sexual socialization messages and contraceptive use behaviors in a nationally representative sample of young Black women and adolescent girls. To better understand how childhood sexual socialization messages relate to ongoing management of fertility through contraceptive use, the focus of this research is on contraceptive behaviors related to use of non-permanent contraceptive methods. In addition, this study sought to identify patterns of parental sexual

socialization messages reported by young Black women and adolescent girls, to better characterize the sexual socialization experiences that occur in this population. The aims of the current study were tested with data from the National Survey of Family Growth (NSFG).

Research Aims and Hypotheses

Primary Aim 1 (First Sexual Intercourse). To examine whether parental sexual socialization reported is associated with three measures of contraceptive behavior concerning the first sexual intercourse: (1) whether there was any contraceptive used at first sexual intercourse, (2) the most effective type of method used at first sexual intercourse, and (3) the number of methods used at first sexual intercourse.

Hypothesis 1a. Higher number of parental sexual socialization messages will be associated with a greater likelihood of having used any method of contraception at the first sexual intercourse.

Hypothesis 1b. Higher number of parental sexual socialization messages will be associated with having used highly effective contraceptive methods at the first sexual intercourse.

Hypothesis 1c. Higher number of parental sexual socialization messages will be associated with having used multiple contraceptive methods at the first sexual intercourse.

Primary Aim 2 (Most Recent Sexual Intercourse). To examine whether parental sexual socialization reported is associated with contraceptive behaviors at the most recent sexual intercourse, specifically whether any contraceptive method was used, the most effective type of method used, and the number of methods used.

Hypothesis 2a. Higher number of parental sexual socialization messages will be associated with a greater likelihood of having used contraception at the most recent sexual intercourse.

Hypothesis 2b. Higher number of parental sexual socialization messages will be associated with having used highly effective contraceptive methods at the most recent sexual intercourse.

Hypothesis 2c. Higher number of parental sexual socialization messages will be associated with having used dual contraceptive methods at the most recent sexual intercourse.

Exploratory Aim. To examine whether age moderates the associations between sexual socialization and these specific contraceptive behaviors.

Secondary Aim. To identify patterns of sexual socialization experiences using latent class analysis.

Method

Design and Methods of the National Survey of Family Growth

The National Survey of Family Growth (NSFG) is an annual cross-sectional, nationally representative survey of all non-institutionalized women and men in the United States between the ages of 15 to 49 for the purpose of gathering information on sexual and reproductive health, including pregnancy, births, and contraceptive use. The NSFG is conducted by the University of Michigan's Institute for Social Research on behalf of the National Center for Health Statistics (NCHS).

Sampling

The NSFG uses a stratified, multi-stage area probability sampling design to achieve completion of a minimum of 5,000 interviews per year with oversampling of Hispanic persons, non-Hispanic Black persons, and adolescents aged 15 to 19. The first stage of sampling involves the selection of Primary Sampling Units (PSUs) that are based on Metropolitan Statistical Areas,

counties and groups of counties. The second stage involves the selection of secondary sampling units (SSUs) within the PSUs that are based on Census Blocks. The third stage involves the selection of housing units within the SSUs. The fourth stage involves the selection of one eligible individual within each selected household. The final stage involves a two-phase sampling approach to interview nonrespondents if possible, so as to reduce nonresponse bias.

Procedures

Since 2006, the NSFG has collected data using a continuous interviewing design (National Center for Health Statistics, 2009). Each year, in-person interviews are conducted by trained interviewers using laptops equipped with computer-assisted personal interviewing software. For more sensitive survey questions, data are collected using audio-computer assisted self-interviewing software, whereby respondents either read or listen to recordings of the questions on a computer and submit their responses. All interviews are conducted in either English or Spanish. The study procedures have been approved by the Ethics Review Board at NCHS and the University of Michigan Institutional Review Board. The NSFG periodically releases public-use data files based on two years of interviews.

Participants

For the purpose of this study, NSFG data from the 2013–2015, 2015–2017, and 2017–2019 public-use data files were utilized. The current study uses data from an unweighted sample of 703 US-born non-Hispanic Black women and adolescent girls between ages l5 to 24 who are sexually active and at risk of having an unintended pregnancy. The age range of this sample was limited to respondents to whom the sexual socialization items were administered. Additional inclusion criteria for the present study are: (a) Reported ever having heterosexual vaginal

intercourse; (b) No reported use of permanent contraceptive methods; (c) Not pregnant at the time of the interview; and (d) Not trying to become pregnant at the time of the interview.

See Table 2.1 for the complete sample characteristics. The mean age at the time of the interview for the sample of 703 respondents was 21 years (M = 20.52; SD = 2.58). Regarding socioeconomic status, 76% of respondents reported having a high school diploma or higher, and 42% reported a family income below 100% of the poverty level. A large majority of respondents (86%) resided in the principal or largest city of a metropolitan statistical area (MSA) (defined as "a geographic entity based on a county or a group of counties with at least one urbanized area with a population of at least 50,000 and adjacent counties with economic ties to the central area" (Centers for Disease Control and Prevention, 2022)) or other MSAs. Approximately one-quarter of the sample (26%) reported living with two biological or adoptive parents during their childhood. Three-quarters of the sample (75%) reported having an affiliation with a religion. In particular, 68% of respondents reported being Protestants, while 4% reported being Catholic and 3% reported other religious affiliations.

Measures

Sexual Socialization

Sexual socialization was measured with seven items designed by the NSFG that assessed whether respondents received specific messages from parents or guardians about sex, contraception, and sexually transmitted infections before the age of 18 years. The first six items reflect instructive messages about the topics, while the last item asks about receiving messages that encourage abstinence until marriage. Binary variables were created for all seven items to indicate whether respondents received a specific message ("yes" or "no"). For the present study, a composite score for sexual socialization was also calculated by summing the first six items to

derive a possible range of scores from 0–6, such that higher scores indicate higher comprehensive sexual socialization. See Appendix B for the complete measure.

Contraceptive Use

There are six measures of contraceptive use in the present study (see Table 2.2 for full detail on these measures):

(1) Contraceptive use at first sexual intercourse

(2) Most effective type of contraceptive method used at first sexual intercourse

(3) Number of contraceptive methods used at first sexual intercourse

(4) Contraceptive use at most recent sexual intercourse

(5) Most effective type of contraceptive method used at most recent sexual intercourse

(6) Number of contraceptive methods used at most recent sexual intercourse

Contraceptive use at first sexual intercourse. Respondents were asked a series of four questions about the types of contraceptive methods used at the first sexual intercourse. Using responses to these items, a binary variable was computed to indicate whether contraception was used at the first intercourse ("yes" or "no").

Most effective type of contraceptive method used at first sexual intercourse. The types of contraceptive methods used at the first sexual intercourse were assessed using responses to a series of four questions on contraceptive use. Four variables were computed for the NSFG public-use data files to account for the use of multiple methods. The responses on these variables were used to categorize respondents into one of three groups: (1) No method; (2) Coital method; (3) Long- and short-acting reversible method.

Number of contraceptive methods used at first sexual intercourse. Responses to a series of four questions about the types of contraceptive methods used at the first sexual

intercourse were used to compute the number of contraceptive methods used at that time. Respondents were then categorized into one of three groups based on the number of methods reported: (1) No method; (2) Single method used; (3) Multiple methods used.

Contraceptive use at most recent sexual intercourse. Respondents were asked a series of four questions about the types of contraceptive methods used at the last sexual intercourse in the past 12 months. Responses to these items were used to compute a binary variable indicating whether contraception was used at the most recent intercourse ("yes" or "no").

Most effective type of contraceptive method used at most recent sexual intercourse. The types of contraceptive methods used at the last sexual intercourse in the past 12 months were assessed using responses to a series of four questions on contraceptive use. Four variables were computed for the NSFG public-use data files to account for the use of multiple methods. The responses on these variables were used to categorize respondents into one of four groups: (1) No method; (2) Coital method; (3) Short-acting reversible method; (4) Long-acting reversible method. An expanded version of this variable was also computed to categorize respondents into one of five groups: (1) No method; (2) Traditional method; (3) Barrier method; (4) Short-acting reversible method; (5) Long-acting reversible method.

Number of contraceptive methods used at most recent sexual intercourse. Responses to a series of four questions about the types of contraceptive methods used at the most recent sexual intercourse in the past 12 months were used to compute the number of contraceptive methods used at that time. Respondents were then categorized into one of three groups based on the number of methods reported: (1) No method; (2) Single method used; (3) Multiple methods used.

Covariates

The selection of covariates was informed by previous research on correlates of contraceptive use in young women (e.g., Cohen et al., 2017; Frost & Darroch, 2008). Sociodemographic factors that were considered for inclusion in the models with multiple predictors for Primary Aim 1 included: Age at first sexual intercourse; Family structure when growing up; Religious affiliation; Relationship with first male sexual partner. The sociodemographic factors that were considered for Primary Aim 2 included: Age at interview (as binary and continuous variables); Educational attainment; Poverty level; Duration of health insurance coverage in the past year; Family structure when growing up; Place of residence; Religious affiliation; Parity; Relationship with last sexual partner at last sex. Relationship with last sexual partner was derived using the method outlined by Copen (2017). See Table 2.3 for scoring details of these covariates.

Data Analytic Plan

The public-use data files for the three NSFG cycles were merged, and the study variables that were not already computed by the NSFG were computed in SPSS version 29. Univariate analyses were conducted to obtain the descriptive statistics for the study variables. Bivariate associations between the study variables and the covariates were examined using a series of independent samples t-tests, chi-square tests, and one-way analyses of variance (ANOVAs). For statistically significant omnibus ANOVA tests, post hoc tests were conducted using multiple pairwise comparisons with Tukey corrections. Covariates that were associated with the outcome variables at the $p < .05$ level were included in the models with multiple predictors. The data were weighted using sampling weights for the 2013–2019 combined data set, the stratum variable, and the cluster variable to account for the NSFG's multi-stage sampling design. The survey design of the NSFG must be accounted for to avoid imprecise calculations of point estimates and standard

errors (Heeringa et al., 2017). All descriptive and bivariate analyses were performed in R (R Core Team, 2022) and RStudio (RStudio Team, 2023) using the "survey" package (Lumley, 2004).

Primary Aims: Testing the Associations Between Sexual Socialization and Contraceptive Use

Regarding Primary Aim 1, unadjusted and adjusted logistic regression analyses were performed to test the association between sexual socialization and contraceptive use at the first sexual intercourse. Unadjusted and adjusted multinomial logistic regression analyses were performed to test the associations between sexual socialization and the most effective type of method used at the first sexual intercourse, and the number of methods used. Sensitivity analyses were also performed for all models with multiple predictors to adjust for potential NSFG cohort effect. Additionally, if there were any statistically significant bivariate associations between age at first sexual intercourse and the contraceptive behaviors, exploratory analyses were performed to examine whether age at first intercourse moderates the associations between sexual socialization messages and the specific contraceptive behaviors. For statistically significant interaction effects, simple slope analyses were conducted to probe the interaction.

Regarding Primary Aim 2, analyses of all models with multiple predictors were conducted using a subsample of respondents who reported having sexual intercourse in the past 12 months and who reported having had sex more than once (unweighted $N = 657$). These criteria were specified so that the most recent act of intercourse was distinguishable from the first act of intercourse. Unadjusted and adjusted logistic regression analyses were performed to test the association between sexual socialization and contraceptive use at the most recent sexual intercourse. Unadjusted and adjusted multinomial logistic regression analyses were performed to test the associations between sexual socialization and the most effective type of method used at

the most recent sexual intercourse and the number of methods used in this subsample. Two sets of sensitivity analyses were performed to adjust for potential NSFG cohort effect, and to perform analyses of the models with multiple predictors using all respondents who reported having sexual intercourse in the past 12 months (regardless of whether they reported having had sex only once). If there were any statistically significant bivariate associations between age at interview and the contraceptive behaviors, exploratory analyses were performed to examine whether age at interview moderates the associations between sexual socialization messages and the contraceptive behaviors. For statistically significant interaction effects, simple slope analyses were conducted to probe the interaction. Additionally, post hoc multinomial logistic regression analyses were conducted to test the associations between sexual socialization and the expanded version of the most effective type of method used at the most recent intercourse.

All analyses for the primary aims were conducted in Mplus (Version 8.9) (L. K. Muthén & Muthén, 2017) to account for NSFG's complex multi-stage sampling design. Furthermore, regression imputation and logical imputation were used by the NSFG to impute some variables that were recoded or computed for public use, including some (but not all) variables that were used in the present study. Therefore, full information maximum likelihood (FIML) estimation was used to address the remaining missing data in the merged data set. FIML uses all non-missing data to produce unbiased parameter estimates in statistical models (Enders, 2001).

Secondary Aim: Identifying Patterns of Sexual Socialization Experiences

A latent class analysis (LCA) was performed to identify patterns in the reports of sexual socialization messages received. LCA is a person-centered approach that identifies latent or unobserved groups or classes in a population that are qualitatively different, using observed categorical indicators (Nylund-Gibson & Choi, 2018; Weller et al., 2020). Class enumeration

was performed to determine the class solution that best fits the data, by first estimating a 1-class model, then gradually increasing the number of classes by one until convergence issues occurred. The model solutions were then compared on the following information criteria: (1) Bayesian Information Criterion (BIC; Schwarz, 1978); (2) Sample-size adjusted Bayesian Information Criterion (SABIC; Sclove, 1987); (3) Akaike Information Criterion (AIC; Akaike, 1987); (4) Consistent Akaike Information Criterion (CAIC; Bozdogan, 1987). The CAIC was calculated using the formula as outlined by Bozdogan (1987). For these fit indices, lower values indicate better fit for the data.

Diagnostic criteria information were also used to assess how well each model solution differentiates between classes, including the Vuong-Lo-Mendell-Rubin Likelihood Ratio Test (VLMR-LRT; Lo et al., 2001), average posterior probabilities (AvePP; B. O. Muthén & Muthén, 2000), and entropy (Celeux & Soromenho, 1996). The VLMR-LRT compares model fit improvement between a model and the preceding model, such that *p* values less than .05 indicate improved fit from the preceding model. The AvePP provides average probabilities that indicate the accuracy of the models in predicting individuals' class memberships. Higher values indicate greater accuracy in predicting class membership. Entropy provides information on how well a model separates between its classes, with values greater than .80 indicating acceptable class separation. Item probability plots were also inspected to determine the best fit model. The LCA was conducted using the subsample of respondents who had complete data on sexual socialization experiences (unweighted $N = 700$).

After the best fit model was determined, multinomial logistic regression analyses were performed to examine class differences in several sociodemographic factors, including age at interview (as binary and continuous variables), age at first sexual intercourse, family structure

when growing up, religious affiliation, and poverty level. These analyses were conducted using the three-step method to account for respondents' probabilities of membership in each class (Asparouhov & Muthén, 2014). However, this approach uses listwise deletion for missing data. Thus, the analytic sample size was reduced to respondents with complete sociodemographic data (unweighted $N = 699$). All analyses were performed in Mplus (Version 8.9) (L. K. Muthén & Muthén, 2017).

Results

Descriptive Results

On average, participants reported receiving slightly more than three of the six instructive sexual socialization messages ($M = 3.16$, $SD = 2.38$). Approximately one-half of respondents reported receiving each of the seven socialization items (see Table 2.4 for the full details). Regarding contraceptive use at the first sexual intercourse, nearly three-quarters of respondents (73%) reported using some form of contraception, and 15% of respondents reported using multiple methods. Slightly more than half (54%) of respondents reported a coital method as the most effective type of contraceptive method they used at the first intercourse. Related to contraceptive use at the most recent sexual intercourse, a majority of respondents (81%) reported using some form of contraception, and 26% reported using multiple methods. About 13% of respondents reported a long-acting reversible method as the most effective type of contraceptive method they used at the most recent intercourse.

Bivariate Associations Between Study Variables

Contraceptive Use at First Sexual Intercourse

Sexual Socialization and Contraceptive Use Behaviors. Among the key study variables, there was a marginally significant association between sexual socialization and

number of contraceptive methods used ($F(2, 102) = 2.87$, $p = .06$), wherein there was a marginally significant difference ($p = .06$) in the number of sexual socialization messages received between respondents who used multiple methods at the first intercourse ($M = 3.94$, $SE = 0.32$) and those who used a single method ($M = 3.05$, $SE = 0.21$). Sexual socialization and any use of a contraceptive method were not significantly associated, nor was sexual socialization and the most effective type of method used (see Table 2.5).

Contraceptive Use Behaviors and Covariates. There was a statistically significant association between age at first intercourse and the number of contraceptive methods used. Specifically, respondents who used multiple methods at the first intercourse were significantly older at the first intercourse ($M = 16.89$, $SE = 0.21$) compared to those who used a single method ($M = 16.14$, $SE = 0.15$), and those who did not use any method ($M = 15.83$, $SE = 0.26$). Age at first intercourse and contraceptive use of any type were not significantly associated, nor was age at first intercourse and the most effective type of method used.

Related to childhood family structure, all three contraceptive use variables significantly differed by household composition (see Table 2.5). Specifically, contraceptive use was higher among respondents who did not grow up in a two-parent household (70%) as compared to those who grew up in a two-parent household (30%). Among users of multiple methods and among users of long- and short-acting reversible methods, most respondents reported that they did not grow up in a two-parent household (77% and 79%, respectively). Neither religious affiliation nor the relationship with the first male sexual partner were significantly associated with contraceptive variables at the first intercourse.

Contraceptive Use at Most Recent Sexual Intercourse

There were no significant differences in the number of sexual socialization messages received by the three contraceptive use variables (see Table 2.6). Regarding covariates, respondents who were younger than 18 years old and those who were 18 years or older differed significantly in the most effective type of method used, but there was no difference in whether any contraceptive method was used or the number of methods used. Among respondents who reported using long-acting reversible methods, most were 18 years or older at the time of the interview (91%). Age measured continuously at the time of the interview and the contraceptive variables were not significantly associated.

The distribution of health insurance coverage in the past year differed significantly by the number of methods used at the most recent intercourse and the most effective method used, but not by whether there was any contraceptive used at the most recent intercourse (see Table 2.6). Specifically, the use of multiple methods and use of long-acting reversible methods were highest among respondents who reported having full-year insurance coverage (83% and 84%, respectively). In addition, contraceptive use at the most recent intercourse, the use of multiple methods, and use of long-acting reversible methods were highest among nulliparous respondents as compared to respondents who had given birth once or multiple times (see Table 2.6).

There were no significant associations between the contraceptive variables at the most recent intercourse and the other potential covariates (educational attainment, poverty level, childhood family structure, place of residence, religious affiliation, relationship with last sexual partner at last sex).

Sexual Socialization Predicting Contraceptive Use Behaviors at First Sexual Intercourse

Based on the finding of the bivariate analyses, the covariates that were included in the adjusted models with multiple predictors predicting contraceptive behaviors at first intercourse included age at first intercourse and childhood family structure.

Main Analyses

In the unadjusted and adjusted logistic regression models, there were no significant associations between sexual socialization and contraceptive use at the first sexual intercourse (AOR = 1.03, 95% CI = 0.91–1.16) (see Table 2.7). Likewise, there were no significant associations between sexual socialization and the most effective type of method used in either the unadjusted or adjusted models (across all comparisons) (see Table 2.8). However, in unadjusted models examining the associations between sexual socialization messages and the number of methods used at the first intercourse, higher number of messages received was significantly associated with lower odds of using a single contraceptive method (OR = 0.85, 95% CI = 0.74–0.98) versus having used multiple methods. These results remained significant after adding the covariates to the model (OR = 0.86, 95% CI = 0.75–0.99). However, there were no statistically significant differences in number of socialization messages received in the other comparisons (no method vs. multiple methods; no method vs. single method) (see Table 2.9). Sensitivity analyses were also performed to adjust for potential NSFG cohort effects but all of the results remained the same.

Exploratory Moderation Analyses

Given that there was a statistically significant bivariate association between age at first sexual intercourse and the number of methods used at first intercourse ($F(2, 102) = 6.81$, $p = .001$), exploratory multinomial logistic regression analyses were performed to test whether age at first intercourse moderated the association between sexual socialization messages and number of

methods used. However, the interaction effect of number of sexual socialization messages and age at first intercourse on the number of methods used at the first intercourse was not statistically significant (across all comparisons) (see Table 2.10).

Sexual Socialization Predicting Contraceptive Use at Most Recent Sexual Intercourse

Based on the finding of the bivariate analyses, the covariates that were included in the adjusted models with multiple predictors predicting contraceptive behaviors at the most recent intercourse included age at the time of the interview (less than 18 years vs. older), duration of past-year health insurance coverage, and parity.

Main Analyses

There were no significant associations between sexual socialization and contraceptive use at the most recent sexual intercourse in the unadjusted and adjusted logistic regression models (see Table 2.11). Similarly, there were no significant associations between sexual socialization and the most effective type of method used at the most recent sexual intercourse in either the unadjusted or adjusted models (across all comparisons) (see Table 2.12). However, in unadjusted models, higher number of messages received was significantly associated with lower odds of having used a single contraceptive method (OR = 0.84, 95% CI = 0.72–0.97) versus having used multiple methods. The results remained the same in the adjusted model (OR = 0.84, 95% CI = 0.72–0.97). There were no significant differences in the number of socialization messages received between the other comparisons (no method vs. multiple methods and no method vs. single method) (see Table 2.13).

Two sets of sensitivity analyses were also performed to adjust for potential NSFG cohort effects, and to perform analyses of the models with multiple predictors using all respondents who

reported having intercourse in the past 12 months (regardless of whether they reported having had sex only once). All of the results remained the same in these analyses.

Exploratory Moderation Analyses

Given that there was a statistically significant difference by age (less than 18 years vs. older) in the most effective type of method used at the most recent intercourse ($\chi^2 = 24.89$, $p = .03$), exploratory multinomial logistic regression analyses were performed to test whether age at interview moderated the association between sexual socialization messages and the most effective type of method used. The results revealed a significant interaction effect between sexual socialization and age at interview on the most effective method used at the most recent intercourse (see Table 2.14). Specifically, for respondents younger than 18 years of age, higher number of sexual socialization messages received was associated with higher odds of using a coital method (OR = 1.44, 95% CI = 1.10–1.89) versus a short-acting reversible method. This effect did not emerge for respondents who were 18 years or older.

Post Hoc Analyses

Post hoc multinomial logistic regression analyses were performed to test the associations between sexual socialization and an expanded version of the most effective type of method used at the most recent intercourse that differentiated between types of coital methods (i.e., barrier and traditional methods). The results indicated that there were no significant associations between sexual socialization and this expanded version of the most effective method used at the most recent intercourse (across all comparisons) (see Table 2.15).

Latent Class Analysis

Six latent class models were estimated using the seven sexual socialization items. Fit statistics for these models are presented in Tables 2.16 and 2.17. The superior fit indices were

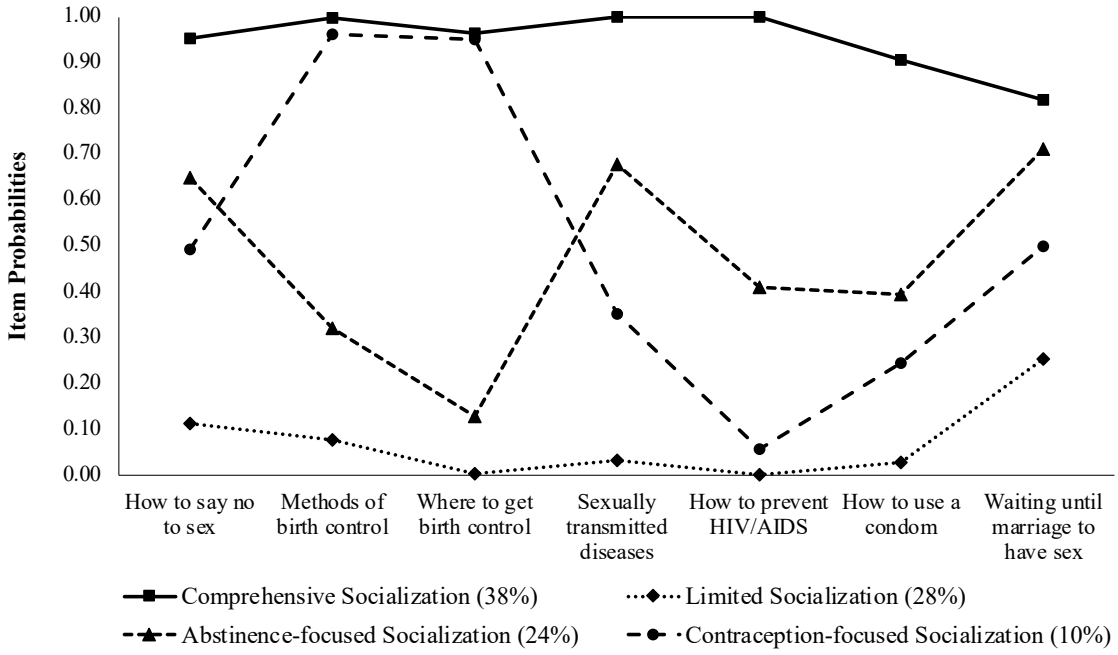
concentrated around the 4-, 5-, and 6-class models. In particular, the 4-class model had the lowest BIC and CAIC, the 5-class model had the lowest SABIC, and the 6-class model had the lowest AIC. The VLMR-LRT indicated that the 2-class model improved the model fit over the 1-class model, and that the 3-class model showed improvement over the 2-class model. Furthermore, all six models had acceptable values for entropy and AvePP, with the 2-class model having the lowest value for both indices. Additionally, the smallest classes for the 2-, 3-, and 4-class models ranged from 10–41% of the sample, while the smallest classes for the 5- and 6-class models were 7% and 4% of the sample, respectively. Thus, taken together, the statistical information provides strong support for the 4-class model over the other model solutions, given its superior BIC and CAIC, and adequate entropy, AvePP, and class proportions. Inspection of the item probability plots provided further support for the 4-class model.

Sexual Socialization Patterns

Figure 2 displays the item probability plot for the 4-class model. The largest class was labeled *Comprehensive Socialization* (38%). This class was characterized by high probabilities of receiving all seven sexual socialization messages (probabilities ranged from 0.82 to 1). The second largest class was labeled *Limited Socialization* (28%). In contrast to the *Comprehensive Socialization* class, this class was characterized by low probabilities of receiving all seven sexual socialization messages (probabilities ranged from 0 to 0.25). The third largest class was labeled *Abstinence-focused Socialization* (24%). This class was characterized by high probabilities of receiving abstinence-focused messages such as "How to say no to sex" (0.65) and "Waiting until marriage to have sex" (0.71), and a high probability of receiving messages about sexually transmitted diseases (0.68). The final and smallest class was labeled *Contraception-focused Socialization* (10%). This class was characterized by high probabilities of receiving

contraception-specific messages such as “Methods of birth control” (0.96) and “Where to get birth control” (0.95), but a low probability of receiving messages about how to use a condom (0.24).

Figure 2. Item Probability Plot for Patterns of Sexual Socialization Experiences



Sociodemographic Factors Associated with LCA Class Membership

Results for the multinomial logistic regression analyses predicting LCA class membership are presented in Table 2.18. Respondents who were older at the time of their first sexual intercourse were less likely to be in the *Limited Socialization* class than in the *Comprehensive Socialization*, *Abstinence-focused Socialization*, or *Contraception-focused Socialization* classes. Furthermore, in comparison to respondents who were less than 18 years of age, those who were 18 years or older were more likely to be in the *Abstinence-focused Socialization* class than in the *Contraception-focused Socialization* class. Respondents who reported having a religious affiliation were more likely to be in the *Abstinence-focused Socialization* class than in the *Contraception-focused Socialization* class. Finally, respondents

who reported a family income above 200% of the poverty level were more likely to be in the *Contraception-focused Socialization* class than in the *Comprehensive Socialization* class, as compared to those who reported a family income below 100% of the poverty level.

Discussion

The purpose of this study was to examine the associations between parental sexual socialization messages and contraceptive behaviors at the first and most recent sexual intercourse in a nationally representative sample of young Black women and adolescent girls. The findings of this study provided partial support for the hypotheses.

Sexual Socialization and Contraceptive Behaviors

Contrary to hypotheses, parental sexual socialization did not predict whether any contraceptive method was used at the first or most recent acts of intercourse. There are likely other more relevant sources of influence on overall contraceptive use behavior for young women and girls, such as informative sexual health education via school (Lindberg & Maddow-Zimet, 2012). Furthermore, a majority of respondents in the current study reported using contraception at the first and most recent intercourse (73% and 81% respectively), which closely mirror national estimates on contraceptive use in the larger population of reproductive age women. For instance, it is estimated that around 84% of non-Hispanic Black women and girls who are at risk of pregnancy use some form of contraception (Kavanaugh & Pliskin, 2020). Furthermore, approximately three-quarters (77%) of adolescent girls use contraception at their first sexual intercourse (Abma & Martinez, 2023).

Similar null findings were observed when testing the associations between parental sexual socialization and the most effective type of method used at the first or most recent sexual intercourse, and post hoc analyses also indicated there were no significant associations between

sexual socialization messages and the expanded version of this variable at the most recent intercourse. These findings add to the limited body of research that has examined the relation between sexual socialization and the use of different forms of contraception. Furthermore, they suggest that there are likely factors other than parental socialization messages that are more influential in this specific contraceptive behavior. For example, contraceptive access, side effects, and ease of use may be more meaningful in influencing the types of methods that young Black women use to prevent pregnancy (Berglas et al., 2021; Hirth et al., 2021).

However, consistent with hypotheses, the results indicated that higher number of socialization messages was associated with a greater likelihood of having used multiple methods at the first and most recent intercourse as compared to a single contraceptive method. Research shows that individuals who are sexually active may use multiple methods, particularly condoms and another method, at the same time to protect against unintended pregnancy and STIs (Higgins & Cooper, 2012). Additionally, women likely use multiple methods of contraception simultaneously due to fears of experiencing an unintended pregnancy (Frohwirth et al., 2016). These findings suggest that more sexual socialization may influence young Black women and girls to engage in more extensive contraceptive behaviors to manage their fertility.

Age Differences in the Effects of Sexual Socialization on Contraceptive Behaviors

Exploratory analyses were also performed to examine the moderation effect of age of socialization experiences and specific contraceptive behaviors. Results indicated that age at first intercourse did not significantly moderate the relationship between sexual socialization and number of methods used at the first intercourse. However, there was a significant interaction effect between sexual socialization and age at the time of the interview on the most effective method used at the most recent intercourse. For respondents who were below 18 years old,

higher number of socialization messages was associated with a higher likelihood of using a coital method, compared to using a short-acting reversible method.

For these Black adolescent girls, socialization messages from their parents may influence them to engage in contraceptive behaviors that prioritize use of short-term coital methods such as condoms, over methods that require greater compliance to be effective such as oral contraceptive pills (Rosenberg et al., 1995). Parents may also suggest the use of condoms over short-acting reversible methods, since they are more accessible to adolescents (Brittain et al., 2022; Ott et al., 2014). Furthermore, previous research shows that parents may encourage Black girls to use condoms to protect themselves against pregnancy and sexually transmitted diseases (STDs), and to also obtain and carry their own so as to not be dependent on a male partner (Fasula et al., 2007; Grange et al., 2011).

Patterns of Sexual Socialization Experiences

In addition to testing the primary hypotheses, this study sought to identify patterns of sexual socialization experiences. Four sexual socialization classes were identified: (1) *Comprehensive Socialization*; (2) *Limited Socialization*; (3) *Abstinence-focused Socialization*; (4) *Contraception-focused Socialization*. The *Comprehensive Socialization* class and *Limited Socialization* class are consistent with the findings of Study 1 of this dissertation and the broader literature that some Black girls receive comprehensive and instructive socialization messages from their families, while others receive little to no socialization (Crooks et al., 2019; E. Evans & Dyson, 2015; Leath et al., 2020; Logan et al., 2021). The *Abstinence-focused Socialization* class also corresponds with previous research that Black girls are often socialized to abstain from sexual activities, and these messages often contain warnings about the adverse consequences of

sex, including STDs (Dennis & Wood, 2012; Fasula et al., 2007; Leath et al., 2020; Nwoga, 2000; Stewart et al., 2022).

In contrast to the other three socialization patterns, the finding that some Black women and girls receive *Contraception-focused Socialization* is novel. While some studies show that Black girls may receive messages about contraception in their socialization (e.g., DiIorio et al., 1996), others have found that some parents actually discourage or avoid talking about contraception with Black girls (e.g., Logan et al., 2021). Interestingly, this class was also characterized by low probability of receiving messages about how to use a condom, which could also reflect Black parents' unwillingness or discomfort to discuss how to properly use condoms with their daughters. Moreover, it could be that parents of Black girls hold more unfavorable views of condoms as an effective method of contraception, in comparison to other methods. One study of 1,069 parents of adolescents found that 40% of parents believed condoms to be very effective at preventing pregnancy, whereas 52% believed oral contraceptive pills (OCPs) were very effective (Eisenberg et al., 2004). Another study of 261 parents/guardians of a teenage daughter found that 59% of parents were accepting of OCPs being provided to their teenager by a healthcare provider, while 51% were accepting of condoms.

In addition to identifying these sexual socialization patterns, sociodemographic predictors of class membership were also examined. Respondents who were older at the time of their first sexual intercourse were less likely to be in the *Limited Socialization* class than in the other three classes. This adds to the mixed body of research on the relationship between sexual socialization and age at sexual debut that have been reported in the general population (Coakley et al., 2017; DiIorio et al., 2003), and in samples of Black women and girls (Bynum, 2007; Donenberg et al., 2011; Usher-Seriki et al., 2008). Furthermore, compared to respondents who were below 18

years old, those who were 18 years or older were less likely to be in the *Contraception-focused Socialization* class than in the *Abstinence-focused Socialization* class. This finding may reflect generational differences in how older and younger parents communicate with children about sex (W. D. Evans et al., 2012).

Additionally, respondents who reported having a religious affiliation were less likely to be in the *Contraception-focused Socialization* class than in the *Abstinence-focused Socialization* class. Research shows that Black families who are religious often relay messages that encourage sexual restraint, especially before marriage (Leath et al., 2020). Moreover, some religions such as Catholicism have guidelines either against the use of contraception or specific contraceptive methods (Srikanthan & Reid, 2008). Finally, compared to respondents who were living below 100% of the poverty level, those who were at more than 200% of the poverty level were more likely to be in the *Contraception-focused Socialization* class than in the *Comprehensive Socialization* class. It is possible that families at this income level may engage in more conversations about pregnancy prevention through the use of contraception because they likely have greater access to different methods than lower income families (Kavanaugh et al., 2022).

Limitations and Future Research Directions

There were several strengths of the current study. A nationally representative sample of young Black women and adolescent girls was utilized, which increased the generalizability of these findings. This is also among the first studies to assess the relationships between sexual socialization and different types of contraceptive methods, as well as the number of methods. It is also the first study to identify patterns of socialization experiences among young Black women and girls using a person-centered approach.

However, there are limitations that are important to consider. First, the items on sexual socialization only assessed whether respondents received messages about specific topics, but did not assess the frequency or quality of the socialization messages. Future research should include measures of sexual socialization that assess the frequency, content, and quality of young Black women and girls' socialization experiences. Second, the reports of socialization experiences may have been subject to recall bias, and the cross-sectional design of the NSFG limits inferences about causality and the directionality of the relationships. Third, only a few respondents (3%) reported using long-acting reversible methods at the first act of intercourse, which prevented analyses to detect whether sexual socialization was predictive of long-acting reversible method use over all other contraceptive methods. Fourth, the types of health insurance coverage in the past year could not be determined with certainty, which resulted in the use of past-year duration of health insurance coverage. Future research on past-year contraceptive use should assess types of past-year health insurance coverage to better understand how contraceptive use differs across different forms of healthcare coverage. Finally, it could not be determined with certainty that all respondents reported on consensual acts of intercourse, which would greatly affect their ability to engage in their preferred contraceptive behaviors. Future research on this topic should assess whether the acts of intercourse that are of interest were consensual.

Conclusion

Contraceptive use is a critical practice as it relates to family planning. The findings from this study add to the limited body of research on the relationship between parental sexual socialization and contraceptive use in young Black women and girls, and expands our current understanding of this link as it relates to the use of various types of contraceptive methods and the number of methods used during intercourse. In particular, higher number of socialization

messages was associated with greater odds of using multiple methods at the first and most recent intercourse as compared to a single contraceptive method. This suggests that parental sexual socialization messages may be significant to young Black women and girls in the management of their fertility. Furthermore, the study highlights the various patterns of sexual socialization experiences that are common in this population, and how they differ by various sociodemographic factors such as age at first intercourse and religious affiliation. These findings underscore the significance of parental sexual socialization on young Black women and girls, as well as differences in how Black girls are socialized about sex, and can inform future research on the role of this important sociocultural process on the contraceptive use behaviors in this population.

Table 2.1

Sociodemographic Characteristics Across NSFG Surveys in 2013–2015, 2015–2017 and 2017–2019

Characteristics	Full sample (*N* = 703)	2013–2015 (*N* = 236)	2015–2017 (*N* = 253)	2017–2019 (*N* = 214)
Age at interview (continuous)	20.52 (2.58)	20.56 (2.54)	20.52 (2.60)	20.47 (2.62)
Age at interview (binary)				
Less than 18 years	100 (15)	29 (15)	37 (15)	34 (16)
18 years or older	603 (85)	207 (85)	216 (85)	180 (84)
Age at first sexual intercourse since menarche[a]	16.16 (1.83)	16.06 (2.02)	16.19 (1.84)	16.24 (1.60)
Educational attainment				
Less than high school	189 (24)	60 (26)	70 (23)	59 (24)
High school graduate	272 (33)	85 (31)	100 (37)	87 (30)
Some college but no degree	177 (31)	72 (33)	60 (27)	45 (34)
Associate degree	25 (4)	6 (2)	10 (7)	9 (3)
Bachelor's degree or higher	40 (8)	13 (9)	13 (6)	14 (8)
Poverty level				
Less than 100% of poverty level	346 (42)	125 (48)	136 (48)	85 (29)
100-200% of poverty level	171 (30)	52 (27)	59 (28)	60 (33)
More than 200% of poverty level	186 (28)	59 (25)	58 (24)	69 (38)
Duration of health insurance coverage in the past year[a]				
Full-year coverage	545 (79)	177 (79)	197 (77)	171 (81)
Partial-year coverage	66 (11)	31 (13)	20 (10)	15 (12)
No coverage	70 (10)	23 (9)	25 (13)	22 (8)
Place of residence				
Principal city of a Metropolitan Statistical Area (MSA)	344 (48)	108 (45)	124 (43)	112 (57)
Other MSA	242 (38)	79 (42)	82 (38)	81 (35)
Non-MSA	117 (14)	49 (13)	47 (19)	21 (8)
Childhood family structure				
Two biological or adoptive parents from birth	182 (26)	56 (26)	74 (27)	52 (25)

Other family composition	521 (74)	180 (74)	179 (73)	162 (75)
Religious affiliation				
Affiliated with a religion	563 (75)	186 (76)	210 (77)	167 (69)
No religious affiliation	140 (25)	50 (24)	43 (23)	47 (31)
Religion				
Protestant	505 (68)	167 (69)	184 (69)	154 (66)
Catholic	29 (4)	12 (5)	13 (5)	4 (1)
Other religion	29 (3)	7 (2)	13 (4)	9 (2)
None	140 (25)	50 (24)	43 (23)	47 (31)

Note. Data are presented as unweighted frequencies and weighted percentages for categorical variables, and weighted means and standard deviations for continuous variables. [a] Variable has missing data.

Table 2.2

Contraceptive Use Measures Scoring

Measure	Variable Type	Scoring
1. Contraceptive use at first sexual intercourse	Binary	(1) Yes: Respondents who reported using an IUD, a hormonal implant, oral contraceptive pills, the hormonal patch, the hormonal vaginal ring, the contraceptive injection, condoms, diaphragms, the cervical cap, the sponge, spermicides or vaginal gels, fertility awareness-based methods, or withdrawal method at the first sexual intercourse. (2) No: Respondents who reported not using any form of contraception at the first sexual intercourse.
2. Most effective type of contraceptive method used at first sexual intercourse	Categorical	(1) No method: Respondents who reported not using any form of contraception at the first sexual intercourse. (2) Coital method: Respondents who reported only using condoms, diaphragms, the cervical cap, the sponge, spermicides or vaginal gels, fertility awareness-based methods, or withdrawal method at the first sexual intercourse. (3) Short-acting reversible method: Respondents who did not report using a long-acting reversible method but who reported using oral contraceptive pills, the hormonal patch, the hormonal vaginal ring, or the contraceptive injection at the first sexual intercourse. (4) Long-acting reversible method: Respondents who reported using an IUD or a hormonal implant at the first sexual intercourse.

3. Number of contraceptive methods used at first sexual intercourse	Categorical	(1) No method: Respondents who reported not using any form of contraception at the first sexual intercourse. (2) Single method used: Respondents who reported using only one contraceptive method at the first sexual intercourse. (3) Multiple methods used: Respondents who reported using two or more contraceptive methods at the first sexual intercourse.
4. Contraceptive use at last sex in the past 12 months	Binary	(1) Yes: Respondents who reported using an IUD, a hormonal implant, oral contraceptive pills, the hormonal patch, the hormonal vaginal ring, the contraceptive injection, condoms, diaphragms, the cervical cap, the sponge, spermicides or vaginal gels, fertility awareness-based methods, or withdrawal method at the last sexual intercourse in the past 12 months. (2) No: Respondents who reported not using any form of contraception at the last sexual intercourse in the past 12 months.
5. Most effective type of contraceptive method used at last sex in the past 12 months	Categorical	(1) No method: Respondents who reported not using any form of contraception at the last sexual intercourse in the past 12 months. (2) Coital method: Respondents who reported only using condoms, diaphragms, the cervical cap, the sponge, spermicides or vaginal gels, fertility awareness-based methods, or withdrawal method at the last sexual intercourse in the past 12 months. (3) Short-acting reversible method: Respondents who did not report using a long-acting reversible method but who reported using oral contraceptive pills, the hormonal patch, the hormonal vaginal ring, or the contraceptive injection at the last sexual intercourse in the past 12 months. (4) Long-acting reversible method: Respondents who reported using an IUD or a hormonal implant at the last sexual intercourse in the past 12 months.

6. Most effective type of contraceptive method used at last sex in the past 12 months (expanded version)	Categorical	(1) No method: Respondents who reported not using any form of contraception at the last sexual intercourse in the past 12 months. (2) Traditional method: Respondents who reported only using fertility awareness-based methods, or withdrawal method at the last sexual intercourse in the past 12 months. (3) Barrier method: Respondents who reported only using condoms, diaphragms, the cervical cap, the sponge, spermicides or vaginal gels at the last sexual intercourse in the past 12 months. (4) Short-acting reversible method: Respondents who did not report using a long-acting reversible method but who reported using oral contraceptive pills, the hormonal patch, the hormonal vaginal ring, or the contraceptive injection at the last sexual intercourse in the past 12 months. (5) Long-acting reversible method: Respondents who reported using an IUD or a hormonal implant at the last sexual intercourse in the past 12 months.
7. Number of contraceptive methods used at last sex in the past 12 months	Categorical	(1) No method: Respondents who reported not using any form of contraception at the last sexual intercourse in the past 12 months. (2) Single method used: Respondents who reported using only one contraceptive method at the last sexual intercourse in the past 12 months. (3) Multiple methods used: Respondents who reported using two or more contraceptive methods at the last sexual intercourse in the past 12 months.

Table 2.3

Scoring of Potential Covariates for Study 2 Analyses

Variable	Variable Type	Scoring
Primary Aim 1		
Age at first sexual intercourse	Continuous	–
Family structure when growing up	Binary	(1) Two biological or adoptive parents from birth (2) Other family composition
Religious affiliation	Binary	(1) Affiliated with a religion (2) No religious affiliation
Relationship with first male sexual partner	Binary	(1) Committed relationship (2) Non-committed relationship
Primary Aim 2		
Age at interview	Continuous	–
Age at interview	Binary	(1) Below 18 years old (2) 18 years or older
Educational attainment	Categorical	(1) Less than high school (2) High school graduate (3) Some college but no degree (4) Associate degree (5) Bachelor's degree or higher
Poverty level	Categorical	(1) Less than 100% of poverty level (2) 100-200% of poverty level (3) More than 200% of poverty level

Duration of insurance coverage in the past year	Categorical	(1) Full-year coverage (2) Partial-year coverage (3) No coverage
Family structure when growing up	Binary	(1) Two biological or adoptive parents from birth (2) Other family composition
Place of residence	Categorical	(1) Principal city of a Metropolitan Statistical Area (MSA) (2) Other MSA (3) Non-MSA
Religious affiliation	Binary	(1) Affiliated with a religion (2) No religious affiliation
Parity	Categorical	(1) 0 (2) 1 (3) 2 or more
Relationship with last sexual partner at last sex	Binary	(1) Committed relationship (2) Non-committed relationship

Table 2.4

Descriptive Statistics on Study Variables

Variable	Mean (SD) or N (%)
Sexual socialization (composite score)[a]	3.16 (2.38)
Sexual socialization messages[a,b]	
How to say no to sex	408 (59)
Methods of birth control	414 (57)
Where to get birth control	340 (49)
Sexually transmitted diseases	424 (58)
How to prevent HIV/AIDS	341 (47)
How to use a condom	339 (46)
Waiting until marriage to have sex	405 (60)
Contraceptive use at first sexual intercourse[a]	
Yes	497 (73)
No	201 (27)
Most effective type of contraceptive method used at first sexual intercourse[a]	
Long- and short-acting reversible method	113 (18)
Coital method	384 (54)
No method	201 (27)
Number of contraceptive methods used at first sexual intercourse[a]	
Multiple methods used	93 (15)
Single method used	404 (57)
No method	201 (27)
Contraceptive use at most recent sexual intercourse [a,c]	
Yes	508 (81)
No	90 (19)
Most effective type of contraceptive method used at most recent sexual intercourse [a,c]	

Long-acting reversible method	71 (13)
Short-acting reversible method	182 (29)
Coital method	255 (39)
No method	90 (19)
Most effective type of contraceptive method used at most recent sexual intercourse (expanded version)[a,c]	
Long-acting reversible method	71 (13)
Short-acting reversible method	182 (29)
Barrier method	183 (27)
Traditional method	72 (12)
No method	90 (19)
Number of contraceptive methods used at most recent sexual intercourse [a,c]	
Multiple methods used	132 (26)
Single method used	376 (55)
No method	90 (19)
Parity	
0	473 (75)
1	143 (17)
2 or more	87 (8)
Relationship with first male sexual partner[a]	
Committed relationship	476 (71)
Non-committed relationship	225 (29)
Relationship with last male sexual partner[a,c]	
Committed relationship	398 (63)
Non-committed relationship	199 (37)

Note. Data are presented as unweighted frequencies and weighted percentages, means, and standard deviations. Range for sexual socialization is 0–6. [a] Variable has missing data. [b] Frequencies and percentages reflect respondents who reported "yes" for each item. [c] Only respondents who reported having sex in the past 12 months and who reported having sex more than once.

Table 2.5

Bivariate Associations Between Contraceptive Use Behaviors at First Intercourse and Predictor Variables

Variable	Contraceptive Use			Most effective type of method used				Number of contraceptive methods used			
	Yes	No	*p*	LSARC	Coital	None	*p*	Multiple	Single	None	*p*
Sexual socialization messages	3.23 (0.18)	3.00 (0.30)	.55	3.51 (0.41)	3.14 (0.19)	3.00 (0.30)	.63	3.94 (0.32)	3.05 (0.21)	3.00 (0.30)	.06
Age at first intercourse	16.30 (0.13)	15.83 (0.26)	.10	16.62 (0.28)	16.19 (0.14)	15.83 (0.26)	.11	16.89 (0.21)	16.14 (0.15)	15.83 (0.26)	.001
Childhood family structure			.02				.01				.04
Two biological or adoptive parents from birth	136 (30%)	46 (18%)		33 (21%)	103 (33%)	46 (18%)		25 (23%)	111 (31%)	46 (18%)	
Other family composition	361 (70%)	155 (82%)		80 (79%)	281 (67%)	155 (82%)		68 (77%)	293 (69%)	155 (82%)	
Religious affiliation			.50				.51				.29
Affiliated with a religion	400 (74%)	161 (78%)		84 (68%)	316 (76%)	161 (78%)		70 (64%)	330 (76%)	161 (78%)	
No religious affiliation	97 (26%)	40 (22%)		29 (32%)	68 (24%)	40 (22%)		23 (36%)	74 (24%)	40 (22%)	
Relationship with first male sexual partner			.75				.86				.81
Committed relationship	343 (71%)	132 (73%)		83 (69%)	260 (72%)	132 (73%)		69 (75%)	274 (70%)	132 (73%)	
Non-committed relationship	152 (29%)	69 (27%)		30 (31%)	122 (28%)	69 (27%)		24 (25%)	128 (30%)	69 (27%)	

Note. Weighted means (SE) for continuous variables. Unweighted frequencies and weighted column percentages for categorical variables. LSARC = Long- and short-acting reversible method.

Table 2.6

Bivariate Associations Between Contraceptive Use Behaviors at Most Recent Intercourse and Predictor Variables

Variable	Contraceptive Use			Most effective type of method used					Number of contraceptive methods used			
	Yes	No	*p*	LARC	SARC	Coital	None	*p*	Multiple	Single	None	*p*
Sexual socialization messages	3.27 (0.16)	3.17 (0.48)	.84	3.31 (0.32)	3.24 (0.31)	3.29 (0.21)	3.17 (0.48)	.99	3.24 (0.31)	3.29 (0.19)	3.17 (0.48)	.97
Age at interview (continuous)	20.47 (0.19)	20.81 (0.46)	.50	20.85 (0.37)	20.03 (0.36)	20.67 (0.21)	20.81 (0.46)	.31	20.00 (0.38)	20.69 (0.20)	20.81 (0.46)	.14
Age at interview (binary)			.65					.03				.42
Below 18 years old	61 (14%)	8 (11%)		3 (9%)	31 (24%)	27 (9%)	8 (11%)		17 (19%)	44 (12%)	8 (11%)	
18 years or older	447 (85%)	82 (89%)		68 (91%)	151 (76%)	228 (91%)	82 (89%)		115 (81%)	332 (88%)	82 (89%)	
Educational attainment			.82					.87				.87
Less than high school	124 (24%)	24 (19%)		14 (21%)	42 (31%)	68 (21%)	24 (19%)		27 (25%)	97 (24%)	24 (19%)	
High school graduate	189 (31%)	42 (40%)		31 (31%)	69 (28%)	89 (33%)	42 (40%)		44 (25%)	145 (34%)	42 (40%)	
Some college but no degree	147 (34%)	16 (30%)		19 (41%)	52 (30%)	76 (35%)	16 (30%)		44 (38%)	103 (32%)	16 (30%)	
Associate degree	20 (4%)	3 (6%)		5 (4%)	6 (4%)	9 (4%)	3 (6%)		6 (3%)	14 (4%)	3 (6%)	
Bachelor's degree or higher	28 (7%)	5 (6%)		5 (3%)	13 (8%)	13 (7%)	5 (6%)		11 (8%)	17 (6%)	5 (6%)	
Poverty level			.81					.87				.77
Less than 100% of PL	243 (41%)	50 (47%)		41 (52%)	84 (40%)	118 (38%)	50 (47%)		68 (47%)	175 (38%)	50 (47%)	
100-200% of PL	129 (32%)	22 (31%)		15 (22%)	42 (32%)	72 (35%)	22 (31%)		28 (26%)	101 (34%)	22 (31%)	
More than 200% of PL	136 (28%)	18 (23%)		15 (27%)	56 (28%)	65 (28%)	18 (23%)		36 (27%)	100 (28%)	18 (23%)	

Duration of health insurance coverage in the past year			.07					.004			.04
Full-year coverage	392 (81%)	69 (62%)		51 (84%)	156 (90%)	185 (73%)	69 (62%)		103 (83%)	289 (80%)	69 (62%)	
Partial-year coverage	46 (9%)	14 (27%)		10 (9%)	12 (7%)	24 (10%)	14 (27%)		16 (12%)	30 (8%)	14 (27%)	
No coverage	57 (10%)	5 (11%)		8 (7%)	11 (3%)	38 (16%)	5 (11%)		11 (6%)	46 (12%)	5 (11%)	
Childhood family structure			.33					.17			.23
Two biological or adoptive parents from birth	139 (27%)	19 (20%)		16 (21%)	60 (35%)	63 (24%)	19 (20%)		43 (37%)	96 (25%)	19 (20%)	
Other family composition	369 (73%)	71 (80%)		55 (79%)	122 (65%)	192 (76%)	71 (80%)		89 (66%)	280 (75%)	71 (80%)	
Place of residence			.54					.21			.87
Principal city of an MSA	242 (47%)	50 (53%)		32 (44%)	91 (48%)	119 (47%)	50 (53%)		66 (46%)	176 (47%)	50 (53%)	
Other MSA	179 (38%)	31 (38%)		22 (27%)	58 (38%)	99 (41%)	31 (38%)		44 (38%)	135 (38%)	31 (38%)	
Non-MSA	87 (15%)	9 (9%)		17 (30%)	33 (14%)	37 (12%)	9 (9%)		22 (16%)	65 (15%)	9 (9%)	
Religious affiliation			.45					.56			.74
Affiliated with a religion	409 (73%)	71 (80%)		56 (65%)	134 (71%)	219 (77%)	71 (80%)		104 (74%)	305 (73%)	71 (80%)	
No religious affiliation	99 (27%)	19 (20%)		15 (35%)	48 (29%)	36 (23%)	19 (20%)		28 (26%)	71 (27%)	19 (20%)	
Parity			.04					.001			.002
0	344 (77%)	47 (60%)		31 (58%)	130 (82%)	183 (79%)	47 (60%)		111 (88%)	233 (72%)	47 (60%)	
1	107 (15%)	23 (30%)		21 (21%)	36 (12%)	50 (16%)	23 (30%)		13 (8%)	94 (18%)	23 (30%)	
2 or more	57 (8%)	20 (10%)		19 (21%)	16 (6%)	22 (6%)	20 (10%)		8 (4%)	49 (10%)	20 (10%)	
Relationship with last male sexual partner			.88					.39			.96
Committed relationship	338 (63%)	60 (62%)		53 (77%)	128 (61%)	157 (60%)	60 (62%)		96 (65%)	242 (63%)	60 (62%)	

Non-committed relationship	169 (37%)	30 (38%)	18 (23%)	54 (39%)	97 (40%)	30 (38%)	36 (35%)	133 (37%)	30 (38%)	

Note. Weighted means (SE) for continuous variables. Unweighted frequencies and weighted column percentages for categorical variables. LARC = Long-acting reversible method. SARC = Short-acting reversible method. MSA = Metropolitan Statistical Area.

Table 2.7

Sexual Socialization Predicting Contraceptive Use at First Sexual Intercourse

Variables	Unadjusted model		Adjusted model	
	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)
Sexual socialization	0.04 (0.07)	1.04 (0.91–1.19)	0.03 (0.06)	1.03 (0.91–1.16)
Age at first sexual intercourse			0.12 (0.10)	1.12 (0.93–1.36)
Childhood family structure			-0.58 (0.32)	0.56 (0.30–1.06)

Note. * $p < .05$. ** $p < .01$. Childhood family structure = Two biological or adoptive parents from birth (coded as 1) vs. Other family composition (coded as 0)

Table 2.8

Sexual Socialization Predicting Most Effective Type of Method Used at First Sexual Intercourse

Reference Group	Long- and short-acting reversible method				Coital method	
Comparison Group	No method		Coital method		No method	
Variables	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)
Unadjusted models						
Sexual socialization	-0.09 (0.10)	0.91 (0.76–1.11)	-0.07 (0.08)	0.94 (0.81–1.09)	-0.02 (0.07)	0.98 (0.86–1.11)
Adjusted models						
Sexual socialization	-0.07 (0.10)	0.94 (0.78–1.13)	-0.05 (0.08)	0.95 (0.82–1.10)	-0.01 (0.06)	0.99 (0.87–1.12)
Age at first sexual intercourse	-0.23 (0.12)	0.79 (0.62–1.01)	-0.16 (0.08)	0.86 (0.73–1.01)	-0.08 (0.10)	0.93 (0.77–1.12)
Childhood family structure	0.002 (0.37)	1.00 (0.48–2.08)	-0.74 (0.32)*	0.48 (0.26–0.89)	0.75 (0.34)*	2.11 (1.08–4.11)

Note. * $p < .05$. ** $p < .01$. Childhood family structure = Two biological or adoptive parents from birth (coded as 1) vs. Other family composition (coded as 0)

Table 2.9

Sexual Socialization Predicting Number of Methods Used at First Sexual Intercourse

Reference Group	Multiple methods				Single method	
Comparison Group	No method		Single method		No method	
Variables	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)
Unadjusted models						
Sexual socialization	-0.17 (0.09)	0.84 (0.71–1.00)	-0.16 (0.07)*	0.85 (0.74–0.98)	-0.01 (0.07)	0.99 (0.87–1.13)
Adjusted models						
Sexual socialization	-0.15 (0.09)	0.86 (0.73–1.03)	-0.15 (0.07)*	0.86 (0.75–0.99)	0.002 (0.07)	1.00 (0.88–1.14)
Age at first sexual intercourse	-0.31 (0.12)*	0.74 (0.59–0.93)	-0.24 (0.08)**	0.79 (0.68–0.92)	-0.07 (0.10)	0.93 (0.77–1.13)
Childhood family structure	0.06 (0.45)	1.06 (0.44–2.55)	-0.64 (0.40)	0.53 (0.24–1.15)	0.70 (0.34)*	2.01 (1.04–3.90)

Note. * $p < .05$. ** $p < .01$. Childhood family structure = Two biological or adoptive parents from birth (coded as 1) vs. Other family composition (coded as 0)

Table 2.10

Interactions of Age at First Sex and Sexual Socialization in Predicting Number of Methods Used at First Sexual Intercourse

Reference Group	Multiple methods				Single method	
Comparison Group	No method		Single method		No method	
Variables	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)
Sexual socialization	-0.15 (0.09)	0.87 (0.73–1.03)	-0.14 (0.07)	0.87 (0.75–1.00)	-0.003 (0.07)	1.00 (0.87–1.14)
Age at first sexual intercourse	-0.30 (0.12)*	0.74 (0.59–0.93)	-0.23 (0.08)**	0.79 (0.68–0.92)	-0.07 (0.10)	0.93 (0.76–1.14)
Sexual socialization x Age at first sexual intercourse	-0.02 (0.06)	0.98 (0.86–1.10)	-0.01 (0.04)	0.99 (0.92–1.06)	-0.01 (0.05)	0.99 (0.90–1.08)
Childhood family structure	0.07 (0.43)	1.08 (0.46–2.52)	-0.63 (0.39)	0.53 (0.25–1.15)	0.71 (0.33)*	2.03 (1.07–3.86)

Note. * $p < .05$. ** $p < .01$. Childhood family structure = Two biological or adoptive parents from birth (coded as 1) vs. Other family composition (coded as 0)

Table 2.11

Sexual Socialization Predicting Contraceptive Use at Most Recent Intercourse

Variables	Unadjusted model		Adjusted model	
	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)
Sexual socialization	0.02 (0.09)	1.02 (0.85–1.22)	0.02 (0.09)	1.02 (0.86–1.21)
Age at interview (binary)			0.21 (0.51)	1.24 (0.45–3.37)
Duration of health insurance coverage				
Full-year coverage (Ref)			1.00	1.00
No coverage			-0.25 (0.76)	0.78 (0.18–3.44)
Partial-year coverage			-1.40 (0.59)*	0.25 (0.08–0.78)
Parity				
0 (Ref)			1.00	1.00
1			-0.92 (0.46)	0.40 (0.16–0.98)
2 or more			-0.65 (0.43)	0.52 (0.23–1.21)

Note. Ref = Reference group. * $p < .05$. ** $p < .01$.

Table 2.12

Sexual Socialization Predicting Most Effective Type of Method Used at Most Recent Intercourse

Reference Group	Long-acting reversible method						Short-acting reversible method				Coital method	
Comparison Group	No method		Coital method		Short-acting reversible method		No method		Coital method		No method	
Variables	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)
Unadjusted models												
Sexual socialization	-0.02 (0.10)	0.98 (0.80–1.19)	-0.004 (0.07)	1.00 (0.87–1.14)	-0.01 (0.08)	0.99 (0.85–1.15)	-0.01 (0.10)	0.99 (0.81–1.20)	0.01 (0.07)	1.01 (0.89–1.15)	-0.02 (0.10)	0.98 (0.81–1.19)
Adjusted models												
Sexual socialization	-0.04 (0.10)	0.97 (0.80–1.67)	-0.02 (0.07)	0.98 (0.85–1.13)	-0.10 (0.08)	0.99 (0.85–1.15)	-0.03 (0.09)	0.98 (0.82–1.16)	-0.01 (0.06)	0.99 (0.88–1.12)	-0.02 (0.09)	0.99 (0.82–1.19)
Age at interview (binary)	-0.56 (0.87)	0.57 (0.10–3.12)	0.18 (0.73)	1.20 (0.29–5.00)	-0.90 (0.79)	0.41 (0.09–1.91)	0.34 (0.54)	1.40 (0.49–4.02)	1.08* (0.45)	2.96 (1.23–7.08)	-0.74 (0.57)	0.48 (0.16–1.44)
Health insurance coverage												
Full-year coverage (Ref)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
No coverage	0.74 (0.89)	2.11 (0.37–12.13)	1.02 (0.58)	2.77 (0.89–8.62)	-0.69 (0.55)	0.50 (0.17–1.49)	1.43 (0.77)	4.18 (0.92–19.03)	1.70** (0.45)	5.50 (2.29–13.19)	-0.27 (0.78)	0.76 (0.16–3.54)
Partial-year coverage	1.38 (0.71)	3.98 (0.98–16.13)	0.10 (0.54)	1.11 (0.39–3.18)	-0.23 (0.59)	0.80 (0.25–2.53)	1.61* (0.65)	4.99 (1.39–17.94)	0.33 (0.46)	1.39 (0.57–3.41)	1.28* (0.63)	3.59 (1.05–12.30)

Parity												
0 (Ref)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	0.31 (0.59)	1.36 (0.43–4.33)	-0.70 (0.43)	0.50 (0.21–1.15)	-0.82 (0.44)	0.44 (0.18–1.05)	1.13* (0.48)	3.09 (1.20–7.94)	0.12 (0.34)	1.13 (0.58–2.19)	1.01* (0.49)	2.74 (1.05–7.14)
2 or more	-0.51 (0.59)	0.60 (0.19–1.89)	-1.63** (0.56)	0.20 (0.07–0.59)	-1.41* (0.62)	0.25 (0.07–0.82)	0.89 (0.54)	2.44 (0.85–7.06)	-0.22 (0.48)	0.80 (0.32–2.05)	1.11* (0.50)	3.04 (1.15–8.05)

Note. Ref = Reference group. * $p < .05$. ** $p < .01$.

Table 2.13

Sexual Socialization Predicting Number of Methods Used at Most Recent Intercourse

Reference Group	Multiple methods				Single method	
Comparison Group	No method		Single method		No method	
Variables	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)
Unadjusted models						
Sexual socialization	-0.17 (0.09)	0.84 (0.70–1.01)	-0.18 (0.08)*	0.84 (0.72–0.97)	0.01 (0.07)	1.01 (0.88–1.16)
Adjusted models						
Sexual socialization	-0.17 (0.09)	0.85 (0.71–1.01)	-0.18 (0.08)*	0.84 (0.72–0.97)	0.01 (0.07)	1.01 (0.89–1.15)
Age at interview (binary)	-0.58 (0.63)	0.56 (0.16–1.91)	0.24 (0.61)	1.28 (0.39–4.19)	-0.83 (0.47)*	0.44 (0.18–1.09)
Duration of health insurance coverage						
Full-year coverage (Ref)	1.00	1.00	1.00	1.00	1.00	1.00
No coverage	0.40 (0.74)	1.49 (0.35–6.36)	-0.16 (0.65)	0.85 (0.24–3.02)	0.56 (0.52)	1.76 (0.64–4.42)
Partial-year coverage	-0.29 (0.63)	0.75 (0.22–2.57)	-0.72 (0.66)	0.49 (0.14–1.77)	0.43 (0.40)	1.53 (0.69–3.38)
Parity						
0 (Ref)	1.00	1.00	1.00	1.00	1.00	1.00
1	1.95 (0.69)*	7.05 (1.82–27.24)	0.78 (0.61)	2.19 (0.67–7.21)	1.17 (0.32)**	3.22 (1.71–6.05)
2	1.16 (0.57)*	3.17 (1.03–9.74)	-0.23 (0.61)	0.79 (0.24–2.61)	1.39 (0.42)**	4.01 (1.77–9.10)

Note. Ref = Reference group. * $p < .05$. ** $p < .01$.

Table 2.14

Interactions of Age and Sexual Socialization in Predicting Most Effective Type of Method Used at Most Recent Intercourse

Reference Group	Long-acting reversible method						Short-acting reversible method				Coital method	
Comparison Group	No method		Coital method		Short-acting reversible method		No method		Coital method		No method	
Variables	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)
Sexual socialization	-0.51 (0.41)	0.60 (0.27–1.34)	-0.35 (0.35)	0.70 (0.36–1.40)	-0.72 (0.37)	0.49 (0.24–1.01)	0.21 (0.16)	1.23 (0.90–1.69)	0.37* (0.14)	1.44 (1.10–1.89)	-0.16 (0.21)	0.86 (0.57–1.28)
Age at interview (binary)	-1.17 (0.99)	0.31 (0.05–2.13)	-0.38 (0.86)	0.69 (0.13–3.71)	-1.40 (0.89)	0.25 (0.04–1.43)	0.22 (0.51)	1.25 (0.46–3.41)	1.02* (0.38)	2.76 (1.31–5.84)	-0.80 (0.56)	0.45 (0.15–1.34)
Sexual socialization x Age at interview (binary)	0.51 (0.42)	1.66 (0.73–3.79)	0.35 (0.35)	1.42 (0.71–2.85)	0.81* (0.38)	2.24 (1.08–4.67)	-0.30 (0.20)	0.74 (0.50–1.09)	-0.45** (0.16)	0.64 (0.47–0.86)	0.15 (0.25)	1.17 (0.72–1.89)
Health insurance coverage												
Full-year coverage (Ref)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
No coverage	0.71 (0.87)	2.03 (0.37–11.25)	0.99 (0.58)	2.69 (0.86–8.41)	-0.81 (0.56)	0.45 (0.15–1.33)	1.52 (0.82)	4.57 (0.92–22.78)	1.80** (0.46)	6.04 (2.43–15.00)	-0.28 (0.77)	0.76 (0.17–3.42)
Partial-year coverage	1.37 (0.72)	3.94 (0.97–16.00)	0.09 (0.58)	1.09 (0.38–3.15)	-0.28 (0.60)	0.76 (0.24–2.44)	1.65 (0.66)	5.20 (1.42–19.05)	0.37 (0.47)	1.44 (0.58–3.60)	1.28* (0.63)	3.60 (1.06–12.26)
Parity												

0 (Ref)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	0.39 (0.60)	1.48 (0.46–4.77)	-0.64 (0.43)	0.53 (0.23–1.23)	-0.60 (0.45)	0.55 (0.23–1.33)	0.99 (0.47)	2.70 (1.07–6.83)	-0.04 (0.34)	0.96 (0.50–1.87)	1.03* (0.49)	2.80 (1.07–7.33)
2 or more	-0.51 (0.60)	0.60 (0.19–1.93)	-1.62** (0.56)	0.20 (0.07–0.59)	-1.39* (0.62)	0.25 (0.07–0.85)	0.88 (0.53)	2.41 (0.85–6.85)	-0.23 (0.47)	0.79 (0.31–2.01)	1.11* (0.50)	3.04 (1.14–8.07)

Note. Ref = Reference group. * $p < .05$. ** $p < .01$.

Table 2.15

Post Hoc Analyses Predicting Most Effective Type of Method Used at the Most Recent Sexual Intercourse

Reference Group	Long-acting reversible method				Short-acting reversible method			Barrier method		Traditional method
Comparison Group	No method	Traditional method	Barrier method	Short-acting reversible method	No method	Traditional method	Barrier method	No method	Traditional method	No method
Sexual socialization	0.97 (0.80–1.67)	0.87 (0.85–1.13)	1.03 (0.89–1.19)	0.99 (0.86–1.15)	0.97 (0.82–1.16)	0.88 (0.74–1.05)	1.04 (0.92–1.17)	0.94 (0.77–1.14)	0.85 (0.72–1.00)	1.11 (0.89–1.37)
Age at interview (binary)	0.57 (0.10–3.15)	3.17 (0.57–17.81)	0.93 (0.22–3.91)	0.41 (0.09–1.91)	1.41 (0.49–4.06)	7.82** (1.92–31.86)	2.29 (1.00–5.23)	0.62 (0.21–1.83)	3.42** (1.05–11.11)	0.18* (0.04–0.85)
Health insurance coverage										
Full-year coverage (Ref)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
No coverage	2.12 (0.37–12.15)	5.20** (1.48–18.23)	1.89 (0.52–6.89)	0.51 (0.17–1.51)	4.19 (0.93–18.84)	10.27** (3.61–29.25)	3.72* (1.32–10.47)	1.13 (0.21–6.04)	2.76 (0.95–7.98)	0.41 (0.90–1.86)
Partial-year coverage	3.97 (0.98–16.11)	0.74 (0.21–2.62)	1.26 (0.40–3.95)	0.80 (0.25–2.53)	4.98* (1.38–17.95)	0.93 (0.22–3.97)	1.59 (0.66–3.80)	3.14 (0.89–11.15)	0.59 (0.17–2.06)	5.36* (1.11–25.90)
Parity										
0 (Ref)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	1.36 (0.43–4.32)	0.52 (0.17–1.57)	0.48 (0.21–1.13)	0.44 (0.18–1.05)	3.08* (1.20–7.91)	1.18 (0.47–2.97)	1.09 (0.54–2.22)	2.82 (1.02–7.83)	1.08 (0.44–2.66)	2.61 (0.89–7.70)
2 or more	0.60 (0.19–1.88)	0.13** (0.04–0.47)	0.23* (0.07–0.72)	0.25* (0.07–0.82)	2.43 (0.84–7.02)	0.53 (0.16–1.74)	0.94 (0.35–2.51)	2.59 (0.91–7.36)	0.57 (0.19–1.72)	4.55 (1.44–14.42)

Note. Data are presented as odds ratios and 95% confidence intervals. Ref = Reference group. * $p < .05$. ** $p < .01$ for coefficient estimates.

Table 2.16

Model Fit Indices for Latent Class Models

Model	LL	BIC	SABIC	AIC	CAIC
1 Class	-3353.306	6752.470	6730.244	6720.613	6733.528
2 Class	-2500.207	5098.680	5051.052	5030.413	5058.090
3 Class	-2364.937	4880.549	4807.520	4775.874	4818.311
4 Class	-2313.667	4830.417	4731.986	4689.334	4746.532
5 Class	-2299.052	4853.596	4729.763	4676.103	4748.063
6 Class	-2287.230	4882.361	4733.127	4668.460	4755.180

Note. LL = log-likelihood. BIC = Bayesian Information Criterion. SABIC = Sample-size adjusted BIC. AIC = Akaike Information Criterion. CAIC = Consistent Akaike Information Criterion.

Table 2.17

Diagnostic Information Criteria for Latent Class Models

Model	Smallest class proportion	Entropy	Lowest AvePP	VLMR-LRT
1 Class	1.00	–	–	–
2 Class	0.41	0.933	0.979	<.001
3 Class	0.27	0.859	0.925	0.003
4 Class	0.10	0.872	0.869	0.406
5 Class	0.07	0.899	0.896	0.398
6 Class	0.04	0.905	0.752	0.456

Note. AvePP = Average Posterior Probabilities; VLMR-LRT = Vuong-Lo-Mendell-Rubin likelihood ratio test *p* value.

Table 2.18

Sociodemographic Variables Predicting Likelihood of Class Membership

Reference Class	Comprehensive Socialization						Abstinence-focused Socialization				Contraception-focused Socialization	
Comparison Class	Limited Socialization		Abstinence-focused Socialization		Contraception-focused socialization		Limited Socialization		Contraception-focused Socialization		Limited Socialization	
Variables	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)
Age at interview (continuous)	0.03 (0.08)	1.03 (0.89–1.19)	-0.10 (0.07)	0.91 (0.79–1.05)	0.13 (0.13)	1.13 (0.88–1.46)	0.13 (0.09)	1.13 (0.94–1.36)	0.22 (0.14)	1.25 (0.95–1.63)	-0.10 (0.14)	0.91 (0.70–1.19)
Age at interview (binary)	-0.35 (0.66)	0.70 (0.19–2.56)	0.62 (0.54)	1.85 (0.64–5.33)	-1.76 (0.92)	0.17 (0.03–1.05)	-0.97 (0.76)	0.38 (0.09–1.69)	-2.38* (0.95)	0.09 (0.02–0.59)	1.41 (0.97)	4.09 (0.61–27.35)
Age at first sexual intercourse	-0.29** (0.09)	0.75 (0.63–0.88)	0.11 (0.10)	1.11 (0.91–1.36)	-0.002 (0.12)	1.00 (0.79–1.26)	-0.40** (0.12)	0.67 (0.53–0.85)	-0.11 (0.14)	0.90 (0.68–1.19)	-0.29* (0.14)	0.75 (0.57–0.98)
Childhood family structure	0.03 (0.37)	1.03 (0.50–2.14)	0.04 (0.35)	1.04 (0.52–2.07)	0.44 (0.55)	1.56 (0.53–4.60)	-0.01 (0.40)	0.99 (0.45–2.19)	0.41 (0.59)	1.50 (0.47–4.79)	-0.42 (0.58)	0.66 (0.21–2.06)
Religious affiliation	-0.35 (0.35)	0.71 (0.36–1.40)	0.63 (0.48)	1.87 (0.73–4.78)	-1.02 (0.54)	0.36 (0.12–1.04)	-0.97 (0.57)	0.38 (0.12–1.16)	-1.65* (0.73)	0.19 (0.05–0.81)	0.68 (0.52)	1.97 (0.71–5.49)
Poverty level												
Less than 100% of PL (Ref)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
100-200% of PL	0.38 (0.37)	1.47 (0.70–3.05)	0.06 (0.46)	1.06 (0.43–2.62)	-0.11 (0.62)	0.90 (0.26–3.04)	0.32 (0.45)	1.38 (0.58–3.30)	-0.17 (0.69)	0.84 (0.22–3.25)	0.49 (0.57)	1.64 (0.53–5.03)

More than 200% of PL	0.28 (0.37)	1.32 (0.64–2.75)	0.38 (0.42)	1.46 (0.64–3.33)	1.47* (0.63)	4.34 (1.25–15.06)	-0.10 (0.48)	0.91 (0.35–2.33)	1.09 (0.72)	2.97 (0.73–12.16)	-1.19 (0.62)	0.31 (0.09–1.04)

Note. Unweighted $N = 699$. * $p < .05$. ** $p < .01$ for coefficient estimates.

Study 3

Sexual Socialization and Pregnancy Intentions in Young Black Women and Adolescent Girls

Pregnancy intention is a complex and multifaceted phenomenon that describes feeling and desires about pregnancies. Studies on pregnancy intentions have traditionally utilized a conventional measure of pregnancy intention that consists of questions about pre-pregnancy contraceptive use, and feelings about becoming pregnant and the timing of pregnancy to characterize pregnancies as either wanted, wanted at a later time (i.e., mistimed), or never wanted (i.e., unwanted) (Klerman, 2000; Mosher et al., 2012). Pregnancies can be further classified into two categories, intended or unintended. However, standard measures of pregnancy intentions are limited in their ability to sufficiently assess other dimensions of pregnancy intentions, including affect about a pregnancy and whether a pregnancy was intentional or planned (Bachrach & Newcomer, 1999). Thus, alternative measures have been developed for population research to assess attitudes related to these other dimensions, including happiness about a pregnancy, wantedness of a pregnancy, and attitudes about wanting to avoid or become pregnant (Mosher et al., 2012). Research conducted by Santelli and colleague (2009) helped to elucidate the interconnections between the standard and alternative measures by identifying two distinct dimensions of pregnancy intention: Pregnancy desire and mistiming. More recently, the Desire to Avoid Pregnancy scale was developed by Rocca and colleagues (2019) to prospectively assess an individual's thoughts and feelings about a future pregnancy and childbearing, in response to critiques of prior measures.

While the use of the traditional and alternative measures help to clarify attitudes and behaviors related to pregnancy intentions, theses measure do not account for sociocultural factors

that may influence women's feelings about pregnancies and their ability to fully control their fertility (Santelli et al., 2003). Notably, structural and cultural factors may affect women's attitudes about pregnancy in critical ways. In particular, structural factors such as access to one's preferred contraceptive method/s and inadequate contraceptive counseling impact women's chance of becoming pregnant, and thus may influence their feelings and thoughts if a pregnancy were to occur (Gomez et al., 2024; Potter et al., 2019). Furthermore, familial relationships also play a role in women's characterization of their pregnancies, which suggests that families may be influential in women's feelings and desires about pregnancies (Klann & Wong, 2020; Santelli et al., 2003). Thus, sexual socialization may be an important source of familial influence on pregnancy intentions, since it is through this process that families convey to children their values and beliefs about when pregnancies should occur and in what context.

Research on the association between familial sexual socialization practices and pregnancy occurrence is very limited, and the findings from these studies are mixed. Three studies of adolescents thus far have found a negative association between parental sexual socialization and likelihood of having a pregnancy or number of pregnancies (Hutchinson & Montgomery, 2007; Leland & Barth, 1993; Pick & Palos, 1995). In the most recent study of 488 African American college students, Hutchinson and Montgomery (2007) found that among women, those who reported greater parent–teen sexual risk communication with mothers had significantly lower likelihood of reporting ever having been pregnant. Only one published study has found a significant association in the opposite direction, such that among 214 adolescents, greater sexual communication with mothers predicted greater likelihood of ever having a pregnancy (Clawson & Reese-Weber, 2003). However, in a study by Amialchuk and Gerhardinger (2015), the researchers did not find a significant association between parental

sexual socialization and likelihood of having a pregnancy using longitudinal data from 3,717 adolescents who participated in the first two waves of the National Longitudinal Study of Adolescent Health (Add Health).

To date, only two published studies have directly examined the link between familial sexual socialization and pregnancy intentions. Cavazos-Rehg et al. (2013) found that among 965 sexually active teenage girls, those whose parents did not talk with them about birth control or how to say no to sex were more likely to be very pleased with a teenage pregnancy than girls who had discussed both topics with a parent. This was also true of girls who had only discussed birth control with a parent. In contrast, Deptula et al. (2010) did not find that parental discussions about sexual consequences in adolescence predicted likelihood of having an unintended pregnancy in adulthood using longitudinal data from Add Health of 16,980 adolescents at baseline through young adulthood.

Taken together, the findings from this limited body of research suggest a need for further research to clarify the links between sexual socialization and pregnancy intentions. Furthermore, none of these studies have examined this association exclusively among young Black women and adolescents. Given the social context in which African American families socialize Black girls and the structural factors that affect their experiences, it is important to develop a greater understanding of how familial sexual socialization practices may relate to pregnancy intentions in this population. Instructive sexual socialization messages from African American parents may provide guidance to young Black women and girls on how to manage their fertility, so as to protect them from undesired conceptions. Thus, the purpose of this study is to examine the associations between parental sexual socialization messages and multiple dimensions of

pregnancy intention in a sample of young Black women and adolescent girls. The aims of this study were tested with data from the National Survey of Family Growth (NSFG).

Research Aims and Hypotheses

Aim 1 (Intendedness of Pregnancy). To examine whether parental sexual socialization is associated with intendedness of a recent pregnancy in young Black women and adolescent girls.

Hypothesis 1. Higher number of parental sexual socialization messages received will be associated with a greater likelihood of having an intended pregnancy as compared to a mistimed or unwanted pregnancy.

Aim 2 (Pregnancy Desire). To examine whether parental sexual socialization is associated with pregnancy desire in young Black women and adolescent girls.

Hypothesis 2. Higher number of parental sexual socialization messages received will be associated with greater pregnancy desire.

Aim 3 (Mistiming of Pregnancy). Examine whether parental sexual socialization is associated with mistiming of pregnancy in young Black women and adolescent girls.

Hypothesis 3. Higher number of parental sexual socialization messages received will be associated with reporting fewer years of mistiming for a pregnancy.

Method

Participants

For the purpose of this study, NSFG data from the 2013–2015, 2015–2017, and 2017–2019 public-use data files were utilized. The current study uses data from an unweighted sample of 254 US-born non-Hispanic Black women and adolescent girls between ages l5 to 24. The

questions on sexual socialization were administered only to respondents in this age range. The sample was limited to respondents who reported a pregnancy that occurred within three years of the interview because several of the questions on pregnancy intentions were only administered for pregnancies in that time frame. For respondents who reported more than one pregnancy within three years of their interview, only data for the most recent pregnancy was used. Additional exclusion criteria for the analytic sample were not being pregnant. This was specified due to prior research on differences in pregnancy attitudes when they are reported prospectively as compared to retrospectively (Joyce et al., 2002).

Table 3.1 provides descriptive characteristics of the sample. The mean age at the time of the interview was 22 years (M = 21.73; SD = 2.13). Slightly less than one-half of respondents (45%) reported having a high school diploma and about one-third (34%) reported completing some college or higher. Slightly more than one-half of the sample (52%) reported a family income below 100% of the poverty level. Regarding their pregnancy, the mean age of respondents at the time of conception was 20 years (M = 20.03; SD = 2.18). A majority of respondents (70%) reported their relationship status at the time of conception as either "never married and not cohabiting with a partner," "divorced," or "separated." Over one-half of respondents (61%) reported that their pregnancy ended in a live birth (see Table 3.3 for full details).

Measures

Sexual Socialization

Sexual socialization was measured with seven items designed by the NSFG that assessed childhood messages from parents or guardians about sex and related topics (see Appendix B for the complete measure). The first six items reflect instructive messages about the topics, while the

last item asks about receiving messages that encourage abstinence until marriage. Binary variables were created for all seven items to indicate whether respondents received a specific message ("yes" or "no"). For this study, a composite score for sexual socialization was calculated by summing the first six items, with higher scores indicating higher comprehensive sexual socialization.

Pregnancy Intentions

The three measures of pregnancy intentions are: (1) Intendedness of pregnancy; (2) Pregnancy desire; (3) Mistiming of pregnancy.

Intendedness of pregnancy. The NSFG computes a standard variable of pregnancy intendedness for NSFG public-use data files using responses to a series of questions on contraceptive use and attitudes about a pregnancy. Pregnancies were then categorized as either "intended," "mistimed," or "unwanted," using the guidelines outlined by Mosher et al. (2012). *Intended* pregnancies included pregnancies that were coded as "Later, overdue," "Right time," "Didn't care, indifferent," or "Don't know, not sure." *Mistimed* pregnancies consisted of those coded as "Too soon, mistimed," and *unwanted* pregnancies were those coded as such. Another version of this variable was computed without the inclusion of "Didn't care, indifferent," or "Don't know, not sure" in the *Intended* category for sensitivity analyses.

Pregnancy desire. Pregnancy desire was computed using the multidimensional approach for assessing pregnancy intentions outlined by Santelli et al. (2009). This measure is derived from a combination of responses to items to the standard measure of pregnancy intention and other alternative measures. These include wantedness of a pregnancy, happiness about a pregnancy, effort to become pregnant, wantedness of a pregnancy with that specific partner, and whether the pregnancy was classified as "on time" or "unwanted."

For *wantedness of pregnancy,* respondents were asked to rate how much they wanted or did not want a pregnancy right before they became pregnant on a scale from 0 (*wanted to avoid a pregnancy*) to 10 (*wanted to get pregnant*). For *happiness about pregnancy*, respondents were asked to rate how they felt when they found out they were pregnant on a scale from 0 (*very unhappy to be pregnant*) to 10 (*very happy to be pregnant*). For *effort to become pregnant*, respondents were asked to rate how much they were trying to become pregnant or avoid pregnancy right before they became pregnant on a scale from 0 (*trying hard not to get pregnant*) to 10 (*trying hard to get pregnant*). For *wantedness of a pregnancy with a specific partner*, respondents were asked to rate how much they wanted to have a baby with that partner right before they became pregnant on a scale from 1 (*definitely yes*) to 4 (*definitely no*). Two binary variables were created to indicate whether a pregnancy was classified as "on time" or "unwanted" (1 = yes, 0 = no).

Prior to computing the *pregnancy desire* score, the scales for wantedness of a pregnancy, happiness about a pregnancy, and effort to become pregnant were rescaled from 0–l0 to 1–11. Furthermore, the response scale for wantedness of a pregnancy with a specific partner was reverse-coded (i.e., 1 = *definitely no* to 4 = *definitely yes*). A slightly adapted version of the formula for the pregnancy desire scale as outlined by Santelli et al. (2009) was used for this study: Pregnancy desire = (happiness / 11) + (wanting / 11) + (trying / 11) + (wanting with partner / 4) + on time – unwanted.

Mistiming of pregnancy. Mistiming of pregnancy in years was also computed using the multidimensional approach outlined by Santelli et al. (2009). For this dimension of pregnancy intention, the degree of mistiming is measured in years. For respondents who reported their pregnancy as "Too soon, mistimed," they were also asked the question, "How much sooner than

you wanted did you become pregnant?" The responses were then converted from months to years. For respondents who did not report a pregnancy as "Too soon, mistimed," they received a score of zero on this scale. Higher scores indicated higher number of years a pregnancy was mistimed.

Covariates

Sociodemographic factors that were considered for inclusion in the models with multiple predictors include age at conception, educational attainment, poverty level, family structure when growing up, parity, relationship status at conception, and the pregnancy outcome (i.e., the way in which the pregnancy ended). See Table 3.2 for scoring details of these covariates.

Data Analytic Plan

The public-use data files for the three NSFG cycles were merged, and the variables for sexual socialization and pregnancy intendedness were computed in SPSS version 29. Univariate analyses were conducted to obtain the descriptive statistics for the study variables. Bivariate associations between the study variables and the covariates were examined using a series of bivariate correlations, independent samples t-tests, chi-square tests, and one-way analyses of variance (ANOVAs). For statistically significant omnibus ANOVA tests, post hoc tests were conducted using multiple pairwise comparisons with Tukey corrections. Covariates that were significantly associated with the outcome variables at the $p < .05$ level were included in the models with multiple predictors. All descriptive and bivariate analyses were performed in R (R Core Team, 2022) and RStudio (RStudio Team, 2023) using the "survey" package (Lumley, 2004) to apply NSFG sampling weights.

Regarding Aim 1, unadjusted and adjusted multinomial logistic regression analyses were performed to test the associations between sexual socialization and intendedness of pregnancy.

For Aims 2 and 3, unadjusted and adjusted linear regression analyses were performed to test the associations between sexual socialization and pregnancy desire, and mistiming of pregnancy. Sensitivity analyses were also performed for all the models with multiple predictors using all respondents who reported a pregnancy that occurred within three years of the interview (regardless of whether they were pregnant at the time of the interview) (unweighted $N = 327$). Additional sensitivity analyses were performed using the variable for intendedness of pregnancy that adjusted for the *Intended* category. All analyses of models with multiple predictors were conducted in Mplus (Version 8.9) (L. K. Muthén & Muthén, 2017) to account for NSFG's complex multi-stage sampling design and to perform full information maximum likelihood estimation procedures.

Results

Table 3.3 presents the descriptive statistics for the key study variables. On average, participants reported receiving three of the six instructive sexual socialization messages ($M = 3.29$, $SD = 2.48$). One-quarter of respondents (25%) reported their most recent pregnancy as being *intended*, with the remaining respondents reporting their pregnancies as *mistimed* (46%) and *unwanted* (29%). The mean pregnancy desire score was 1.87 ($SD = 1.51$; Range = -0.48 – 5), suggesting that pregnancy desire was low in this sample. On average, respondents reported that their pregnancy occurred two years earlier than desired ($M = 2.12$; $SD = 2.95$; Range = 0 – 12).

Bivariate Associations Between Study Variables

Among the key study variables, the associations between sexual socialization and the three measures of pregnancy intentions were not significant and were small in effect size (Intendedness of pregnancy: $F(2, 62) = 0.10$, $p = .91$; Pregnancy desire: $r = .02$, $p = .82$; Pregnancy mistiming: $r = .08$, $p = .16$). However, there was a significant but weak correlation

between pregnancy desire and pregnancy mistiming (r = -.09, p = .04), such that higher pregnancy desire was associated with mistiming of a pregnancy of fewer years. Furthermore, there were statistically significant group differences in pregnancy desire by whether a pregnancy was intended, mistimed, or unwanted, $F(2, 62) = 74.54$, $p < .001$. Specifically, respondents who reported an *intended* pregnancy reported significantly higher pregnancy desire (M = 3.62; SE = 0.28), compared to those who reported a *mistimed* pregnancy (M = 1.82; SE = 0.09) and those who reported an *unwanted* pregnancy (M = 0.39; SE = 0.13). In addition, respondents who reported a *mistimed* pregnancy reported significantly higher pregnancy desire (M = 1.82; SE = 0.09) than those who reported an *unwanted* pregnancy (M = 0.39; SE = 0.13). Because the pregnancy mistiming scale was computed using respondents' pregnancy intendedness reports, bivariate association between pregnancy mistiming and intendedness of pregnancy were not tested.

Regarding potential covariates in associations with pregnancy intentions, age at conception was significantly correlated with the variables for pregnancy desire (r = .20, p = .001) and pregnancy mistiming (r = -.13, p = .04). Pregnancy desire was higher among respondent who were older at the age of conception, and pregnancy mistiming was lower with increasing age at conception. However, age at conception was not significantly associated with intendedness of pregnancy (see Table 3.4). Regarding poverty level, there were statistically significant group differences by pregnancy mistiming (see Table 3.5). Respondents who reported a family income below 100% of the poverty level reported marginally significantly fewer years mistimed pregnancies (M = 1.55, SE = 0.28), compared to those whose family income was over 200% of the poverty level (M = 2.75, SE = 0.52) (p = . 10). The associations between poverty level and pregnancy intendedness and desire were nonsignificant (see Tables 3.4 and 3.5). Neither

educational attainment nor childhood family structure were significantly associated with the three measures of pregnancy intentions.

Relationship status at conception was significantly associated with pregnancy desire (p = .02) and mistiming ($p < .01$), but not intendedness of pregnancy (see Tables 3.4 and 3.5). Specifically, respondents who reported being "married" or "cohabiting with a partner" at the time of conception reported higher pregnancy desire ($M = 2.37$, $SE = 0.23$) and fewer years of pregnancy mistiming ($M = 1.08$, $SE = 0.24$) as compared to respondents who reported being either "never married and not cohabiting with a partner," "divorced," or "separated" (Desire: $M = 1.65$, $SE = 0.17$; Mistiming: $M = 2.56$, $SE = 0.41$).

Tests of parity indicated a significant effect for intendedness of pregnancy and pregnancy mistiming (ps < .01), but not pregnancy desire (see Tables 3.4 and 3.5). Pregnancies that were classified as *intended* were highest among respondents who had experienced one live birth with 51% in this group, whereas 28% had experienced two or more live births, and 21% had experienced no live birth. In addition, nulliparous respondents reported higher pregnancy mistiming ($M = 3.78$, $SE = 0.59$) compared to those who reported having had one previous live birth ($M = 1.62$, $SE = 0.34$) and those who reported having had two or more live births ($M = 0.56$, $SE = 0.45$).

Additionally, there were statistically significant associations between the outcome of the pregnancy and all three measures of pregnancy intentions (all ps < .05) (see Tables 3.4 and 3.5). A majority of pregnancies that were classified as *intended* were reported to have ended in a live birth (79%), while only 6% ended in an induced abortion and another 15% ended in other ways such as stillbirth, miscarriage, or as a result of an ectopic pregnancy. Furthermore, respondents who reported that their pregnancy ended in an induced abortion reported significantly lower

desire (*M* = 0.91, *SE* = 0.13) compared to those who reported that their pregnancy ended in a live birth (*M* = 2.09, *SE* = 0.13) and those whose pregnancy ended in other ways (i.e., stillbirth, miscarriage, ectopic pregnancy) (*M* = 1.88, *SE* = 0.24). Relatedly, respondents who reported that their pregnancy ended in a live birth reported fewer years mistimed (*M* = 1.40, *SE* = 0.28), compared to those who reported that their pregnancy ended in other ways (*M* = 3.14, *SE* = 0.52).

Sexual Socialization Predicting Pregnancy Intentions

Based on the findings of the bivariate analyses, the covariates that were included in the adjusted models with multiple predictors included age at conception, poverty level, parity, relationship status at conception, and outcome of pregnancy. In the primary set of analyses, there were no significant associations between sexual socialization messages and intendedness of pregnancy in either the unadjusted or adjusted multinomial logistic regression models (across all comparisons) (see Table 3.6). Similarly, sexual socialization messages did not significantly predict either pregnancy desire or mistiming of a pregnancy in the unadjusted and adjusted linear regression models (see Table 3.7).

In the sensitivity analyses with all respondents who reported a pregnancy within three years of the interview (regardless of being pregnant at the time of the interview), the results differed from those of the primary analyses. In the unadjusted model testing the relationship between sexual socialization and intendedness of pregnancy, the association was not statistically significant (see Table 3.8), but this association was statistically significant in the adjusted model. Higher number of socialization messages received was significantly associated with lower odds of having an *intended* pregnancy (OR = 0.82, 95% CI = 0.68–0.99) versus having a *mistimed* pregnancy. These results remained the same in sensitivity analyses that were performed using the adjusted pregnancy intendedness variable. Furthermore, there was no statistically significant

association between sexual socialization messages and mistiming of pregnancy in the unadjusted model (see Table 3.9), but this association was statistically significant in the adjusted model. Higher number of sexual socialization messages received was associated with higher number of years a pregnancy was mistimed (B = 0.18, p = .01). There were no significant associations between sexual socialization messages and pregnancy desire in the unadjusted and adjusted models (see Table 3.9).

Discussion

The purpose of this study was to examine the associations between parental sexual socialization messages and pregnancy intentions in young Black women and adolescent girls who have had a pregnancy using population-based survey data. This is among the first known studies to investigate the links between parental sexual socialization messages and pregnancy intentions exclusively in this population. It was hypothesized that a higher number of sexual socialization messages would be associated with having an intended pregnancy versus a mistimed or unwanted pregnancy. Furthermore, it was hypothesized that a higher number of sexual socialization messages would be associated with higher pregnancy desire and fewer years that a pregnancy was mistimed. These hypotheses were not supported in the primary set of analyses that utilized data only from respondents who have had a pregnancy that occurred within three years of the interview but who were not pregnant at the time of their interview. It is possible that these analyses lacked statistical power due to sample size (unweighted N = 254) to detect effects of sexual socialization on the three measures of pregnancy intentions.

Sensitivity analyses were also performed using a slightly larger sample of all respondents who reported a pregnancy that occurred within three years of the interview, regardless of whether they were pregnant at the time of the interview (unweighted N = 327). Results indicated

that there was a significant association between sexual socialization and intendedness of pregnancy, such that more sexual socialization messages received were associated with a lower likelihood of reporting a pregnancy as *intended* compared to *mistimed*. However, there was no statistically significant difference in other comparisons, including *intended* versus *unwanted*. Furthermore, contrary to hypothesis, there was a significant association between sexual socialization and mistiming of pregnancy, such that higher number of sexual socialization messages received was associated with more years a pregnancy was reported as being mistimed.

Sexual Socialization and Pregnancy Intendedness and Mistiming

The findings from the sensitivity analyses suggest that more engagement in instructive sexual socialization may be influential in how young Black women and adolescent girls think about their fertility experiences, although causality cannot be inferred. Young women who receive more sexual socialization messages may be prompted to think more about their family planning desires, including when would be an ideal time for them to have children if desired. This is consistent with a previous study of 965 sexually active adolescent girls that found that girls who had discussed "how to say no to sex" and "birth control" with a parent held less favorable views about the potential of a teenage pregnancy than girls who had not discussed either topics with a parent, and those who had only discussed "birth control" with a parent (Cavazos-Rehg et al., 2013). Moreover, when considering that the mean age of respondents in the present study is 22 years, it is likely that for many of the respondents who desire to have children, they may have wanted to have children later in life, when they are settled into a career, financially secure, and possibly married or with a committed long-term partner.

Sexual Socialization and Pregnancy Desire

Contrary to Hypothesis 2, there was no significant association between sexual socialization and pregnancy desire. This finding, in conjunction with the others, may indicate respondents' incongruent feelings or thoughts about their pregnancy. In a previous qualitative study of 27 Latina and White women who did not want more children, Aiken and colleagues (2015) investigated the women's pregnancy intentions and their feelings about the potential occurrence of an unintended pregnancy. The results showed that some women expressed incongruent intentions and feelings about having another pregnancy; some women reported not wanting more children ever, or for at least another four years, but they also expressed that they would be happy if another pregnancy occurred in the upcoming months. For some of those women, having an unintended pregnancy was viewed as a blessing, and with more positive or warm emotions than practicability. However, for some, this incongruence was explained in part by social pressure to say that an unintended pregnancy would make them happy. Likewise, research has found that fatalism, the belief that external forces are at play in people's lives, may affect how women view their pregnancy as result of fate or God's will (Jones et al., 2016). Thus, it is possible that respondents in the current study who desired a later pregnancy (or none at all) may have also reported complex feelings about a pregnancy that they had. Nonetheless, this finding may also be a result of retrospective reporting of affective and cognitive aspects of pregnancy intentions, which have been found to result in biased reporting wherein women's feelings about a pregnancy may become more favorable over time (Bachrach & Newcomer, 1999; Gipson et al., 2008).

Limitations and Future Directions

There are some limitations of the current study that must be noted. First, the constructs of interest in this study were assessed using retrospective reports which may be subject to recall

bias. The NSFG sought to address this issue by restricting the administration of the three alternative measures of pregnancy intentions (wantedness of a pregnancy, happiness about a pregnancy, and effort to become pregnant) to only pregnancies that occurred in the three years prior to the interview. However, it is possible that these measures are still biased by experiences that intervened such as giving birth and raising the child referred to in the questions. Relatedly, pregnancy intentions as a public health construct has been criticized by experts for its overly simplistic way of conceptualizing the complex and dynamic ways in which people think about their fertility, and its characterization of all unintended pregnancies as undesired and therefore resulting in adverse health outcomes to the mother and offspring (Aiken et al., 2016). Furthermore, pregnancy intentions has been criticized by experts for its characterization of unplanned or unintended pregnancies as public health problems that must be addressed, rather than centering women's reproductive autonomy and improving structural issues that affect their autonomy, such as expanding access to contraception and abortion care (Potter et al., 2019). Future research on pregnancy-related thoughts and feelings should instead measure attitudes about achieving a desired pregnancy or attitudes about avoiding a pregnancy (Aiken et al., 2016). This includes population-based studies such as the NSFG which are used to inform public health initiatives.

Another limitation of the current study was the measure of sexual socialization which only assessed whether respondents received guidance on a few topics about sex, but not the frequency or quality of these messages. Future studies on young Black women and girls' socialization experiences must use measures that assess the frequency, quality, and content of sexual socialization messages. Additionally, although this study sought to be inclusive of all pregnancies (regardless of how they ended), it is important to note that pregnancies that end in a

spontaneous or induced abortion are often underreported in surveys including the NSFG, particularly among Black women (Jones & Kost, 2007). Finally, the cross-sectional design of the NSFG does not permit causal inference or inference about the directionality of the relationships examined. Third variables such as poverty level and social support may influence both pregnancies and responses to them. Future research should employ longitudinal methods at relatively frequent intervals during a pregnancy to study the links between parental sexual socialization and pregnancy intentions in a young Black women and adolescent girls. Despite these limitations, the study has several strengths, including the use of a nationally representative sample of young Black women and girls, conceptualization within a broader framework, and the use of a multidimensional approach at examining pregnancy intentions.

Conclusion

Unintended pregnancies are of great public health concern, especially among young Black women who are disproportionately affected. The findings from this study highlighted the link between parental sexual socialization and intendedness and the degree of mistiming of a pregnancy, but not the level of desire about a pregnancy. This is the first known study to examine the association between parental sexual socialization and pregnancy intentions in young Black women and adolescent girls. Furthermore, the results underscore the role of this relevant familial and sociocultural process on fertility desires in this population. Further research is needed to better determine the causality of this relationship, and identify mechanisms through which parental sexual socialization may impact pregnancy intentions in young Black women and girls.

Table 3.1

Sample Demographic Information (N = 254)

Variable	Mean (SD) or N (%)
Age at interview	21.73 (2.13)
Educational attainment	
Less than high school	57 (21)
High school graduate	125 (45)
Some college or higher	72 (34)
Poverty level	
Less than 100% of poverty level	154 (52)
100-200% of poverty level	55 (32)
More than 200% of poverty level	45 (16)
Childhood family structure	
Two biological or adoptive parents from birth	59 (19)
Other family composition	195 (81)

Note. Data are presented as unweighted frequencies and weighted percentages, means, and standard deviations. Range for age at interview is 15–24.

Table 3.2

Scoring of the Potential Covariates for Study 3 Analyses

Variable	Variable Type	Scoring
Age at conception	Continuous	–
Educational attainment	Categorical	(6) Less than high school (7) High school graduate (8) Some college or higher
Poverty level	Categorical	(3) Less than 100% of poverty level (4) 100-200% of poverty level (5) More than 200% of poverty level
Family structure when growing up	Binary	(5) Two biological or adoptive parents from birth (6) Other family composition
Parity	Categorical	(4) 0 (5) 1 (6) 2 or more
Relationship status at conception	Binary	(6) Married or cohabiting (7) Divorced, separated or never married/not cohabiting
Family structure when growing up	Binary	(3) Two biological or adoptive parents from birth (4) Other family composition
Pregnancy outcome	Categorical	(4) Live birth (5) Induced abortion (6) Other outcomes (stillbirth, miscarriage, ectopic pregnancy)

Table 3.3

Descriptive Statistics on Study Variables

Variable	Mean (SD) or N (%)	Range
Sexual socialization (composite score)	3.29 (2.48)	0 – 6
Sexual socialization messages[a]		
How to say no to sex	139 (59)	
Methods of birth control	139 (57)	
Where to get birth control	118 (51)	
Sexually transmitted diseases	142 (60)	
How to prevent HIV/AIDS	110 (49)	
How to use a condom	123 (52)	
Waiting until marriage to have sex	127 (56)	
Intendedness of pregnancy		
Intended	66 (25)	
Mistimed	115 (46)	
Unwanted	73 (29)	
Pregnancy desire[b]	1.87 (1.51)	-0.48 – 5.0
Mistiming of pregnancy (years)[b]	2.12 (2.95)	0 – 12
Age at conception	20.03 (2.18)	14 – 24
Parity		
0	56 (30)	
1	112 (42)	
2 or more	86 (28)	
Relationship status at conception		
Married or cohabiting	91 (30)	
Divorced, separated or never married/not cohabiting	163 (70)	
Pregnancy outcome		
Live birth	171 (61)	
Induced abortion	34 (15)	
Other outcomes (stillbirth, miscarriage, ectopic pregnancy)	49 (25)	

Note. Data are presented as unweighted frequencies and weighted percentages, means, and standard deviations. [a] Frequencies and percentages reflect respondents who reported "yes" for each item. [b] Variable has missing data.

Table 3.4

Bivariate Associations Between Intendedness of Pregnancy and Predictor Variables

Variable	Intended	Mistimed	Unwanted	*p*
Sexual socialization messages	3.08 (0.49)	3.36 (0.37)	3.37 (0.57)	.91
Age at conception	20.45 (0.43)	19.93 (0.39)	19.79 (0.32)	.44
Educational attainment				.41
Less than high school	12 (17%)	29 (21%)	16 (24%)	
High school graduate	35 (41%)	53 (40%)	37 (55%)	
Some college or higher	19 (42%)	33 (39%)	20 (21%)	
Poverty level				.07
Less than 100% of poverty level	36 (41%)	70 (45%)	48 (71%)	
100-200% of poverty level	18 (44%)	21 (34%)	16 (19%)	
More than 200% of poverty level	12 (15%)	24 (21%)	9 (10%)	
Childhood family structure				.99
Two biological or adoptive parents from birth	14 (19%)	27 (19%)	18 (18%)	
Other family composition	52 (81%)	88 (81%)	55 (82%)	
Parity				.004
0	7 (21%)	37 (47%)	12 (12%)	
1	32 (51%)	55 (36%)	25 (43%)	
2 or more	27 (28%)	23 (16%)	36 (45%)	
Relationship status at conception				.06
Divorced, separated or never married/not cohabiting	31 (55%)	81 (79%)	51 (72%)	
Married or cohabiting	35 (45%)	34 (21%)	22 (28%)	
Outcome of pregnancy				.01
Live birth	58 (79%)	66 (43%)	47 (73%)	
Induced abortion	1 (6%)	19 (20%)	14 (14%)	
Other outcomes (stillbirth, miscarriage, ectopic pregnancy)	7 (15%)	30 (37%)	12 (13%)	

Note. Weighted means (SE) for continuous variables. Unweighted frequencies and weighted column percentages for categorical variables.

Table 3.5

Bivariate Associations Between Pregnancy Desire and Mistiming and Categorical Covariates

Variable	Pregnancy Desire		Mistiming of Pregnancy	
	M (SE)	*p*	M (SE)	*p*
Educational attainment		.93		.67
Less than high school	1.81 (0.29)		1.86 (0.44)	
High school graduate	1.85 (0.25)		1.98 (0.50)	
Some college or higher	1.92 (0.19)		2.46 (0.51)	
Poverty level		.29		.04
Less than 100% of poverty level	1.67 (0.20)		1.55 (0.28)	
100-200% of poverty level	2.05 (0.24)		2.72 (0.76)	
More than 200% of poverty level	2.14 (0.24)		2.75 (0.52)	
Childhood family structure		.54		.96
Two biological or adoptive parents from birth	1.99 (0.21)		2.15 (0.50)	
Other family composition	1.84 (0.15)		2.12 (0.35)	
Parity		.71		.002
0	1.77 (0.20)		3.78 (0.59)	
1	1.82 (0.25)		1.62 (0.34)	
2 or more	2.03 (0.23)		1.07 (0.45)	
Relationship status at conception		.02		.002
Married or cohabiting	2.37 (0.23)		1.08 (0.24)	
Divorced, separated or never married/not cohabiting	1.65 (0.17)		2.56 (0.41)	
Outcome of pregnancy		<.001		.01
Live birth	2.09 (0.20)		1.40 (0.28)	
Induced abortion	0.91 (0.13)		3.41 (0.96)	
Other outcomes (stillbirth, miscarriage, ectopic pregnancy)	1.88 (0.24)		3.14 (0.52)	

Table 3.6

Sexual Socialization Predicting Intendedness of Pregnancy (Primary Analyses)

Reference Group	Unwanted				Mistimed	
Comparison Group	Intended		Mistimed		Intended	
Variables	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)
Unadjusted models						
Sexual socialization	-0.05 (0.13)	0.95 (0.74–1.23)	-0.002 (0.11)	1.00 (0.81–1.24)	-0.05 (0.11)	0.96 (0.78–1.18)
Adjusted models						
Sexual socialization	-0.09 (0.13)	0.92 (0.72–1.17)	-0.02 (0.10)	0.98 (0.81–1.19)	-0.07 (0.10)	0.94 (0.77–1.15)
Age at conception	0.24 (0.16)	1.28 (0.93–1.76)	0.12 (0.13)	1.12 (0.87–1.45)	0.13 (0.15)	1.14 (0.85–1.53)
Poverty level						
Less than 100% of poverty level (Ref)	1.00	1.00	1.00	1.00	1.00	1.00
100-200% of poverty level	1.56 (0.72)*	4.75 (1.15–19.61)	0.67 (0.57)	1.96 (0.67–6.02)	0.89 (0.63)	2.43 (0.70–8.38)
More than 200% of poverty level	0.81 (0.72)	2.24 (0.55–9.23)	0.84 (0.62)	2.31 (0.68–7.82)	-0.03 (0.56)	0.97 (0.32–2.92)
Parity						
0 (Ref)	1.00	1.00	1.00	1.00	1.00	1.00
1	-4.08 (1.30)**	0.02 (0.001–0.21)	-1.54 (0.84)	0.22 (0.04–1.11)	-2.55 (1.18)*	0.08 (0.01–0.79)
2 or more	-5.34 (1.54)**	0.01 (0.0002–0.10)	-2.42 (1.11)*	0.09 (0.01–0.78)	-2.93 (1.29)*	0.05 (0.004–0.68)
Relationship status at conception	1.09 (0.65)	2.99 (0.84–10.64)	-0.09 (0.46)	0.91 (0.37–2.25)	1.18 (0.59)*	3.27 (1.04–10.32)
Outcome of pregnancy						
Live birth (Ref)	1.00	1.00	1.00	1.00	1.00	1.00
Induced abortion	-4.43 (1.15)**	0.01 (0.001–0.11)	-0.42 (0.81)	0.66 (0.13–3.24)	-4.01 (1.24)**	0.02 (0.002–0.22)
Other outcomes	-4.37 (1.51)**	0.01 (0.001–0.24)	-0.04 (0.90)	0.96 (0.16–5.62)	-4.33 (1.34)**	0.01 (0.001–0.18)

Note. Ref = Reference group. Relationship status at conception = Never married/not cohabiting, divorced, or separated vs. Married or cohabiting. * $p < .05$. ** $p < .01$.

Table 3.7

Sexual Socialization Predicting Pregnancy Desire and Mistiming of Pregnancy (Primary Analyses)

Variables	Pregnancy Desire				Mistiming of Pregnancy			
	B (*SE*)	*β*	95% CI		B (*SE*)	*β*	95% CI	
Unadjusted models								
Sexual socialization	0.01 (0.05)	0.02	-0.10	0.12	0.10 (0.11)	0.08	-0.12	0.31
Adjusted models								
Sexual socialization	-0.03 (0.05)	-0.06	-0.13	0.07	0.09 (0.09)	0.08	-0.07	0.26
Age at conception	0.13 (0.07)	0.19	-0.001	0.26	-0.18 (0.14)	-0.14	-0.46	0.09
Poverty level								
Less than 100% of poverty level (Ref)								
100-200% of poverty level	0.51 (0.34)	0.16	-0.16	1.17	0.76 (0.73)	0.12	-0.66	2.18
More than 200% of poverty level	0.64 (0.29)*	0.16	0.08	1.21	0.80 (0.53)	0.10	-0.23	1.83
Parity								
0 (Ref)								
1	-1.15 (0.41)**	-0.39	-1.95	-0.36	-2.00 (0.91)*	-0.34	-3.78	-0.22
2 or more	-1.20 (0.49)*	-0.36	-2.17	-0.24	-1.88 (0.96)	-0.29	-3.75	-0.003
Relationship status at conception	0.58 (0.30)	0.18	-0.004	1.16	-0.75 (0.43)	-0.12	-1.60	0.10
Outcome of pregnancy								
Live birth (Ref)								
Induced abortion	-2.05 (0.34)**	-0.48	-2.71	-1.39	0.55 (0.67)	0.07	-0.77	1.87
Other outcomes	-1.36 (0.44)**	-0.39	-2.21	-0.50	0.06 (0.82)	0.01	-1.54	1.65

Note. Ref = Reference group. *β* = standardized estimate. Relationship status at conception = Never married/not cohabiting, divorced, or separated vs. Married or cohabiting. * $p < .05$. ** $p < .01$.

Table 3.8

Sexual Socialization Predicting Intendedness of Pregnancy (Sensitivity Analyses)

Reference Group	Unwanted				Mistimed	
Comparison Group	Intended		Mistimed		Intended	
Variables	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)	B (*SE*)	OR (95% CI)
Unadjusted models						
Sexual socialization	-0.12 (0.11)	0.88 (0.71–1.10)	0.04 (0.10)	1.04 (0.86–1.25)	-0.16 (0.08)	0.85 (0.73–1.00)
Adjusted models						
Sexual socialization	-0.17 (0.12)	0.84 (0.67–1.06)	0.04 (0.10)	1.04 (0.86–1.25)	-0.21 (0.09)*	0.81 (0.68–0.98)
Age at conception	0.29 (0.15)	1.33 (1.00–1.77)	0.07 (0.12)	1.08 (0.85–1.36)	0.21 (0.12)	1.24 (0.98–1.57)
Poverty level						
Less than 100% of poverty level (Ref)	1.00	1.00	1.00	1.00	1.00	1.00
100-200% of poverty level	1.03 (0.61)	2.80 (0.85–9.22)	0.80 (0.53)	2.24 (0.80–6.25)	0.22 (0.51)	1.25 (0.46–3.39)
More than 200% of poverty level	0.78 (0.62)	2.17 (0.65–7.28)	1.04 (0.53)	2.84 (1.00–8.07)	-0.27 (0.48)	0.77 (0.30–1.95)
Parity						
0 (Ref)	1.00	1.00	1.00	1.00	1.00	1.00
1	-1.48 (0.73)*	0.23 (0.06–0.95)	-1.49 (0.64)*	0.23 (0.06–0.79)	0.02 (0.59)	1.02 (0.32–3.25)
2 or more	-2.61 (1.10)*	0.07 (0.01– 0.64)	-2.40 (1.01)*	0.09 (0.01–0.65)	-0.21 (0.75)	0.81 (0.19–3.55)
Relationship status at conception	0.90 (0.48)	2.47 (0.97–6.30)	0.18 (0.40)	1.20 (0.55–2.62)	0.72 (0.39)	2.06 (0.96–4.43)
Outcome of pregnancy						
Live birth (Ref)	1.00	1.00	1.00	1.00	1.00	1.00
Induced abortion	-2.24 (1.00)*	0.11 (0.02–0.75)	-0.30 (0.86)	0.74 (0.14–3.96)	-1.93 (1.18)	0.15 (0.01–1.46)
Other outcomes	-1.49 (1.02)	0.23 (0.03–1.67)	0.03 (0.86)	1.03 (0.19–5.57)	-1.52 (0.72)*	0.22 (0.05–0.90)
Pregnant at time of interview	-0.17 (0.75)	0.84 (0.19–3.67)	0.52 (0.77)	1.68 (0.37–7.55)	-0.69 (0.55)	0.50 (0.17–1.47)

Note. Ref = Reference group. Relationship status at conception = Never married/not cohabiting, divorced, or separated vs. Married or cohabiting. * $p < .05$. ** $p < .01$.

Table 3.9

Sexual Socialization Predicting Pregnancy Desire and Mistiming of Pregnancy (Sensitivity Analyses)

Variables	Pregnancy Desire				Mistiming of Pregnancy			
	B (*SE*)	β	95% CI		B (*SE*)	β	95% CI	
Unadjusted models								
Sexual socialization	-0.05 (0.05)	-0.08	-0.15	0.05	0.15 (0.08)	0.14	-0.002	0.31
Adjusted models								
Sexual socialization	-0.08 (0.05)	-0.14	-0.18	-0.01	0.16 (0.07)*	0.14	0.03	0.29
Age at conception	0.13 (0.06)*	0.19	0.02	0.24	-0.22 (0.11)	-0.17	-0.43	-0.01
Poverty level								
Less than 100% of poverty level (Ref)								
100-200% of poverty level	0.27 (0.29)	0.08	-0.30	0.84	0.83 (0.61)	0.13	-0.37	2.03
More than 200% of poverty level	0.24 (0.29)	0.06	-0.33	0.81	0.78 (0.46)	0.11	-0.12	1.69
Parity								
0 (Ref)								
1	-0.53 (0.34)	-0.18	-1.20	0.13	-1.25 (0.60)*	-0.22	-2.43	-0.08
2 or more	-0.65 (0.44)	-0.18	-1.50	0.21	-1.20 (0.70)	-0.18	-2.57	0.18
Relationship status at conception	0.58 (0.27)*	0.19	0.05	1.11	-0.51 (0.34)	-0.09	-1.17	0.16
Outcome of pregnancy								
Live birth (Ref)								
Induced abortion	-1.56 (0.34)**	-0.33	-2.22	-0.89	1.10 (0.84)	0.13	-0.55	2.76
Other outcomes	-0.72 (0.43)	-0.19	-1.57	0.13	0.65 (0.61)	0.09	-0.54	1.84
Pregnant at time of interview	-0.003 (0.32)	-0.001	-0.64	0.63	0.04 (0.54)	0.01	-1.02	1.10

Note. Ref = Reference group. β = standardized estimate. Relationship status at conception = Never married/not cohabiting, divorced, or separated vs. Married or cohabiting. * $p < .05$. ** $p < .01$.

General Discussion

Familial socialization is a normative process that prepares children for their role in society. For African American parents and other caregivers, the socialization of Black girls may involve teaching them about their racial status as a Black person, their gendered status as a woman, and their intersectional status as both to prepare them for navigating society as Black women. These socialization practices may have significant implications for the health of African American women and girls, particularly concerning sexual and reproductive health which is the focus of this dissertation. However, there is limited research on the socialization experiences of Black women and girls in general and in relationship to their sexual and reproductive health attitudes, behaviors, and outcomes related to issues of family planning, such as contraceptive use and pregnancy intentions. The purpose of this dissertation research was to address these gaps in the literature with three original empirical studies.

Study 1 used qualitative research methodology to investigate the socialization experiences of 25 young African American women in higher education and the perceived influence on their sexual and reproductive health values, attitudes, and behaviors in adulthood. Results indicated that Black women received a wide range of childhood messages from their caregivers about what it means to be a Black woman, and about sexual and reproductive health issues related to family planning (e.g., endorsement of feminine gender norms/roles, and guidance on and support with reproductive health issues). Furthermore, the women discussed ways in which they perceived the influence of these messages on their reproductive health attitudes and behaviors, such as their adoption or rejection of their caregivers' values and attitudes.

The findings from Study 1 provide new insights into childhood sexual socialization experiences as related to issues of family planning by highlighting the types of messages that African American caregivers relay to Black girls explicitly and implicitly. These findings also highlight the complexities of familial socialization. The results also underscore the perceived influence of childhood socialization messages on the sexual and reproductive health values, attitudes, and behaviors of Black women in adulthood. Specifically, they suggest that socialization experiences are relevant in the adult lives of young Black women. The findings from Study 1 informed the development of Studies 2 and 3 of this dissertation, which employ quantitative research methodology with population-based survey data.

Study 2 utilized population-based survey data from the National Survey of Family Growth (NSFG) with a sample of 703 young Black women and adolescent girls. The study aims were to test associations between sexual socialization experiences and contraceptive use behaviors at the first and most recent acts of sexual intercourse. This study also sought to build on the findings from Study 1 by identifying patterns of sexual socialization experiences of young Black women and girls using latent class analysis, and examined sociodemographic correlates of class membership.

The findings of Study 2 indicated that parental sexual socialization significantly predicted using more contraceptive methods at the first and most recent intercourse, but not whether any contraceptive was used or the most effective method used. However, respondents' age significantly moderated the relationship between sexual socialization and the most effective method used at the most recent intercourse; for respondents who were younger than 18 years of age, more sexual socialization messages were associated with a higher likelihood of using a coital method versus a short-acting reversible method. In addition, four patterns of sexual

socialization experiences were identified in this sample, that were representative of comprehensive socialization, limited socialization, abstinence-focused socialization, and contraception-focused socialization. Several sociodemographic correlates of these classes were also identified, including age at the interview, age at first sexual intercourse, religious affiliation, and poverty level. This is the first study to examine patterns of sexual socialization experiences in young Black women and adolescent girls, and adds in several ways to our burgeoning knowledge of how Black parents socialize their daughters about sexual and reproductive health.

The findings from Study 2 contribute to the limited body of research on the associations between parental sexual socialization and contraceptive use among young Black women and adolescent girls, especially as pertains to use of various contraceptive methods and the number of methods used during intercourse. The results suggests that parental socialization may be directly tied to the number of contraceptive methods used during intercourse by young women, and thus may play an influential role in encouraging young Black women and girls to engage in greater management of their fertility. In contrast, parental sexual socialization may be less influential in the specific types of contraceptive methods that young Black women and girls use, especially for those who are older. Furthermore, the findings from Study 2 build on those from Study 1 by providing quantitative evidence of the differing sexual socialization experiences of young Black women and adolescent girls. This may be useful for identifying young Black women and girls in the larger population who may benefit from more targeted, medically accurate sexual health education.

Study 3 also utilized data from the NSFG but only for a sample of 254 young Black women and adolescent girls who had a pregnancy to examine the links between parental sexual socialization and three measures of pregnancy intentions. These measures are intendedness of

pregnancy, pregnancy desire, and pregnancy mistiming. This was among the first studies of young Black women and adolescent girls on this topic, and contributes to a large gap in the literature. Nonetheless, there were no significant associations between parental sexual socialization and the measures of pregnancy intentions in the primary set of analyses using only data from respondents who were not pregnant at the time of the interview. However, in the sensitivity analyses which included respondents who were pregnant at the time of the interview, there were significant associations between sexual socialization and intendedness of pregnancy and pregnancy mistiming, but not pregnancy desire. Contrary to hypotheses, more socialization messages were associated with a lower likelihood of reporting a pregnancy as *intended* versus *mistimed*, and more messages were associated with more years a pregnancy was reported as being mistimed. The findings from Study 3 suggests that sexual socialization messages from parents may be significant to how young Black women and adolescent girls regard their fertility desires, especially as it relates to the timing of a pregnancy.

Taken together, the findings from this dissertation research elucidate some of the sociocultural processes central to Black girls' development into womanhood, by identifying the types of familial socialization messages that are imparted to them and the patterns of these messages. The results add to our understanding of how the socialization experiences of African American women and girls relate to their sexual and reproductive attitudes and behaviors around family planning, including their contraceptive behaviors and pregnancy intentions. Furthermore, this research helps to illuminate the heterogeneity of socialization experiences among young Black women and adolescent girls in the U.S. population, and identifies those who are at greater risk of contraceptive non-use and unintended pregnancies, particularly those who did not receive comprehensive parental sexual socialization. These findings may help to inform sexual health

interventions to better support young Black women and girls in their sexual and reproductive health.

In addition, the findings have important implications for future stages of research including further quantitative research to better assess socialization experiences of young Black women and girls. Further conceptually based and methodologically rigorous research is needed to identify psychological and sociocultural mechanisms through which socialization experiences affect their health attitudes and behaviors regarding issues of family planning. Researchers should develop measures that can better assess parental socialization messages that are relevant to young Black women and girls, and to examine potential mediators of the links between parental socialization messages and sexual and reproductive health attitudes and behaviors, such as sexual agency. Ideally, this work should be conducted by multidisciplinary teams of researchers with differing but complementary expertise in sexual and reproductive health, child development, and family dynamics.

Moreover, the current state of reproductive rights in the United States, including abortion bans and restrictions across numerous states (Guttmacher Institute, 2024) and the risk these laws pose to contraceptive access (Felix et al., 2023), necessitates greater affirmation of the right to reproductive autonomy for Black women and girls. Thus, the findings from this dissertation research may also be significant for African American families, as well as educators and healthcare providers, in their interactions with young Black women and girls. In particular, African American families should strive to impart messages about Black womanhood that are uplifting to young Black women and girls, and messages about sexuality that are well informed and empowering. Likewise, educators and healthcare providers should support African American families in raising Black girls, by providing informative sexual health resources and serving as a

resource themselves. Furthermore, while healthcare providers should provide medically sound reproductive health counseling to young Black women and girls, they should also be respectful of the decisions that Black women and girls make about their sexual and reproductive health and well-being.

Appendix A: Study 1 Materials

Background Questionnaire

1. What is your age?
2. What is your current enrollment status or appointment at UCLA?
    a. Graduate or Professional student
    b. Undergraduate student
        2a. What is your grade level?
        (1) 1st year/Freshman
        (2) 2nd year/Sophomore
        (3) 3rd year/Junior
        (4) 4th year/Senior
        (5) Other (specify)
3. What state or district in the US did you mostly live in when growing up (before the age of 18)?
4. In general, what was your family income when you were growing up (before the age of 18)?
    a. Low income
    b. Low to middle income
    c. Middle income
    d. Middle to high income
    e. High income

5. People are different in their sexual attraction to other people. Which best describes your feelings? Are you ____?

    a. Only attracted to males

    b. Only attracted to females

    c. Attracted to males and females

    d. Attracted to neither

    e. Prefer not to answer

Interview Protocol

Thank you for taking the time to participate in today's interview. As you know, the aim of the study is to learn about childhood messages related to being a Black girl, and how these messages may have shaped your values, attitudes, and behaviors regarding your sexual and reproductive health. As a reminder, all information shared with me today will be kept confidential. You may answer at your own pace, or choose to not to answer any questions, or to stop at any time. I look forward to hearing your thoughts and experiences. Before we begin, do you have any questions?

START THE RECORDING.

Introductory Questions:

First, let's talk about your childhood. In the screening interview, you said that your African American caregiver(s) before the age of 18 was/were your [CAREGIVER(S)]. For the following questions, I would like you to think back to when you were younger than 18 years old.

1. Who were the other members of your household when you were growing up? If you grew up in more than one household, who were the members of the household that you spent a majority of your upbringing in?

Relationship	First Name (optional)

2. What is the highest level of education your [CAREGIVER(S)] has/have completed?
3. Tell me a little bit about your relationship with your family members growing up?

   PROBE: Anything else?

Many families practice or observe cultural traditions in the foods they eat, holidays they celebrate, and activities they participate in.

4. Can you describe any traditions related to African American culture that your family observed or practiced?

   (IF DIFFICULT TO ANSWER: For example, preparing soul food or celebrating holidays like Kwanzaa)

   PROBE: Anything else?

General Childhood Gendered-Racial Socialization Messages

Families often teach children about the accepted norms and values regarding many things including gender roles, or what it means in their family or culture to be a girl or a boy. This may include expectations of how they should act, speak, dress, and so forth. For the following questions, I would like you again to think back to when you were younger than 18 years old.

5. Can you tell me about any messages that your [CAREGIVER(S)] may have told you about being a girl, or what it means to be a woman? (AS NEEDED: What were these messages? Who were these messages from? In what ways were the messages you received before you were a teenager similar or different from those you received as a teenager?)

   PROBES: Anything else? Can you tell me more about that?

6. IF Q1 INCLUDES SIMILAR AGED MALE RELATIVE(S): In what ways were the messages you received about being a girl similar or different to the messages that your [MALE RELATIVE(S)] received about being a boy?

   PROBE: Can you tell me more about that?

Some African American families also communicate messages about race to children to prepare them for life as a Black person.

7. Can you tell me about any messages that your [CAREGIVER(S)] may have given you about what it means to be Black? (AS NEEDED: What were these messages? Who were these messages from? How were the messages you received before you were a teenager similar or different from those you received as a teenager?)

   PROBES: Anything else? Can you tell me more about that?

8. Can you tell me about any messages that your [CAREGIVER(S)] may have told you that were specifically about being a Black girl, or what it means to be a Black woman? (AS NEEDED: What were these messages? Who were these messages from? How were the messages you received before you were a teenager similar or different from those you received as a teenager?)

   PROBES: Anything else? Can you tell me more about that?

Families may also communicate non-verbal messages through their actions or behaviors.

9. What actions or behaviors by your [CAREGIVER(S)], if any, did you observe that may have conveyed their beliefs about how Black girls or Black women should act? What were these behaviors?

   (IF DIFFICULT TO ANSWER: For example, ways to dress, or fix your hair, or church attendance, or caring for the home)

   PROBES: Anything else? Can you tell me more about that?

10. Now, I would like you to think about all the messages and behaviors you have mentioned. How did these messages make you feel as a child or teenager? (PAUSE)

    PROBES: Do you remember feeling positive, negative, or neutral about these messages? Can you tell me more about that?

Childhood Gendered-Racial Socialization Messages Regarding Sexual & Reproductive Health Issues

As children develop, some families may start to relay messages about difficult topics such as sex or pregnancy. For the following questions, I would like you to think again about when you were younger than 18 years old.

11. Can you tell me to what extent your [CAREGIVER(S)] talked to you about topics such as sex, relationships, or having children?

    PROBE: Can you tell me more about that?

12. What actions or behaviors by your [CAREGIVER(S)], if any, did you observe that may have conveyed their values and beliefs about sex, relationships, or having children?

    PROBES: Can you tell me more about that? Anything else (sex, relationship, having children)?

13. IF Q1 INCLUDES SIMILAR AGED MALE RELATIVE(S): In what ways were the messages you received about sex, relationships, or having children similar or different to the messages that your [MALE RELATIVE(S)] received about sex, relationships, or having children?

    PROBE: Can you tell me more about that?

Now, I would like to ask you about messages regarding more specific issues related to gynecological health care and having sex and children that might have been relayed to you.

14. To what extent, did your [CAREGIVER(S)] communicate messages to you about seeking gynecological exams or health care? (AS NEEDED: What were these messages? In what ways were any of these messages specifically about Black women?)

    PROBE: Can you tell me more about that?

15. To what extent did your [CAREGIVER(S)] communicate messages to you about contraception or birth control? (AS NEEDED: What were these messages? Were there particular methods of contraception this concerned? In what ways were any of these messages specifically about Black women?)

    PROBE: Can you tell me more about that?

16. To what extent did your [CAREGIVER(S)] communicate messages to you about unintended or unplanned pregnancies? (AS NEEDED: What were these messages? In what ways were any of these messages specifically about Black women?)

    PROBE: Can you tell me more about that?

17. To what extent did your [CAREGIVER(S)] communicate messages to you about abortion? (AS NEEDED: What were these messages? In what ways were any of these messages specifically about Black women?)

    PROBE: Can you tell me more about that?

Halfway point: Thank you for your participation so far. We are halfway through with the interview.

Association between Childhood Gendered-Racial Socialization Messages & Current Values and Beliefs Regarding Sexual and Reproductive Health Issues

The messages that families communicate in childhood can shape the values and beliefs that individuals hold as adults. For the following questions, I would like you to reflect on all the messages from your [CAREGIVER(S)] that you mentioned.

18. To what extent do you think any of the messages that you mentioned have led you to have opinions or thoughts about sex, relationships, or having children?

    PROBE: Can you tell me more?

19. To what extent do you think any of the messages that you mentioned have led you to have opinions or thoughts about seeking gynecological care? (AS NEEDED: You spoke about this before, but would you like to say more?)

    PROBE: Can you tell me more?

20. To what extent do you think any of the messages that you mentioned have led you to have opinions or thoughts about contraception as it relates to pregnancy prevention? (AS NEEDED: You spoke about this before, but would you like to say more?)

    PROBE: Can you tell me more?

21. To what extent do you think any of the messages that you mentioned have led you to have opinions or thoughts about contraception as it relates to preventing sexual transmitted infections (STIs)? (AS NEEDED: You spoke about this before, but would you like to say more?)

    PROBE: Can you tell me more?

22. To what extent do you think any of the messages that you mentioned have led you to have opinions or thoughts about unintended or unplanned pregnancies? (AS NEEDED: You spoke about this before, but would you like to say more?)

    PROBE: Can you tell me more?

23. To what extent do you think any of the messages that you mentioned have led you to have opinions or thoughts about abortion? (AS NEEDED: You spoke about this before, but would you like to say more?)

    PROBE: Can you tell me more?

Sexual and Reproductive Health Behaviors

The messages that families relay about accepted norms and values may also influence the behaviors of individuals during childhood and adolescence, and even adulthood. This includes behaviors related to intimate relationships, sexual health, and family planning. For the following questions, I would like you to reflect on all the messages from your [CAREGIVER(S)] that you mentioned and think about your behavior as an adult. As a reminder, all information shared with me will be kept confidential.

24. To what extent do you think any of the messages that you mentioned have influenced your seeking regular gynecological care?

    PROBE: Can you tell me more?

IF Q6 ON DEMOGRAPHIC QUESTIONNAIRE IS "ONLY ATTRACTED TO FEMALES" OR "ATTRACTED TO NEITHER" OR "PREFER NOT TO ANSWER", SKIP TO FINAL QUESTIONS.

25. To what extent do you think any of the messages that you mentioned have influenced whether you have used, or might use, contraception in the future to prevent pregnancy? (AS NEEDED: Were there particular methods of contraception this concerned?)

    PROBE: Can you tell me more?

26. To what extent do you think any of the messages that you mentioned have influenced whether you have used, or might use, contraception in the future to prevent STIs?

    PROBE: Can you tell me more?

27. To what extent do you think any of the messages that you mentioned have influenced whether you get screened, or might get screened, in the future for STIs?

    PROBE: Can you tell me more?

28. To what extent do you think any of the messages that you mentioned have influenced whether you have been sexually active, or inactive with men?

    PROBE: Can you tell me more?

29. To what extent do you think any of the messages that you mentioned have influenced the number of male sexual partners you have had, or might have in the future?

    PROBE: Can you tell me more?

30. To what extent do you think any of the messages that you mentioned have influenced how you interact with men who you find attractive?

    PROBE: Can you tell me more?

Final Questions

We have now made it to the final set of questions

31. In addition to the messages you received from your [CAREGIVER(S)], can you tell me about any messages that other family members or relatives may have told you about the topics we discussed when you were younger than 18 years old? (AS NEEDED: What were these messages? Who were these messages from?)

    PROBE: Anything else?

32. Can you tell me about any messages that your peers may have told you about the topics we discussed when you were younger than 18 years old? (AS NEEDED: What were these messages?)

    PROBE: Anything else?

33. Is there anything else you would like to say about the topics we have discussed? Do you have any questions?

END THE RECORDING.

CLOSING STATEMENT:

Thank you for your participation. This was a very helpful conversation and I appreciate your willingness to share your thoughts and experiences with me.

Would you like to have the results of the study emailed to you in future?

Finally, would you like to review, edit, or erase the research recording of your participation in whole or in part?

Appendix B: Sexual Socialization Measure

(Before you were 18 years old,) which, if any, of the topics shown on Card 23 (did you ever talk/have you ever talked) with a parent or guardian about?

How to say no to sex. 1
Methods of birth control 2
Where to get birth control 3
Sexually transmitted diseases 4
How to prevent HIV/AIDS.....5
How to use a condom 6
Waiting until marriage to have sex..8
None of the above 95

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