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Media multitasking: Issues posed in measuring the effects of television sexual content exposure

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Abstract

Adolescents who see more sexual content on television are more likely to initiate intercourse over the subsequent year. The present study hypothesized that use of the internet while watching television would moderate this relationship. Internet use might either strengthen or weaken the association between television-viewing and sex; various theories conflict in their predictions. A national sample of 1,762 12–17 year olds completed a telephone survey at baseline and one year later. Using multivariate logistic regression analysis, baseline exposure to sexual content on television was used to predict intercourse initiation by follow-up among baseline virgins. The equation controlled for potentially confounding characteristics and tested for an interaction between sexual content exposure and self-reported multitasking. Half of youth reported using the internet while watching television. The interaction between multitasking and sexual content exposure was significant; exposure to sexual content on television was more strongly related to sexual initiation among multitaskers. Divided attention may allow television messages to “slip past the radar” of viewers who would reject these messages if they devoted cognitive resources to critically examining them. Media multitasking is likely to become more prevalent as new media continue to be introduced. Future studies of television-viewing effects may need to assess multitasking to avoid missing effects in this important subgroup of viewers.

Introduction

The media environment is rapidly becoming more complex. Along with an increasing diversity in content there are many more ways one can obtain that content. As the number of television programs received in homes moves from three well into three-digits, television content can be viewed on computers, iPods, and telephones, as well as television sets. The variety of content available on the Internet is practically limitless, and includes what were previously “other media” such as music, television shows, games, and films. With this large array of information, images, and messages to explore has come a tendency for youth to squeeze more media use into less time. A survey conducted by Kaiser Family Foundation in 2005 (Roberts, Foehr, & Rideout, 2005) found that youth ages 8 to 18 years fit 8.5 hours worth of exposure to media into about 6.5 hours of actual time using media per day. They do so by multitasking, using two or more forms of media simultaneously. The same report estimated that about one quarter of young people’s media time is spent in this manner. Among youth in grades 7 through 12, four out of five report that they use other media while primarily watching television.

A primary goal of the present study was to examine the implications of this trend for media effects; use of other media while watching television might moderate associations between viewing and behavior. In an earlier publication, we examined the relationship between

adolescents' exposure to sexual content on television and their subsequent initiation of intercourse (Collins et al., 2004). A key period of sexual exploration and development occurs during adolescence. During this time, individuals begin to consider which sexual behaviors are enjoyable, moral, and appropriate for their age group (LeVay & Valente, 2003). Many teens become sexually active during this period – currently, forty-six percent of high school students in the U.S. have had sexual intercourse (Center for Disease Control, 2002). Although intercourse among youth is common, most sexually active teens wish they had waited longer to have sex (The National Campaign to Prevent Teen Pregnancy, 2002), suggesting that sex is occurring before youth are prepared for its consequences. Further evidence of this is provided by public health data. Each year, one case of a sexually transmitted disease (STD) is diagnosed for every four sexually active teens in the U.S. (Institute of Medicine, 1997), and the U.S. rate of teen pregnancy is among the highest of all industrialized countries (Singh & Darroch, 1999). Unplanned pregnancy and sexually transmitted diseases (STDs) are more common among those who begin sexual activity earlier (Koyle, Jensen, & Olsen, 1989).

One contributor to these behavioral and health problems may be television-viewing. Sexual behavior is strongly influenced by culture (Delamater, 1981; Nathanson, 1991) and television is an integral part of U.S. teen culture. The average youth watches about three hours of TV daily (Roberts, Foehr, Rideout, & Brodie, 1999). The messages he or she encounters there are highly likely to involve sex. According to a recent content analysis of a representative sample of programming from the 2004–5 television season, sexual content appears in 70% of all television programs. Programs with sexual content average five scenes per hour with sexually-related material. Talk about sex is found more frequently (68% of all programs) than portrayals of sexual behavior (35% of programs). About one in seven programs (14%) that include sexual content also include a portrayal of the risks and responsibilities of having sex (e.g. getting pregnant, using condoms) (Kunkel, Eyal, Finnerty, Biely, & Donnerstein, 2005). According to social learning theory, exposure to sexual messages without reference to potential negative consequences or modeling of responsible sexual behavior should increase the likelihood of youth having sex (Bandura, 1986).

We tested this hypothesis by conducting a national longitudinal survey of 1,792 12–17 year olds (Collins et al., 2004). At baseline and one-year follow-up, participants reported their television viewing habits and sexual experience, and responded to measures of more than a dozen factors known to be associated with adolescent sexual initiation. Television viewing data were combined with results of a content analysis to derive measures of exposure to sexual content. Multivariate regression analysis indicated that adolescents who viewed more sexual content at baseline were more likely to initiate intercourse over the subsequent year, controlling for respondent characteristics that might otherwise explain this relationship. The size of the adjusted intercourse effect was such that youth in the 90th percentile of TV sex viewing had a predicted probability of intercourse initiation that was approximately double that of youth in the 10th percentile, across all ages studied.

The present study hypothesized that use of the internet while watching television would moderate this relationship. Although other forms of media are also used while watching television (Foehr, 2006), we focused on the internet because it is likely that pairing of these two media will increase as distinctions in the technology delivering internet access and television content blur. The message-learning approach to media effects suggests that multitasking will reduce the association between television viewing and behavior. This perspective, grounded in the early theories of persuasion developed at Yale, makes the logical argument that in order for a message to influence the viewer, it must be attended to and understood (Hovland, Janis, & Kelley, 1953). Because the brain cannot process two

messages simultaneously (Koechlin, Basso, Pietrini, Panzer, & Grafman, 1999; Meyer & Kieras, 1997; Pashler, 2000), multitasking necessarily means that less attention and processing is devoted to what is presented on television. According to the message-learning approach, such conditions should result in more limited, if any, exposure effects. If a television is on but no one is watching or listening, it should not matter whether or not there is sex depicted, “viewing” will have no effect.

More recent theories of media effects and persuasion focus less on viewers learning the content of messages and more on how they process and respond to portrayals. While viewers must devote some minimum amount of attention to a television message for it to have an impact on them, it is unclear how much attention is needed to constitute “exposure” from this perspective. For example, a few studies have shown that messages processed subliminally have an influence on attitudes (albeit the type and extent of such effects may be limited to simple liking of the stimulus itself, rather than changes in views about an issue) (Krosnick, Betz, Jussim, & Lynn, 2002; Kunst-Wilson & Zajonc, 1980). Subliminal influence data indicate that as long as a message is perceived, even outside of awareness, it can have an impact. Other studies indicate that messages that are processed automatically, with very little thought about the content being communicated (“peripheral processing”) can be persuasive (Petty & Cacioppo, 1986). These two lines of research suggest that the limited attention that results from multitasking may be sufficient for message exposure. If so, then divided attention may actually foster *stronger* effects of exposure by limiting opportunities for counterarguing (Petty & Cacioppo, 1986; Petty & Wegener, 1997). That is, youth who are paying less attention may be less likely to apply a skeptical eye to unrealistic portrayals of sex and its consequences.

A third way in which multitasking might moderate exposure effects is by altering the informational context for television messages. The internet is interactive and it is possible that when they are multitasking what youth are doing online is looking for more information about what they are watching on television. In one Kaiser Family Foundation survey, 52% of young multitaskers said they go online “to do something related to what they are watching.” One in ten youth did this “often” and nearly one in five did it “sometimes” (Roberts et al., 2005). This might include a variety of activities, including looking up names of actors or voting in a poll, but it probably also includes finding related content that might support or refute the messages in the content on television. For example, in one of our studies we looked at teens’ beliefs about condoms following exposure to an episode of *Friends* in which a character repeatedly stated that condoms are 97% effective. Young viewers who were watching with a computer and an open web-link might well have typed “condom effectiveness” into their web browsers to see what turned up. If they had, that information would almost certainly have altered (strengthened or weakened) their response to that aspect of the episode (Collins, Elliott, Berry, Kanouse, & Hunter, 2003).

In summary, use of the internet and television at the same time might either decrease or increase the relationship between sexual content exposure and sexual initiation, depending on the amount of attention that is paid to the television, the amount of processing viewers engage in, and the kinds of things they do while online in this situation. To gain some insight into these issues, we updated our prior analysis (Collins et al., 2004), testing for an interaction between exposure to sexual content and multitasking, and paying particular attention to the direction of the interaction.

A secondary aim of the present study was to describe youth who use the Internet while watching television in terms of both demographics and some of their other media-related activities. There is very little data on this topic. One prior study looked at youth whose multitasking involves use of a variety of different media, not just a combination of television

and the internet. They found that youth who use multiple media simultaneously are more likely to be sensation seekers, a personality trait that describes individuals who seek novel and exciting experiences. The same study also found that girls are more likely to media multitask than boys and that media multitaskers are heavier users of media overall (Foehr, 2006). This latter association is perhaps unsurprising given that more time with media almost necessitates multitasking, considering average amounts of media use among youth and limits on waking hours. However, it is also consistent with studies that find, for example, that heavier television viewers are heavy users of music and print (Roberts & Foehr, 2004). Strong correlations between use of various media suggest that there may be “super users” of media who use more of everything, rather than substituting one medium for another in a total media diet. In the present study, we attempted to replicate prior findings regarding differences between media multitaskers and non-multitaskers according to gender, sensation-seeking, and time spent with each medium, using our more restricted definition of multitasking (the simultaneous use of television and the internet). We also tested for differences in the prevalence of multitasking by age and race, and for relationships between multitasking and specific patterns of television use. The latter included level of involvement while viewing and various ways of blending television use with social interaction. Based on the hypothesis that multitaskers are super-users, we expected to find that they are more involved viewers and more likely to integrate viewing with their social relationships and interactions.

Methods

Details of our methods have been published in prior papers (Collins et al., 2004; Collins, Elliott, & Miu, In press) thus, only an overview is given here.

Procedure

We conducted a national telephone survey in Spring 2001 and re-interviewed the same group one year later, in Spring 2002. The survey measured television viewing habits, sexual knowledge, attitudes, and behavior, and a broad set of demographic and psychosocial variables shown to predict sexual behavior or television viewing habits in previous research.

A list of households with a high estimated probability (37.5%) of containing a teen aged 12–17 was purchased from Survey Sampling Incorporated. At the time of the baseline telephone interview, we briefly surveyed parents to determine household composition. An adolescent participant was then randomly selected from among all household members in the age range of 12–17 years. Parental consent for the adolescent’s participation, and then the adolescent’s assent, were obtained prior to the interview.

Sample

We obtained an overall completion rate at baseline of 54% ($n = 2,003$). The refusal rate was 36% among households determined to be eligible, consistent with other telephone surveys on less sensitive topics. At follow-up, we retained 88% of the baseline sample, resulting in a final sample of 1,762 adolescents. This longitudinal sample was 48% female, 77% white, 13% African-American, 7% Hispanic, and 4% Asian or other race. Among 33% of the sample, at least one parent had a college degree, 64% had a parent who had been otherwise educated beyond high school. Seventeen percent had ever had intercourse at baseline, 29% by follow-up.

Measures

Exposure to Sexual Content on TV—Three measures reflected the content of television viewed at baseline: exposure to sexual content, exposure to portrayals of sexual

risks or the need for safety, and relative exposure to sexual behavior versus talk about sex. These measures were based on a set of 23 programs. As part of the baseline survey, teens indicated the frequency with which they watched each of these programs during the prior television season (“since school started last Fall”) on a four-point scale ranging from “never” to “every time it’s on.” We derived the exposure measures by multiplying self-reported viewing-frequency for each program by one of three indicators of the average content in an episode of that program, and summing across programs.

Methods developed by Kunkel, Eyal, and Biely (2003) as part of a much larger study of television sexual content were used to determine the sexual content in a sample of episodes from the 23 programs. A minimum of three episodes and a maximum of 14 were taped and coded for each program. Coders unitized the episodes into distinct scenes, indicating the presence of any of the following types of 1) sexual behavior: physical flirting, passionate kissing, intimate touch, intercourse implied, intercourse depicted, 2) sexual talk: about own/others’ plans or desires, about sex that has occurred, talk toward sex, expert advice, and other, and 3) talk or behavior depicting risks or the need for safety in regard to sexual activity: abstinence, waiting to have sex, portrayals mentioning or showing condoms or birth control, and portrayals related to AIDS, STDs, pregnancy, or abortion. These three categories of content were not exclusive of one another – a given scene could contain all or none of these broad categories. Raters also coded the degree of focus (major or minor) on sexual behavior, talk, or risks in each scene. Highly trained and experienced raters from Kunkel’s larger study coded our data. Inter-rater reliabilities for the larger study ranged from 89 – 100% for the sexual content variables employed in the present study (Kunkel et al., 2003).

For each television series studied, amount of sexual content was calculated as the average number of scenes per episode containing a major focus on sexual behavior, plus the average number of scenes containing a major focus on talk about sex. Proportion of sexual content that included sexual behavior was measured by dividing the average number of scenes that contained a major focus on sexual behavior by the average number of scenes with any sexual content for each episode. Risk and safety content was the average number of scenes per episode containing any such portrayal, whether the focus was major or minor. Because sexual risks and the need for safety were rarely portrayed, using only those scenes with a major focus would have caused the risk measure to focus unduly on a handful of programs and episodes.

After weighting by viewing frequency and summing across programs, the three measures were standardized to a mean of 0 and standard deviation of 1.

Frequency of Multitasking—This measure was a single item specific to the combination of internet and television use. Participants were asked, “How often do you use the Internet at the same time that you are watching TV?” Responses were measured on a 1–4 scale with labels of never, rarely, sometimes, and often.

Sexual Behavior—Questions assessed behavior with someone of the opposite sex. Intercourse experience at both baseline and follow-up was measured with the item “Have you ever had sex with a boy/girl? By sex we mean when a boy puts his penis in a girl’s vagina” (yes/no).

Time on the Internet—Participants reported how much time they spend “surfing” the Internet on a typical day. Responses were on a 1–4 scale with labels of none, less than an hour, 1–2 hours, or 3 hours or more.

Average Hours of Television Viewing—We measured time spent watching television with a set of five items tapping hours of viewing on various days of the week and at different times of day. Responses were averaged to create a continuous indicator of average viewing time ($\alpha = .70$).

Covariates—Other covariates were also measured as part of the baseline interview. They included basic demographics as well as several indicators of social environment known to predict initiation of coitus. We also assessed a number of personal characteristics that are known correlates of adolescent sexual behavior.

Other Media-Related Measures—Participants described the frequency of engaging in a number of different activities we expected to correlate with multitasking. Responses to all of these were made on 1–4 scales labeled never, rarely, sometimes and often. The activities were: talking on the phone while watching television, watching television with friends, chatting on the internet about television shows, and searching the internet for more information about something seen on television. Chatting in websites for specific television shows was also reported, but as yes or no. Involved viewing of television was measured with the average of three items: “How often do you get very involved in the TV shows you watch and feel what the characters are going through,” “How often do you think about how characters on TV shows are similar to you,” and “While watching TV, how often do you think about how the shows compare to your own life?,” each rated on a response scale of one (never) to four (often); $\alpha = .76$.

Analyses

One hundred seventy-five respondents declined to answer some or all of the sexual behavior questions, and were excluded from analyses. To control for sexual behavior at baseline, the analysis sample was also restricted to baseline virgins ($n = 1,292$). We used logistic regression in all tests, as well as weights accounting for nonresponse and slight deviations in representativeness of the baseline sample compared to U.S. census figures. There was no differential attrition at follow-up to account for in our analyses.

Imputation—A small number of respondents had missing data on one or more predictor variables. Although the percentage missing on any given variable was less than 3%, listwise deletion of cases would have resulted in significant sample loss in our main multivariate analyses. To avoid any bias this might introduce in our results, we imputed missing data on these predictors (Little & Rubin, 1987).

Results

Multitasking and Its Predictors

We find that just under half of all adolescents in our sample report ever combining use of the internet with television viewing. Among these multitaskers, the frequency with which they engage in this activity is about evenly distributed across the categories “rarely,” “sometimes,” and “often” (see Table 1). Given the essentially bimodal distribution of this variable, the remainder of our analyses treated it as dichotomous, differentiating those who ever multitask in this manner from those who never do so. Table 2 shows some of the characteristics of these two groups. We find no difference in the rates of multitasking by gender and age, but White youth may be somewhat more likely to multitask than youth of other racial and ethnic backgrounds ($p = .06$). There are no differences in multitasking according to school performance or parents’ education level (see top of Table 3). However, multitaskers receive significantly higher scores on sensation-seeking than non-multitaskers.

The bottom of Table 3 shows differences in the media use patterns of multitaskers as compared to other youth. Multitaskers spend more time with the internet, about 1–2 hours in a typical day, while other youth spend less than one hour, on average. Multitaskers also spend considerably more time with television, and are exposed to much more sexual content on television. The z-score scaling of these two variables allows us to see that multitaskers differ by one-quarter to one-third of a standard deviation; multitaskers spend more time than average with television and are exposed to more sexual content than average, while their non-multitasking counterparts fall below the mean on these factors. Moreover, multitaskers are more involved viewers than are others. Finally, their multitasking habits are reflected in all of the other media use behaviors we examined: multitaskers spend more time combining television with socializing, more often chat on the internet about television, and are nearly twice as likely to go to chat rooms specific to particular shows. They also use the internet to search for information about things they see on television more often than do non-multitasking youth.

Relationship between Multitasking and Television Effects

Table 4 shows the results of the regression model predicting intercourse initiation from exposure to sexual content on television, multitasking, and their interaction. The model controls for total time with television and with the internet, as well as a diverse set of factors previously demonstrated to predict intercourse initiation. As the table shows, there is a significant main effect of sexual content exposure qualified by an interaction between such exposure and multitasking (std beta = .49, $p = .02$). The positive beta for the interaction indicates that exposure to sexual content on television is more strongly related to sexual initiation among multitaskers, that is, among those who use the internet while watching television. It is also of interest that the effect associated with time spent on the internet overall is negative. In general, those who spend more time on the internet are less likely to initiate intercourse. The effects of other covariates are consistent with our previously published findings. Our addition of the internet use and multitasking variables, as well as the interaction between multitasking and exposure to sexual content had little impact on their values, indicating they are independent of these other factors.

In an attempt to explore empirically the process behind the significant interaction effect, we added the indicators for using the internet to chat about television and using the internet to get information about something seen on television to the model (in turn), along with indicators for their interactions with multitasking. If obtaining additional information from the internet is responsible for the effect of multitasking on sexual content exposure, then we would expect the coefficient for the content by multitasking interaction effect to be reduced by these additions, and the interactions themselves to be significant (Muller, Judd, & Yzerbyt, 2005). The interaction between multitasking and chatting on the internet about television was marginally significant (std beta = .38, $p = .09$). However, it did not reduce the coefficient for the multitasking by exposure interaction (std beta = .55, $p = .01$). The interaction for using the internet to get information was not significant (std beta = .21, $p = .31$).

Discussion

The main goal of the present study was to test whether use of the internet while watching television moderates the association between sexual content exposure and intercourse initiation, and if so, in what way. We found that the strength of the link between exposure and sex differs among youth who multitask than those who do not. These results make it clear that studies of television viewing effects may need to use more complicated methods of assessing exposure than they have done in the past, or they may miss important effects. Historically, it was possible to measure exposure to a particular kind of content, such as

violence, by simply measuring hours of viewing. There were few channels available, and they showed mostly the same kind of programming (Gerbner, Gross, Morgan, & Signorielli, 1986). More recently, research has used measures that link viewing amounts to the specific messages contained in what is viewed (Brown et al., 2006; Collins et al., 2004). It may be that it will be necessary in the future to also measure what else viewers are doing while they watch.

The specific form of the interaction suggests that, contrary to what one might intuit, the divided attention that results from multitasking increases the association between what is viewed and the viewers' later behavior. Youth who multitasked while they watched television were (if the effect is causal) more affected by viewing sexual content, not less. While this may not be intuitive to a lay person, it is consistent with views of media effects and persuasion that focus on viewers' cognitive response to messages as a key part of the social learning process (Petty & Cacioppo, 1986; Petty & Wegener, 1997). Lack of attention may allow messages to "slip past the radar" of viewers who might reject these messages if they devoted more cognitive resources to critically examining them. Interestingly, our data show that multitaskers are more involved viewers than other youth. However, our measure does not allow us to determine whether this involvement carries them deeper into messages, or leads them to examine and reflect critically upon message content. If the latter, it may be that divided attention resulting from multitasking interrupts this process.

It is also possible that the stronger association between content exposure and behavior is a function of the content encountered online. We found clear indication that multitaskers use the internet in part to get more information about what they see, both through chatting and web searches. We cannot determine from our data if these searches are the same ones that happen simultaneous with viewing, or what specific kind of information is being sought or discussed. Moreover, we did not obtain evidence that our measures of information-search mediated the multitasking by exposure interaction. Thus, it remains unclear why multitaskers experience stronger effects of exposure, we only know that they do so.

Our data suggest it will be important to learn more about the basis of this effect, since multitaskers are also heavier users of television and more exposed to sexual content than others. We also found that, like one prior study of media multitasking that looked at the phenomenon across all media, sensation seeking personality predicts combined use of television and the internet. It is likely that this is a function of the greater level of stimulation sought by sensation seekers in all aspects of their lives (Zuckerman, 1996, 2006). Rather than simply searching for more stimulating content on television multitaskers also use more content at once to achieve greater stimulation.

Unlike prior work, we found no difference between boys and girls in likelihood of multitasking. The prior study looking at this issue used a continuous measure of amount of time spent multitasking, and it is possible that our simpler measure of "any" versus "none" did not capture differences in amount of multitasking by gender. It is also possible that the difference stems from the specific kind of multitasking we explored. Perhaps boys and girls pair the internet with television equally often, but only girls watch television and read at the same time. Teenage girls spend more time reading books than do boys (Roberts & Foehr, 2004).

We also found some suggestive evidence that White youth may combine internet use with television viewing more often than youth from other racial/ethnic backgrounds. This may be a result of economic factors. It is possible that Whites in our study were more likely to own a computer or to have one located near a television set in their homes, and this would affect their ability to multitask.

There are several limitations to the findings described in this paper, including our inability to determine with any certainty the process underlying the stronger association between exposure to content and sexual initiation among multitaskers. Future research that would shed light on this issue might include laboratory or field studies in which the content encountered online is measured, along with that viewed on television. Laboratory studies might also attempt to measure the amount of attention and cognitive response to television content that occurs during multitasking, and whether it differs from that which occurs when viewing is the only activity in which individuals are involved. In spite of this limitation, the present study does shed considerable light on the question of whether using the internet while watching television limits exposure to such an extent that content has little or no effect on behavior. It is clear that it does not. Results also reveal something about the characteristics of multitaskers and the ways in which they use television and the internet, in addition to multitasking. These data suggest that multitaskers are “super users” of media, consuming more media, sharing their media use with others, and becoming more involved in what they view. As such, they are an important subgroup to follow in future research.

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Table 1

Frequency of combining internet and television use (multitasking)

Frequency	Percent of sample
Never	52
Rarely	15
Sometimes	18
Often	15

Table 2

Percent of youth ever combining television and internet use (multitasking) by demographic characteristics

Characteristic	Percent Who Are Multitaskers
Gender	
Female	52
Male	48
Race/Ethnicity*	
White	52
Hispanic	40
African-American	38
Other	42
Age	
< = 12	43
13	46
14	52
15	52
16	48
> = 17	48

* p = .06, prevalence of multitasking differs marginally by this characteristic.

Table 3

Characteristics of youth ever combining television and internet use (multitaskers) compared to those who do not multitask (means)

Characteristic	Multitasker		Response Scale
	No	Yes	
Personal Characteristics			
Parent Education	3.23	3.38	1–6
School Grades	4.10	4.18	1–5
Sensation Seeking	2.07	2.23*	0–3
Media Use			
Time on Internet	1.76	2.28***	1–4
Time with Television	– .12	.09***	Z-score
Exposure to Sex on Television	– .15	.15***	Z-score
Viewer Involvement	2.52	2.67***	1–4
Phone While Viewing	2.48	2.85***	1–4
Viewing with Friends	2.44	2.72***	1–4
Internet Chat About TV	1.65	2.20***	1–4
Internet Search About TV	1.81	2.36***	1–4
Television Chat Rooms	.11	.19**	0–1

Note. Multitaskers and non-multitaskers differ.

*
p < .05.

**
p < .01.

p < .001.

Table 4Multivariate Regression Equation Predicting Intercourse Initiation by Wave 2 (Std Beta)^a

Baseline Predictor	Std Beta
TV Exposure to:	
Sexual Content	.34 *
Sexual Risk or Need for Safety	-.15
Sexual Behavior vs. Talk	.04
Multitasking ^b	-.14
Exposure to Sexual Content X Multitasking ^c	.49 *
Time on Internet ^a	-.38 **
Time TV-Viewing	.08
Covariates:	
Age in Years ^a	.45 ***
Female Gender ^a	-.19
Hispanic ^{a,d}	-.55
African American ^{a,d}	.46
Has Mostly Older Friends ^a	.67 *
Lives with Both Parents ^a	-.53 *
High Parent Education	-.19 **
Parental Monitoring	-.41 **
Parent Disapproval of Sex ^a	-.33
Low School Grades	.31 *
Religious	-.31 **
Good Mental Health	-.42 *
Sensation Seeking	.45 ***
Deviant Behavior	.13 *

^a Age, time on the Internet and dichotomous variables were not standardized because their scales are interpretable in unstandardized form.

^b Ever uses Internet while watching television.

^c The interaction term was entered in a separate equation so that main effects would remain interpretable for the sample as a whole.

^d The comparison group was Non-Hispanic whites and races other than Hispanics and African-Americans.

* p < .05.

** p <= .01.

*** p <= .001.