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TELEVISION VIEWING AND YOUNG ADOLESCENTS' BELIEFS AND ASSUMPTIONS ABOUT SEXUAL RELATIONSHIPS

The 'effect' of different program clusters at different experience levels

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Abstract

Several studies reported positive relationships between emerging adults' television viewing and assumptions about peer sexual experiences and sexual stereotypes. In this paper, these relationships are re-investigated in a younger sample. Furthermore, the moderating influence of sexual experience is examined: does real-life sexual experience reinforce the effect of television exposure, or does it make the expected relationships disappear? Respondents from a sample of 12- to 15-year-olds (N = 2121) reported on their viewing diet, estimated the prevalence of given sexual activities, and rated stereotypes about males as being preoccupied with sex, males as dominating sexual relations, and sex as a purely physical activity. Results demonstrated connections between television viewing and sexual beliefs. More specifically, greater exposure to early evening comedy series, youth action series, soap operas and late evening action series were repeatedly associated to sexual attitudes. Further exploration showed that some of these relationships become stronger as sexual experience levels progress.

Television viewing and adolescents' beliefs and assumptions about sexual relationships: The "effect" of different program clusters at different experience levels

Introduction

Theoretical models on sexual decision making (e.g. Christopher, 2001) and studies on sexual initiation (Catania et al 1989; Whitakker & Miller, 2000) have indicated that teenagers' perceptions of peer sexual behaviors as well as their acceptance of stereotypical attitudes about intimate relationships play a pivotal role in sexual maturity processes. With regard to stereotypical attitudes, for instance, stronger endorsement of certain sexuality-related beliefs is associated with having more and riskier sexual experiences (e.g. Pleck et al. 1993). As regards assumptions about peer sexual experiences, the intention of starting sexual activity was found to be predicted by the belief that most friends have already had sexual intercourse (Kinsman et al, 1998). Likewise, young adolescent girls classified the assumption of sexual activity in friends as a valid reason for their own sexual debut (Rosenthal et al, 2001).

Researchers who have described how adolescents come to develop these assumptions and attitudes often have included an account of adolescents' television viewing. Several authors have warned that television examples of intimate relationships might have an impact on various sexuality-related assumptions and beliefs. These warnings generally rest on evidence about how television conveys images of dating, romance, and sex (e.g. Haferkamp, 1999; Shapiro & Kroeger, 1991). Content analyses have come up with two major conclusions. First, the studies have indicated that sexuality is an everyday ingredient of television entertainment. Kunkel et al. (2001), for instance, have reported that nearly seven in ten television programs contain sexual messages. Heintz-Knowles (1996) calculated an average of 10 references to intercourse per hour in soap operas (cf. Greenberg & Busselle, 1996), and Ward (1995) estimated an average of 20 instances per hour in programs most preferred by young people.

A second common finding across content analyses is that television messages often are distorted and clichéd. More specifically, several authors have drawn attention to a set of interrelated stereotypes

that appear to be repeatedly featured throughout television fare. It has been suggested, for instance, that televised portrayals of dating and sexual relationships often convey the image of sex-driven males. Fictional entertainment expresses a stereotype of males as being preoccupied with sexual intercourse. Ward (1995), for example, has reported that male characters are always thinking about sex and are continuously willing and eager. Further, young, male characters on soap operas, drama series, and situation comedies typically are those individuals who are most likely to initiate and control sexual relations. Television has a tendency to depict males as proactively pursuing as much sex as possible (Aubrey, 2004, Kunkel et al., 2001; Ward, 1995; Gow, 1996). Finally, it is regarded a common practice in television entertainment to portray sex on television as free of consequences. Kunkel et al. (2003) have indicated that only 15% of the sexually oriented scenes on television mentioned risks or responsibilities. Such findings have led several authors to conclude that televised sexual relations are recreational, superficial and inconsequential. According to Ward (1995), the frivolous image of televised sexuality is stressed even more by the portrayal of women as sexual objects or conquests, primarily valued for their physical appearance (see Gow, 1996).

These conclusions have inspired studies to investigate the role of television in adolescents' sexual socialization. On the one hand, a number of studies explored whether television's frequent references to sexuality make sexual activity seem more widespread. More specifically, Buerkel-Rothfuss and Strouse (1993), Ward (2002), and Ward and Rivadeneyra (1999) were interested in the relationship between television exposure and expectations about the level of sexual activity among peers. They have found that heavy viewers (of soap operas) tend to overestimate the prevalence of sexual activity in real-life (Buerkel-Rothfuss & Strouse, 1993), and that more frequent TV exposure is related to greater expectations of peer sexual experiences (Ward, 2002). According to Ward (2003), television appears to create the impression that "everyone is doing it" (p. 238). On the other hand, a number of studies have linked television viewing to the acceptance of stereotypes that are in line with TV's view of sexual relations. Both greater TV exposure and greater viewing involvement have been associated, for instance, to stronger support for

recreational attitudes (Ward & Rivadeneyra, 1999), and acceptance of stereotypes as "men are sex-driven" and "women are sexual objects" (Ward, 2002).

These studies have been limited, however, by their use of participants within the age range of 18-22. Therefore, the primary goal of this study was to determine if the hypothesized relationships differ by age. In particular, we were interested in whether the relationship between TV exposure and assumptions about peer sexual activity as well as the relationship between television viewing and the acceptance of sexual stereotypes would occur in a sample of adolescents who are noticeably younger than Ward and Rivadeneyra (1999) and Ward's (2002) undergraduate students. If such relationships arise, it would mean that the role of television viewing in adolescents' sexual decision making starts at an earlier age than typically is assumed.

The research literature includes conflicting statements about what to expect from the role of age in sexuality-related television effects. On the one hand, it has been put forward that younger viewers are less likely to be affected by sexual references in entertainment television, since they may be less connected to sexually oriented contents. Silverman-Watkins & Sprafkin (1983), for example, have reported that 12-year-olds, more than older adolescents, experienced difficulty in understanding sexual innuendo in television shows. Brown, White, and Nikopoulou (1993) have pointed out that preadolescent girls reacted disinterested or disgusted to sexual media content, whereas older girls were often intrigued. Furthermore, Ward (2002) has assumed that for younger adolescents influences from their parents may be of more importance, whereas desires for sexual closeness and enduring commitments may be of less importance. On the other hand, some authors have called for research in younger age groups, as they believed that television effects might be stronger among viewers who lack the cognitive capacity adequately to process the images portrayed (Chapin, 2000). Ward (2003) referred to the typical belief in television effects research that younger viewers most probably are less informed and have less first-hand experience in the area and therefore would be more affected.

Given this undecided account of the issue, we sought to address the following research question:

RQ1: Does the association between exposure to television and assumptions about the sexual experiences of peers also occur in a sample of 12- to 15-year olds?

RQ2: Do the associations between exposure to television and beliefs about males as initiators of sexual relations, beliefs about males as being preoccupied with sex, and beliefs about sex as a recreational, purely physical activity also occur in a sample of 12- to 15-year olds?

With regard to the first research question, our decision to opt for a younger sample may have specific consequences for the content of the hypothesized relationship. Typically, it is assumed that television viewing is related to expectations about the sexual activity level of *same-aged* peers. This is a plausible assumption for the study of emerging adults (18-22), as content analyses have reported that when intercourse is depicted, it normally involves adult characters (Kunkel et al., 2001). Heintz-Knowles (1996), for instance, has specified that half of the sexual participants on television are between the ages of 18-35, whereas adolescents (age <18) made up only 5% of the sexual participants. This implies that television primarily refers to sexual activities of characters that are at least a couple of years older than the participants in this study. We therefore included an additional indication of the idea that "everyone is doing it" and asked participants in the study how they would rate the sexual experience level of people that are a couple of years older than themselves.

RQ3: Is exposure to television associated with assumptions about the sexual experiences of older-aged peers?

That young adolescents might not learn from television what their same-aged peers are doing, but what people who are a bit older are doing may be equally or even more important, as it has been found that perceptions of older peers can have an influence on younger adolescents' development. Kinsman et al. (1998) have speculated on young adolescents' desire to seem older and their adopting of older

adolescents' behaviors to seem mature. Such a process may be reinforced or expedited by abundant portrayals of emerging adults who are sexually successful.

The role of real-life experiences

Closely related to the issue of age in sexuality-related television research is the issue of first-hand sexual experiences. It also is a topic of conflicting assumptions. On the one hand, several authors have endorsed the idea that television's impact must be stronger among adolescents with little sexual experience. Peterson et al. (1991), for instance, have pointed at "adolescents' limited access to countervailing views" and asserted that children, with less experience than adults, are more likely to be affected by televised scripts. In the same way, Ward and Rivadeneyra (1999) relied on a general assumption repeatedly referred to in the field of media effects: that television's impact is supposed to be stronger in areas in which viewers have the least personal experience. Segrin and Nabi (2002) departed from a comparable opinion, when they assumed that a negative relationship between age and idealistic marriage expectations may be best explained by assuming that older respondents have more relationship experience and, therefore, hold less idealistic beliefs about marriage. In addition, Baran's (1976a, b) studies have found that the relationship between lower satisfaction with first coitus and the reality perception of television characters' sexual ability and sexual pleasure occurred in a sample of young, inexperienced teenagers but not in a sample of experienced college students.

According to other researchers, however, it would be a limited analysis of television's role to assume that viewers only are affected when they have little or none real-life experiences. For instance, in summarizing results of research on samples of college students, Ward (2002) has concluded "that undergraduates are neither too jaded nor too experienced to be affected". Furthermore, she reported that experienced male students were more likely than inexperienced male students to accept stereotypes about sexual relationships. Similarly, Rehkof (2004) has found that respondents in a committed relationship were more likely to perceive televised portrayals as realistic.

Due to this lack of clarity, an additional aim of this study was to address the following research question:

RQ3: Does real-life sexual experience reinforce the effect of television exposure, or does it make the expected relationships disappear?

Exposure to sexually oriented content

The majority of the studies in the area of romance- and sexuality-related television effects have relied on cultivation theory (e.g., Segrin & Nabi, 2002; Ward & Rivadeneyra, 1999; Ward, 2002). Cultivation theory is the most prominent theory on whether relationships exist between television content and viewers' notions of social reality (Gerbner, Gross, Morgan, & Signorielli, 1980; Morgan & Signorielli, 1990). More in particular, "the cultivation hypothesis proposes that over time, heavy viewers of television develop views of the world similar to what they see on television" (Bryant & Thompson, 2002, p. 100). Research conducted in this tradition generally has compared the beliefs and notions of light and heavy viewers. The cultivation hypothesis was supported when significant differences between light and heavy viewers were found and when the conceptions of these heavy viewers reflected televised reality.

Hawkins and Pingree (1982), however, have challenged the general idea that viewers digest a lifelong, continuous flood of rather homogeneous messages across most television genres. They have stated that it is not the pure amount of overall television viewing, irrespective of exposure to different types of content, that affects reality conceptions. Instead, they have speculated on different cultivation effects of different types of television content. Weaver and Wakshlag (1986) have reported results that support this suggestion for crime-related cultivation effects. Potter and Chang (1990) also have found that exposure to specific kinds of programs was a far better predictor of cultivation measures than overall television viewing.

Researchers in the field of sexuality- and relationship-related effects of television have adopted this approach and employed various operationalizations of content-specific exposure. Segrin and Nabi

(2002) and Rehkoff (2004), for instance, asked how often undergraduate students watched soap operas, daytime talk shows, reality shows about relationships, and romantic comedies and regarded the sum of these frequencies as an indication of their romantically-themed television viewing. In Peterson et al.'s (1991) study participants were invited to list their favorite programs. These favorite programs were classified into four categories, ranging from "with a relatively high level of sexual content" to "with little or none sexual content", and processed into a single index.

Ward & Rivadeneyra (1999) and Ward (2002), on the other hand, rejected the use of favorite programs and provided a list of all network comedies and dramas that had aired regularly on one of the six major networks during the previous school term. They asked respondents to indicate how often they had viewed each of these programs, summed these frequencies and multiplied them by the length of the program, thus resulting in indices of their monthly hours of prime time viewing, their monthly hours of soap opera viewing, and their monthly total of viewing hours. Similarly, Brown and Newcomer's (1991) sexy television viewing measure was represented by the product of three variables: the viewing frequencies of 67 current prime-time and afternoon television shows, their length, and their sexual content level, which was based on ratings of a sample of college students. In the same way, Aubrey et al. (2003) provided a list of 55 current and recent primetime and daytime television programs and asked to specify how often respondents watched each program. After that, an independent sample comparable to the sample of the actual study rated each program; these ratings, together with the program's length, were used as weights in the sum of each respondent's frequencies.

With the exception of Aubrey et al's (2003) approach, which used an equivalent sample to rate the sexual content of the programs listed, these operationalizations are strongly based upon a researcher-centered definition of sexuality- or relationship-oriented content. The measures include programs or genres of which the researchers themselves (or their students for that matter) believed that they are sexually oriented or romantically themed. This is remarkable, since most studies in the field have emphasized the viewers' perceptions of the portrayals and their connections with the material as

noteworthy factors in the socialization process. Ward and Rivadeneyra (1999), Aubrey et al. (2003), Ward (2002) and a good number of other authors in the field have included in their research designs several dimensions of what is referred to as *viewer involvement* (e.g. perceived realism, viewing to learn, identification, viewing motivations). They have done this to draw attention to the importance of "a constructivist perspective that highlights the active, sense-making role of the viewer" (Ward, 2002, p. 2).

In this study, we included measurements of viewer involvement as well, but went one step further. An additional goal of the study was to create content-specific exposure measures that more closely follow the "constructivist perspective" on television viewing. Two arguments have inspired this approach. First, it has been indicated that the concept of genres as it is defined by researchers may not capture the real-life television diets of adolescent viewers. Various studies have questioned the notion of genre loyalty and concluded that viewers of one program are no more likely to watch another program of the same type or genre (Goodhardt, et al., 1987; Webster & Lichty, 1991), unless it is preceded by a show of the same genre on the same channel (Walker, 1988). This means that when researchers who included a list of programs in their questionnaire would have factor analyzed these programs (i.e. identify groups of shows that tend to be viewed by the same viewers), the emerging factors most likely would not have corresponded unequivocally with traditional genres, such as soap operas or reality television. According to Cohen (2002), a more likely result is that program clusters would have emerged that reflect viewers' actual television diets as these result from content preferences and channel loyalty and are shaped by inheritance effects. A second argument is that qualitative accounts of the relationship between television content and adolescents' sexual maturity (Steele, 1999) have drawn attention to teenagers' particular interpretations of television content. In this respect, Ward et al. (2002) have emphasized that "researchers need to acknowledge that their perceptions of specific sexual content may differ from those of other viewers" (p. 118). This implies that relationships may occur between sexual beliefs and exposure to content that is not sexually oriented or romantically themed in the view of adult researchers. We therefore chose to break television exposure into the program clusters as they emerge from adolescents' actual television viewing patterns and hoped this would better document television's reach and impact.

The general aim of this study was to provide an exploratory re-examination of relationships already reported in previous studies. More specifically, the relationships between television exposure and assumptions about peer sexual experiences as well as certain sexual stereotypes were investigated with particular attention for the role of age, first-hand experiences and 'constructivist' content measures.

Method

Subjects

We used data from the [name of state deleted] Study on Media and Adolescent Sexuality. This investigation was a cross-sectional study among all seventh and tenth grade students attending 9 schools in [name of state deleted]. To ensure representation of different parts of [name of state deleted] and of its different schooling levels, we targeted schools located in various regions, and schools that provide diverse types of schooling. Participating students completed a structured, pencil-and-paper questionnaire in a regularly scheduled classroom period. The study was presented as an omnibus study on the leisure habits of youngsters. Trained graduate students were present to answer any questions, and respondents were garanteed that all responses would be treated confidential.

Total sample size was 2400, but inaccurate information from the schools, sickness, truancy and refusal to cooperate led to a final sample size of 2127 adolescents. 53.1 percent of the sample were seventh grade students. In the seventh grade the average age was 12.69 years (SD=.52); in the tenth grade the average age was 15.75 years (SD=.69). 58.5 percent were boys.

Measurement

Television viewing.

The questionnaire included a list of 60 programs that were broadcast outside school hours on the five most important channels during the period of 6 weeks before the data collection. Respondents were asked to report on their frequency of viewing these programs, using a 4-point scale (ranging from

'regularly' to 'never'). On the basis of these frequencies and the length of the programs an average of total weekly viewing amounts was calculated.

Further, participants' involvement in television viewing was assessed by a group of four measures. One measure asked respondents to indicate whether they watch TV for entertainment reasons by rating four items (e.g. 'I watch TV for fun') on a 5-point scale (from 'strongly agree' tot strongly disagree'). The second viewer involvement measure examined participants' learning motivations. Agreement with five items adapted from Rubin's television viewing motives scale (1981) was rated using a 4-point scale (from 'strongly agree' tot strongly disagree'). Next, based on the viewing for learning scale a newly constructed scale was used to assess adolescents' viewing for learning about relationships. Participants indicated their agreement with four items about whether they watch television to find out how to manage intimate and dating situations (e.g. 'When I watch TV, I sometimes hope to learn something about loving relationships'). The final viewer involvement measure examined whether television content may inspire sexually oriented thoughts. Participants rated three items (e.g. 'When I think of sex, I sometimes imagine something I saw on TV') by using a 4-point scale (from 'strongly agree' tot strongly disagree').

These ratings were averaged to produce four involvement measures for each person. Reliability analyses for these assessments included obtaining alphas and performing factor analyses. The principal components analyses run on the ratings of these measures all yielded conceptually coherent factors with eigenvalues greater than 1.0. Alphas ranged from .76 to .83.

Sexual stereotypes.

Stereotypes of males as being preoccupied with sex, of males as being the main initiators of sexual relations and of sex as a purely physical activity were assessed with participants' ratings on 12 items, several of which were inspired by The Stereotypes about Male Sexuality Scale (Snell, 1998). Items included: 'Most boys are ready for sex at any time', 'A "real" man is one who can get any girl to have sex with him', 'It's okay for a boy to be a little forceful to get sex' and 'it is acceptable to have sex outside a loving a relationship'. The principal components analysis run on the 4-point ratings of these items

produced three conceptually coherent factors with eigenvalues greater than 1.0. The first factor could be labeled 'men are sex-driven', the second 'men initiate sexual relations' and the third 'sex is a purely physical activity. As the alphas ranged from .71 to .86, the ratings were summed to produce three separate indices.

Assumptions about sexual experiences.

Respondents estimated the prevalence of four sexual activities among both peers and people who are a couple of years older. Measured on a 5-point scale (1. never; 2. seldom; 3. now and then; 4. often; 5. very often), they were asked how often same-aged and older-aged peers (1) have been naked with their boy- or girlfriend, (2) have had full intercourse, (3) have had sex with multiple partners, and (4) have had sex in public places. A principal components analysis showed that these indicators loaded on single factors (Alpha: .75 and .73). These variables were summed to obtain an estimate of adolescents' perception of peer sexual experiences as well as an estimate of adolescents' perception of sexual behaviors among people who are a bit older.

Sexual experience.

The participants reported which of nine sexual behaviors they had experienced, ranging from French kissing over petting to coitus (coded yes = 1 and no = 0). Since summing these scores would have failed to spot the actual significance of each of these behaviors, we performed a procedure to obtain for each behavior a weight that expresses its perceived importance. More specifically, we entered these items in a Multidimensional Scaling Analysis; however, forced it to produce only one dimension. This analysis plotted each behavior on a certain distance from every other behavior. 'To caress each other over his/her clothes' was situated at one extreme of the scale and was given the weight of 1. Full intercourse was situated at the other extreme and, reflecting the actual distances that emerged from the multidimensional scaling analysis, got a weight of 3.7. 'French kissing' and 'touching her breasts/your breasts being touched' were given weights between 1 and 2, whereas 'touching his/her genitals/your genitals being touched' and 'seeing him/her fully naked/you being seen fully naked' received weights between 1.5 and 3. The weighted sum of these items reflected participants' sexual experience level.

Socio-demographic variables.

Socio-demographic variables included respondents' age, family make-up (single-parent family or not), the educational level of both their mother and father using a 5-point scale from 'no degree' to 'college degree', and respondents' schooling level. In [name of state deleted] a distinction is made between three levels of education: general education, technical education and vocational training. Because these levels are indicative of job prospects and access to higher learning they can be considered three levels of education with general education as the highest en vocational training as the lowest. Classes were chosen in such a way that 40 percent of the sample consists of higher-level pupils, and 30 percent each of so-called middle and lower level pupils.

Results

Preliminary results

Table 1 presents the means of the variables in the analyses and reports on the mean differences between boys and girls. This indicates that every variable in the model significantly differs with respect to gender. Boys more strongly accepted the stereotype of sex as a purely physical activity and males as dominators of sexual relations and rated the sexual experience level of same-aged and older-aged peers higher. Boys also reported higher levels of sexual experience. Girls, on the other hand, indicated stronger endorsement of the stereotype that males are preoccupied with sex. With regard to television viewing, boys showed greater exposure and more involvement. Girls' television viewing was less motivated by entertainment or learning intentions and their sexually oriented thoughts were not as frequently inspired by television content. Due to these differences, we have decided to perform separate analyses for both gender groups. In the present study, gender was treated as a moderator variable.

TABLE 1

Program analysis

To determine program clusters as they emerge from adolescents' actual viewing diets a principal components analysis with oblimin rotation was run on the viewing frequencies of 60 listed programs (see Cohen, 2002). This analysis produced groups of programs that are viewed at similar frequencies by individual viewers (See Table 2). A scree plot was used to determine that an eleven-factor solution was optimal and that additional factors would add only small amounts of explained variance. Together these factors explained 44% of the total variance in viewing frequency. All factors had eigenvalues over 1.5.

TABLE 2

Interpretation of the solution indicated that the programs could be classified according to three distinctive attributes. Table 2 presents an overview of the factors that emerged from the analysis and indicated its structure within each of these attributes. A first attribute is the hour at which the program is broadcast. When we split an evening of television viewing in three blocks of time, i.e. during prime time, before prime time, and after prime time, there seems to be some support for inheritance effects. The chance of a program being watched appears to increase when it follows another program watched. Six of the eleven factors are exclusively composed of programs that are broadcast in the same block of time and another three factors only hold one exception to this rule. A second attribute that comes into view as an important attribute of television programs is the channel on which programs are broadcast. The concept of channel loyalty showed through participants' viewing patterns, since seven of the eleven factors are homogeneous with respect to the channel and another three factors only hold one exception to this. Finally, a third attribute that appears to have influence on adolescents' viewing diets is the concept of genres. The principal components analyses yielded seven factors that were homogeneous with regard to common content features usually referred to as 'television genres' and another two factors held only one exception. We identified action series (e.g. 24), soap operas (e.g. Days of Our Lives), situation comedies (e.g. Friends), youth drama series (e.g. Party of Five), and youth action series (e.g. 'Buffy, The Vampire Slayer', 'Smallville'). Reflecting the content of each factor as it proves from the proportion within each of

these attributes we labeled the factors as follows: After primetime action series, Before primetime comedy (CH4), Primetime series on CH3, Before primetime comedy (CH5), Before primetime youth action series (CH 4), Before primetime programs on CH2, Primetime series on CH1, Before primetime action series on CH 5, Before primetime action series on CH 4, Before primetime series on CH3, Before primetime soap operas.

Generally, this analysis provides support for the contention that genre is an important but not the only attribute that distinguishes programs. The question now is whether these program clusters, which presumably more adequately than researcher-defined genre classifications reflect viewers' television diet, significantly can predict the sexual assumptions and stereotypes. The frequencies of the programs in each factor therefore were summed and multiplied by their length to produce eleven specific television viewing measures.

Correlational and regression analyses

The primary goal of this study was to determine whether TV exposure and viewing involvement are both associated with young adolescents' beliefs and assumptions about sexual relations. Table 3 summarizes correlational analyses examining relationships between four viewing involvement and 12 exposure measures and five sexual outcome measures.

TABLE 3

With respect to the exposure measures, every significant correlation points in the same direction. Greater exposure always is related to more support for sexual stereotypes and higher assumptions about peer sexual experiences. The most consistent exposure measure is viewing after primetime action series with five significant correlations. Before primetime comedy (CH4) is four times related to sexual outcome measures and before primetime youth action series (CH 4), before primetime action series (CH 4) and before primetime soap operas are three times related to the sexuality-related beliefs. Before

primetime series on CH3, before primetime comedy (CH5), and overall exposure show two significant correlations. Before primetime programs on CH2, primetime series on Channel 1 and before primetime action series on Channel 5 are not or hardly related to any of the outcome measures.

The viewing involvement measures more consistently were associated with sexual stereotypes or assumptions. In particular, the involvement measures that focused on relationships, such as motives for learning about relationships and having sexual thoughts that are inspired by television content, showed very consistent results, compared to four significant correlations for general learning motives and two correlations for general entertainment motives.

TABLE 4

Finally, as a more solid test of connections between television viewing and sexual attitudes or assumptions, a hierarchic regression analysis was run for each of the sexual outcome measures. In a first step, the regression models simultaneously included the background variables and television measures that had correlated significantly with that sexual outcome variable. In the next step, we examined the role of adolescents' sexual experience level by entering the interaction effects of the sexual experience measure and the exposure measures, represented by their product terms.

The regression equations that were tested to predict male adolescents' stereotypes accounted for 6.9%-19.6% of the variance (See Table 4). Three variables consistently predicted the acceptance of sexual stereotypes. First, being older and more sexually experienced predicted stronger endorsement of statements about sex as a purely physical activity, about sex as an activity dominated by males, and about males as being preoccupied with sex. Further, these stereotypes were stronger among males who reported more often to have sexual thoughts induced by television. In addition to these predictors, the acceptance of sex as a purely physical activity was also predicted by viewing more before primetime youth action series and before primetime soap operas. The stereotype of sex as an activity dominated by males additionally was predicted by a stronger usage of television for learning about relationships and by the

interaction between sexual experience and watching after primetime action series. The latter indicated that a significant relationship with viewing after primetime action series turns up at higher levels of sexual experience. The stereotype about males as being preoccupied with sex was more strongly endorsed by males who follow a lower level of schooling and have more television-related sexual thoughts. Besides, this stereotype was predicted by the interaction between sexual experience and before primetime action series on Channel 4, denoting that this type of content becomes a significant predictor at higher levels of sexual experience.

The regression equations to predict male adolescents' assumptions of others' sexual activity levels explained 39.8% of the variance in assumptions about same-aged peers and 18.7% of the variance in assumptions about older-aged peers. Four variables were significant predictors of both. Being older, having more sexual experience, viewing television with the intention to learn about relationships and having sexual thoughts inspired by television contributed significantly to higher assessments of the sexual experience in same-aged and older-aged peers. In addition to these, assumptions about same-aged peers' sexual experiences are predicted by schooling level, with boys in lower levels of schooling assuming higher levels of sexual experience, by viewing before primetime action series and by the interaction between sexual experience and viewing soap operas, indicating that higher levels of sexual experience go with stronger associations between viewing soap operas and assumptions about same-aged peers. As regards assumptions about older-aged peers, additional significant predictors are father's educational level, viewing before primetime comedy, entertainment motives, and the interaction between sexual experience and viewing before primetime comedy. Having a less educated father, more exposure to before primetime situation comedies - especially when the respondents' sexual experience level is higher -, and television usage for entertainment contributed to higher assumptions of older peers' sexual experiences.

TABLE 5

A different pattern of results emerged in the regression equations that were tested to predict the stereotypes among female participants (See Table 5). The models for sexual stereotypes explained 4.2%-9.4% of the variance. More specifically, stronger support for the idea that sex is a purely physical activity was predicted by the respondents' age, their schooling level, the educational level of their mother, and their sexual experience, on the one hand, and by viewing after primetime action series and having television-induced sexual thoughts, on the other. First, this denotes that both following a higher schooling and having a well-educated mother predicted more endorsement of the idea that sex is purely physical. At the same time, being older and having more sexual experience contributes to this idea as well. Finally, both exposure to after primetime action series and a higher frequency of sexual thoughts that are inspired by television content play a role in regarding sex as a purely physical activity. A similar pattern emerged for the stereotype of sex as an activity dominated by males. This idea received more support when the respondent is older and has more sexual experience and is predicted by viewing after primetime action series - especially at higher experience levels - and having television-induced sexual thoughts. Besides, this stereotype is more strongly endorsed by girls who watch television to learn about romantic relationships. With regard to the stereotype about males as being preoccupied with sex, the respondents' educational background, age, sexual experience, and exposure to specific television content turned out to be irrelevant. Instead, this stereotype only was predicted by viewing to learn about relationships and by having sexual thoughts that are induced by exposure to television content.

The equations to predict assumptions of others' sexual activity levels explained 38.5% of the variance in assumptions about same-aged peers and 25.8% of the variance in assumptions about older-aged peers. These equations revealed that being older and having more sexual experience predicted higher assumptions of same-aged as well as of older older-aged peers' sexual experiences. In addition, following a lower level of schooling, being from a single-parent family, and having sexual thoughts inspired by television predicted higher assumptions about same-aged peers. As far as the assumed sexual activity level of older-aged peers is concerned, viewing before primetime youth action series and soap operas as well as watching television to learn about relationships predicted higher assumptions.

Discussion

The main goal of this study was to re-investigate relationships that already have been found in previous studies, but never were tested in a sample of 12- to 15-year-olds. We were interested in whether such associations might occur in younger adolescents.

The findings of this study do indicate that a number of significant associations exist between television viewing and young adolescents' beliefs and assumptions about sexual relations. Both exposure and involvement measures played a role. With regard to viewing involvement, for example, a considerable number of significant relationships emerged. These variables were rather consistent predictors of young adolescents' stereotypes and assumptions. More particularly, the study identified the importance of specialized involvement variables. Whereas previous studies mostly employed involvement measures that concerned television viewing in general, this study also used specific, sexuality-related measures and found that these were better predictors. To watch television for learning about relationships more consistently predicted sexual beliefs than general learning motives did. Furthermore, having sexual thoughts that were inspired by television made a strong contribution to young adolescents' sexual beliefs. This result may indicate a mediating process within the relationship between television viewing and the occurrence of certain sexual beliefs. The observation that a good number of young adolescents uses images and impressions from what they have seen on television as 'input' for their sexual thoughts (our results indicate that about one third of the girls and half of the boys report to have television-induced sexual thoughts) not only suggests that they are highly involved in their television viewing, but also that they may apply what they saw in later thinking. It can be hypothesized then that television provides adolescents with a framework to evaluate real-life sexual feelings and situations. The robust association between having television-induced sexual thoughts and sexual stereotypes or assumptions appears to offer some tentative support for this allegation. Further research should address this issue.

With regard to television exposure, five program clusters significantly were related to one or more outcome measures in the male sample and four program clusters were related to at least one of the sexual beliefs in the female sample. These findings hold two important conclusions. First, the pattern of

sex differences found in this study points in a direction opposite to what Ward (2002) has reported about undergraduate students. Ward (2002) located more and stronger relationships in the female sample, whereas this study found the most coherent results in the male sample. This may suggest that developmental differences exist between boys and girls, with males being affected more strongly in early adolescence and females being influenced more strongly in late adolescence. On the other hand, it may also be an issue of the outcome measures that were assessed here. These measures dealt with topics that especially may occupy boys in early adolescence, whereas other outcome measures might have produced a reverse pattern. In addition, it may also be an issue of the medium covered here. Early adolescent boys are more likely to be attracted to television than their female counterparts - a contention confirmed by boys' higher exposure levels -, whereas early adolescent girls especially may be attracted to other media, such as teen magazines (Treise & Gotthoffer, 2002).

A second conclusion relates to the types of content that produced significant associations. Typically, studies have focused attention to genres that manifestly express ideas about relationships and sexuality, such as soap operas and situation comedies. The findings here, however, indicate that this approach may be too limited, as in the male sample three out of five significant program clusters and in the female sample three out of four significant program clusters reflect content that usually is ignored. The effect of television was broader than the effect of soap operas or situation comedies. In fact, one of the main findings is that action series are consistent predictors of sexually oriented beliefs. This is a surprising conclusion, since most studies so far have ignored the possibility of an association with action series. Then again, it is not surprising, since action series have been shown to feature male dominance and machismo and to represent women as pleasant rewards or vulnerable victims. The stereotypes of males as being preoccupied with sex, as dominating sexual relations, and of sex as a purely physical activity seem to be in line with the view that is presented in action series.

Furthermore, the use of 'constructivist' measures of television content, rather than content types defined by the researcher, showed that the concept of genres is crucial but not overpowering in understanding adolescents' television viewing patterns. The clusters of programs watched by the same

adolescent viewers reflected the additional importance of time and channels. Young adolescents' television diets could not be captured using one attribute only.

However, the identification of these other attributes (i.e. time and channel) does not provide definitive answers. The importance of time, for instance, leads to other questions. Why viewing in the early evening is related to certain sexual beliefs may be attributed to the content of the programs that are broadcast during that part of the day and are chosen to be watched, but may equally well be attributed to viewing conditions that are typical for that part of the day. More than during primetime, the period before primetime might be a period during which adolescents sit alone in front of the television, without any parental mediation. Similarly, viewing late evening action series may not be related to sexual beliefs solely because of the content of these shows, but also because of the very fact that they are broadcast late in the evening. For instance, watching television until late hours on a school night might be an indicator of lacking parental rules and/or resistance to the school system - a process previously referred to as media delinquency (Roe, 1995). However, holding a particular sexual belief system may be an indicator of the same structural factors as well. In this view, it is not the content that generates assumptions or attitudes. Both television viewing patterns and sexual beliefs result from structural factors in an adolescent's lives. Research on the role of television in adolescent sexual socialization thus needs a more detailed account of how and why adolescents watch certain programs.

A final aim of this study was to explore the moderating impact of sexual experience on the relationship between television exposure and sexual beliefs. The conflicting assumptions about this position in the literature served as a background for this research question. The findings of this study seem to have provided an answer that is situated between both oppositions. On the one hand, the significant associations between television viewing and sexual outcome measures in a sample of young adolescents indicated that people who are not experienced in the sexual field for years and years still could be affected. The idea that one needs to understand fully the sexual messages to be affected is not entirely supported. On the other hand, this study does suggest that the impact of television becomes stronger when the level of experience rises. This study therefore points to a slow developmental process

in which television and sexual experience gradually interact towards a more enduring sexual belief system.

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Table 1: Main statistics for the variables in the analysis

	Mean	Std. Dev.	Minimum	Maximum	T-value
'Sex is a purely physical activity'	5,1251	2,01273	3,00	12,00	13,84***
'Males dominate sexual relations'	8,5088	1,79338	4,00	16,00	10,62***
'Males are preoccupied with sex'	11,6653	3,24649	5,00	20,00	-3,72***
Assumptions about same-aged peers' sex. exp.	15,9344	3,38182	4,00	20,00	4,81***
Assumptions about older-aged peers sex. exp.	7,0779	2,60674	3,00	15,00	3,47***
Total weekly amount of viewing hours	28.53	11.47	12.63	42.52	2.047*
Viewing for entertainment	8,6967	2,91930	4,00	20,00	2,76**
Viewing for learning	11,3140	2,77205	5,00	20,00	2,17*
Viewing for learning about relationships	10,3172	2,73722	4,00	16,00	4,80***
Sexual thoughts inspired by television content	8,0211	1,95752	3,00	12,00	14,21***
Sexual experience	5.3280	7.3875	0	21.59	5.371***

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 2: Overview of the program clusters: number of programs per cluster in each category of the three attributes: Point in time, Channel and Genre

	Point in time			Channel					Genre					Label[1]
	Before	Prime-time	After	Ch1	Ch2	Ch3	Ch4	Ch5	Action	Soap operas	Comedy	Youth drama	Youth action	
Factor 1 (6 programs)			6/6				2/6	4/6	6/6					After primetime action series
Factor 2 (5 programs)	5/5						5/5				5/5			Before primetime comedy (CH4)
Factor 3 (7 programs)		7/7		1/7		6/7			1/7	2/7	4/7			Primetime series on CH3
Factor 4 (9 programs)	9/9						1/9	8/9			9/9			Before primetime comedy (CH5)
Factor 5 (5 programs)	4/5		1/5				5/5						5/5	Before primetime youth action series (CH 4)
Factor 6 (4 programs)	4/4				4/4						2/4	2/4		Before primetime programs (CH2)
Factor 7 (3 programs)		3/3		3/3					2/3	1/3				Primetime series on CH1
Factor 8 (7 programs)	5/7		2/7					7/7	7/7					Before primetime action series on CH 5
Factor 9 (5 programs)	4/5		1/5				5/5		5/5					Before primetime action series on CH 4
Factor 10 (5 programs)	4/5		1/5			5/5			2/5		3/5			Beforme primetime series on CH3
Factor 11 (4 programs)	4/4			3/4		1/4				4/4				Before primetime soap operas

[1] The labels are based on the attributes for which the factor are most homogenous.

Table 3. Correlations between TV exposure and viewing involvement and sexual outcomes

	Males					Females				
	Sex is purely physical	Males dominate sex. relations	Males are preoccupied with sex	Assumptions about peer sex. experiences	Assumptions about sex. experiences of older-aged peers	Sex is purely physical	Males dominate sex. relations	Males are preoccupied with sex	Assumptions about peer sex. experiences	Assumptions about sex. experiences of older-aged peers
Total exposure								.09*		.16**
Factor 1		.09**	.08*	.09**		.11**	.10**			
Factor 2			.09**		.07*				.11**	.15***
Factor 3		.09**							.10**	
Factor 4	.07*									.10**
Factor 5	.07*		.07*							.14***
Factor 6									.08*	
Factor 7										
Factor 8										
Factor 9		.09**	.08*	.11**						
Factor 10			.07*			.09*				
Factor 11	.09**		.11*	.11**						.13**
Entertainment motives	.07*				-.09**	.07*				.09*
Learning motives		.10**					.10**			
Relationship learning motives		.15***	.15***	.09**	.12***		.15***	.15***	.09**	.12***
TV-inspired sexual thoughts	.17***	.18***	.33***	.10***	.22***	.17***	.18***	.33***	.11**	.22***

* $p < .05$; ** $p < .01$; *** $p < .001$; Factor 1=After primetime action series, 2=Before primetime comedy (CH4), 3=Primetime series on CH3, 4=Before primetime comedy (CH5), 4=Before primetime youth action series (CH 4), 5=Before primetime programs (CH2), 6=Primetime series on CH1, 7=Before primetime action series on CH 5, 8=Before primetime action series on CH 4, 9=Before primetime series on CH3, 10=Before primetime soap operas.

Table 4. Hierarchic regression analyses (final equation, all blocks included) in the male sample

	Sex is purely physical	Males dominate sex. relations	Males are preoccupied with sex	Assumptions about peer sex. experiences	Assumptions about sex. experiences of older-aged peers
Schooling level	-.04	.05	.06*	.16***	.03
Single-parent family	.03	.01	.03	-.01	.03
Educational level mother	-.00	.01	-.03	.02	.00
Educational level father	-.03	.02	.04	.01	-.07*
Age	.22***	-.10**	.07*	.22***	.19***
Factor 1		.00	-.01	.01	
Factor 2			.03		.06*
Factor 3		.03			
Factor 4	.02				
Factor 5	.06*		.03		
Factor 6					
Factor 7					
Factor 8					
Factor 9		.03	.02	.05	
Factor 10					
Factor 11	.07**		.03	.04	
Entertainment motives	.03				.05*
Learning motives		.00			
Relationship learning motives		.07*	.05	.05*	.07*
TV-inspired sexual thoughts	.12***	.14***	.27***	.06*	.17***
Sexual experience	.26***	.11***	.11***	.39***	.20***
Factor 1 * Sex. Exp.		.13***	.05	.02	
Factor 2 * Sex. Exp.			.00		.06*
Factor 3 * Sex. Exp.		.03			
Factor 4 * Sex. Exp.	.02				
Factor 5 * Sex. Exp.	.02		.06		
Factor 6 * Sex. Exp.					
Factor 7 * Sex. Exp.					
Factor 8 * Sex. Exp.					
Factor 9 * Sex. Exp.		.03	.07*	.00	
Factor 10 * Sex. Exp.					
Factor 11 * Sex. Exp.	.02		.02	.06*	
R^2	19.6***	.07***	.15***	.39***	.19***
F	22.53	7.08	12.96	59.40	26.81
Df	14/1222	15/1221	18/1218	14/1222	11/1225

* $p < .05$; ** $p < .01$; *** $p < .001$; Factor 1=After primetime action series, 2=Before primetime comedy (CH4), 3=Primetime series on CH3, 4=Before primetime comedy (CH5), 4=Before primetime youth action series (CH 4), 5=Before primetime programs (CH2), 6=Primetime series on CH1, 7=Before primetime action series on CH 5, 8=Before primetime action series on CH 4, 9=Before primetime series on CH3, 10=Before primetime soap operas.

Table 5. Hierarchic regression analyses (final equation, all blocks included) in the female sample

	Sex is purely physical	Males dominate sex. relations	Males are preoccupied with sex	Assumptions about peer sex. experiences	Assumptions about sex. experiences of older-aged peers
Schooling level	.07*	.02	.03	.15***	.03
Single-parent family	.01	.04	.03	.5*	.02
Educational level mother	.09*	.02	.06	.03	.02
Educational level father	.05	.00	.01	.02	.04
Age	.12**	-.13**	.02	.35***	.34***
Factor 1	.12**	.08**			
Factor 2				.02	.03
Factor 3				.04	
Factor 4					.00
Factor 5					.07*
Factor 6				.02	
Factor 7					
Factor 8					
Factor 9					
Factor 10					
Factor 11					.07*
Entertainment motives					.01
Learning motives		.02	.02		
Relationship learning motives		.12**	.14***	.01	.09**
TV-inspired sexual thoughts	.12**	.14***	.08*	.10***	.06
Sexual experience	.16***	.06	.06	.23***	.15***
Factor 1 * Sex. Exp.	.00	.09**			
Factor 2 * Sex. Exp.				.00	.01
Factor 3 * Sex. Exp.				.02	
Factor 4 * Sex. Exp.					.01
Factor 5 * Sex. Exp.					.01
Factor 6 * Sex. Exp.				.00	
Factor 7 * Sex. Exp.					
Factor 8 * Sex. Exp.					
Factor 9 * Sex. Exp.					
Factor 10 * Sex. Exp.					
Factor 11 * Sex. Exp.					.01
R^2	.09***	.07***	.04***	.38***	.26***
F	11.12	7.22	5.22	40.178	.17.87
Df	9/866	11/864	9/866	14/861	18/857

* $p < .05$; ** $p < .01$; *** $p < .001$; Factor 1=After primetime action series, 2=Before primetime comedy (CH4), 3=Primetime series on CH3, 4=Before primetime comedy (CH5), 4=Before primetime youth action series (CH 4), 5=Before primetime programs (CH2), 6=Primetime series on CH1, 7=Before primetime action series on CH 5, 8=Before primetime action series on CH 4, 9=Before primetime series on CH3, 10=Before primetime soap operas.