

## The Effects of Sex in Television Drama Shows on Emerging Adults' Sexual Attitudes and Moral Judgments

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*This study tests the effects of exposure to sexual television content on emerging adults' sexual attitudes and moral judgments. One hundred and ten college freshmen were randomly assigned to view shows that portrayed either positive or negative consequences of sexual intercourse. Results indicate that exposure to shows that portray negative consequences of sex leads to more negative attitudes toward premarital intercourse and to more negative moral judgments of characters engaged in this behavior. Results were observed immediately after the viewing and persisted 2 weeks later. Findings are discussed in light of social cognitive theory and previous media effects research.*

Sexual behavior implicates important public health concerns in the United States. Youth between the ages of 15 and 24 have the highest rates of STDs (Fox, 2004) and represent about half of the estimated 19 million new STD infections each year (CDC, 2006b). Moreover, the proportion of youth between the ages of 13 and 24 diagnosed with AIDS continues to increase (CDC, 2006a). Seventy percent of sexually active young adults report having taken a pregnancy test or had a partner who did so. Likely contributing to these alarming data are risky sexual behaviors in which emerging adults have been found to engage. More than half of college students have reported engaging in casual sex—that is, sex outside of established romantic relationships—which is often spontaneous and involves drugs and alcohol (Grello, Welsh, & Harper, 2006). In one study, nearly one-third of 18–19 year olds reported having engaged in sexual behaviors with two or more partners in the past 12 months (Mosher, Chandra, & Jones, 2005). Despite the risks associated with these encounters, which generally involve little to no familiarity with a partner's sexual health history, less than half of young adults who engage in sexual activity report

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using contraception either regularly or at all when engaging in sex (Hoff, Greene, & Davis, 2003). These data highlight the importance of examining the factors that play a role in sexual socialization, among these the mass media and particularly television, which is recognized as a key socializing agent with regard to sex for young people (Huston, Wartella, & Donnerstein, 1998).

A growing body of studies documents a relationship between exposure to televised sexual content and perceptions of peer norms, expectations about sex, permissive sexual attitudes, and engagement in premarital sexual intercourse (Aubrey, Harrison, Kramer, & Yellin, 2003; Brown & Newcomer, 1991; Collins et al., 2004; Ward, 2003; Ward & Rivadeneyra, 1999). Most of the evidence to date about the effects of sexual portrayals in mainstream entertainment television has emerged from cross-sectional, correlational research.

Only a small handful of studies have experimentally examined the media's influence on sexual outcomes. Bryant and Rockwell (1994) found that young adolescents exposed to 15 hours of sexual television content that "focused on pre, extra, and nonmarital sexual relations" (p. 188) subsequently judged such situations as less morally wrong than adolescents exposed to content depicting intercourse between married individuals and those exposed to shows that did not depict sexual relationships. Farrar (2006) found that exposure to portrayals of safe sex on television drama shows impacted female college students' attitudes toward condom use. And Taylor (2005) found that exposure to verbal televised sexual content perceived to be realistic led female college students to overestimate the level of sexual activity among their peer group. This modest base of experimental evidence is consistent with the findings from correlational studies, but more work is needed to afford confidence in drawing causal conclusions. Moreover, experimental studies are needed for the identification and control of specific processes that operate in the exposure-outcome relationship (Huston et al., 1998).

The current study extends previous research by examining the effects of exposure to a specific contextual variable associated with the portrayal of sex on television on sexual attitudes and moral judgments. Specifically, the study tests the effects of exposure to differentially valenced consequences of premarital sexual intercourse. It tests effects immediately after exposure to two episodes of 1-hour dramas and the persistence of effects 2 weeks later. The study examines sexual media effects during the important development period of emerging adulthood, between the ages of 18 and 25 (Arnett & Tanner, 2006).

Researchers have established that important developmental progressions continue to take place even at the end of the traditional "late-adolescence" period (Arnett, 2000). As identity development is rarely achieved by late-adolescence, the period of emerging adulthood is characterized by increased opportunities for self-exploration, especially in the areas of love, work, and worldviews. This period is further characterized by increased independence from, and access to, traditional socializing agents such as parents. Romantic and sexual relationships in emerging adulthood tend to last longer and involve greater intimacy than in adolescence. There is also much sexual activity during this age period (CDC, 1997), with nearly 80% of emerging

adult college students engaging in sexual intercourse. Understanding the media's role in such behavior is crucial, given the public health risks associated with sex.

### **Sex on Television: Content and Context**

Though television use tends to decrease after early adolescence, it is still the most popular media pastime among emerging adults (Gunter & McAleer, 1997). Studies have shown that there is a considerable amount of sexual messages across the television landscape (Greenberg & Hofschire, 2000). For example, Kunkel, Farrar, Eyal, Biely, and Donnerstein (2007) found that 64% of television shows contained some sexual content. Thus, most emerging adults will be exposed to many messages about sex when they watch television. Most of these sexual messages are conveyed through conversations (Greenberg & Woods, 1999; Kunkel et al., 2007). Over the years, there has been an increase in the depiction of sexual behaviors (Kunkel et al., 2007), the most common of these being passionate kissing (Greenberg & Busselle, 1994). Sexual intercourse, which is usually implied by narrative device rather than visually depicted, has become more frequent over time, recently occurring in 11% of shows (Kunkel, Eyal, Biely, Finnerty, & Donnerstein, 2005).

It is increasingly clear that the context of portrayals is important in understanding media effects (Kunkel et al., 1995). Context is thought to influence the meaning viewers make of televised content, the extent to which they identify with particular plots or characters, and the lessons they learn from portrayals of behavior. Researchers have identified several contextual variables that are potentially consequential for media effects in the realm of sex, including the age of characters who engage in sexual intercourse and their relationship status (Kunkel et al., 2001).

Central for the current study, an important contextual element in sexual portrayals involves the consequences portrayed for the sexual activities. Sexual intercourse can result in different outcomes, both positive (e.g., increased social status, personal satisfaction) and negative (e.g., social stigma, relationship damage, STD contraction). Content analyses have found that clear depictions of consequences of sexual behaviors are often omitted in television stories (Greenberg & Woods, 1999; Kunkel et al., 2001, 2007) so that televised portrayals tend to present sexual acts as resulting in neither clearly positive nor clearly negative consequences. When outcomes of sexual behaviors are portrayed, they more often tend to be positive. Cope-Farrar and Kunkel (2002) reported that of the 25% of intercourse participants who experienced clear outcomes for their actions, most of these reflected positive consequences. Also, television characters' attitudes toward unmarried intercourse tend to be positive. For example, Greenberg and Busselle (1994) reported that about 40% of male and female characters exhibited positive attitudes toward this activity as compared to less than 20% who exhibited a negative attitude. As will be reviewed below, media violence research has found that the consequences portrayed for aggressive behaviors have important implications for viewer effects. In comparison, the effects of televised messages about sexual intercourse that results in different consequences

have not yet been tested. Addressing this lacuna is an important basis for the current study.

### **Theoretical Framework for the Study— Social Cognitive Theory**

According to social cognitive theory (SCT), cognitive processes account for which events in the environment are observed, what meaning is given to them, and how information about them is organized for future use by the individual (Bandura, 2001). Wide support has been established for these theoretical premises, especially in, but not limited to, the realm of media violence (Gentile, 2003; Morrison & Westman, 2001). SCT also accounts for effects on attitudes and emotions related to specific behaviors, as models can vicariously elicit affective dispositions in viewers (Check & Malamuth, 1986).

SCT accounts for several groups of intervening variables in its theoretical mechanism. These include characteristics of the model, the behavior observed (Grusec, 1973), the observer (Perry, Perry, & Boldizar, 1990), and the observed event. Among the most important characteristics of the observed event is the action's consequences. Previous research (Bandura, 1965) has established that viewing televised violent behaviors that result in positive outcomes or rewards leads to an increased viewer tendency to imitate the acts, due to a shift in attitudes toward the violent behavior from negative to positive (i.e., disinhibition). Conversely, viewing violent behaviors punished or negatively reinforced on television leads to a decreased tendency to imitate them, motivated by less favorable attitudes toward them.

Bandura (1977) does not restrict his theorizing about the role of consequences only to violent acts. Rather, the theory clearly applies broadly to all observed behaviors. However, there has been little generalization of these premises to other realms of media effects besides violence where behaviors may be positively or negatively reinforced. This study tests whether similar effects of consequence contingencies will result from exposure to televised sexual acts.

The design of this study involves exposing emerging adults to two comparable television drama programs that include portrayals of sexual intercourse. In one condition, participants are exposed to portrayals of intercourse that result in negative consequences for the characters involved and in the other condition, participants are exposed to portrayals of intercourse that result in positive consequences. Participants' attitudes toward sex are then assessed. Based upon the theoretical premises of SCT, the following hypothesis is posed:

- H<sub>1a</sub>: Immediately after viewing television programs with negative consequences of sexual intercourse, emerging adults will express significantly more negative attitudes toward premarital intercourse as compared to their attitudes before viewing these programs.

SCT might also be used to predict change in attitudes toward sex in a positive direction after exposure to positive consequences of sexual behavior on television. There are, however, reasons to believe that this may not be the case with regard to sexual intercourse. As noted above, though intercourse is mostly presented as resulting in no clear consequences whatsoever on television, portrayals of positive consequences of sex are nonetheless far more common on television than are those of negative consequences (Cope-Farrar & Kunkel, 2002; Kunkel et al., 1999). Given this pattern, emerging adults have likely been exposed throughout their lives to countless portrayals of sex that result in positive outcomes for the characters. A short-term experimental treatment in which sexual intercourse is portrayed as resulting in positive consequences—such as the one included in the current study—is unlikely to reveal any palpable effect. That is, the many previous instances of similar exposure have likely already exerted their maximal influence. In comparison, the portrayal of negative consequences of sexual behavior on television is not common. These less frequent depictions are likely to be more salient and stand out to viewers. Thus, while a simple and straightforward reading of SCT might suggest a complementary hypothesis is in order regarding the influence of exposure to sexual intercourse portrayals with positive consequences, a more ecologically sensitive perspective seems to argue otherwise. Therefore, a research question is posed about the effects of exposure to sexual intercourse portrayals associated with positive consequences:

RQ<sub>1a</sub>: Will emerging adults' attitudes toward premarital sexual intercourse become more positive immediately after viewing television programs with positive consequences of sexual intercourse as compared to their attitudes before viewing these programs?

In addition to examining the effects of exposure to sexual content on television immediately after viewing, this study examines whether such effects persist over time. Considering the cumulative nature of most media effects, it is particularly important to examine the influence of messages beyond immediate posttests. Few studies to date have examined the persistence of media effects over time in the realm of sex. A series of studies on the impact of sexual health information portrayed on the television drama *ER* revealed that short vignettes did increase adult viewers' awareness of health-related information such as emergency contraception and the sexually transmitted Human Papilloma Virus 1 week after the shows aired but that these effects did not persist 6–8 weeks later (Kaiser Family Foundation, 2002). Contrary to this finding, another survey demonstrated that adolescents who viewed an episode of the show *Friends* in which condom efficacy was discussed retained knowledge from the program 6 months later (Collins, Elliott, Berry, Kanouse, & Hunter, 2003). Also, effects of exposure to sexual content on adolescents' moral judgments about sex were observed between 3 and 7 days following experimental exposure to the content (Bryant & Rockwell, 1994).

While these findings are helpful, more evidence is needed about the duration of effects, in general (Huston et al., 1998), and on emerging adults, specifically.

Moreover, clarifying the conditions associated with long-term effects is important. A 2–3 minute vignette about sexual health included in an hour-long drama show may simply not be enough to lead to a persistent effect over time. In contrast, a strong emphasis on condom efficacy in an episode of *Friends* or the cumulative effect of exposure to several hours of sexual content may be sufficient for such long-term effects. The present experiment will add to knowledge about the longer-term influence of media sex by measuring effect outcomes 2 weeks following treatment exposure, as well as immediately following viewing. The following hypothesis is posed:

H<sub>1b</sub>: Two weeks after exposure to television programs with negative consequences of premarital sexual intercourse, emerging adults will express significantly more negative attitudes toward premarital intercourse as compared to their attitudes before viewing.

The uncertainty about the influence of viewing positive consequences of sexual behavior on television applies in this area as well. Therefore, a research question is posed:

RQ<sub>1b</sub>: Will emerging adults' attitudes toward premarital sexual intercourse become more positive 2 weeks after viewing television programs with positive consequences of premarital sexual intercourse as compared to their attitudes before viewing?

This study also examines a second outcome of exposure to sexual content on television—moral judgment related to sex. SCT suggests that moral perceptions also may be impacted by exposure to mediated sexual behavior (Bandura, 2001). To date, only Bryant and Rockwell (1994) have examined this outcome of exposure to sexual content in mainstream entertainment media. They found that exposure to nonnormative sexual behaviors in the media influenced young adolescents' moral judgments and caused them to be more approving of sexual infidelities or improprieties as compared to adolescents who were not exposed to such content. The researchers noted that "many teenagers' values appear to be quite frail and very malleable—constantly in a state of flux" (p. 186).

The target population in the current study is just entering the emerging adulthood period, and, like adolescents, many aspects of their lives are frequently changing as they are still forming their own identity, including morals and values (Arnett & Tanner, 2006). It is important to determine if, and how, viewing different consequences of sex may influence their moral judgments of this behavior. The following hypotheses are posed to examine effects of exposure on moral judgments immediately after exposure and 2 weeks later:

H<sub>2a</sub>: Immediately after exposure to television programs with negative consequences of premarital sexual intercourse, emerging adults will express signif-

ificantly more negative moral judgments of the characters who engage in that behavior than following exposure to programs with positive consequences of sexual intercourse.

H<sub>2b</sub>: Two weeks after exposure to television programs with negative consequences of premarital sexual intercourse, emerging adults will express significantly more negative moral judgments of the characters who engage in that behavior than following exposure to programs with positive consequences of sexual intercourse.

To summarize, the relatively limited body of experimental studies of the effects of sexual media content (Huston et al., 1998) underscores the value of evidence to better document the media's role in the sexual socialization process. Based on SCT, consequences portrayed on television for social behaviors should influence observers' subsequent beliefs about the outcomes of the behaviors and, as a result, their attitudes toward and judgments of the behaviors (Bandura, 2001), all of which underlie the propensity to model observed acts. The theoretical predictions, which have been well supported in research on media violence, state that viewing behavior that results in negative outcomes will likely result in more negative attitudes toward that behavior and in more negative moral judgments of characters who engage in it. This study examines the theory's application to the realm of sexual media effects.

## Method

As part of a larger project, this study employed an experimental design to examine the effects of viewing television shows with different portrayals of consequences of sexual intercourse on emerging adults' sexual attitudes toward premarital intercourse and on their moral judgments of characters who engage in this behavior. In the current study, the effects of exposure to positive versus negative consequences of sexual intercourse were tested. Undergraduate freshmen were randomly assigned to one of the two treatment conditions.

## Sample

Participants were freshmen students at a West Coast university and college.<sup>1</sup> Efforts at recruitment were similar at both locations, and included advertising the study in freshmen dorms and soliciting participants through introductory Communication courses. One hundred and fifteen students participated in both the pretest and the viewing sessions and completed an immediate posttest for the current study. Five participants were excluded from analyses because they failed the manipulation check, as explained below. The final sample for analyses of immediate effects thus consisted of 110 participants. Of these, 70% were females.

Participants were randomly assigned to treatment conditions, with nearly equal numbers in each condition of females (positive consequences condition = 38, negative consequences condition = 39) and males (positive consequences condition = 16, negative consequences condition = 17). The average age of participants was 18.08 years ( $SD = 0.31$ , range: 18–20). Of the 110 original participants, 96 (87%) completed the 2-week follow-up assessment.<sup>2</sup>

## Stimuli

In each condition participants viewed two episodes of 1-hour prime-time television drama shows popular among emerging adults. All shows included a portrayal of emerging adults engaging in sexual intercourse, consistent with the behavior's definition specified by Kunkel et al. (1999).<sup>3</sup> In each condition, shows depicted consequences experienced by the characters who were engaged in the act of sexual intercourse. Programs in the two conditions varied in the valence of consequences portrayed for this behavior.

To increase the external validity of this study, shows used as stimuli were shown as aired on television with minimal editing. To enhance internal validity, the optimal treatment for this study might have been to show identical program content that varies only in the portrayal of consequences associated with sexual intercourse. However, at a practical level, it is virtually impossible to identify television programs amenable to editing in such a manner. The alternative chosen for this study was to use multiple intact stimulus programs that presented diverse story lines but were matched as closely as possible on all key elements featured in the show, except for the nature of the consequences of sexual intercourse.

Programs in the two conditions were comparable on important contextual dimensions, and therefore any differences detected in audience effects should be due only to the experimental manipulation. All programs focused on emerging adult characters, similar to the target population of this study. The consequences portrayed in the programs were emotional in nature, consistent with previous content analyses findings that these outcomes are the most prevalent on television (Aubrey, 2004). Shows were pilot tested using a sample of emerging adults who did not participate in the main study to ensure that the valence of intercourse consequences was perceived as intended, either positive or negative. In each condition, both male and female characters experienced outcomes for their behavior. Relationships among the characters who engaged in intercourse were also similar in both conditions (e.g., characters who have an established sexual relationship with one another). Programs were also comparable in the emphasis placed on intercourse within the program, relative to all other content.<sup>4</sup>

In the positive consequences condition, participants watched an episode of *Dawson's Creek* and an episode of *Beverly Hills 90210*. In *Dawson's Creek*, Dawson, a college student, runs into an old romantic acquaintance, Amy. As the evening progresses at Amy's place, the two begin to kiss fervently. In the heat of an increasing



passion Amy pulls Dawson on top of her to the floor, an advance he reciprocates enthusiastically as the scene fades to black. The next scene shows Amy and Dawson calmly embracing one another on the floor, clearly naked under some sheets with her head resting on his chest. They proceed to spend an intimate night under the covers of Amy's bed and in their robes, surrounded by candles. As they converse about their shared interest in film and Dawson's ex-girlfriend whom he still loves, Amy and Dawson also discuss the spontaneous sexual encounter they had just shared, agreeing that it was a wonderful experience, and that it would have been difficult to predict "a night like this." As the episode comes to a close it is clear that this sexual encounter has helped Dawson to reach new realizations about relationships and to feel better about himself.

In the episode of *Beverly Hills 90210*, a young adult couple named Kelly and Brandon, are trying to spice up their love life. Brandon surprises Kelly with a romantic dinner at their shared home. Rather than focusing on the food, Kelly sits suggestively on Brandon's lap and the two kiss passionately. Eager to take advantage of their newly found excitement, the two mischievously shove aside the dishes on the table. Groping one another, they climb on the table with Brandon on top of Kelly as the scene fades to black. In the next scene, the two are shown the next morning kissing fondly and happily reflecting on their sexual encounter. Throughout the episode, they discuss their desire to reenact the sexual encounter and engage in other public displays of affection, often embarrassing those around them. The episode underscores that their sexual encounter rekindled Kelly and Brandon's passion, enhancing their relationship.

In the negative consequences condition, participants watched a different episode of *Dawson's Creek* and an episode of *Party of Five*. In *Dawson's Creek*, an evening draws to an end as Joey, a female college student, is kissing her new boyfriend, Eddie, in his apartment. Overcome by her intensified passion, Joey suggestively tells Eddie that, though she usually does not have sex early in the relationship, she can think of no good reason to *not* have sex with him right then and there. Excited by what is to follow, the two increase their zealous kissing, pulling off one another's clothes as the scene fades to black. In the next scene, the two are seen lying intimately in bed the following morning, covered in sheets as Joey abruptly realizes with panic that she has overslept and missed an important college exam. Later, Joey's concern about her academic future is met with minimal sympathy by Eddie, disappointing Joey. Realizing she was too quick to become intimate with Eddie, Joey experiences strong remorse for her sexual behavior, calling it "a mistake" and telling Eddie that she regrets her decision. The episode concludes with Joey terminating her relationship with Eddie.

In *Party of Five*, Bailey, a college student, confesses to his roommate, Callie, that he does not have sex with his high school student girlfriend, Sarah. In the midst of their conversation a power outage occurs and the two find themselves standing close to each other in their search for a candle. In the confusion of the moment, Bailey and Callie tentatively begin kissing. Bailey reciprocates eagerly when Callie pulls him closer and the scene fades to black. The next scene finds Bailey, undressed,

jumping out of bed with Callie. He is in a frenzy, confused, and yells that the sexual encounter they just shared should never have happened. Throughout the episode, Bailey is shown feeling guilty and clearly upset at his behavior and its implications for his relationships with both Sarah and Callie. His anguished state is exemplified by his comment, "I did like the worst thing that I could have possibly done ..."

## Procedures

Participants filled out a pretest survey and then signed up for a viewing session held at least 1 day later. The pretest included several control measures (religiosity, sexual experience, television exposure, and demographics) found to influence the outcomes of exposure and a measure of attitudes toward premarital sexual intercourse. Participants watched the shows in groups of eight or fewer people. All sessions followed the same procedures and order of presentation of materials. To ensure that no interaction would take place during these sessions that would impact the study's findings, a researcher was present in the room at all times and participants completed the surveys using a clipboard to maximize privacy. Viewing sessions were randomly assigned to conditions. After viewing the shows, participants filled out a posttest survey, including measures of both dependent variables. Participants returned to complete a follow-up questionnaire about 2 weeks after the sessions.

## Measurement

*Attitudes Toward Premarital Sexual Intercourse.* General dispositions toward engaging in premarital sex were assessed. A sample item is: "Having sexual intercourse before one is married is always wrong" (see Appendix for the complete list of items for the dependent variables). Most items were adopted from previous studies (Fisher & Hall, 1988; Sheeran, Abrams, Abraham, & Spears, 1993). Response options ranged from 1 (*strongly disagree*) to 7 (*strongly agree*) and scores were averaged across items for each participant. A baseline measure was taken at pretest and attitudes were assessed immediately after viewing the episodes and 2 weeks later. The measure proved reliable at pretest ( $\alpha = .81$ ), posttest ( $\alpha = .79$ ), and 2 weeks later ( $\alpha = .76$ ).

*Moral Judgments of Characters Engaged in Premarital Sexual Intercourse.* At posttest and follow-up only, participants indicated their agreement with four statements about the appropriateness and acceptability of the characters' sexual behavior in each of the shows viewed. A sample item is: "The characters who engaged in premarital sexual intercourse acted in a morally acceptable way." Response options ranged from 1 (*strongly disagree*) to 7 (*strongly agree*); responses for all items were averaged. The reliability for the measure at posttest was  $\alpha = .83$  and at follow-up,  $\alpha = .85$ .

*Control Variables.* Several variables have been established as important in the media effects literature in general, and in the realm of sexual socialization in particular. These variables were assessed during the pretest and are statistically controlled in the study's analyses.

*Religiosity* was established as an important factor in sexual socialization (Sheeran et al., 1993), and assessed by participants indicating their primary religion and responding to four items about religion's role in their sexual behavioral decisions. A sample item is: "To what extent are your behavioral decisions based on your religious beliefs?" (see Appendix for all items). Response options ranged from 1 (*strongly disagree*) to 7 (*strongly agree*); items were averaged. The Cronbach reliability was  $\alpha = .90$ . The mean score was 2.90 ( $SD = 1.73$ ), indicating that most participants do not consider themselves to be very religious.

Previous *sexual experience* (i.e., engaging in kissing, intimate touching of another person's body, and sexual intercourse) is important in sexual socialization (Ward & Rivadeneyra, 1999). Questions about participants' sexual experience were dichotomous items. The majority of participants in this study have been involved in a romantic relationship (75%) and had at least some physical sexual experience (including kissing, intimate touching, and oral sex). Slightly less than half (45%) have engaged in sexual intercourse. This is consistent with previous research on freshmen and sophomores (Siegel, Klein, & Roghmann, 1999).

General *television exposure* and exposure to specific genres are both relevant in the media effects process (Buerkel-Rothfuss & Strouse, 1993). Two items assessed overall television exposure by asking participants how many hours of television they watched in recent years on an average weekday and on an average weekend day. Previous research has often measured participants' average daily viewing amount (e.g., Haridakis & Rubin, 2003). Participants were also asked to indicate how often they watch programs of 10 different genres (e.g., comedies, reality shows). Scores on exposure to these genres were combined with scores on the general exposure measures to create an overall television exposure measure, consistent with previous research (Potter & Tomasello, 2003). Of the participants, 64% reported watching 2 hours or less of television per average weekday and 62% watched 3 hours or less during the average weekend day. Males reported watching significantly more television on weekend days ( $M = 3.73$ ,  $SD = 1.75$ ) than females ( $M = 2.91$ ,  $SD = 1.54$ ),  $t(108) = -2.45$ ,  $p < .05$ .

It is also important to assess any previous exposure participants had to the specific episodes used in the study, as this may impact the level of familiarity with and attention to the shows. The majority of subjects (73%) had not seen either of the episodes in the treatment conditions. About 1 in 5 participants (23%) had seen 1 of the episodes in the past and less than 5% had seen both episodes. There were no significant differences between the two conditions in the number of people who have seen these episodes in the past,  $\chi^2(2) = 0.52$ ,  $p = .77$ .

*Demographic variables* included participants' gender, age on last birthday, socio-economic status (SES) assessed by mother's and father's highest level of education, and ethnicity. Males ( $M = 18.21$ ,  $SD = 0.49$ ) were significantly older than females

( $M = 18.03$ ,  $SD = 0.16$ ) in this sample,  $t(108) = -3.02$ ,  $p < .01$ . The majority of participants (75%) identified themselves as White/Caucasian. More than half (70%) reported that their father had at least a college education, with similar results for mothers' education (60%).

### Manipulation Check

At posttest, participants were asked to rate the emotional reactions expressed by characters who experienced consequences for their sexual behaviors. Participants responded about eight emotions (e.g., happiness, regret) and indicated the extent to which they thought the character displayed each reaction after engaging in intercourse on a scale of 1 (*not at all*) to 7 (*a lot*). Responses for the two shows within each condition were averaged. As expected, participants in the positive condition thought that the characters exhibited significantly more positive emotional reactions to their sexual experience ( $M = 6.14$ ,  $SD = 0.43$ ) than those in the negative consequences condition ( $M = 2.40$ ,  $SD = 0.82$ ),  $t(99) = 28.75$ ,  $p < .001$ .

A second manipulation check was conducted to assess participants' perceived consequences of premarital sexual intercourse in the experimental treatment shows. A closed-ended question asked participants whether the consequences for sexual intercourse were good, bad, or nonexistent. Chi-square analyses comparing scores for each of the two shows between the two conditions revealed significant differences as expected,  $\chi^2(2) = 81.22$ ,  $p < .001$ ;  $\chi^2(2) = 100.29$ ,  $p < .001$ . Shows in the positive and negative consequences conditions were perceived by participants to portray clearly positive and negative consequences, respectively.

Five participants (4% of the sample) failed to correctly identify the expected valence of the consequences of sexual intercourse in their treatment condition. These participants were excluded from all subsequent analyses, leaving a sample of 110 participants.

## Results

### Analysis Plan

Attitudes toward premarital sexual intercourse were assessed through changes from pretest to posttest and from pretest to follow-up test. Moral judgments of the characters involved in sexual intercourse on the shows were assessed through a posttest score and a change score from post- to follow-up test. As moral judgments were show-specific they could not be assessed at pretest and, thus, no change from pretest was assessed for this variable.

Paired  $t$  tests were conducted to test  $H_{1a}$ ,  $H_{1b}$ ,  $RQ_{1a}$ , and  $RQ_{1b}$ , which focus on within-condition changes in attitudes toward premarital sexual intercourse. To test  $H_{2a}$  and  $H_{2b}$ , which focus on between-condition comparisons of moral judgments of characters engaged in premarital sexual intercourse, two analyses were done. First, multiple regression analyses examined which of the control variables (i.e., *religiosity, sexual experience, television exposure, gender, age, SES, and ethnicity*) significantly predicted the dependent variables. Significant predictors were then controlled in hypotheses-testing analyses of covariance (ANCOVAs).

### Effects on Attitudes Toward Premarital Sexual Intercourse

$H_{1a}$  posits that viewing television shows with negative consequences of sexual intercourse will lead to significantly more negative attitudes toward sex after initial viewing. A paired  $t$  test was conducted to examine the significance of any change in attitudes within the negative consequences condition from pre- to posttest. Significant differences emerged in this condition between attitudes toward premarital sex at pretest ( $M = 4.85$ ,  $SD = 1.45$ ) and posttest ( $M = 4.50$ ,  $SD = 1.29$ ),  $t(55) = 3.28$ ,  $p < .01$ . Items were assessed on a 7-point scale, with higher numbers representing more approval of premarital sexual intercourse. Based on Thalheimer and Cook (2002), the Cohen's  $d$  effect size for this change is 0.26, which is relatively small in magnitude. This provides support for  $H_{1a}$ .

$RQ_{1a}$  examines whether participants' attitudes toward premarital sexual intercourse become more positive following exposure to shows that portray positive consequences of this behavior. A paired  $t$  test revealed that there was not a significant change in the attitude scores of participants in this condition,  $t(53) = 1.29$ ,  $p = .20$ .

$H_{1b}$  tests the same hypothesis as  $H_{1a}$  but focuses on the persistence of the effects 2 weeks after exposure to the experimental programs. A paired  $t$  test was performed examining the change from pretest to follow-up test. The findings for this hypothesis directly parallel those for the immediate effects hypothesis. As with the pre- to posttest change, participants in the negative consequences condition exhibit a significant decrease in the positivity of attitudes toward premarital sex from pretest ( $M = 4.79$ ,  $SD = 1.46$ ) to follow-up test ( $M = 4.57$ ,  $SD = 1.21$ ),  $t(48) = 2.00$ ,  $p = .05$ . Moreover, there was no statistically significant change in participants' attitudes between the posttest and the follow-up test,  $t(48) = -1.11$ ,  $p = .27$ , indicating that the significant attitudinal change occurred after exposure to the shows and persisted 2 weeks later. Thus,  $H_{1b}$  is supported.

As with  $RQ_{1a}$ ,  $RQ_{1b}$  examines change in the attitudes toward premarital sex 2 weeks after exposure to shows with positive consequences of sex. No significant change was observed in the attitudes of participants in this condition from pre- to follow-up test,  $t(46) = 0.90$ ,  $p = .37$  or from posttest to follow-up test,  $t(46) = 0.24$ ,  $p = .81$ .

### Effects on Moral Judgments of Characters Involved in Sexual Intercourse

Two hypotheses are posed with regard to the influence of moral judgments.  $H_{2a}$  examines how viewing television programs with different consequences of premarital sex influences moral judgments of the characters involved in this behavior. A stepwise multiple regression revealed that religiosity ( $B = -0.29$ ,  $SeB = 0.06$ ,  $\beta = -0.39$ ,  $p < .001$ ) and sexual experience ( $B = 0.00$ ,  $SeB = 0.00$ ,  $\beta = 0.25$ ,  $p < .01$ ) significantly predict moral judgments,  $F(2, 107) = 15.99$ ,  $p < .001$ ,  $R^2 = .23$ , together explaining 23% of the variance in moral judgments. Religiosity had a strong negative relationship and sexual experience had a positive relationship with moral judgments.

An ANCOVA was performed using moral judgments as the dependent variable and controlling for religiosity and previous sexual experience. Religiosity,  $F(1, 106) = 21.90$ ,  $p < .001$ ,  $Eta^2 = .17$ , and previous sexual experience  $F(1, 106) = 6.90$ ,  $p < .01$ ,  $Eta^2 = .06$ , remained significant predictors of the dependent variable. Significant differences also emerged between the treatment conditions,  $F(1, 106) = 34.44$ ,  $p < .001$ ,  $Eta^2 = .25$ . Participants in the positive consequences condition exhibited higher scores on moral judgments ( $M = 4.98$ ,  $SD = 1.12$ ) than those in the negative consequences condition ( $M = 3.71$ ,  $SD = 1.09$ ). Thus,  $H_{2a}$  was supported, revealing that viewing negative outcomes for intercourse leads to significantly more negative moral judgments of characters compared to viewing positive consequences.

$H_{2b}$  examines the effects of exposure to varying consequences of sexual intercourse on moral judgments 2 weeks after exposure. The analyses conducted to test  $H_{2a}$  were repeated with the moral judgment score at over-time assessment as the new dependent variable. A stepwise multiple regression found that religiosity ( $B = -0.25$ ,  $SeB = 0.07$ ,  $\beta = -0.34$ ,  $p < .001$ ) and sexual experience ( $B = 0.00$ ,  $SeB = 0.00$ ,  $\beta = 0.23$ ,  $p < .05$ ) also significantly predicted moral judgments at follow-up,  $F(2, 92) = 10.19$ ,  $p < .001$ ,  $R^2 = .18$ , explaining 18% of the variance in moral judgments. The ANCOVA analysis was significant,  $F(4, 90) = 47.05$ ,  $p < .001$ ,  $Eta^2 = .68$ . Religiosity remained a significant predictor of moral judgments,  $F(1, 91) = 13.34$ ,  $p < .001$ ,  $Eta^2 = .13$ . Significant differences also emerged between the treatment conditions,  $F(1, 91) = 23.11$ ,  $p < .001$ ,  $Eta^2 = .20$ . Participants in the positive consequences condition exhibited higher scores on moral judgments ( $M = 4.82$ ,  $SD = 1.11$ ) than those in the negative consequences condition ( $M = 3.64$ ,  $SD = 1.14$ ) 2 weeks after exposure.

To reflect the repeated measures nature of the design, an additional analysis was performed with the change score in moral judgments from post- to follow-up test as the dependent variable. The stepwise multiple regression equation using all control variables to predict the change score was not significant,  $F(7, 87) = .80$ ,  $p = .59$ . An ANOVA showed that there were no significant changes in moral judgment scores from posttest to follow-up,  $F(1, 93) = 1.69$ ,  $p = .20$ . That is, the significant treatment effects observed immediately following treatment exposure did not change

significantly over time from the original posttest conducted after viewing. Rather, differences in moral judgments identified between the two conditions at posttest persisted 2 weeks later. These results indicate that viewing negative consequences of sex leads to more negative moral judgments of characters who engage in intercourse, as compared with viewing positive consequences.

## Discussion

This study tests the causal relationship between exposure to televised portrayals of sexual intercourse and emerging adults' sexual attitudes and moral judgments. It identifies a specific contextual element in televised portrayals—the consequences of sexual intercourse portrayed on shows—as an important factor in shaping these outcomes. This study reveals that viewing shows with negative consequences of sex leads to significant effects on emerging adults immediately after viewing and that these effects persist 2 weeks later. Viewing negative outcomes of premarital sexual intercourse leads to more negative attitudes toward premarital sex and to more negative moral judgments of the characters who engage in this behavior.

These findings support the premise from social cognitive theory which states that associating negative reinforcement with an observed behavior will lead to more negative dispositions toward the behavior (Bandura, 1977, 2001). These negative dispositions underlie behavioral intentions and behaviors, and should be associated with less inclination to imitate the behavior, so as to avoid suffering consequences similar to those experienced by the model. In interpreting these findings, it is important to note that televised messages of negative consequences of sexual intercourse are not frequent (Cope-Farrar & Kunkel, 2002; Kunkel et al., 1999). Thus, when such portrayals are shown, they are likely to be salient to viewers and to draw more attention than the more commonly portrayed positive consequences. Also, televised portrayals of negative outcomes of sex are not only infrequent but are contrary to the favorable sexual attitudes reported by most participants at pretest, thus leading to a palpable effect.

Whereas exposure to portrayals of negative consequences of sex led to significant changes in participants' attitudes, those who viewed positive consequences of sex did not exhibit more positive attitudes toward sex. Though this finding is inconsistent with SCT (Bandura, 1977, 1986), some explanations are possible. Given the prevailing pattern of portrayals of sexual outcomes on television (Heintz-Knowles, 1996; Kunkel et al., 2001), it is difficult to demonstrate any exposure effects beyond those already well established by participants' everyday viewing. Moreover, participants' overall positive attitudes toward premarital sex at pretest also likely minimized the chance of observing a reinforcement effect.

With regard to the effects on moral judgments, participants apparently understand the portrayed consequences of sexual intercourse as a sort of value judgment on the behavior: When outcomes are good, the behavior is perceived to be more appropriate and when consequences are bad, it is perceived as less appropriate.

This perspective is reflected in the participants' own moral judgments which varied consistently with the treatment condition. This finding is consistent with Bryant and Rockwell's (1994) evidence documenting the effect of sexual content on adolescents' moral judgments as well as with developmental research (e.g., Kitchener, King, Davison, Parker, & Wood, 1984) that indicates moral judgments continue to evolve after adolescence. This evidence provides support for the continued malleability of moral judgments related to sexual socialization during the period of emerging adulthood.

By illuminating the influence of consequences associated with sexual intercourse on television, this study adds to the body of entertainment media effects research. Whereas media violence research has established that consequences of aggressive behaviors have important implications for viewer effects, this factor has not been examined yet in the realm of sexual content. While SCT argues that consequences should operate similarly across diverse social behaviors, there are inherent differences between violence and sex that are important to note. First, as compared to violence, evaluative messages about sex from different sources (e.g., parents, media) are often inconsistent (Tucker, 1989). Second, while societal consensus against violence is strong, many do not consider premarital sexual relations as morally wrong (Harding & Jencks, 2003). And whereas socialization with regard to violence tends to begin at an early age and continues throughout one's development (Huesmann, Eron, Lefkowitz, & Walder, 1984), sexual topics gain prominence mostly in adolescence, when sexual interest begins to emerge (Sanrock, 2001). Overall, then, socialization processes about violence and sex are different. Thus, it is not surprising to find some differences in theorized effects of sex as compared to violence, such as the lack of any influence in the positive consequences condition.

Perhaps the most important finding of this research is that the effects of exposure to televised sexual portrayals impacted emerging adults' attitudes toward sex and moral judgments 2 weeks after viewing. This study is one of only a few investigations to document that the effects of television exposure can persist beyond immediate viewing. Few media effects studies ever seek to measure influence over time.

Some limitations associated with this study should be noted. First, one must be cautious about generalizing about the effects of exposure from a single study of college students. Additional studies with more varied and representative samples of emerging adults are needed to substantiate the current findings. Second, though a valuable element in the current study, the experimental design has the disadvantages of limited external validity due to the setting in which viewing occurs. One drawback associated with the pretest posttest design employed in this study is that it may set up experimental demand in participants (Gunter, 2000). The study tried to minimize this problem by separating the pretest from the viewing session and posttest by at least 1 day. Additionally, the use of intact shows meant that participants were exposed to full story lines, with different plot elements, and involving multiple characters, as is characteristic of television drama. The inclusion of nonsexual story lines in the shows could have served as a distractor from the



sexual element in the study. The over-time assessment of effects also helps guard against experimental demand as it is unlikely that—in the context of their first hectic semester of college—participants in this study would remember all the questions asked 2 weeks earlier. Nonetheless, future research should employ more diverse experimental designs that will validate and confirm this study's findings.

A third limitation is that all shows in this study were from the same genre: dramas targeting young adults. Males may have been less familiar with or interested in the shows, possibly resulting in them paying less attention. Gender differences in content preferences have been previously documented (Greenberg & Linsangan, 1993; Ward & Rivadeneyra, 1999). Future studies should employ more varied stimuli from many genres. Finally, the manipulation check serves an important—and often ignored—element in the current design by confirming its stimuli's validity. But it should be acknowledged that the manipulation check might have led participants to anticipate the premise and focus of the study, thus impacting its results.

Despite these limitations, this study makes an important contribution to the growing body of research on the effects of entertainment media on sexual socialization. It shows that emerging adults' sexual attitudes and moral judgments can be influenced by exposure to even a relatively small dose of sexual content on television. It reveals that the context of portrayal of sexual intercourse—specifically, the portrayal of negative consequences of sex—can affect attitudes about and perceptions of sexual activity. Moreover, it indicates that such effects can persist beyond the immediate viewing situation and over a 2-week period.

The fact that many portrayals of sexual intercourse on television are seen to result in positive consequences or in no clear consequences for the characters involved in this activity is likely related to enhanced sexual activity, also at younger ages, as revealed in studies (e.g., Collins et al., 2004). But, as this study reveals, exposure to portrayals of sexual intercourse that result in negative outcomes can lead to change in attitudes toward sex. This study makes clear that the cumulative effects of media on the sexual socialization of young adults could well be different from those currently documented if a more balanced view of the consequences of premarital sexual intercourse predominated across most television programming.

## Appendix

### Measure of Attitudes Toward Premarital Sexual Intercourse

1. Having sex with a person one is not married to is irresponsible.\*
2. It's a good idea to get sexual experience before settling down.
3. Having sexual intercourse before one is married is always wrong.\*
4. People my age should wait until they are older before they have sex.\*
5. Sexual intercourse for unmarried young people is acceptable without affection existing if both partners agree.

### Measure of Moral Judgments of Characters Engaged in Sexual Intercourse

1. It was morally wrong for the characters to engage in premarital sexual intercourse.\*
2. The characters who engaged in premarital sexual intercourse acted in a morally acceptable way.
3. It was morally appropriate for the characters to engage in premarital sexual intercourse.
4. The fact that the characters engaged in premarital sexual intercourse reflects badly on their character.\*

### Measure of Religiosity

1. Personally, how important is religion to you?
2. To what extent are your behavioral decisions based on your religious beliefs?
3. To what extent do your religious beliefs influence your sexual behavior?
4. How often do you attend religious services?

\*Reverse-coded

### Notes

<sup>1</sup>Participants from the university and the college did not differ significantly on any of the dependent variables. One significant difference emerged in that all college students reported having had engaged in intercourse whereas not all university students have done so ( $\chi^2 = 5.70, p < .01$ ). Sexual experience was used as a control variable in data analyses.

<sup>2</sup>Statistical analyses compared participants who did and did not return for the follow-up test on all pretest and control variables. No significant differences emerged even though sufficient power existed to detect them (Cohen, 1988). Thus, all participants were retained in the sample.

<sup>3</sup>Kunkel et al. (1999) write, "Intercourse implied is said to occur when a program portrays one or more scenes immediately adjacent (considering both place and time) to an act of sexual intercourse that is clearly inferred by narrative device . . . Such portrayals are not necessarily explicit in any way but clearly convey the message that sex has occurred" (p. 9).

<sup>4</sup>Program comparability between the two conditions was assessed using two additional measures. Programs that presented positive and negative consequences were perceived by participants as equally realistic. This was assessed by 5 items and a response scale of 1 (*strongly disagree*) to 7 (*strongly agree*) ( $\alpha = .80, t(108) = -1.71, p = .09$ ). Also, identification with the same-sex character that experiences consequences for sexual intercourse was assessed. This refers to an emotional connection viewers make with a character as they imagine themselves to be this persona (Cohen, 2001). Identification is considered to be an important mediator in media effects (e.g., Ward & Rivadeneyra, 1999), thought to increase with variables such as liking of the character and viewers' perceived similarity with him or her (Eyal & Rubin, 2003). To ensure that participants identified equally with characters in both conditions, a 12-item measure was adapted from previous research (Cohen, 2001; Eyal & Rubin, 2003), using a scale of 1 (*strongly disagree*) to 7 (*strongly agree*) ( $\alpha = .87$ ). The two conditions did not differ on identification,  $t(108) = 0.35, p = .73$ , enhancing confidence in the conditions' comparability.

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