ADOLESCENTS' PERCEPTIONS OF CAREGIVERS' SAFE-SEX MESSAGES: FAMILY COMMUNICATION PATTERNS AND CAREGIVER-CHILD PERSUASION

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ABSTRACT

ADOLESCENTS' PERCEPTIONS OF CAREGIVERS' SAFE-SEX MESSAGES: FAMILY COMMUNICATION PATTERNS AND CAREGIVER-CHILD PERSUASION

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This thesis examined adolescent children's perceptions of caregivers' safe-sex messages in the larger context of their families' patterned communication. It was posited that caregivers from families that value open conversation are more likely to communicate safe-sex messages; children in families that value conformity are more likely to perceive caregivers' safe-sex strategies as effective and favorable; and children with high-conformity message sources are more likely to comply with caregivers' messages. Several research questions about different types of messages were also posed and the sources (e.g., adoptive mothers) and recipients (e.g., sons) were considered to examine the impact of biological sex on message outcomes. Participants were 13- to 18-year-olds that completed an online questionnaire. Results indicated that caregivers that communicated safe-sex messages were more likely to be high in conversation orientation, suggesting that caregivers who value open communication are more likely to initiate safe-sex talks. Although the predicted relationship between conformity orientation and message outcomes was not found, (a) participants who received messages from high-conversation, compared to low-conversation, sources reported higher intentions to comply with caregivers' safe-sex messages and (b) participants with pluralistic (i.e., high conversation, low conformity) message sources reported higher response efficacy scores than participants with protective (i.e., low conversation, high conformity) sources. Respondents' reports of response efficacy and attitude regarding caregivers' messages predicted their intentions to comply. Message content and biological sexes of interactants were not associated with differences in outcomes.

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INTRODUCTION

Adolescent sexual behavior remains a major public health issue in the United States. Women aged 15 to 19 accounted for over 10% of births in 2008 (U. S. National Center for Health Statistics, 2008). Additionally, the Centers for Disease Control and Prevention (CDC; 2009) reported that the two most common sexually transmitted infections (STIs), chlamydia and gonorrhea, affected over 1.5 million individuals in 2008—and the highest rates for these were among girls aged 15 to 19. The CDC (2009) additionally notes that "undiagnosed and untreated STIs cause at least 24,000 women in the United States each year to become infertile" (p. 1). Men also suffer from high incidences of chlamydia and gonorrhea, but are most affected by syphilis. Given the staggering STI and birth rates among teens—and the significant consequences associated with them—high importance should be placed on reducing unsafe sexual behavior among adolescents.

Families play an imperative role in adolescents' formation of sexual attitudes and behaviors (DiIorio, Pluhar, & Belcher, 2003). Although most teenagers receive formal sex education (Martinez, Abma, & Copen, 2010), such education may be incomplete or given by ineffective teachers, leading to poor sexual choices (Bute & Jensen, 2011). Through their communication about sexual beliefs and values, caregivers (i.e., primary female and primary male caregivers, such as biological mothers or step-fathers) can socialize their children about appropriate sexual attitudes and behavior, reduce the likelihood of unsafe behavior, and impact decision making later in life (DiIorio et al., 2003; Wright, 2009). Because caregivers generally seek to promote their children's adoption of safe behavior, safe-sex communication is inherently persuasive. Although caregivers can indirectly shape teenagers' attitudes and perceived norms about safe sex through their reactions to sexual messages from the media and other sources (Boer

& Westhoff, 2006), the focus of the study reported here was on intentional and direct attempts to persuade children to engage in safe behaviors (e.g., a mother tells her son to wait until marriage to have sex). This kind of family influence—caregiver-child persuasion—is communication from a primary male and/or primary female caregiver that is intentionally meant to shape, reinforce, or change her/his/their child's long-term attitudes and/or behaviors.

The type and quality of communication within the family affects willingness to discuss sexual topics, and factors such as family cohesion, openness, expressiveness, and involvement affect adolescent sexuality (Segrin & Flora, 2005). Because family communication is critical to adolescent sexual behavior, and because families tend to develop stable and predictable communication patterns over time (Ballard-Reisch & Weigel, 2006), this study sought to test the relationship between (a) patterns of family communication and (b) adolescents' perceptions of caregivers' safe-sex messages. Because families interact in different ways and about different subjects, it is important to consider how certain family communication styles impact safe-sex discussion. Asserting that family communication processes reside within individual members as well as within the family system, Ritchie (1991) and colleagues (e.g., Fitzpatrick & Ritchie, 1994; Koerner & Fitzpatrick, 2002a) developed family communication patterns (FCP) theory, which argues that families fall into one of four types based on their communication styles.

Given the subjects outlined above and the framework of FCP, this study argued that family type (i.e., consensual, pluralistic, protective, laissez-faire) would predict (a) caregivers' actual communication of safe-sex messages, (b) adolescent children's perceptions of the safe-sex strategy promoted by caregivers, and (c) adolescent children's intentions to comply with caregivers' messages. Several research questions about different types of safe-sex messages and the source and recipient of safe-sex messages (e.g., father-son discussion versus mother-daughter

discussion) were also considered. The goals of this thesis were to build upon and integrate the family persuasion and safe-sex communication literatures; extend family communication patterns theory to new domains of research; and to examine the issue of adolescent sexual behavior in the context of family communication. The following sections outline relevant safe-sex communication and family persuasion processes and explicate FCP theory.

ADOLESCENT SEXUAL BEHAVIOR

The onset of sexual development is often a confusing time in which adolescents negotiate significant biological, psychological, and emotional changes (Katchadourian, 1990). Adolescents must adjust to their developing sexuality (e.g., sexual arousal, fantasizing) while simultaneously being inundated with sexual messages from various sources, such as media messages and portrayals (Katchadourian, 1990; Kunkel et al., 2007). Katchadourian (1990) notes that many teenagers have already engaged in a number of sexual activities by the time they enter high school, including heavy petting and oral sex. Approximately half of 9th to 12th graders report having engaged in sexual intercourse, and by the age of 18, most adolescents in the United States have had sex (Crockett, Raffaelli, & Moilanen, 2006). Given these rates and the significant consequences associated with unsafe sexual behavior, the activity of primary interest here is practicing safe sex (e.g., remaining abstinent, using contraceptives).

During middle adolescence (i.e., between the ages of 15 and 17) especially, adolescents have high sexual energy, are beginning to explore sexual behavior, and tend to emphasize physical contact (Anderson & Neinstein, 2008; Katchadourian, 1990). However, the negative consequences associated with risky sexual behavior are not salient during this time (Anderson & Neinstein, 2008). Indeed, more than one-fourth of teens aged 15 to 19 do not use any form of contraception (e.g., birth control, condoms) at first intercourse (Nelson & Neinstein, 2008). Family communication about sex and safe-sex methods remains an important, and arguably underused, tool for influencing adolescents to avoid risky sexual behaviors (Kirby & Miller, 2002; Nelson & Neinstein, 2008; Zamboni & Silver, 2009).

Safe-Sex Communication

This study conceptualized safe-sex communication as a family's intergenerational discussion of sexual behaviors, such as using methods of birth control. It is necessary to note, though, that research on safe-sex communication has focused on different interactants, topics, and outcomes. Some researchers have focused on father-child dyads (e.g., Wright, 2009), while others have focused on parent-daughter dyads (e.g., Hutchinson, 2002); some scholars have looked only at discussion of condom use and birth control (e.g., Furstenberg, Herceg-Baron, Shea, & Webb, 1984), while others have looked at a wide range of topics, such as masturbation and sexual development (Miller, Kotchick, Dorsey, Forehand, & Ham, 1998); and some studies have been interested in time of first adolescent sexual experience (DiIorio, Kelley, & Hockenberry-Eaton, 1999), while others have been interested in predictors of adolescent sexual behavior and intention to use contraception (Buhi & Goodson, 2007). These disparate, albeit related, interests illustrate the complex nature of adolescent sexual behavior and caregiver-child safe-sex communication. As such, the following sections detail research most relevant to this thesis, and are not meant to be a complete review of the safe-sex communication literature.

Frequency and content of safe-sex communication. Most teenagers receive some sort of formal sex education (e.g., school program) before the age of 18 (Martinez et al., 2010). In their review of data from the 2006-2008 National Survey of Family Growth, Martinez et al. noted that the majority of discussion in formal sex education settings focuses on STI and HIV/AIDS prevention, with reduced emphasis on methods of birth control. Sex education from parents followed different trends than formal education between 2006 and 2008. According to Martinez et al., 80% of female teens and 68% of male teens reported talking to at least one parent about sex education. For females aged 15 to 19 who discussed sex with parents, most

conversations focused on how to say no to sex (63%), STIs (55%), and methods of birth control (51%), with some discussion about condom usage (29%); for male counterparts, most conversations focused on STIs (50%), with some discussion about condom usage (38%) and methods of birth control (31%). Other researchers have found similar trends, while noting differences in father-child and mother-child discussion about sex (Heisler, 2005; Miller et al., 1998). Although safe-sex communication is considered to be most common between mothers and daughters and between fathers and sons, some evidence suggests that discussion of sexual topics, such as birth control, may be more common between mothers and children than between fathers and children (DiIorio et al., 1999; Miller et al., 2009; Raffaelli, Bogenschneider, & Flood, 1998; Wright, 2009).

Outcomes of safe-sex communication. Family communication about sex has been associated with positive outcomes for adolescent sexual behavior. For example, Hutchinson (2002) found that mother-daughter discussion of condom use was associated with contraception usage throughout adolescence; Somers and Paulson (2000) found that father-daughter discussion of sex was associated with increased contraception usage; and DiIorio et al. (1999) found that parent-child safe-sex communication was related to delayed onset of sexual activity. However, in their reviews of the literature on safe-sex communication, DiIorio et al. (2003) and Miller, Benson, and Galbraith (2001) concluded that while many studies have cited positive benefits for adolescents, others have found mixed results or no such positive outcomes. To better understand the impact that safe-sex communication has on teens' sexual behavior, it may prove useful to analyze safe-sex communication in the context of caregiver-child persuasion. The argument here is that communication about safe sex is inherently persuasive, as primary caregivers (i.e., the primary male and female caregivers of an individual, such as a biological father or step-mother)

seek to shape, and in some cases change or reinforce, their children's sexual attitudes and behaviors (Stiff & Mongeau, 2003).

CAREGIVER-CHILD PERSUASION

As adolescents age and their autonomy increases, family members' self-disclosure, shared experiences, and expectations of privacy and responsibilities change (Laursen & Collins, 2004). Caregiver-child persuasion may be particularly problematic during this time, as both teens and caregivers must adjust to new roles and changed relationships (Laursen & Collins, 2004; Segrin & Flora, 2005). Research in this area has typically focused on parental power, discipline, and compliance-gaining (Wilson & Morgan, 2004). Caregiver-child persuasion is defined here as "communication from a primary female caregiver (e.g., biological mother) and/or primary male caregiver (e.g., biological father) that is meant to shape, reinforce, or change her/his/their child's long-term attitudes and/or behaviors." This is a first attempt at explicitly classifying caregiver-child persuasion that is based on a definition of general persuasion (Miller, 1980). It should be noted that this conceptualization ideally focuses on enduring behaviors as the outcomes of persuasion; equally important, however, are initial steps to these long-lasting effects—specifically, initial intentions to act in ways consistent with the persuasive message. As such, in this thesis, behavior was referred to as adolescents' initial intentions to comply with their caregivers' persuasive messages. In addition, perceptions of, and attitudes toward, the behaviors promoted by caregivers' messages were also examined.

Family discussion, in general, and caregiver-child persuasion, in particular, is embedded within the larger communication patterns of families. Family communication patterns theory asserts that families develop stable communication patterns over time (Koerner & Fitzpatrick, 2006). Though this can center on spousal communication or father- or mother-child communication (Fitzpatrick & Ritchie, 1994), the study reported here focused on caregiver-child communication patterns.

Family Communication Patterns Theory

Originally proposed by McLeod and Chaffee (1972) and further developed by Ritchie (1991) and colleagues (Fitzpatrick & Ritchie, 1994; Koerner & Fitzpatrick, 2002a, 2006; Ritchie & Fitzpatrick, 1990), family communication patterns (FCP) theory assumes that families can be assessed along two dimensions: conversation orientation and conformity orientation. Conversation orientation refers to the degree to which family members have an open and honest communication climate, where all family members "are encouraged to participate in unrestrained interaction about a wide array of topics" (Koerner & Fitzpatrick, 2006, p. 54). Families high in conversation orientation share much about individual thoughts and feelings, and are characterized by high levels of interaction; families low in conversation orientation interact less frequently and discuss fewer topics openly. Conformity orientation is "the degree to which family communication stresses a climate of homogeneity of attitudes, values, and beliefs" (Koerner & Fitzpatrick, 2002a, p. 85). Families high in conformity orientation typically avoid conflict, value harmony, and emphasize homogeneity of attitudes and beliefs; children in high conformity families are typically obedient to their caregivers. Families low in conformity orientation typically promote heterogeneous attitudes and beliefs and the individuality, independence, and equality of all family members. By crossing these orientations, four family types emerge, each of which is characterized by varying communication patterns, caregiver expectations, and child outcomes.

Consensual families. Consensual (i.e., high conversation, high conformity) families promote open communication in which new attitudes and beliefs can be explored, but ultimately pressure members to agree and to respect the family hierarchy (Koerner & Fitzpatrick, 2002a, 2006). Caregivers are interested in what their children have to say, but ultimately expect children

to conform to their decisions; caregivers spend time explaining their decisions and beliefs in the hopes that children will understand and agree. In light of the importance placed on agreement, children in these families tend to accept their caregivers' attitudes (Fitzpatrick & Ritchie, 1994). In the context of safe-sex communication, these families may be highly likely to discuss sex openly—with caregivers potentially pressuring teens to be abstinent or to use methods of birth control. Caregivers of this family type might be especially influential, as inductive reasoning techniques may lead to children's moral internalization, such that children are particularly aware of the consequences of their actions (Hoffman, 1975).

Pluralistic families. Pluralistic (i.e., high conversation, low conformity) families promote open and honest communication with little pressure to agree with other members' beliefs (Koerner & Fitzpatrick, 2002a, 2006). Although they may not agree with their children's decisions, caregivers in these families do not wish to control their children. Rather than emphasizing the caregivers' power, these families respect children's attitudes and allow them to participate in the family's decision-making process (Koerner & Fitzpatrick). Pluralistic families foster child communication competence as well as independence of ideas, attitudes, and behaviors (Fitzpatrick & Ritchie, 1994). With high importance placed on open communication, these families may be highly likely to discuss sex; however, with low importance placed on conforming to caregivers' values and decisions, adolescents may feel less of a need to act in ways consistent with their caregivers' wishes in sexual as well as other contexts.

Protective families. Protective (i.e., low conversation, high conformity) families highlight the importance of obedience and do not value autonomy from, or open communication within, the family (Koerner & Fitzpatrick, 2002a, 2006). Members are expected to agree with one another and to behave according to the family's beliefs. Caregivers expect children to abide

by their decisions, which do not need to be defended or rationalized to children. Children in these families often come to distrust their own decision-making processes, are not prepared for dealing with influences exterior to the family, and are easily persuaded by sources inside and outside the family (Fitzpatrick & Ritchie, 1994). Regarding safe-sex communication, these families may be less likely than high conversation ones (i.e., consensual and pluralistic) to discuss sex, but caregivers may ultimately demand that adolescents remain abstinent or use methods of birth control. Additionally, though teens might originally plan to comply with caregivers' wishes, their susceptibility to influences outside the family may reduce the likelihood that they actually behave in accordance with caregivers' safe-sex messages.

Laissez-faire families. Laissez-faire (i.e., low conversation, low conformity) families typically have fewer and more superficial interactions than the other family types, and often discuss a limited number of topics (Koerner & Fitzpatrick, 2002a, 2006). Caregivers do not confer about their children's decisions, and emphasis is placed on individuality and independent decisions. What's more, family members avoid conflict, commonly are emotionally divorced from one another, and do not promote power structures that favor caregivers (Koerner & Fitzpatrick). Because little value is placed on family discussion and caregiver support, children in these families might come to question their own decision-making ability and be more easily influenced by peer groups and other external sources (Fitzpatrick & Ritchie, 1994). Because there is little caregiver-child interaction about substantive topics in these families, sex talks may be very unlikely to occur. Should safe-sex communication even take place, the culture of independent decision making and children's susceptibility to outside influences may reduce the likelihood that teens behave in ways consistent with their caregivers' desires.

Family type and safe-sex communication. A number of predictions about safe-sex communication can be made based on FCP theory. First, because families that value open conversation are more likely to discuss sensitive topics (e.g., birth control), caregivers in high-conversation (i.e., consensual and pluralistic) families should be more likely to talk about sex. As such, the following prediction asserts:

> H1: Adolescent children with high-conversation (i.e., consensual and pluralistic) caregivers will report receiving more safe-sex messages than children with low-conversation (i.e., protective and laissez-faire) caregivers.

Second, given the definition of caregiver-child persuasion put forth here, a critical outcome to consider for each family type is internalization of messages about healthy sexual attitudes and behaviors. Internalization of attitudes and behaviors associated with safe-sex talks is especially important, as behavior "adopted in this fashion tends to be integrated with the individual's existing values" (Kelman, 1958, p. 53) and leads to lasting attitudes and behavior patterns. Steps to internalization of persuasive messages (e.g., message aimed at convincing adolescents to always practice abstinence) refer to individuals' (a) perceptions of the effectiveness of the safe-sex behaviors promoted by caregivers, (b) perceptions of their own ability to use the behaviors, (c) attitudes toward the behaviors, and (d) plans to engage in the behaviors. In this study, perception of effectiveness was defined as the degree to which adolescents believe that the behavior promoted by caregivers is useful and relatively easy to enact (i.e., response efficacy); perception of ability referred to individuals' beliefs that they can easily and conveniently perform the behavior (i.e., self-efficacy); attitude referred to beliefs that the behavior is a positive, favorable, or good thing; and plans to enact behaviors referred to children's actual intentions to behave in a way consistent with caregivers' messages (i.e., behavioral intention).

As has been noted, pressures to conform to caregivers' wishes should vary depending on the family's communication style. Because caregivers in high-conformity (i.e., consensual and protective) families value obedience to caregivers' views, teens in these families are likely to be most accepting of caregivers' views about sex and may have the highest likelihood of planning to comply with caregivers' safe-sex messages. Additionally, because their caregivers spend the most time rationalizing and explaining their choices, adolescents in consensual families may be especially apt to actually comply with caregivers' persuasive messages. Children in low-conformity (i.e., pluralistic and laissez-faire) families, however, may feel that they can decide for themselves what is best, outside of their caregivers' recommendations. Following from this, two additional hypotheses predict:

> H2: Adolescent children with high-conformity (i.e., consensual and protective) safe-sex message sources (i.e., caregivers that relay safe-sex messages) will perceive (a) higher response efficacy of, (b) higher self-efficacy regarding, and (c) more positive attitudes toward the behavior promoted by caregivers' safe-sex messages than adolescent children with low-conformity (i.e., pluralistic and laissez-faire) message sources.
>
> H3: Adolescent children with high-conformity (i.e., consensual and protective) message sources will be more likely to initially intend to comply with caregivers' safe-sex messages than will adolescent children with low-conformity (i.e., pluralistic and laissez-faire) message sources.

Finally, in the context of adolescent sexual behavior, any link between (a) response efficacy, self-efficacy, and attitude and (b) intentions to comply with caregivers' messages would hold both theoretical and practical value. One's intention to behave a certain way is arguably linked to his or her perceptions of the behavior (Ajzen, 1991); as such, individuals' reported response

efficacy, self-efficacy, and attitude regarding a behavior should predict their intention to engage in that behavior. Thus, a fourth and final hypothesis predicts:

> H4: Adolescent children's intentions to comply with caregivers' safe-sex messages will be predicted by their (a) perceived response efficacy, (b) perceived self-efficacy, and (c) attitude.

Family member differences, FCP outcomes, and persuasion. Some researchers have noted differences between fathers' and mothers' perceptions of their family's communication patterns; for example, children may perceive one caregiver as being more conversation- or conformity-oriented than the other caregiver (Ritchie & Fitzpatrick, 1990). Additionally, caregivers may report having different styles; for example, in their study, Bakir, Rose, and Shoham (2006) found that mothers were more likely to report being part of a consensual family and fathers were more likely to report being part of a protective family. Such findings suggest that the way an individual (e.g., the child) perceives his or her family communication patterns depends largely on the specific family member (e.g., male caregiver) or members (e.g., both caregivers) about which the individual is asked. Thus, the perceived FCP type of each caregiver may be different, and this may impact the interactants of safe-sex discussions (e.g., a child may be more likely to talk to the caregiver that is perceived as more conversation-oriented). However, as noted above, caregiver and child gender may also impact which family members discuss safe sex. Although teens may primarily talk to female caregivers about sexual topics (DiIorio et al., 1999; Raffaelli, Bogenschneider, & Flood, 1998), because FCP theory has not been extended to the realm of safe-sex communication, predictions cannot be made about the relationship between caregiver FCP type and caregiver gender during safe-sex talks. Given this, a research question asks:

RQ1: Is there an association between message source FCP type and the source-recipient dyad type (e.g., female caregiver and daughter) of safe-sex interactants?

Although source-recipient triads (i.e., both caregivers and child) could also be considered, this research question, and the ones that follow, focuses on either (a) the message source or (b) in the case of both caregivers being present for safe-sex discussion, the most important source of sex-related information from the perspective of the child.

Researchers have used FCP to investigate a number of family communicative situations and outcomes, such as conflict and depression in families (Koerner & Fitzpatrick, 1997), child self-esteem and mental health (Schrodt, Ledbetter, & Ohrt, 2007), and parental understanding of adolescent self-concept (Sillars, Koerner, & Fitzpatrick, 2005). In a meta-analysis, Schrodt, Witt, and Messersmith (2008) categorized 56 studies that used FCP to investigate various family outcomes (i.e., information processing, behavioral, psychosocial). None of the most common outcomes reported by Schrodt et al. involved caregiver-child safe-sex communication in particular, although some could be applied to caregiver-child persuasive communication in general (e.g., cognitive flexibility and complexity, message persuasiveness). Although little relevant research was found on the relationship between FCP and safe-sex communication or family persuasion processes, it is likely that FCP holds implications for persuasive communication in families. For example, Ritchie and Fitzpatrick (1990) asserted that a family's conformity orientation does not necessarily predict compliance behavior among family members. Indeed, caregivers' influence is not unidirectional: children may resist persuasive attempts, and caregivers must revise their messages based on children's responses (Wilson, 2002; Wilson & Morgan, 2004). As children develop, they begin exhibiting more complex and varied resistance strategies, such as rationalizing noncompliance or negotiating rewards for compliance (Wilson &

Morgan, 2004). However, caregivers' persuasive messages and children's potential resistance to them may be complicated by the nature of safe-sex communication. As such, it is necessary to consider the different forms that safe-sex messages can take.

Safe-Sex Messages

Many studies have reported the relationship between discussion of sexual topics (e.g., condom use, pregnancy) and outcomes (for a review, see DiIorio et al., 2003). However, although the literature has researched the content and impact of safe-sex messages, there is not yet a rigorous examination of the subject from a persuasive communication standpoint. Knowing what caregivers actually say to teens when persuading them to engage in safe-sex behaviors holds implications for scholars and practitioners alike.

Lefkowitz, Boone, Au, and Sigman (2003) looked at abstinence messages and safer sex (i.e., contraception usage) messages communicated by mothers during discussions about sex. Taking a similar approach, this thesis examined (a) abstinence messages (i.e., messages that promote waiting until a later time or event to have sex) and (b) contraception messages (i.e., messages that promote condom usage and other methods of birth control). Lefkowitz et al. additionally looked at the co-occurrence of message types, and found that individuals that discussed abstinence were likely to also discuss safer sex. Accordingly, this thesis also considered (c) combination messages (i.e., messages that advocate remaining abstinent as well as using condoms and methods of birth control). Because the combination message type has yet to be explored and because investigation is needed on the relationship between FCP and safe-sex messages, two related research questions ask:

RQ2: Does a third safe-sex message type promoting both abstinence and contraception usage (i.e., combination message) exist in caregiver-child safe-sex communication?

RQ3: What types of safe-sex messages (i.e., abstinence, contraception, combination), if any, are communicated most frequently in (a) consensual, (b) pluralistic, (c) protective, and (d) laissez-faire families?

Additionally, sons and daughters receive proportionally different messages from caregivers (e.g., female teenagers are more likely than male teenagers to receive messages about "how to say no to sex"; see Martinez et al., 2010); female and male caregivers may differ in whether they communicate abstinence, contraception, or combination messages to sons versus daughters. For example, female caregivers may perceive contraception messages as being best for their male children, but perceive a combination message as being best for female children; similarly, male caregivers may believe that their female children should remain abstinent, while their male children should know forms of contraception. As such, a research question related to RQ1 asks:

RQ4: Is there an association between the makeup of the caregiver-child source-recipient dyad (e.g., male caregiver-daughter) and the type of safe-sex message communicated by caregivers?

Similarly, it seems possible that the makeup of the safe-sex interactants could impact adolescents' perceptions of their caregivers' messages and their intent to behave in ways consistent with those messages. Given this, the following research question asks:

RQ5: Is there an association between the makeup of the caregiver-child source-recipient dyad and children's (a) perceived response efficacy, (b) perceived self-efficacy, (c) attitude, and (d) intent regarding behaviors promoted by caregivers' safe-sex messages?

Some of the most common outcomes reported in the literature on family safe-sex communication include delayed onset of sexual behavior and likelihood of contraceptive use (DiIorio et al., 2003), as well as attitudes toward premarital sex and condom use (Wright, 2009).

Given the focus on caregiver-child persuasive interaction—and the outcomes related to children's internalization of messages—it is important to investigate the association between safe-sex message type and teens' attitudes and behavior. However, no literature could be found that specifically tests whether or not children behave in accordance with the content of caregivers' safe-sex messages. Consistent with the outcomes of interest in H2 and H3, two final research questions ask:

RQ6: Do adolescent children perceive the three safe-sex strategies differently in terms of (a) response efficacy, (b) self-efficacy, and (c) attitude?

RQ7: Do differences exist in adolescents' intentions to comply with caregivers' messages depending on the type of safe-sex message?

METHOD

Participants and Procedure

Participants were recruited via a private research company and given monetary incentive to complete an online survey containing the measures described in the sections below. The survey was sent out to individuals in the research company's participant pool that matched the specified age range (i.e., 13- to 17-year-olds) and were demographically representative of the 2010 census. Invitations to participate were sent via e-mail to potential respondents. Once sent, the survey was kept open until 150 individuals had participated; because participants were the first 150 individuals to complete the survey, no response rate could be calculated. Participants (N = 150) comprised a sample of male (n = 57) and female (n = 90) adolescents; three respondents did not report their sex. Respondents ranged from 13- to 18-years old (M = 15.42, SD = 1.19). Additional descriptive information is reported in Table 1. Respondents were asked to self rate questions related to their female caregivers' and male caregivers' communication patterns; their caregivers' communication of safe-sex messages; their perceptions of these message; and their intention to comply with their caregivers' messages.

Table 3.1 Descriptive Statistics of All Respondents

	f	*M*	*SD*	Min	Max
Current Grade		10^{th} grade		7^{th}	12^{th}
7^{th} - 9^{th} grade	47				
10^{th} - 12^{th} grade	101				
Not Reported	2				
Number of Siblings		1.76	1.35	0	7

Note. N = 150

Table 3.1 (cont'd)

	f	*M*	*SD*	Min	Max
Female Caregiver					
Biological Mother	140				
Step-Mother	3				
Adoptive Mother	3				
Other	4				
Male Caregiver					
Biological Father	124				
Step-Father	13				
Adoptive Father	4				
Other	9				
Received Formal Sex Education	124				

Instrumentation

Unless otherwise noted, all continuous measures used a seven-point, Likert-type scale with the anchors "strongly disagree" (1) and "strongly agree" (7). A number of items were reverse-scored. All of the items detailed below are included in Appendix A.

Family communication patterns. The revised family communication patterns (RFCP) instrument (Ritchie & Fitzpatrick, 1990) was used for all participants to measure both their female caregivers' and male caregivers' conversation orientation (15 items) and conformity orientation (11 items). Respondents rated their agreement with statements about their communication with their female and male caregivers separately (e.g., I can tell my primary male caregiver almost anything; in our home, my primary female caregiver likes to have the last word). Certain items were dropped in order to increase reliability of the FCP scales for each caregiver,. The final scale for female caregiver conversation orientation retained 12 items (*M* =

4.67, *SD* = 1.20, α = .90). The final scale for male caregiver conversation orientation retained 13 items (*M* = 3.96, *SD* = 1.18, α = .89). The final scale for female caregiver conformity orientation retained six items (*M* = 3.69, *SD* = 1.25, α = .80). The final scale for male caregiver conformity orientation retained eight items (*M* = 3.87, *SD* = 1.19, α = .80). All dropped items are labeled parenthetically in Appendix A.

All participants recorded scores for female caregivers and all but one recorded scores for male caregivers. Based on these self-reports of caregivers' conversation orientation and conformity orientation, participants' male and female caregivers were separately placed into one of the four family types: consensual (high conversation, high conformity), pluralistic (high conversation, low conformity), protective (low conversation, high conformity), or laissez-faire (low conversation, low conformity). Following Koerner and Fitzpatrick's (2002b) recommendations, caregivers were placed into these types based on the approximated population means reported by Fitzpatrick and Ritchie (1994)[1]; the breakdown of family types for each caregiver is reported in Table 2.

With the exception of H1, when testing the hypotheses and research questions related to FCP and safe-sex messages, only the FCP types of message sources were used in analysis. For example, if a participant reported hearing a safe-sex message from their female caregiver, only the female caregiver's FCP type was used in the analysis. If a message was reported as coming from both caregivers, the participants' most important source of sex-related information (e.g., female caregiver) was used in the analysis. This was determined using one item asking participants to rank, from first to seventh, their most influential sources of sex-related information (i.e., primary female caregiver, primary male caregiver, siblings, friends, school, religious figures, media).

Table 3.2 Frequency of Family Types for Participants' Female and Male Caregivers and Safe-Sex Message Sources

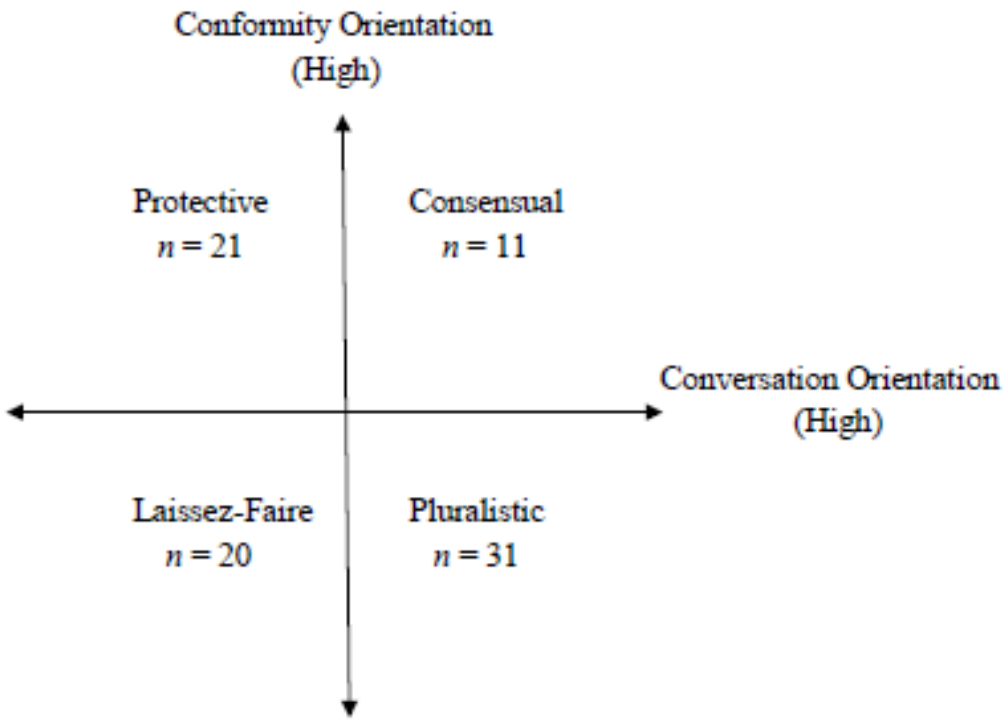
Family Type	Female Caregiver	Male Caregiver	Message Source
Consensual	20	4	11
Pluralistic	41	19	31
Protective	49	76	21
Laissez-Faire	40	50	20
Total	150	149	83

Note. All participants (N = 150) reported RFCP scores for their primary female caregiver; all but one participant reported RFCP scores for their primary male caregiver. Eighty-three participants reported the content of caregivers' safe-sex messages as well as the message source.

Caregivers' safe-sex messages. Respondents were asked to recall and report the most recent safe-sex message given to them by one or both caregivers, if one had ever been communicated. They were asked an open-ended question about the content of the message, and this response was then coded into one of the safe-sex message types (i.e., abstinence, contraception, combination). Participants were also asked to report the source of the message (i.e., female caregiver, male caregiver, or both) and approximately how long ago they heard it. Of the 91 respondents who reported receiving a safe-sex message from one or both of their primary caregivers, 83 recorded some sort of message: 75 participants reported a safe-sex message; eight participants could not remember the message, stated that they discussed sex with their caregiver(s) without reporting the content of the discussion, or reported some other content unrelated to a safe-sex promotion message (i.e., these were considered as "other" messages). The

mean age of the 83 respondents who reported safe-sex messages was 15.37 years (*SD* = 1.16), they were more likely to be female (*n* = 49), and they received the message a mean of 8.90 months prior to completing the questionnaire (*SD* = 11.26). The FCP types of these respondents' message sources are included in Table 2 and represented visually in Figure 1.

Figure 3.1 Visual Representation of Number of Message Sources in Each Family Type Based on Conformity and Conversation Orientations



Coding of safe-sex messages. The author and a second individual coded all messages; a third, independently trained individual coded roughly 25% of the messages to further establish coding reliability (see below). Based on the content of caregivers' messages, each message was coded as either an (a) abstinence message, (b) contraception message, (c) combination message,

or (d) “other” message. Abstinence messages were coded as those that promoted delaying the onset of sexual intercourse until a later time or event, such as marriage or a certain age (e.g., 25-years-old). Contraception messages were coded as those that promoted any form of contraceptive use, such as always wearing condoms or taking birth control. Combination messages were coded as those that promoted elements of both abstinence messages and contraception messages, such as telling children to wait to have sex after college and, at that point, to always use condoms. “Other” messages were coded as those messages that could not be remembered, requested that participants seek other sources for information, or did not promote methods or warn of precautions to sexual activity in some way. Different subcategories comprised these major categories. Table 3 presents descriptions and frequencies of each subcategory. Some of the subcategories in the coding scheme were not used; the descriptions of these are included in Appendix B.

Certain subcategories were developed a priori based on safe-sex communication literature regarding discussion of sexual topics (e.g., Martinez et al., 2010; Miller et al., 1998). However, a number of subcategories were developed using constant comparative methodology; this technique involves creating and revising categories as the messages are read and new themes are identified (Field & Morse, 1985; Glaser & Strauss, 1967). The two primary coders independently coded all messages and then discussed and developed new subcategories that did not fit the existing coding scheme. Following revision of the scheme, the coders again independently coded the messages. The “other” category was retained for messages that did not, in some way, regard discussion of abstinence and/or contraception.

Each message was considered as one unit; the coders categorized each unit into one, and only one, of the subcategories. For messages that had elements of multiple subcategories within

Table 3.3 Safe-Sex Message Category Descriptions and Frequencies

Message Category	Description	*f*	% of Total
Abstinence	Promotion of delayed onset of sexual intercourse. Forms of "protection" are not promoted, and message recipients are expected to not have sex.	16	19.28
Never Have Sex	The message recipient should simply "not have sex at all" or "never have sex." Message source is likely to say, "Just don't do it."	3	
Love/Right Person or Moment	The message recipient should not have sex until they are in love, with the "right person," or find the "right moment" to do so.	2	
Marriage	The message recipient should wait until they are married to have sex.	9	
Age/Maturity	The message recipient should wait to have sex when are "older," reach a certain age (e.g., 25), or are more mature.	2	
Contraception	Promotion of forms of safe sex, such as condoms and birth control. Refraining from sex is not advocated; rather, sex is assumed or considered likely to occur, and message sources suggest protection.	42	50.6

Note. A total of 83 messages were reported by participants.

Table 3.3 (cont'd)

General Protection Request	The message recipient should use protection or practice safe-sex, but the method by which they should (e.g., condom use) is not specified. Recipients are generally asked to "be safe/smart" or to "use protection."	10	
Consequences	The message recipient should avoid the negative consequences of unprotected sex (e.g., STIs) by using contraception; sex is assumed by the message source.	10	
Condom/Birth Control Usage	The message recipient should make sure that the male partner uses a condom and/or the female partner is on birth control.	20	
Caregivers Provide Condom/Birth Control	The message recipient should alert his/her primary caregiver(s) that s/he is going to have sex, and the caregiver(s) will assist the individual in obtaining condoms and/or birth control.	2	
Combination	Elements of both abstinence messages and contraception messages are promoted. Specifically, message sources promote waiting to have sex as well as using forms of protection.	17	20.48

Table 3.3 (cont'd)

Wait, and Then Use Protection	The message recipient should wait until a certain time (e.g., specific age) or event (e.g., in love), and then have sex while using forms of contraception, such as condoms.	1	
Wait, but If You Don't	The message recipient should remain abstinent until a certain time (e.g., specific age) or event (e.g., marriage); however, if s/he ends up failing to wait, s/he should use forms of contraception.	9	
Both Discussed, No Connection	The message source discusses elements of both abstinence and contraception, but not in connection to each other.	7	
Other	Messages reported by participants that do not clearly promote waiting to have sex and/or practicing safe sex.	8	9.64
No Message Recorded/Cannot Remember	The message recipient states that s/he and his/her caregiver(s) discussed sex, but s/he does not state what was said, or the safe-sex message cannot be remembered.	5	
Referral	The message recipient is told by his/her caregiver(s) to seek out advice about sex from another source (e.g., a school program).	1	

Table 3.3 (cont'd)

General Consequences	The message recipient is generally told to beware of the consequences of sex, but there is no mention of abstinence or contraception.	1	
Other	The message recorded does not involve preventive safe-sex discussion, or is otherwise unrelated to sex.	1	

the same major category, the first subcategory encountered within the message was coded. For example, if the recorded message stated, "You should wait until you are older before you have sex (abstinence—age/maturity subcategory), or at least until you are in love with the person (abstinence—love/right person or moment subcategory)," the message would be coded as the first subcategory (i.e., abstinence—age/maturity). Messages that had elements of both the abstinence and contraception categories were coded as one of the combination message subcategories. Reliability for the subcategory coding between the two primary coders (Kappa = .84) was good (see Cohen, 1960); disagreements were resolved by the two coders. A third coder was independently trained and coded 21 randomly selected messages (roughly 25% of the 83 total messages) to establish coding reliability. Agreement with the primary coders final coding scheme was 95.24% for the major categories and 85.71% (Kappa = .83) for the subcategories.

Perceptions of, and compliance with, messages. In addition to reporting the content of their caregivers' safe-sex messages, respondents were asked to report their agreement with statements relating to perceptions of and intentions to comply with caregivers' messages. Perceived response efficacy of the safe-sex behavior promoted by one's caregiver(s) (M = 5.93, SD = 0.96, α = .83) was measured using four items (e.g., Richard & van der Pligt, 1991; Rimal & Real, 2003; Witte, 1991), such as "Using the safe-sex behavior is effective in protecting me." The scores from these items were used to create a single index of perceived response efficacy. Perceived self-efficacy of the ability to perform the behavior promoted by one's caregiver(s) (M = 5.50, SD = 1.19, α = .84) was measured with four items (Ajzen, 2002a; Witte, 1994), such as "I am easily able to use the safe-sex strategy"; these were used to form a single index of perceived self-efficacy. Attitude toward the safe-sex behavior advocated by one's caregiver(s) (M = 4.27, SD = 0.81, α = .82) was assessed using a four-item semantic differential scale adapted from

O'Keefe (2002). The items used five-point scales, such that the anchors ranged from 1 (e.g., "unfavorable") to 5 (e.g., "favorable"). These were combined to form a single index of attitude. Children's intention to comply with the safe-sex message received from one's caregiver(s) (M = 5.36, SD = 1.08, α = .74) was assessed using four items related to their recalled behavioral intention at the time they heard the message, such as "At the time my parent(s) talked to me about safe sex, I planned to act exactly as they requested." The scores from these items were used to create a single index of initial plans to comply with the message. The items used here were constructed based on Ajzen's (2002b) recommendations regarding the measurement of behavioral intention. More specifically, given the focus on caregiver-child persuasion, measuring intent to comply with caregivers' safe-sex messages was preferable to general questions about intent to engage in healthy sexual behavior.

Correlations among message source conversation and conformity orientation and the dependent measures described in this section are reported in Table 4; mean scores for each message source FCP type are reported in Table 5. It should be noted that intention to comply and response efficacy were highly correlated, r (80) = .78, p < .001. Though this might suggest that they are measuring the same thing, the way the two variables were conceptually and operationally defined in this study were distinct from one another. For instance, the response efficacy measure focused on the safe-sex strategy itself, whereas the intention to comply measure focused more generally on the act that was requested by caregivers. In addition, prior research has found a significant relationship between response efficacy and behavioral intention (e.g., Lam, 2006; Witte, 1994).

Table 3.4 Correlations among Message Source Conversation and Conformity Orientation, Response Efficacy, Self-Efficacy, Attitude, and Intention to Comply

	Conversation	Conformity	Response Efficacy	Self-Efficacy	Attitude	Intention
Conversation						
Conformity	-.36**					
Response Efficacy	.40**	-.21				
Self-Efficacy	.30**	-.21	.63**			
Attitude	.25*	-.09	.60**	.60**		
Intention	.34**	-.19	.78**	.60**	.63**	

Note: *$p < .05$, **$p < .01$

Table 3.5 Table of Means for Response Efficacy, Self-Efficacy, Attitude, and Intention to Comply for Each Message Source FCP Type

	Consensual (n = 11)	Pluralistic (n = 31)	Protective (n = 21)	Laissez-Faire (n = 20)
Response Efficacy	5.98 (0.96)	6.29 (0.74)	5.49 (1.11)	5.81 (0.93)
Self-Efficacy	5.70 (1.24)	5.77 (1.21)	5.12 (1.24)	5.39 (1.01)
Attitude	4.36 (0.86)	4.37 (0.76)	4.24 (0.83)	4.09 (0.87)
Intention to Comply	5.66 (1.40)	5.60 (0.93)	4.85 (0.96)	5.34 (1.10)

Note: N = 83 respondents who reported safe-sex message content. Response efficacy, self-efficacy, and intention to comply were rated on seven-point scales (i.e., the range is 1 to 7); attitude was rated on a five-point scale (i.e., the range is 1 to 5). Standard deviations are noted in parentheses.

RESULTS

Given the nature of the hypotheses and research questions, all 150 participants were retained when testing H1; the 83 participants who recorded messages were retained when testing H2, H3, H4, RQ1, RQ2, and RQ5; and only the 75 participants who reported a message that was categorized into one of the three safe-sex message types were used when testing RQ3, RQ4, RQ6, and RQ7[2].

Hypothesis 1 and Research Questions 1-4: Safe-Sex Messages

H1 predicted that adolescents with high-conversation caregivers would report more safe-sex communication than adolescents with low-conversation caregivers. Two independent-samples t-tests were conducted with the independent variable of presence of safe-sex communication (i.e., with the categories "safe-sex discussed" and "safe-sex not discussed") and the dependent variable of caregiver conversation orientation. The test illustrated that the data were consistent with the prediction for male caregivers, t (143) = 4.75, $p < .001$, $r^2 = .14$, and for female caregivers, t (143) = 2.91, $p = .004$, $r^2 = .06$. Male caregivers who engaged in safe-sex discussion with children were more likely to be high in conversation orientation ($M = 4.58$, $SD = 1.01$) than male caregivers who did not engage in safe-sex discussion ($M = 3.65$, $SD = 1.16$). Female caregivers who engaged in safe-sex discussion also were more likely to be high in conversation orientation ($M = 4.94$, $SD = 1.17$) than female caregivers who did not engage in safe-sex discussion ($M = 4.36$, $SD = 1.21$).

RQ1 asked if the FCP type of the message source was associated with the source-recipient dyad (e.g., male caregiver and daughter) of safe-sex interactants. A two-way chi-square was conducted with the independent variable of message source FCP type and the dependent

variable of source-recipient dyad type. The test indicated that there was no overall significant association, χ^2 (9, n = 82) = 9.90, p = .36, V = .20. It should be noted that separate one-way chi-square tests appeared to indicate that (a) there were lower consensual (n = 11) message sources and higher pluralistic (n = 31) message sources than would be expected, χ^2 (3, n = 83) = 9.68, p = .022, and (b) although sons were about as likely to receive messages from female caregivers (n = 18) as from male caregivers (n = 15), daughters were more likely to receive messages from female caregivers (n = 44) than male caregivers (n = 5), χ^2 (3, n = 82) = 40.44, p < .001.

RQ2 inquired about the presence of a third safe-sex message type that promotes both abstinence and contraception usage (i.e., combination message). Of the reported 83 safe-sex messages from caregivers, there were 16 abstinence messages (19.28%), 42 contraception messages (50.60%), 17 combination messages (20.48%), and eight "other" messages (9.64%). Overall, combination messages comprised 20.48% of the 83 safe-sex messages reported by participants. Thus, it appeared that this third message category was often present in caregiver-child safe-sex communication.

RQ3 asked if there was a relationship between safe-sex message type (i.e., abstinence, contraception, combination) and message source FCP type. A two-way chi-square was conducted with the independent variable of message source FCP type and the dependent variable of safe-sex message type. The test was not significant, χ^2 (6, n = 75) = 3.90, p = .69, V = .16. The FCP type of the message source did not appear to be related to the likelihood of receiving one safe-sex message type more than any other.

RQ4 questioned whether there was a relationship between the source-recipient dyad of safe-sex interactants and the type of safe-sex messages communicated to adolescent children. A

two-way chi-square was conducted with the independent variable of source-recipient dyad type and the dependent variable of safe-sex message type. The result was not significant, χ^2 (6, n = 75) = 3.25, p = .78, V = .15. The source-recipient dyad type of safe-sex interactants did not appear to be related to the likelihood that one type of safe-sex message communicated by caregivers would be received any more than the others.

Hypotheses 2-4 and Research Questions 5-7: Safe-Sex Communication Outcomes

H2 predicted that adolescents with high-conformity message sources, compared to those with low-conformity message sources, would report (a) higher response efficacy, (b) higher self-efficacy, and (c) more favorable attitudes regarding caregivers' safe-sex messages. Independent-samples t-tests were used to test the hypotheses, with the independent variable of message source conformity orientation (i.e., high conformity orientation versus low conformity orientation); three separate tests were conducted with the dependent variables of response efficacy, self-efficacy, and attitude. The results demonstrated that response efficacy differed significantly between high- and low-conformity message sources, t (80) = -2.09, p = .04, r^2 = .052, albeit not in the predicted direction. Participants who received messages from high-conformity sources (M = 5.66, SD = 1.07) reported significantly lower response efficacy scores than participants who received messages from low-conformity sources (M = 6.10, SD = 0.85). In addition, the means for response efficacy appeared to indicate that participants who received messages from high-conversation sources (M = 6.21, SD = 0.80) reported higher scores compared to those with low-conversation sources (M = 5.65, SD = 1.03). Given this, it seemed plausible that the difference was between two particular message source FCP types: between the high-conversation, low-conformity (i.e., pluralistic) type and the low-conversation, high-conformity (i.e., protective) type. To probe this, a post hoc ANOVA was conducted. Results indicated that response efficacy

scores were significantly different among the message source FCP types, F (3, 78) = 3.27, p = .025, η^2 = .112. A comparison test using Tukey's HSD indicated that the significant differences indeed were between pluralistic (M = 6.29, SD = 0.74) and protective (M = 5.49, SD = 1.11) message sources. Participants with high-conformity sources did not differ from participants with low-conformity sources in reports of self-efficacy, t (81) = -1.11, p = .269, r^2 = .015, or attitude, t (81) = 0.12, p = .91, r^2 = .00, were not significantly different. Thus, the data refuted H2a and were inconsistent with H2b and H2c.

Similar to H2, RQ6 asked whether the type of safe-sex message communicated by caregivers impacted children's (a) response efficacy, (b) self-efficacy, and (c) attitude. One-way ANOVAs were used to test the research question, with the independent variable of safe-sex message type; three separate tests were conducted for each outcome variable. The results indicated that safe-sex message type was not associated with differences in response efficacy, F (2, 71) = 0.60, p = .55, η^2 = .017, self-efficacy, F (2, 72) = 0.31, p = .74, η^2 = .008, or attitude, F (2, 72) = 0.65, p = .53, η^2 = .018. Thus, the data did not provide evidence for a relationship between safe-sex message type and (a) response efficacy, (b) self-efficacy, or (c) attitude.

H3 predicted that adolescents in high-conformity families would be more likely than those in low-conformity families to intend to comply with caregivers' safe-sex messages. A one-way ANOVA was conducted with the independent variable of message source conformity orientation and the dependent variable of intention to comply with the message. The test indicated that participants with high-conformity sources were not significantly different from participants with low-conformity sources in intention to comply with caregivers' messages, t (81) = -1.55, p = .12, r^2 = .029. Thus, the data were not consistent with H3. As with H2a, the

means for intent appeared to indicate that those with high-conversation message sources (M = 5.62, SD = 1.06) reported higher scores compared to those with low-conversation sources (M = 5.09, SD = 1.05). As opposed to the results of H2a, however, because the test of H3 illustrated that message source conformity orientation was not associated with higher or lower intentions to comply, it was not considered in the post hoc analysis. A post hoc t-test indicated that participants with high-conversation message sources reported significantly higher intentions to comply with caregivers' messages than participants with low-conversation message sources, t (81) = 2.31, p = .023, r^2 = .062.

Similar to H3, RQ7 asked whether the type of safe-sex message communicated was related to teens' intention to comply with the message. A one-way ANOVA was conducted with the independent variable of safe-sex message type and the dependent variable of intention to comply with the message. The test illustrated that safe-sex message type was not associated with differences in intention to comply with caregivers' messages, F (2, 72) = 1.22, p = .30, η^2 = .033. As such, the data were not consistent with a potential relationship between safe-sex message type and intent.

RQ5 asked about the associations among source-recipient dyad and children's reported (a) perceived response efficacy, (b) perceived self-efficacy, (c) attitude, and (d) intention to comply with the message. One-way ANOVAs were used to test the research question, with the independent variable of source-recipient dyad type; separate tests were conducted for each outcome variable. The results demonstrated that source-recipient dyad type was not related to differences in response efficacy, F (3, 77) = 0.04, p = .99, η^2 = .001, self-efficacy, F (3, 78) = 0.47, p = .71, η^2 = .018, attitude, F (3, 78) = 0.47, p = .71, η^2 = .018, or intent, F (3, 78) = 0.20,

$p = .90$, $\eta^2 = .007$. Thus, the data suggested that there was no association between source-recipient dyad type and the outcomes reported by participants.

H4 predicted that adolescent children's intentions to comply with caregivers' safe-sex messages would be predicted by their reports of (a) perceived response efficacy, (b) perceived self-efficacy, and (c) attitude. Multiple regression procedures were used to test the hypothesis, with the independent variables of response efficacy, self-efficacy, and attitude predicting the dependent variable of intention to comply with the message. Control variables were entered into the first block of the model. These included age, grade, number of siblings, and sex of the participant; formal sex education (i.e., grade in which education was received; primary message of the education[3]); and religiosity (i.e., Duke University Religion Index; Koenig & Büssing, 2010; $\alpha = .88$). The independent measures (i.e., response efficacy, self-efficacy, attitude) were entered into the second block. Although not predicted in H4, female and male caregivers' conversation and conformity orientation scores were also included in the second block. Although not explicitly hypothesized, interaction effects were considered, and the interactions among the variables in the second block were entered into the third and final block of the model. Response efficacy, self-efficacy, attitude, female and male caregiver conversation orientation scores, and female and male caregiver conformity orientation scores were mean-centered prior to constructing the models (Cohen, Cohen, West, & Aiken, 2003). The results of the regression model, which are depicted in Table 6, illustrated that the first and third blocks of the model were not significant in predicting participants' intentions to comply with caregivers' messages. As such, the results reported in this paragraph focus on the second block of the model which alone accounted for 60% of the variance in intent to comply with the safe-sex message. Consistent with H4a and H4c, response efficacy ($\beta = .52$, $t = 4.82$, $p < .001$) and attitude ($\beta = .23$, $t = 2.18$, $p =$

.034) were significant predictors of intention to comply with caregivers' messages. The results were not consistent with H4b—self-efficacy was not a significant predictor ($\beta = .14$, $t = 1.39$, $p = .17$). Additionally, caregivers' conversation and conformity orientation scores were not significant predictors.

Table 4.1 Multiple Regression Analysis for Intention to Comply with Caregivers' Safe-Sex Messages

	B	*SE*	β	*t*	*sr*
Block 1: Control variables					
Age	0.13	0.25	.14	0.52	.06
Current grade	-0.06	0.21	-.08	-0.29	-.04
Number of siblings	0.12	0.11	.14	1.12	.13
Formal education message	-0.04	0.33	-.02	-0.13	-.02
Grade when education received	-0.08	0.10	-.11	-0.79	-.09
Sex	-0.27	0.30	-.13	-0.92	-.11
Religiosity	0.11	0.07	.18	1.50	.18
$F(7, 65) = 0.75$, $p = .63$, $R^2 = .075$, adjusted $R^2 = .00$					
Block 2: Predictor variables					
FCV	0.06	0.09	.06	0.68	.05
FCF	0.10	0.10	.11	1.01	.08
MCV	-0.03	0.08	-.04	-0.41	-.03
MCF	-0.12	0.10	-.14	-1.14	-.09

Note. $N = 83$. *sr* = semipartial correlation; FCV = Female caregiver conversation orientation; FCF = Female caregiver conformity orientation; MCV = Male caregiver conversation orientation; MCF = Male caregiver conformity orientation. All variables in Blocks 2-3 are mean-centered. Outcome variable = Intention to comply with caregivers' messages. *$p < .05$. **$p < .001$.

Table 4.1 (cont'd)

	B	*SE*	β	*t*	*sr*
Response efficacy	0.60	0.12	.52	4.82**	.36
Self-efficacy	0.14	0.10	.15	1.39	.10
Attitude	0.30	0.14	.23	2.18*	.16
$F_{change}(7, 58) = 15.53$, $p < .001$, $R^2_{change} = .603$, adjusted $R^2 = .600$					
Block 3: Interactions					
FCV X FCF	-0.01	0.14	-.01	-0.04	-.00
FCV X MCV	0.04	0.13	.06	0.29	.02
FCV X MCF	-0.10	0.16	-.15	-0.64	-.05
FCF X MCV	-0.07	0.12	-.12	-0.57	-.04
FCF X MCF	0.01	0.09	.01	0.09	.01
MCV X MCF	0.21	0.12	.37	1.78	.14
FCV X Response efficacy	0.23	0.18	.27	1.29	.10
FCV X Self-efficacy	-0.01	0.16	-.13	-0.61	-.05
FCV X Attitude	-0.00	0.20	-.00	-0.01	-.00
FCF X Response efficacy	0.10	0.21	.10	0.49	.04
FCF X Self-efficacy	0.09	0.13	.12	0.60	.05
FCF X Attitude	-0.14	0.26	-.13	-0.54	-.04
MCV X Response efficacy	0.11	0.17	.12	0.67	.05
MCV X Self-efficacy	-0.14	0.13	-.22	-1.07	-.08
MCV X Attitude	-0.10	0.22	-.10	-0.45	-.03
MCF X Response efficacy	0.19	0.21	.24	0.95	.07
MCF X Self-efficacy	-0.15	0.16	-.25	-0.97	-.07
MCV X Attitude	-0.09	0.26	-.10	-0.34	-.03
Response efficacy X Self-efficacy	0.03	0.15	.04	0.22	.02
Response efficacy X Attitude	-0.45	0.21	-.50	-2.14*	-.16
Self-efficacy X Attitude	0.33	0.22	.41	1.52	.12
$F_{change}(21, 37) = 0.89$, $p = .60$, $R^2_{change} = .108$					
The overall model: $F(35, 37) = 3.89$, $p < .001$, adjusted $R^2 = .584$					

DISCUSSION

This project examined the associations among perceptions of family communication patterns, safe-sex message content, and persuasion outcomes of caregiver-child safe-sex discussion. The results are discussed as they relate to safe-sex communication in general and FCP theory in particular, with focus on the intersection of FCP theory and caregiver-child safe-sex communication. Practical and theoretical implications, future research directions, and study limitations are discussed in turn.

Caregiver-Child Safe-Sex Communication

The argument here is that caregiver-child safe-sex communication is inherently persuasive in that safe-sex talks consist of caregivers seeking to influence their children's sexual attitudes and behaviors. Literature was reviewed to gain an understanding of safe-sex message features, and two types were distinguished: abstinence messages and contraception messages. Some research suggested that these messages frequently co-occur (Lefkowitz et al., 2003). Thus, RQ2 asked about the forms that safe-sex messages take, specifically inquiring about the existence of a third message type (i.e., combination). The findings presented here suggest that parents do communicate messages that promote both abstinence and contraception methods in one message. To further examine the persuasive impact that these differing messages have, RQ6 and RQ7 asked whether safe-sex message type was associated with response efficacy, self-efficacy, attitude, and intention to comply with caregivers' messages. The results were nonsignificant. Although previous research has examined the effect that family communication about sex has on sexual beliefs and behaviors (DiIorio et al., 2003; Wright, 2009), no known study has examined the impact of safe-sex message features (e.g., focus on abstinence versus contraception methods). The results of this study suggest that the type of safe-sex message

chosen by caregivers does not impact persuasive message outcomes: the teenage participants did not have higher or lower perceived response efficacy of, higher or lower perceived self-efficacy regarding, more or less favorable attitudes toward, or higher or lower intentions to comply with one message type compared to any other.

Previous research on safe-sex communication has also noted that sons and daughters may receive different types of messages (Martinez et al., 2010) and that female caregivers typically engage in more caregiver-child safe-sex discussion than male caregivers (DiIorio et al., 1999; Raffaelli et al., 1998). Given the potential impact of the source-recipient dyad makeup (e.g., male caregivers and sons, female caregivers and daughters) on safe-sex communication and persuasive outcomes, RQ4 and RQ5 asked whether source-recipient dyad type was associated with communication of different safe-sex message types, response efficacy, self-efficacy, attitude, and intentions to comply with caregivers' messages. Results demonstrated that here there were no such relationships. However, the data did indicate that for daughters, female caregivers were more likely than male caregiver to serve as safe-sex message sources. Although male and female caregivers may not differ in safe-sex message selection and the makeup of interactants may not impact discussion outcomes, it is still noteworthy that, at least for daughters, biological sex of the caregiver matters. It may be that female caregivers and/or daughters feel more comfortable engaging in safe-sex talks with a member of the same sex (DiIorio et al., 1999) or that female caregivers, more than male caregivers, are knowledgeable about and confident with engaging in safe-sex discussions (Miller et al., 2009). Biological sex of caregivers and children were also considered in relation to FCP theory; this is discussed in the following section.

Family Communication Patterns, Safe-Sex Communication, and Persuasive Outcomes

Tenets of family communication patterns (FCP) theory guided the rationale for why some caregivers may be more likely to engage in safe-sex discussions with children and why messages from different caregivers may be perceived as more or less persuasive by children. H1 predicted that high-conversation caregivers would be more likely than low-conversation caregivers to engage in safe-sex communication. The data supported this prediction. Male and female caregivers who communicated safe-sex messages were more likely to be perceived as high in conversation orientation by their children. In addition, it appears that of the 121 male caregivers who were perceived as low in conversation orientation, most (71.90%) did not serve as safe-sex message sources; in a similar vein, of the 87 female caregivers who were perceived as low in conversation orientation, more than half (55.95%) did not serve as safe-sex message sources. These results are consistent with the assumption that low-conversation families, compared to high-conversation families, are less likely to engage in discussion about deeply personal topics (Fitzpatrick & Ritchie, 1994; Koerner & Fitzpatrick, 2006). In sum, predispositions toward open and frequent communication appear to matter in terms of communication of safe-sex messages.

With regard to the makeup of safe-sex communication interactants and the content of safe-sex messages, RQ1 asked whether the FCP type of the safe-sex message source was associated with source-recipient dyad type and RQ3 asked whether message source FCP type was associated with safe-sex message type (i.e., abstinence, contraception, combination). Both tests were nonsignificant, suggesting that message source FCP type was equally related to the makeup of interactants (e.g., mother-daughter and mother-son communication were equally likely to involve pluralistic sources) and the safe-sex message type communicated (e.g.,

consensual sources were equally likely to communicate abstinence messages and contraception messages).

Although caregivers' FCP type may be associated with willingness to discuss safe sex and message source FCP type may be related to some persuasive outcomes as discussed below, there appear to be no relations among message source FCP type, safe-sex message selection, and source-recipient dyad type. It may be the case that safe-sex message selection is impacted by other factors, such as caregivers' own values and experiences. For example, a more conservative caregiver may believe sexual intercourse should wait until marriage, while a caregiver who has had premarital sex may promote condom usage. Although FCP theory assumes that family members will communicate in ways consistent with their conversation and conformity orientations (e.g., Koerner & Fitzpatrick, 2002b), the existing beliefs and values of family members—other than those pertaining to communication—are beyond the scope of the theory. More specifically, FCP primarily is concerned with cognitive representations of communication behavior that are formed through repeated family interaction (Koerner & Fitzpatrick, 2002a). When considering makeup of interactants, safe-sex communication might be gendered in a way that is also not within the scope of FCP—the theory is not meant to offer a rationale as to why one dyad type (e.g., male caregiver and son) might communicate more frequently or differently than another (e.g., female caregiver and son).

The main goal of this study was to examine the persuasive nature of caregiver-child safe-sex communication. As such, the impact that message source FCP type might have on persuasive outcomes (i.e., response efficacy, self-efficacy, attitude, intention to comply) was considered. H2 and H3 predicted that adolescents with high-conformity message sources, compared to adolescents with low-conformity message sources, would report higher response efficacy, self-

efficacy, and attitudes regarding caregivers' messages and higher intentions to comply with caregivers' messages. The results indicated that messages from high-conformity sources, compared to low-conformity message sources, were not associated with higher response efficacy, self-efficacy, attitude, or intentions. However, for response efficacy, results were in the opposite direction of that predicted—participants with low-conformity message sources reported higher scores than those with high-conformity sources. In addition, the means for message source conversation orientation appeared to indicate that messages from high-conversation sources, compared to low-conversation sources, were higher in response efficacy and intentions to comply. Post-hoc analyses indicated that (a) participants with pluralistic message sources reported significantly higher response efficacy scores than participants with protective sources and (b) participants with high-conversation message sources reported significantly higher intentions to comply than participants with low-conversation sources. These results suggest that there may be something about the crossing of conversation and conformity orientations, in general, and perceived conversation orientation, in particular, that are associated with outcomes of caregiver-child persuasion.

In understanding the finding regarding response efficacy, it is important to consider the nature of pluralistic and protective family types. Pluralistic families are characterized by an environment of open communication in which children can freely express ideas and participate in family decisions; caregivers in these families tend to explain their decisions, such as why they think children should behave in a certain way, but ultimately accept children's choices (Koerner & Fitzpatrick, 2006). Protective families, on the other hand, are hierarchical in nature and children are expected to conform to caregivers' attitudes without question; caregivers in these families ultimately do not rationalize their decisions and expectations (Koerner & Fitzpatrick,

2006) and children in this family type are more likely to be influenced by sources external to the family (Fitzpatrick & Ritchie, 1994). It is likely that these patterns of communication impacted the outcomes of safe-sex communication. Outcomes of caregiver-child persuasion—such as response efficacy—might be best considered at the level of family type, rather than the level of conformity orientation. Indeed, Koerner and Fitzpatrick (2002a) state that, when studying family communication, "it is not sufficient to know only [one orientation]; it is as well necessary to know the other" (p. 86). Understanding the interaction of conversation orientation and conformity orientation (i.e., considering communication at the level of family type) may yield a better theoretical understanding of caregiver-child safe-sex communication than either dimension can on its own.

However, the finding regarding intentions to comply with caregivers' messages does not fully support the preceding claim. For intentions to comply, message sources' conversation orientation mattered more on its own than did the crossing of the orientation dimensions. It is not surprising, though, that participants with high-conversation sources reported higher intent than participants with low-conversation sources. Given that consensual and pluralistic communicators spend time rationalizing their decisions, rather than implicitly demanding homogeneity of attitudes (i.e., protective) or refraining from involvement in family members' lives (i.e., laissez-faire), this finding is consistent with the idea that parental reasoning is associated with child internalization of attitudes and behaviors (Hoffman, 1975). Though conformity orientation mattered for response efficacy, it may be the case that, in the context of family persuasion, the conversation orientation of the message source is the primary predictor of outcomes.

Finally, this study also considered whether participants' intentions to comply with caregivers' messages might be predicted by the other persuasive outcomes of interest (i.e., response efficacy, self-efficacy, and attitude). H4 predicted that participants' reported intentions to comply with caregivers' safe-sex messages would be predicted by their reported response efficacy, self-efficacy, and attitude regarding the message. Data analysis indicated that response efficacy and attitude were significant predictors of intentions to comply. This suggests that participants' perceived effectiveness of and attitudes toward the safe-sex method (e.g., abstinence or condom use) promoted by caregivers largely predicted their intentions to comply with caregivers' messages.

It is possible that caregivers characterized by certain FCP types might be more or less effective at influencing children to comply with persuasive messages. Because high-conversation (i.e., consensual and pluralistic) families put considerable effort into explaining their decisions (Koerner & Fitzpatrick, 2002a, 2006), these types of message sources may be especially adept at increasing children's perceptions of response efficacy regarding health behaviors (e.g., practicing safe sex). For example, beyond simply recommending that children use a specific safe-sex strategy, high-conversation message sources might additionally explain why their promoted method is effective. Regarding attitude, although high-conformity (i.e., consensual and protective) families promote homogeneous attitudes and beliefs (Koerner & Fitzpatrick, 2002a, 2006), conversation orientation seems to play an important function in the adoption of caregivers' values. More specifically, because low-conversation families, and protective families in particular, are not concerned with conceptual matters and rationalizing decisions (Koerner & Fitzpatrick, 2006) and children tend to be influenced by sources outside the family (Fitzpatrick & Ritchie, 1994), low-conversation message sources may not be particularly successful at shaping

or changing children's attitudes. However, because high-conversation (i.e., consensual and pluralistic) caregivers rationalize decisions (Koerner & Fitzpatrick, 2006), children may be more prone to adopting caregivers' recommended beliefs and attitudes. In any case, the results of this study suggested that low-conversation message sources might have less success in persuading children about healthy sexual behavior than other types of message sources.

Implications and Directions for Future Research

This thesis yielded a number of theoretical and practical implications regarding caregiver-child safe-sex communication. First, it drew from FCP theory to examine caregiver-child safe-sex communication and consequently, as argued above, caregiver-child persuasion. As it stands, scholarship on the intersection of persuasion and family communication remains underdeveloped. Although caregiver-child persuasion tends to consider parental strategies and child resistance (Wilson & Morgan, 2004), research has yet to fully examine the communicative processes in caregiver-child persuasion. The study reported here was focused on explicitly defining and investigating caregiver-child persuasion (i.e., communication from a primary female caregiver and/or primary male caregiver that is meant to shape, reinforce, or change her/his/their child's long-term attitudes and/or behaviors) in the context of patterned family communication. The results suggested that FCP is one avenue through which to make predictions about outcomes of caregiver-child persuasion, albeit in unexpected ways. Given the outcomes reported by participants with high conversation messages sources, in general, and pluralistic and protective message sources, in particular, it may be the case that conversation orientation and the family type of caregivers is more important to persuasive exchanges than conformity orientation is on its own. Future research in this area should refine the definition of caregiver-child persuasion presented here and further investigate the processes underlying this type of

persuasion. Additionally, future research might consider theoretical constructs from the persuasion literature, rather than solely from the family communication literature.

Second, this study adds to scholarship in the area of safe-sex communication. Data analysis suggested that (a) children's intentions to comply with caregivers' safe-sex messages are largely predicted by their perceived response efficacy and attitudes toward the messages' recommendations, (b) children with pluralistic (i.e., high conversation, low conformity) message sources reported higher response efficacy than children with protective (i.e., low conversation, high conformity) sources, and (c) children with high-conversation sources, compared to those with low-conversation sources, reported higher intentions to comply. During formal education, sex educators should consider (a) the roles that response efficacy and attitude play and (b) involving and guiding caregivers. Educators may be especially successful at instilling healthy sexual behaviors if they stress the effectiveness of safe-sex methods and work to shape positive attitudes. Also, it might benefit children's development of sexual attitudes and behaviors if education involves caregivers such that educators recommend that families discussing sex keep lines of communication open and potentially reduce the role of caregiver authority. Future research should examine the interrelationships of persuasive outcomes more carefully, and scholars interested in safe-sex communication might also examine the impact of different message types (e.g., abstinence versus combination messages) on persuasive outcomes of safe-sex discussion and general aspects of safe-sex communication (e.g., children's perceptions that parents are being invasive) that may negatively impact outcomes.

Limitations

Although the study reported here adds to the literature on family persuasion and safe-sex communication, a number of limitations were inherent in its design. First, although the definition

of caregiver-child persuasion concerned enduring attitudes and behavior, measuring such outcomes was beyond the scope of this project. Rather than assess these outcomes, children's initial intentions to comply with caregivers' safe-sex messages were measured. In the future, a panel study would allow researchers to assess long-term attitudes and behaviors. Second, the analyses related to message source FCP and persuasive outcomes should be considered in light of the unequal numbers of source FCP types. Though these numbers were not drastically different, future research might consider creative techniques for obtaining exact numbers of each FCP type, such as an experiment in which message sources and message features are manipulated to match the communication style of each family type.

Third, it is possible that safe-sex discussion influenced perceptions of family communication patterns, rather than the directional relationship discussed throughout the thesis. More specifically, those caregivers who served as message sources may have been perceived as being higher in conversation orientation simply because they engaged in discussion of a sensitive topic. Among caregivers who served as message sources, the percentage who measured as high- and low-conversation was fairly equal (50.6% and 49.4%, respectively). However, this percentage was not the same for all caregivers (28.1% and 71.9%). Most notably, the distribution of pluralistic and protective caregivers differed: 37.35% of message sources were pluralistic and 25.3% of message sources were protective, whereas 20.07% of all caregivers were pluralistic and 41.81% of all caregivers were protective. Thus, although this thesis follows FCP theory's assumption that caregivers' FCP types impact their willingness to discuss sensitive topics, the case could be made that the discussion of safe sex affected participants' perceptions of their caregivers' FCP types. Future research should tease out the directionality of the relationship between discussion of sensitive topics and perceptions of conversation orientation.

CONCLUSION

Family safe-sex discussion is an important communicative process through which children may develop healthy sexual beliefs and behaviors. This thesis conceptualized safe-sex talks as caregiver-child persuasion and applied family communication patterns theory to investigate the message content, makeup of interactants, and outcomes of family safe-sex discussion. The results suggested that caregivers are more likely to engage in safe-sex talks if they value open communication (i.e., high conversation); children's perceived response efficacy and attitude regarding caregivers' messages are associated with intentions to comply with the message; and high-conversation message sources may be more successful at influencing children than low-conversation message sources. Future research is needed to better understand the underlying communicative mechanisms and outcomes of caregiver-child persuasion.

NOTES

[1] The RFCP scores found in Fitzpatrick and Ritchie (1994), and reported in Koerner and Fitzpatrick (2002b), were assessed using five-point scales; as such, these reported means were transformed to fit a seven-point scale before caregivers were placed into their FCP types.

[2] Readers may question why the majority of analyses focused only on the respondents who reported the content of safe-sex messages, as opposed to all individuals who reported receiving a message (n = 91)—specifically, why not include all 91 individuals when testing H2, H3, H4, RQ1, and RQ5? The argument could be made that participants who did not remember message content might have been impacted beneficially by sexual discussion, despite not remembering the safe-sex message word-for-word. However, these individuals might not have reported the content of caregivers' messages for a number of reasons: Participants may have forgotten the content of the message, felt uncomfortable recalling and sharing what they heard, or simply misunderstood the questionnaire items related to these messages. Ultimately, it is impossible to delineate this information. As a result, these eight participants were excluded.

[3] The primary message of formal sex education was assessed using the same coding scheme and procedures as those for categorizing caregivers' safe-sex messages. Of the 124 individuals who reported receiving formal sex education, 122 respondents recorded the content of messages; reliability for the subcategory coding (Kappa = .87) was good, and disagreements were resolved by the two coders. In the multiple regression model used to test H4, this was included as a control variable by dummy coding the message type as being either the same as (1) or different from (0) the type of message (e.g., abstinence) communicated by caregivers. The rationale behind this decision was that formal sex education message type, on its own, was not

significantly associated with respondents' intentions to comply with caregivers' messages, $F(3, 79) = 0.21$, $p = .91$, $\eta^2 = .007$. Yet it seemed plausible that receiving the same message from caregivers and formal educators may enhance perceptions of that message, whereas differing messages from these two sources might counteract the impact of one another. However, separate *t*-tests showed no significant differences between those who received the same safe-sex messages and those who received different messages for any of the outcome variables. Although this suggested that formal sex education messages may have no significant association with perceptions of caregivers' messages, this control variable was retained.

APPENDICES

APPENDIX A

Table A.1 Survey Items

Revised Family Communication Patterns Scale
Conversation-Orientation Items – Female Caregiver
My primary female caregiver and I often talk about topics like politics and religion, where one person disagrees with the other. (Item dropped from analyses.)
My primary female caregiver often says things like, “Every member of the family should have some say in family decisions.” (Dropped.)
My primary female caregiver does not often ask my opinion when the family is talking about something.*
My primary female caregiver encourages me to challenge her ideas and beliefs.
My primary female caregiver often says something like, “You should always look at both sides of an issue.”
I do not usually tell my primary female caregiver what I am thinking about things.*
I can tell my primary female caregiver almost anything.

Note. Unless otherwise noted, all items in this appendix were assessed by reporting agreement on a seven-point, Likert-type scale with the anchors *strongly disagree* (1) and *strongly agree* (7). Attitude items were measured using a semantic differential scale, with anchors ranging from 1 (e.g., bad) to 5 (e.g., good). * denotes reverse-scored items. ** denotes open-ended questions. *** denotes a response that was assessed using continuous data other than a Likert-type or semantic differential scale.

Table A.1 (cont'd)

In our family, my primary female caregiver and I do not often talk about our feelings and emotions.*
My primary female caregiver and I often have long, relaxed conversations about nothing in particular.
I really enjoy talking with my primary female caregiver, even when we disagree.
My primary female caregiver does not like to hear my opinions when she does not agree with me.* (Dropped.)
My primary female caregiver encourage me to express my feelings.
My primary female caregiver tends to be very open about her emotions.
My primary female caregiver and I often talk about things we have done during the day.
In our family, primary female caregiver and I do not often talk about our plans and hopes for the future.*
Conversation-Orientation Items – Male Caregiver
In our family, my primary male caregiver and I often talk about topics like politics and religion where one person disagrees with the other. (Dropped.)
My primary male caregiver often says things like, "Every member of the family should have some say in family decisions."
My primary male caregiver does not often ask my opinion when the family is talking about something.*
My primary male caregiver encourages me to challenge his ideas and beliefs.

Table A.1 (cont'd)

My primary male caregiver often says something like, "You should always look at both sides of an issue."
I do not usually tell my primary male caregiver what I am thinking about things.*
I can tell my primary male caregiver almost anything.
In our family, primary male caregiver and I do not often talk about our feelings and emotions.*
My primary male caregiver and I often have long, relaxed conversations about nothing in particular.
I really enjoy talking with my primary male caregiver, even when we disagree.
My primary male caregiver does not like to hear my opinions when he does not agree with me.* (Dropped.)
My primary male caregiver encourages me to express my feelings.
My primary male caregiver tends to be very open about his emotions.
My primary male caregiver and I often talk about things we have done during the day.
In our family, primary male caregiver and I do not often talk about our plans and hopes for the future.*
Conformity-Orientation Items – Female Caregiver
My primary female caregiver often says things like, "You'll know better when you grow up."
My primary female caregiver often says things like, "My ideas are right and you should not question them."
My primary female caregiver does not feel that it is important to be the boss.* (Dropped.)

Table A.1 (cont'd)

When anything really important is involved, my primary female caregiver does not expect me to obey without question.* (Dropped.)
In our home, my primary female caregiver usually has the last word. (Dropped.)
My primary female caregiver often says things like, "A child should not argue with adults."
My primary female caregiver often says things like, "There are some things that just shouldn't be talked about."
My primary female caregiver does not become irritated with my views if they are different from hers.* (Dropped.)
My primary female caregiver often says things like, "You should give in on arguments rather than risk making people mad."
If my primary female caregiver does not approve, she does not want to know about it.
When I am home, I am not expected to obey my primary female caregiver's rules.* (Dropped.)
Conformity-Orientation Items – Male Caregiver
My primary male caregiver often says things like, "You'll know better when you grow up."
My primary male caregiver often says things like, "My ideas are right and you should not question them."
My primary male caregiver does not feel that it is important to be the boss.* (Dropped.)
When anything really important is involved, my primary male caregiver does not expect me to obey without question.* (Dropped.)
In our home, my primary male caregiver usually has the last word.

Table A.1 (cont'd)

My primary male caregiver often says things like, "A child should not argue with adults."
My primary male caregiver often says things like, "There are some things that just shouldn't be talked about."
My primary male caregiver does not become irritated with my views if they are different from his.*
My primary male caregiver often says things like, "You should give in on arguments rather than risk making people mad."
If my primary male caregiver does not approve, he does not want to know about it.
When I am home, I am not expected to obey my primary male caregiver's rules.* (Dropped.)
Parents' Safe-Sex Messages
Has your primary female caregiver ever talked to you about safe sex? (Yes/No)
Has your primary male caregiver ever talked to you about safe sex? (Yes/No)
If yes to either of the previous two questions, to the best of your ability, please recall and write down what your caregiver(s) most recently told you about safe sex. Please make sure you only write down the most recent message.**
Which caregiver told you this? (Primary male caregiver/Primary female caregiver/Both)
Approximately how many months ago did your caregiver(s) tell you this?
Do you think your caregiver(s) was trying to persuade you? If not, what was his/her/their goal?
Please rank, from 1st to 7th, your most important sources of sex-related communication: (Primary female caregiver/Primary male caregiver/Siblings/Friends/School/Religious figures/Media)

Table A.1 (cont'd)

Who is your most influential caregiver? (Female caregiver/Male caregiver)
Perceived Response Efficacy
I am confident that the safe-sex strategy my caregiver(s) told me to use will protect me.
There is not much that this safe-sex behavior can do to protect me.*
Using the safe-sex behavior is effective in protecting me.
The safe-sex behavior my caregiver(s) told me to use is an effective strategy.
Perceived Self-Efficacy
The safe-sex strategy my caregiver(s) asked me to use is easy for me to do.
Using the safe-sex strategy is inconvenient for me.*
The safe-sex behavior is difficult for me to do.*
I am easily able to use the safe-sex strategy.
Attitude
On the scales below, rate how you feel about the safe-sex behavior that your caregiver(s) asked you to use.
The behavior is bad/good.
The behavior is unfavorable/favorable.
The behavior is pleasant/unpleasant.*
The behavior is positive/negative.*
Intention to Comply
At the time my parent(s) talked to me about safe sex, I did not intend to do what they told me.*
When my parent(s) talked to me about safe sex, I planned to act exactly as they requested

Table A.1 (cont'd)

When my parent(s) talked to me about safe sex, I decided to try doing what they wanted.
Additional Questions
How old are you?***
What grade are you currently in?***
What is your sex? (Male/Female/Transgender)
How many siblings do you have?***
How would you best describe your primary female caregiver? (Biological mother/Adoptive mother/Step-mother/Other)
How would you best describe your primary male caregiver? (Biological father/Adoptive father/Step-father/Other)
Have you received any formal sex education from your school? (Yes/No) If yes, what was the primary message the educators communicated to you?** In what grade did you receive the education?***
Religiosity Measure – Duke University Religion Index (Intrinsic Religiosity Items)
In my life, I do not experience the presence of the Divine (i.e., God).*
My religious beliefs are what really lie behind my whole approach to life.
I try hard to carry my religion over into all other dealings in life.

APPENDIX B

Table B.1 Descriptions of Unused Coding Subcategories

Message Category	Description
Abstinence	
Direct Request	The message recipient should simply "be abstinent."
Family	The message recipient should wait to have sex until they want and/or are ready to begin a family or to have children.
Consequences/ Responsibilities	The message recipient should remain abstinent because s/he will likely experience negative consequences (e.g., pregnancy) or deal with emotional, physical, or financial responsibilities.
Contraception	
Sexual History/Testing	The message recipient should discuss his/her and his/her partner's sexual histories before having sex; and/or the message recipient and/or his/her partner should get tested for STIs, HIV, etc. before having sex.
Other	
Educational Information	The message recipient discussed the process of sex without advocating a specific type of safe-sex method. Messages talked about the anatomy of males versus females, how to use contraceptive methods, and "what sex is."

Note. Some subcategories were found in coding of formal sex education messages.

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