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# The Influence of Parental Communication about Sex on Subsequent Sexual Behaviors and Attitudes among Asian, Latino, and White Young Adults

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Abstract: Background: The prevalence of sexually transmitted infections (STIs) among young adults aged 18 to 25 in the U.S. is particularly high. Parental communication about sex is crucial in reducing sexual risk behaviors among this group. Due to cultural taboos about sex among Asian and Latino families, little is known about parental sex communication's prevalence among these groups and its impact on young adults' sexual behaviors and attitudes. Methods: This study aimed to explore the association between parental sex communication, attitudes toward sex communication, and sexual behaviors among Asian, Latino, and White young adults. A sample of 205 young adults, including 63 Asian, 48 Latino, and 94 non-Hispanic White young adults (Age M = 20.04, SD = 1.22; 68% females; 70% sexually active), completed an online survey. Results: Asian young adults reported significantly lower rates of parental sex communication (39.7%) compared to Latino (69.6%) and White young adults (67.7%) ( $\chi^2 = 14.07$ , df = 2, p < 0.001). Parental sex communication predicted viewing sexual topics as cultural taboos among Latino young adults (p < 0.05), subsequently predicting sexual risk behaviors like having multiple partners ( $\beta = -4.05$ , SE = 1.45, p = 0.03). Conclusions: Asian participants' attitudes and sexual risk behaviors may be influenced by factors beyond familial discussions due to the lack of parental sex communication. Conversely, parental discussions among Latino participants negatively impact attitudes and behaviors related to sexual risk. Strategies for reducing sexual risk behaviors should guide parents in navigating sensitive discussions, especially within Asian and Latino families where such topics are taboo.

**Keywords:** parental safe-sex communication; safe-sex self-efficacy; racial/ethnic differences; cultural taboo of sex; attitudes toward sex communication

## 1. Introduction

Significant among the current issues impacting young adults ages 18 to 25 in the United States (U.S.) are sexual risk behaviors, defined as sexual activities that may put an individual at higher risk of sexually transmitted infections (STIs), HIV, and unplanned pregnancies [1]. These behaviors may include, but are not limited to, having sex at an early age, having multiple sexual partners, having sex under the influence of drugs or alcohol, and having unprotected sex [2]. Between 2011 and 2021, there has been a decrease in reported condom use, tests for HIV, and tests for STIs among high school students in the U.S. Approximately half of youth ages 15–24 are diagnosed with STIs due to inconsistent condom use, but among young adults, 18 to 24-year-olds, about half of these individuals are enrolled college students in the U.S. This population practices health-risk behaviors with low barrier methods and STI testing utilization [3]. There are many forms of contraceptives, such as male and female condoms, implants, and pills. The most commonly used form of safe sex protection that is utilized among American youth, according to the CDC, is the male condom. Specifically, from 2015–2017, 97% of female teenagers opted for



Citation: Cabral, P.; Minassians, L.A.; Friedman, E.; Campbell, C.; Schmit, C. The Influence of Parental
Communication about Sex on
Subsequent Sexual Behaviors and
Attitudes among Asian, Latino, and
White Young Adults. Youth 2024, 4,
606–617. https://doi.org/10.3390/
youth4020041

Academic Editor: Giulio D'Urso

Received: 29 February 2024 Revised: 11 April 2024 Accepted: 25 April 2024 Published: 1 May 2024



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condom usage [4]. Moreover, in 2020, young adults aged 15–24 made up over half (53%) of reported cases of chlamydia, gonorrhea, and syphilis [5]. Racial/ethnic minorities (i.e., the Latino population) are particularly vulnerable to a higher incidence of negative sexual health outcomes due to various factors, including poor sexual health communication and education. In fact, HIV incidence has increased by more than 14% since 2010, becoming known as the "invisible epidemic" among Latino communities, which emphasizes the importance of sexual health communication and parent-child communication [6]. Additionally, Asian Americans are the sole ethnic group that has had a consistent increase in HIV infection rates, from 4.9 per 100,000 in 2011 to 5.5 per 100,000 in 2016 [7]. Although Asian Americans may be perceived as more sexually conservative and low-risk for STIs, this is challenged by the lack of research and low screening rates across Asian Americans [8]. The effectiveness of sexual health education in reducing negative outcomes associated with sexual risk behaviors in the US is vastly supported by evidence [9], yet its application is neither cohesive nor consistent due to the education system in the U.S. being decentralized. Alternatively, parental education of sexual health through communication of safe sex strategies may provide a complementary and reliable source of sexual health knowledge for youth. However, parental communication about safe sex is lacking, as evidence also demonstrates that many parents underestimate their role in teaching their children about sex, resulting in many adolescents reporting little or no communication about sex with their parents [10]. Moreover, parental communication about safe sex may differ across racial/ethnic groups in the U.S. This study aims to examine racial/ethnic differences in parental communication about safe sex and associated sexual health outcomes among U.S. young adults.

#### 1.1. Parental Communication about Sex

Parent–child communication is important to the sexual health behavior outcomes of developing adolescents and emerging young adults. Parent–child communication on the topic of sex, including sexual intercourse, STIs, contraceptive methods, and reproductive health, leads to improved health outcomes among adolescents. Though delayed sexual activity is not the primary goal of sexual education, it does tend to delay sexual initiation and increase the use of contraception methods [11]. Moreover, family communication has been found to predict improved sexual self-efficacy, which is one's belief in their ability to make decisions about their sexuality and avoid high-risk sexual behavior, particularly for young women [12].

When parents take initiative and start a conversation about sex with their child, the child discusses sex more openly and frequently in the future [13]. However, A seldom-discussed variable is the quality of parent–child communication about safe sex. Moreover, several barriers exist that prevent the facilitation of sex-related communication between parents and young adults in Latino and Asian families. Among Latino families, there remains a documented sexual silence in that Latino parents engage in fewer conversations about sexuality with their children and feel greater discomfort than non-Latino White parents, which is associated with fewer discussions about safer sex practices [14–17]. Asian American parent–child dyads have also been reported to have higher rates of discomfort compared to African Americans and Latina dyads [7]. For example, Asian Americans typically do not receive information regarding sexual health from their parents because of the cultural stigma [18]. Thus far, it remains unclear how young adults in Asian and Latino families, which typically prescribe to traditional cultural values that may inhibit family communication about sex [19,20], perceive parental communication about safe sex, if it occurs at all, as well as the associations with subsequent sexual risk behaviors.

## 1.2. Attitudes about the Communication of Safe Sex

According to the Theory of Planned Behavior [21], intrapersonal processes, which include attitudes, peer norms, and perceived behavioral control, are pivotal in influencing behaviors, including sexual risk behaviors. Specifically, attitudes toward the communica-

tion of safe sex may influence positive outcomes in sexual health. Sexual attitudes among U.S. young adults are influenced by racial and ethnic differences. Among Asian, Latino, and White U.S. college students, Asian students have been found to be significantly more conservative in their attitudes towards casual sex than their counterparts, whereas Latino students attitudes towards extramarital sex were significantly more liberal than the other two groups [22]. Attitudes toward sexual behaviors are typically influenced and developed by parental communication of values [23]. Positive attitudes toward condoms and barrier methods, as well as discussions about safe sex, are particularly important to decreasing negative sexual health outcomes [24]. In fact, independent of additional cultural factors such as acculturation levels, sexual attitudes are an important factor in the sexual decision-making process, particularly for Latino boys [25]. However, due to limited research on the contextual facets of parental communication about safe sex among Asian and Latino families, it is unknown how attitudes regarding parental communication about safe sex influence sexual risk behaviors.

### 1.3. Safe-Sex Self-Efficacy

In line with the Theory of Planned Behavior, an individual's sexual self-efficacy as a component of perceived behavioral control involves the belief in one's ability to be involved in safe sexual action [12]. An emerging adult's self-efficacy gives them the confidence to practice safe sex; this confidence is communicated through the initial sex talk [26]. Furthermore, safe-sex self-efficacy, which is found to be associated with increased participation in safe sex practices [27,28], may be influenced by safe sex communication with sexual partners. In fact, self-efficacy about condom use communication is associated with condom use frequency [29]. Moreover, communication about safe sex with sexual partners is a difficult task for many young adults [30]. Family factors, including parent-child discussions about sex, may either negatively or positively influence condom use and sexual refusal self-efficacy among emerging adults in college. This effect may be further compounded by differences across racial and ethnic groups.

The current study aims to examine the relationship between parental sex communication and sexual behaviors and attitudes among three of the major racial ethnic groups in the U.S., including Asian, Latino, and non-Hispanic White young adults. Non-Hispanic White young adults were included for comparisons as the largest racial group in the U.S. and due to the higher prevalence of recent sexual activity than Asian young adults reported by previous research [31]. The inclusion of White participants also allows direct comparisons to previous research on racial/ethnic group differences. The following three hypotheses were tested: (H1) Asian and Latino young adults will be less likely to report parental communication about sex than their non-Hispanic White counterparts; (H2) parental communication about sex among Asian and Latino youth will be associated with more negative attitudes toward sexual communication (e.g., cultural taboo and efficacy to discuss safe sex with others) as well as lower safe-sex self-efficacy; and (H3) parental sex communication, negative attitudes toward sex communication (i.e., perceiving safe sex communication as a cultural taboo, uncomfortable, unhelpful, and/or to have a negative connotation/valence), and lower safe-sex self-efficacy will be related to higher sexual risk behaviors (i.e., inconsistent condom/barrier methods used, multiple sex partners, sexually transmitted infections) among both groups. Illuminating racial/ethnic group differences in the contextual factors of parental communication about safe sex as associated with attitudes about safe sex communication, safe-sex self-efficacy, and sexual risk behavior outcomes may provide guidance for developing culturally-driven interventions.

# 2. Methods

#### 2.1. Participants

After Institutional Review Board (IRB) approval was received to proceed with the data collection, an online survey was distributed among a sample of 261 young adults at a small liberal arts college in Southern California, in which informed consent was obtained

electronically. The analysis focused on 205 Asian (n = 63), Latino (n = 48), and non-Hispanic White (n = 94) young adults ( $Age\ M = 20.04,\ SD = 1.22;\ 67.8\%$  females; 70% sexually active). The participants recruited had a diverse sample of sexual and gender identities. See Table 1 for sample descriptions.

**Table 1.** Descriptives for major variables across racial/ethnic groups.

		Overall	Asian	Latino	White
Age, M (SD) LGBTQ, % Income, Med.		20.04 (1.22) 41.90 150–199,999 k/yr.	20.22 (1.18) 22.20 140–149,999 k/yr.	19.62 (1.07) 73.00 150–199,999 k/yr.	20.14 (1.28) 37.30 150–199,999 k/yr.
Female, %		67.80	76.20	42.60	77.20
<sup>a</sup> Parental education level, M (SD)		6.02 (1.30)	5.74 (1.45)	5.48 (1.62)	6.33 (1.01)
Parental communication about sex, %		44.80	39.70	69.60	67.70
<ul> <li>b Never received sex talk,</li> <li>M (SD)</li> <li>c Parental</li> </ul>		4.13 (2.33)	5.07 (2.19)	4.23 (2.39)	3.00 (2.04)
communication about sex frequency, M (SD)		1.96 (0.78)	1.54 (0.71)	2.00 (0.76)	2.21 (0.74)
sex requeries, in (62)	Never, %	30.7	57.9	28.3	18.7
	A few times, %	36.6	29.8	43.5	41.8
	A lot of times, %	27.3	12.3	28.3	39.6
<b>Cultural taboo of sex</b> , <i>M</i> ( <i>SD</i> )		3.61 (2.09)	4.68 (2.01)	4.09 (2.09)	2.78 (1.77)
Parental communication helpful, M (SD) Parental communication		3.50 (1.16)	2.96 (1.30)	3.13 (1.26)	3.77 (1.00)
negative valence/connotation, M (SD)		26.62 (11.61)	27.54 (11.02)	27.63 (12.12)	26.06 (11.82)
Parental communication comfort, M (SD)		3.96 (1.81)	4.42 (1.50)	3.63 (2.16)	3.88 (1.83)
Self-efficacy to discuss condom use, $M(SD)$		5.90 (1.32)	5.87 (1.33)	6.01 (1.19)	5.87 (1.35)
Self-efficacy to discuss condom use with a new partner, $M$ ( $SD$ )		6.03 (1.30)	6.05 (1.27)	6.14 (1.23)	5.98 (1.38)
Self-efficacy to refuse unsafe sex, M (SD)		4.64 (1.91)	4.61 (1.97)	5.41 (1.56)	4.44 (1.92)
Self-efficacy to insist on condom use, $M(SD)$		4.94 (1.87)	5.16 (1.69)	5.05 (1.86)	4.74 (2.00)
Global self-efficacy to use a condom, $M(SD)$		38.35 (7.56)	36.96 (6.99)	40.05 (8.07)	38.84 (7.73)
Sex initiation, % STI, %		69.30 7.80	76.40 7.40	84.40 4.50	83.80 14.90
Consistent condom use, M (SD)		3.78 (1.82)	4.10 (1.78)	4.00 (1.86)	3.48 (1.83)

a "parent's education level" response range: 1 = less than high school, 2 = GED, 3 = high school diploma, 4 = some college, no degree, 5 = associate degree, 6 = bachelor's degree, 7 = graduate degree. b "never received sex talk" response range: 1 = strongly disagree to 7 = strongly agree. Lower scores indicate that they most likely did receive a sex talk from their parents. c "frequency of parental communication" about safe sex response range: 1 = never, 2 = a few times (once or twice), 3 = a lot of times (more than twice).

#### 2.2. Procedures

Participants were recruited for this study following approval from the Institutional Review Board (IRB) at a small liberal arts college in Southern California. Recruitment efforts targeted emerging adult students aged 18–25. Recruitment methods included sending email invitations through student listservs from various clubs, organizations, and sports teams on campus. Interested participants were provided with information about the study and invited to participate through an online anonymous survey. Consent was obtained electronically from the participants at the start of the survey. They were assured that their responses would be kept confidential, given the sensitivity of the topic. The Qualtrics survey consisted of questions related to parental communication about sex, attitudes

toward sex communication, and sexual behaviors and attitudes. Participants received compensation for their participation, with the opportunity to enter a drawing for a USD 25 Amazon gift card or SONA credit.

#### 2.3. Measures

Through multiple assessments, participants were asked about their experiences with parental communication about safe sex as well as sexual behaviors. Demographic variables (age, gender, sexual orientation, race/ethnicity, income, and parent's educational level) were each assessed using single-item questions.

**Parental Communication about safe sex**. We used two separate items (adapted from the Parent–Adolescent Communication Scale [32]) to measure the prevalence of safe sex communication from parents. One assessment of parental communication about safe sex used a dichotomous response (no = 0, yes = 1; Were you given a "sex talk" by a parent or guardian in your youth?). The second assessment was a continuous statement of agreement ("I have not received the sex talk from my parents or a guardian") on a 7-point Likert-type response scale (from strongly disagree = 1 to strongly agree = 7). Additionally, we assessed the frequency of parental communication about safe sex (How many times have your parents (or primary caregiver) ever talked to you about sexual intercourse (i.e., oral, vaginal, and/or anal sex?), measured on a 3-point response scale (1 = never, 2 = a few times (once or twice), and 3 = a lot of times (more than twice)). Last, participants were also asked to identify the source of their first "sex talk" (i.e., From where did you first learn about sexual intercourse (i.e., oral, vaginal, and/or anal sex)? In other words, who first told you about sexual intercourse?) in which participants choose from a list of 22 possible sources of information (e.g., mother, father, health/sex education class, etc.).

Attitudes about safe sex communication. Attitudes toward parental communication about safe sex were assessed using 4 separate, individual indicators (i.e., helpfulness, comfort, negative valence/connotation, and perceiving communication about sex as a cultural taboo) using items adapted from the Parent-Adolescent Communication Scale [32]. Perceiving parental communication about safe sex as helpful (the sex talk provided helpful information; response range from 1 = strongly disagree to 5 = strongly agree) and comfortable ("I felt comfortable discussing sex with my parent/guardian"; responses range from 1 = strongly agree to 7 = strongly disagree) were assessed as agreement statements on Likerttype response scales. The negative valence/connotation of the parental communication was based on a composite score of 8 items (reliability  $\alpha = 0.93$ ) of agreement statements (*Did* your parents instill/convey any of the following combination of negative connotations around sex in the conversation?—"I felt fearful/embarrassed/anxious after the conversation"). Responses to individual items were on a 7-point Likert-type scale (from 1 = strongly disagree to 7 = strongly agree), with higher scores indicating higher perceived negative valence/connotations to parental communication about safe sex. Additionally, perceiving sex as a cultural taboo topic was measured through a single item ("Sex is considered a cultural taboo in my household, so I do not talk about it and my parents do not talk about it") of an agreement statement on a 7-point response scale (from 1 = strongly disagree to 7 = strongly agree).

**Safe-sex self-efficacy**. Items adapted from the Sexual Communication Self-Efficacy Scale [33] were used to assess safe-sex self-efficacy. Specifically, it was assessed in the following 5 separate measures as a participants ability to: (1) discuss condom use with any partner, (2) discuss condom use with a new partner, (3) refuse sex without a condom, (4) insist on using a condom, and (5) global self-efficacy to use condoms. Self-efficacy to discuss condom use with any partner ("I feel confident in my ability to discuss condom usage with any partner I might have"), discuss condom use with a new partner ("I feel confident in my ability to suggest using condoms with a new partner"), resist sex without a condom ("I would refuse to have sex if my partner doesn't use a condom"), and to insist on using a condom ("I insist on condom use when I have sexual intercourse") were measured through single items based on a 7-point response scale (from 1 = strongly disagree to 7 = strongly agree). Global self-efficacy to use condoms was assessed through a composite score of 7 items (reliability

 $\alpha = 0.84$ ) of agreement statements (e.g., "I feel confident in my ability to put a condom/barrier method/contraception on myself or my partner; I feel confident that I would remember to use a condom even after I have been drinking") on a 7-point response scale (from 1 = strongly disagree to 7 = strongly agree).

**Sexual risk behaviors**: Items adapted from the Condom Self-Efficacy Scale [34] were used to assess sexual risk behaviors, including inconsistent condom use, STI diagnosis, and multiple sexual partners, using three separate single items. A dichotomized question was asked to assess STI prevalence among participants (*Have you ever been tested positive for a sexually transmitted infection?*; no = 1, yes = 1). Inconsistent condom use (*Do you use condoms every time you have sexual intercourse?*) was based on a 6-point response scale (from 1 = never to 6 = always). To measure the number of sexual partners (*With approximately how many people have you had oral, anal, or vaginal intercourse with in your lifetime?*) participants were asked to provide a number of total lifetime sexual partners. Last, although not an outcome in the analyses of this study, sexual intercourse initiation (*Have you ever had sexual intercourse (i.e., oral, anal, or vaginal intercourse; no* = 0, yes = 1) was also measured as a descriptive characteristic of participants (see Table 1).

#### 2.4. Statistical Analyses

Using SPSS v.29, chi-square comparisons and ANCOVAs were used to compare differences in parental communication about safe sex across racial/ethnic groups. Linear and logistic regressions were used to assess the relationship between parental communication about safe sex and attitudes about safe sex communication, safe-sex self-efficacy, and sexual risk behaviors. ANCOVA and regressions controlled for age, gender, sexual orientation, income, and parental education level.

#### 3. Results

Descriptive statistics for all major variables of interest and demographics across groups can be seen in Table 1.

Hypothesis 1 examined racial/ethnic group differences in parental communication about safe sex. We expected to find that Asian and Latino participants would report a lower prevalence of communication in comparison to their White counterparts. According to chi-square comparisons of the dichotomous measure of parental communication about safe sex, Asian participants reported the lowest prevalence of parental communication about safe sex compared to Latino and White young adults ( $\chi^2 = 14.27$ , df = 3, p < 0.01). When examining the continuous Likert-scale measure of parental communication, ANCOVA results show that groups significantly differed in whether they had received a safe-sex talk from their parent, F = 10.68, df = 3, p < 0.001. Specifically, Asian participants endorsed the statement of not receiving a safe-sex talk from their parents more than White participants (MD = -2.07, SE = 0.37, p < 0.001). Latino participants did not differ significantly from Asian or White participants (p > 0.05). Moreover, post hoc analyses were used to identify the most frequently cited source of sex information across all groups. Prevalence estimates show that when asked where they first learned about sexual intercourse, Latino (14.6%) and White (34%) participants listed their mother and Asian (12.7%) participants listed sex/health education classes.

Additionally, post hoc analyses examined the context and negative valence of parental communication about safe sex. ANCOVA results revealed that White (M=3.77, SD=1.00) and Asian participants (M=2.96, SD=1.30) significantly differed on whether they perceived the parental communication about safe sex to have provided helpful information (F=5.77, df=2, p=0.004). Latino participants did not significantly differ from their Asian or White counterparts (p>0.05). Moreover, ANCOVA post hoc analyses of the negative valence/connotation within parental communication (i.e., embarrassment, fear, etc.) revealed that all groups similarly perceived parental communication about safe sex to have moderate negative valence/connotation (Asian M=27.54, SD=11.02; Latino M=27.63, SD=12.12; White M=26.06, SD=11.82; F=0.21, df=2, p=0.81).

Hypothesis 2 of the study proposed that Asian and Latino youth would report higher negative attitudes toward safe sex communication and lower safe-sex self-efficacy related to parental communication than their White counterparts. When examining the relationship between parental communication about safe sex and the perceived cultural taboo of sex through linear regressions, it appears to be unique among U.S. racial/ethnic minority young adults. Specifically, the continuous measure of parental communication about safe sex was associated with perceiving sex as a cultural taboo among Asian ( $\beta$  = 0.77, SE = 1.01, p = 0.03) and Latino ( $\beta$  = 0.52, SE = 0.22, p = 0.03) participants. Among White participants, the frequency of parental communication about sex significantly predicted not perceiving sex as a cultural taboo ( $\beta$  = -1.27, SE = 0.30, p < 0.001).

Among Latino participants, the continuous measure of parental communication significantly predicted being uncomfortable with parental communication about safe sex ( $\beta$  = 0.79, SE = 0.25, p = 0.01). Among White participants, the dichotomous measure of parental communication about sex ( $\beta$  = 1.84, SE = 0.60, p < 0.01) and frequent communication about sex with parents ( $\beta$  = -1.83, SE = 0.38, p < 0.01) significantly predicted comfort with the discussion about sex with parents. These associations were not significant for Asian participants (p > 0.05). Among Latino participants, parental communication about sex was associated with perceiving the conversation as unhelpful ( $\beta$  = -0.61, SE = 0.12, p < 0.01). Among Asian participants, the continuous measure of parental communication about sex ( $\beta$  = -0.59, SE = 0.25, p = 0.02) and more frequent communication ( $\beta$  = 1.20, SE = 0.49, p = 0.02) was related to being perceived as helpful. Parental communication about sex did not significantly predict perceiving the communication as negative in valence/connotation (p > 0.50).

According to linear regression results, parental communication about safe sex did not significantly predict self-efficacy to discuss the use of condoms with a partner among Asian ( $\beta = -0.71$ , SE = 1.03, p = 0.50) and White ( $\beta = -0.07$ , SE = 0.09, p = 0.30) participants. Among Latino participants, parental communication about safe sex significantly predicted lower self-efficacy to discuss using condoms with a partner ( $\beta = -1.57$ , SE = 0.50, p < 0.01). The frequency of parental communication about sex was also negatively related to self-efficacy to discuss using condoms with a partner among Latino participants ( $\beta = -0.95$ , SE = 0.41, p = 0.04). Moreover, among Latino participants, the continuous measure of parental communication about safe sex ( $\beta = -1.42$ , SE = 0.55, p = 0.02) and frequency of parental communication ( $\beta = -1.01$ , SE = 0.45,  $\beta = 0.04$ ) inversely predicted self-efficacy to suggest using condoms with a new partner. Parental communication did not predict self-efficacy to discuss using a condom with a new partner among Asian ( $\beta = -0.64$ , SE = 0.98,  $\beta = 0.52$ ) or White ( $\beta = -0.72$ , SE = 0.46,  $\beta = 0.13$ ) participants.

Parental communication about safe sex did not predict self-efficacy to refuse sex without a condom among any of the groups (Asian  $\beta = -0.95$ , SE = 1.49, p = 0.53; Latino  $\beta = -0.97$ , SE = 0.86, p = 0.28; White  $\beta = -0.24$ , SE = 0.67, p = 0.72). However, parental communication was inversely related to insistence on using condoms ( $\beta = -2.14$ , SE = 0.91, p = 0.03) among Latino participants only (Asian  $\beta = 0.05$ , SE = 1.33, p = 0.97; White  $\beta = 0.36$ , SE = 0.41, p = 0.61). Parental communication did inversely predict the total self-efficacy to use condoms scale among Latino participants ( $\beta = -12.26$ , SE = 3.66, p < 0.01), but not Asian ( $\beta = -1.97$ , SE = 5.41, p = 0.72) or White ( $\beta = 0.23$ , SE = 2.80, p = 0.92) participants.

Hypothesis 3 proposed that negative attitudes, lower safe-sex self-efficacy, and the parental communication associated with negative attitudes and lower safe-sex self-efficacy would be related to greater sexual risk behaviors. Associations between sexual risk behaviors (i.e., inconsistent condom use, STIs, multiple sexual partners) and all parental communication and self-efficacy variables were assessed across groups using multiple linear regressions and logistic regression for the outcome of STIs. Across all groups, no variables predicted STI incidence (p > 0.05). However, among White participants, sex as a cultural taboo significantly predicted STI prevalence ( $\beta = 0.67$ , SE = 0.33, p = 0.04).

Among Asian participants, lower parental communication about sex as a continuous measure ( $\beta$  = 1.01, SE = 0.37, p = 0.02), frequency of parental communication ( $\beta$  = 1.81,

SE = 0.64, p = 0.02), sex as a cultural taboo ( $\beta$  = -0.63, SE = 0.20, p = 0.01), and self-efficacy to refuse sex without a condom ( $\beta$  = 1.00, SE = 0.24, p = 0.001) significantly predicted consistent condom use ( $R^2$  = 0.74, SE = 1.19, df = 1, 13, p < 0.01). No predictors were significantly associated with consistent condom use among Latino or White participants (p > 0.12).

No major predictors were significantly related to the number of sexual partners among Asian participants (p > 0.05). However, self-efficacy to refuse sex without a condom significantly predicted the number of sexual partners among Latino ( $\beta = -4.05$ , SE = 1.45, p = 0.03) and White ( $\beta = 0.39$ , SE = 0.12, p = 0.002) participants. Moreover, the total measure of safe-sex self-efficacy to use condoms did not significantly predict any of the behavioral sexual risk outcomes among any of the groups (p < 0.05).

#### 4. Discussion

The overarching aim of this study was to examine differences in parental communication about sex across Asian, Latino, and White U.S. young adults, as well as its association with attitudes, self-efficacy, and sexual risk behaviors. The first hypothesis of this study posited that Asian and Latino young adults would be less likely to report parental communication about sex than their non-Hispanic White counterparts. This hypothesis was partially supported by the data, which showed that Asian youth had the lowest prevalence of having had a sex talk with a parent compared to Latino and White participants. This finding is consistent with previous data examining the limited sex communication between Asian American parents and youth [35]. White participants received the sex talk the most frequently, with Latino participants not differing significantly from Asian or White participants. Asian, Latino, and White groups differed significantly in the frequency of parental communication about sex, with the same pattern replicated. White participants reported the highest frequency of parental communication about sex, and Latino participants did not differ significantly from Asian or White participants.

In terms of content, the source of the sex talk for the total sample was most frequently cited as "mother". Moreover, Latino and White participants cited "mother", but Asian participants reported "sex/health education class". This reveals that Asian youth typically receive sexual health information from structured health education, which may be more accurate and lead to lower sexual risk behaviors and negative outcomes [36]. The quality of the sex talk was also analyzed, with White participants ranking conversations significantly higher on the perceived helpfulness of the information compared to their Asian counterparts. All three groups considered conversations to result in negative connotations, suggesting that parents broadly emphasize fear and negative attitudes toward sex. The lack of fathers as sources of parental communication about sex may be due to their low self-efficacy in discussing these topics [37]. Perhaps the limited range of sources for sexual health communication may contribute to a lack of substantive guidance on protective sexual behaviors [38].

The second hypothesis proposed an association between parental communication about sex, more negative attitudes towards sexual communication, and lower safe-sex self-efficacy among Asian and Latino young adults. The results of the study partially supported this hypothesis. Among Latino and Asian participants, a lack of parental communication about safe sex was significantly related to perceiving this topic as taboo. This result seems to suggest that parental communication about sex is in line with conservative cultural values regarding the topic of sex. Frequent negative conversations concerning sex are likely to further foster the impression that sex is a cultural taboo in households among these groups. Alternatively, among White young adults, frequent parental communication reveals a lower perceived taboo, suggesting more encouragement of safe sex communication with others. Previous work has found that incongruent attitudes and values toward communication about sex between parent—child dyads may influence youth to be less likely to communicate about safe sex with a future partner [39]. This emphasizes the importance of studying parent—child communication about sex beyond just the frequency of communication as

well as the importance that positive attitudes toward sex communication are important for future safe sex behaviors.

When examining the contextual results of parental communication about sex across groups, further nuances were revealed. Among Latino young adults, parental communication significantly predicted being uncomfortable during the conversation and perceiving it as unhelpful. More specifically, this appears to suggest that a lack of parental communication about safe sex among this group may be partially influenced by perceiving this topic as a cultural taboo, uncomfortable to discuss, and subsequently unhelpful. Conversely, parental communication was found to be helpful among Asian young adults, particularly with more frequent conversations. Among White participants, although the dichotomous measure of parental communication about sex was associated with being uncomfortable during the conversation, more frequent communication about sex with parents significantly predicted greater comfort with the discussion. This can be explained by habituation in that an initial conversation about sex is likely to be uncomfortable the first time, but it will become less arousing and stressful with each conversation [40]. Perhaps frequent sexual health communication may enhance perceived social support, which subsequently reduces negative views of sex or increases self-efficacy [41]. Asian and Latino participants reported a lower frequency of parental communication compared to their White counterparts (see Table 1), perhaps further driving perceived negative messaging about the topic.

Among Latino participants, having conversations with their parents regarding sex predicted a lack of self-efficacy to discuss safe sex with a partner. When they indicated that they did talk to their parents, they also indicated that they had less confidence to discuss condom use with a partner. Also, the more frequently they communicated with parents about sex, the less confident they reported being about discussing using condoms with a partner. This could be explained by the nature of the parental conversations. If these conversations suggest participants should view sex as taboo in their household, they may be less confident in their ability to approach the topic with partners. Additionally, our results revealed that, only among Latino young adults, communication with parents about sex was related to being less likely to insist on condom use. Among Latino young adults, communication with parents about sex was also related to lower safe-sex self-efficacy to use condoms. In sum, parental communication about sex led to many negative attitudes surrounding safe sex and self-efficacy among Latino participants but not among White or Asian participants. To investigate why this outcome is different for Latino participants, further research is needed on the content of the conversations Latino young adults are having with their parents as well as the way information is being delivered by parents. It could be the case that these conversations are discouraging Latino children from having open communication about sex and leading them to feel ashamed to talk about safe sex [42].

In the third hypothesis, we hypothesized that negative attitudes toward sex communication and lower safe-sex self-efficacy would predict higher sexual risk behaviors among Asian and Latino groups. The results partially supported this hypothesis. Specifically, the frequency of parental sex communication as well as the self-efficacy to refuse sex without a condom were positively correlated with consistent condom use among Asian participants. The protective outcomes of parental sex communication may not be available to Asian young adults (see Table 1), which may be problematic for engagement in safe sex behaviors such as frequency of condom use [11].

However, among the same group, perceiving sex as a cultural taboo was negatively correlated with consistent condom use. These findings suggest that, for Asian young adults, the cultural attitudes surrounding sex may further erode the protective influence of parental safe-sex communication on sexual risk behaviors. Taboo outlooks on sex among Asian parents are shown to facilitate restriction-oriented parental sex communications with minimal information on biological processes and potential sexual outcomes [35]. It is fitting, then, that young adults who do not receive informative parental sex communications may not receive information on risky sex behaviors as well as guidance for avoiding such behaviors. This may clarify our findings, in which perceiving sex as a cultural taboo

was related to increased sexual risk behaviors in the form of reduced condom use for this population.

Among Latino participants, we found that the self-efficacy to refuse sex without a condom had a significant negative association with the number of sexual partners. This suggests that having high self-efficacy is protective against sexual risk behavior for the Latino population. However, among White participants, the same self-efficacy predicted a higher number of sexual partners. Contrary to our hypothesis, this finding may suggest that other forms of self-efficacy or perceived behavioral control (e.g., self-efficacy to refuse unsafe sex as an emotional response, self-efficacy to resist unsafe sex under peer pressure) are protective among White young adults [43]. In regard to contracting STIs, perceiving sex as a cultural taboo was the only cause of STI prevalence, but only for the non-Hispanic White group. This finding suggests that viewing sex as a cultural taboo increases sexual risk behavior among the White population. Perhaps perceiving sex as a cultural taboo is detrimental to the protective effects of self-efficacy among all populations, as this result was also found among Asian young adults. Providing parental communication about safe sex that does not enhance negative attitudes toward the topic may be facilitated by educational interventions aimed at building stronger self-efficacy and knowledge about the topic among parents.

#### 5. Limitations and Future Directions

Despite the recruitment of three major ethnic groups and the attempt to recruit a diverse racial/ethnic sample for this study, we were unable to examine differences across gender and sexual orientation groups. It is important to note that previous research has found that parent—child gender dyads and the sexual minority status of children influence communication approaches among Latino and Asian families [15,19]. While we aimed to focus on the sexual behavior of racial and ethnic minorities by including three major ethnic groups in our research, the sample size of Black participants was too small to be included in the study. This limitation represents a major obstacle to the inclusion of other underrepresented groups (e.g., Black young adults), which may perpetuate the biases that occur in research. Therefore, recruiting a larger and more diverse sample should be a priority for future data collection focused on racial/ethnic group differences.

Moreover, due to the different safe-sex strategies across sexual orientation groups, it is important to examine self-efficacy related to safe-sex practices across multiple barrier strategies and not just condom use. Specifically, our measure of safe-sex self-efficacy focused on the condom as the primary barrier method. Further research could examine other contraceptive measures. We suggest future research replicate our findings among a larger, more diverse sample of gender and sexual orientation identities. Moreover, future work must employ assessments that measure a global scale of safe-sex self-efficacy. Finally, due to the unique culturally informed messages among Asian and Latino families, it is important that interventions developed to guide parental communication about safe sex within these groups be able to balance the importance of cultural values and accurate sexual health knowledge. Of particular interest may be reducing perceived cultural taboo topics of sex, as this may provide an avenue to increase better sexual health communication, increase safe-sex self-efficacy, and lower sexual risk behaviors.

**Author Contributions:** Conceptualization, P.C. and L.A.M.; methodology, L.A.M.; software, P.C.; validation, P.C. and L.A.M.; formal analysis, P.C.; investigation, P.C. and L.A.M.; resources, P.C.; data curation, P.C. and L.A.M.; writing—original draft preparation, L.A.M., E.F., C.C. and C.S.; writing—review and editing, P.C.; visualization, P.C.; supervision, P.C.; project administration, P.C. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

**Institutional Review Board Statement:** The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board of Occidental College (protocol code SP20-004-MANA on 14 May 2020).

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data requests are made available by contacting the corresponding author.

Conflicts of Interest: The authors declare no conflict of interest.

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