

Does Sex on the Screen change the Attitude of a Teen?

Longitudinal relationships between sexualized media consumption and permissive sexual attitudes, and the moderating role of parental communication and control.



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Abstract

This study examines the hypothesis that a longitudinal relationship exists between sexualized media consumption and permissive sexual attitudes. I also hypothesize that this association is moderated by parents' control of their offspring's media use and communication about media use and sex. A total of 331 adolescents aged 14 to 17 were followed from 2009 to 2010, during 4 waves with 6 month time intervals in between. The results regarding the first hypothesis showed that there is no longitudinal relationship between sexual media consumption and permissive sexual attitudes, even though both increase over time. However at T3, significant moderator effects were found for sexualized media consumption in combination with parental control and with parental communication. This indicates that at T3 for youth whose parents more tightly control their children's media use and communicate more about sex with their children, sexualized media was more strongly associated with permissive sexual attitudes than for adolescents whose parents were less controlling and communicated less with them about sex.

Samenvatting

Deze studie onderzoekt de hypothese dat er een longitudinaal verband bestaat tussen geseksualiseerde media consumptie en permissieve seksuele attitudes. Daarbij stel ik ook de hypothese dat deze associatie gemodereerd wordt door ouderlijke controle van het media gebruik door hun kinderen en ouderlijke communicatie over media gebruik en seks. In totaal participeerden 331 adolescenten tussen de 14 en 17 jaar aan dit onderzoek. Zij werden gevolgd van 2009 tot 2010, gedurende 4 metingen waartussen steeds 6 maanden zaten. De resultaten betreffende de eerste hypothese tonen aan dat er geen longitudinale relatie bestaat tussen seksuele media consumptie en permissieve seksuele attitude, terwijl beiden wel toenamen over tijd. Desalniettemin werden er op T3 wel significante moderator effecten gevonden voor geseksualiseerde media consumptie in combinatie met ouderlijke controle en ouderlijke communicatie. Dit toont aan dat bij jongeren op T3 bij wie ouders meer strenge controle uitoefenen op het media gebruik van hun kinderen en meer met hen communiceren over seks, geseksualiseerde media sterker geassocieerd is met permissieve seksuele attitudes dan bij jongeren bij wie ouders minder controlerend zijn en minder communiceren over seks.

Introduction

In this day and age, parents and professionals worry about the influence and impact of sexual images in mass media on the sexual attitudes and behaviors of children and adolescents (Villiani, 2001). Over the last decade, anxiety and public health concerns about the sexual development of youth has increased in many aspects of society (Kunkel, Farrar, Eyal, Biely, Donnerstein & Rideout, 2007). This is not surprising as the access to media has expanded, leading to spectacularly higher consumption of television programs and information on the Internet (Braun-Courville & Rojas, 2009). A report by the Kaiser Foundation indicated that on average, television programs contain more than 8 sexual incidents per hour. In programs that are popular among adolescents, 83% contain sexual content (Ward & Friedman, 2006). In addition, adolescents spend about 4 days per week using the Internet. Studies show that 10% of the 1000 most-visited Web sites are sex-oriented and that sex is one of the most frequent researched topics on the Internet (Braun-Courville & Rojas, 2009). Therefore sexual socialization of youth may be strongly influenced by the information they consume through the media, especially because adolescents consider the media as an important source of information and education (Andre, Frevert & Schuchmann, 1989).

Adolescents are active consumers and often report that the media are among their top sexual educators which can have concerning consequences. Media images that portray sex as glamorous, exciting, and risk free may be associated with the development of permissive sexual attitudes (Brown, Childers & Waszak, 1990). Because of this adolescents form attitudes about sex that are unrealistic, do not mention negative outcomes, are stereotypical and potentially unhealthy (Ward & Friedman, 2006). Therefore, it is important to understand how these attitudes are formed and what influences them (Daugherty & Burger, 1984). However, media effects do not occur in isolation of what happens in other social contexts, such as the family. Because parents are especially concerned about the sexual attitudes of

their children (Jaccard, Dodge & Dittus, 2002), it is important to examine the potential moderating influence they can have as an educator in the sexual development of their offspring. Particularly since sexual experts underline the importance and crucial role of the family's influence on their children's sexual health (Calderone, 1989; Klein & Gordon, 1992) and in shaping their sexual attitudes (Kesterton & Coleman, 2010). This is especially important in the light of the finding that many teens report that their parents do not give them sufficient information about sexual subjects during adolescence (Brown, Greenberg, & Buerkel-Rothfuss, 1993). This is why, in the present study, I aim to examine if parental communication and control can be a protective factor (i.e., through a moderating effect) on the relationship between sexualized media consumption and sexual attitudes, in a four-wave longitudinal design.

The most prominent theories that describe the way in which media consumption influences sexual attitudes are the cognitive social-learning theory and the cultivation theory. The cognitive social-learning theory by Bandura (1978) states that people learn through observation and imitation of others. Bandura identifies three main processes involved in learning: direct experience, modeling (i.e., indirect experience from observing others), and the storing and processing of information through cognitive operations (Escobar-Chaves, Tortolero, Markham, Low, Eitel & Thickstun, 2005). This theory also predicts that people who view media showing attractive characters who enjoy having sexual intercourse without suffering any negative consequences, are prone to imitate that behavior (Brown, 2002) and learn which behaviors are "appropriate" and "inappropriate" (Ward, 2003).

According to the cultivation theory, a great amount of exposure to media creates and cultivates attitudes that are consistent with the media message, instead of with reality (Escobar-Chaves et al., 2005). The cultivation theory provides a supplement to the concept of storing and processing of information in the cognitive social-learning theory, because it

addresses the forming of attitudes in this process. Thus, based on these perspectives I expect that with higher levels of sexualized media consumption, adolescent's sexual attitudes will become more permissive in nature. A sexual permissive attitude is one where people think more liberal about sexuality and freedom in sexual activities.

Media Consumption and Sexual Attitudes

There are various studies that examined the relationship between media consumption and attitudes about sex. Although some found no relationship (e.g., Nikken & De Graaf, 2011), most studies in contrast *did* find a statistically significant relationship. Youth's attitudes and beliefs regarding sex and sexual topics can be influenced by television (Kunkel et al., 2007). Specifically, sexual references in movies and on television were found to be associated with negative attitudes toward condom use and contraception, associated with having multiple sexual partners and having sex more frequently (Braun-Courville & Rojas, 2009; Wingood, DiClemente, Harrinton, Davies, Hook & Oh, 2001), and influencing youth's beliefs about sexual behavior norms (Buerkel-Rothfuss & Mayes, 1981; Buerkel-Rothfuss & Strouse, 1993). Correlational and experimental evidence showed that television's abundant and often stereotypical sexual content is linked with stronger support of non-relational sex and sexual stereotypes (Warm & Friedman, 2006; Ward, 2002). Ter Bogt, Engels, Bogers and Kloosterman (2010) found that watching erotic television content is associated with more permissive attitudes towards sex. Another study reported that music-television consumption was significantly linked to permissiveness for females (Strouse & Buerkel-Rothfuss, 1987).

Results concerning the association between Internet use and sexual attitudes show a similar picture. Exclusive to the Internet is the immense amount and range of (free) pornographic material which can be watched anonymously (Döring, 2009). Adolescents that have visited sexually explicit Web sites, compared to those who have not, report a more permissive attitude (Braun-Courville & Rojas, 2009). They also found that watching sexually

explicit images on the Internet, was associated with sexual permissive attitudes in their study among 433 adolescents age 12 to 22. The effects of pornography are often debated, but pornographic scripts can lead to viewers adopting more permissive sexual attitudes (Zillmann and Bryant, 1988). Among adolescents in Taiwan and Hong Kong, watching pornography was related to negative attitudes toward monogamy, marriage, and family (Lam & Chan, 2007; Lo & Wei, 2005). The results reviewed above comprehend that there is a significant relationship between media consumption and sexual attitudes, however most of these studies were not longitudinal.

Parental Communication and Control as a Protective Factor

How realistic is it to assume that all adolescents that are exposed to certain media images are affected in an exactly similar way, and to an exactly similar extent? Presumably, it is more adequate to examine media “effects” in conjunction with what happens in other social contexts, such as the family context for instance. More specifically, adults are aware of the importance of media influence. They have reported to believe that the media is an important educator for information on sex and sexuality for young people (Malamuth & Impett, 2001). Consequently, the extent to which parents are involved in their children’s lives and communicate with them about sex, may be critical for the development of sexuality and the prevention of high-risk sexual activity. Parental monitoring may also be of crucial importance in this regard. However, most parents do not know what their children are looking at because media use is often unsupervised. Many adolescents have Internet access in their bedroom which makes it hard for parents to keep track of what they are looking at (Braun-Courville & Rojas, 2009). Also, parents often do not control the media to which their children are exposed with any consistency or regularity, and may not communicate with them about the content (Strasburger & Donnerstein, 1999).

Nevertheless, a large amount of research on adolescent sexuality has repeatedly shown

that parents can play a substantial role in sexual development and attitudes. A survey study on 157 adolescents found that adolescents who received less parental communication about sexuality, had less sexual knowledge and more conservative sexual attitudes (Somers & Paulson, 2000). According to Donnerstein and Smith (2001), parents are helping to "inoculate adolescents from potentially detrimental effects of exposure" by openly communicating and actively co-viewing. Co-viewing is expected to be an effective method to deal with unpleasant effects of television viewing. To co-view, an adult watches a program with a child, discusses the content and explains any material that is not realistic. However, one survey found that 44% of adolescents watch something different with their parents than while they are watching alone (Strasburger & Donnerstein, 1999). Thus, potentially important but largely unexplored factors that may contribute to the relationship between media consumption and attitudes about sex, are parental communication and control. To my knowledge there has been no earlier longitudinal study that examined these variables as moderators in the relationship between sexual media consumption and permissive sexual attitudes.

The Present Study

In the present study I aim to investigate to what extent there is a longitudinal relationship between sexualized media consumption and permissive attitudes about sex. I will also examine if this association is moderated by parents' control of their offspring's media use and communication about media use and sex. With regard to the first research question, I hypothesize that there is a positive longitudinal relationship between sexualized media consumption and permissive sexual attitudes of 14 to 17 year olds. With regard to the second research question, I hypothesize that parental control and parental communication have a moderating role in the formation of sexual attitudes of their adolescents, and this effect will weaken the relationship that exists between sexualized media consumption and permissive

attitudes towards sex. I will examine these hypotheses in a sample of 331 adolescents aged 14 to 17, who were followed over 4 waves, from 2009 to 2010.

The present study features several improvements over previous research. First of all, it examines development instead of only using cross-sectional data. Secondly, previous studies differed in the age groups studied. This study investigates a young age group that has not often been used in studies about media influence. This group (14-17 years old) is very interesting to examine because they are at the start of their sexual development. Thirdly, this study focuses purely on permissive attitudes as a key concept that underlies developments in for instance sexual behavior. Finally, this study uses parental communication and control as moderators on the effect of sexualized media consumption on permissive sexual attitudes of youth, which to my knowledge has not been investigated before.

Method

Sample

This study longitudinally examines an age group of 14 to 17 year olds. Schools were asked for the participation of their 14 to 15 year olds at baseline measurement, which took place in October 2009. A total of 511 third graders filled in a questionnaire at baseline (T1). At the fourth wave, 419 students were still participating in the study. At baseline the mean age of this sample was 14.52 (SD = 0.64 | min-max 13-17), and the sample consisted predominantly of youth from a Dutch background (59,7%, n = 426). The second, third, and fourth wave of data collection (T2, T3, and T4) took place after six, twelve, and eighteen months, respectively. During the study, participants finished third grade and moved into the fourth grade. Because of this transition between T2 and T3, it was not possible to retain all baseline participants in the sample. Because the Dutch secondary school system reassigns students to different classes across grades, class composition changes considerably. The used

data was collected in classes in which at least seven students had participated at T1 and T2, and were still participating at T3 and T4. An attrition analysis was conducted to examine if there were any differences between the longitudinal sample (the participants who completed the questionnaires at every wave), and those who dropped out. The predicting variables in the attrition analysis were age, gender, educational level, religion, ethnicity, having a TV/computer in own room, sexual media consumption, permissive sexual attitude and parental communication and control. A logistic regression analysis proved that sample attrition was predicted by having a high education level ($OR = 3.528, p < .01$), indicating that these participants had a higher chance of dropping out of the study than those with a lower educational level.

Procedure

For this study, data were collected from seven high schools in The Netherlands. The schools received an invitation letter to take part in a longitudinal survey on the development of intimate relationships and sexuality in adolescence. When a school agreed to participate, they received a questionnaire in advance to judge whether the item content was appropriate, because some of the questionnaire items referred explicitly to sexual attitudes and activities. None of the schools withdrew their participation after examining the questionnaire content. Permission for the study was also granted by the ethics board of the Faculty of Social and Behavioral Science of Utrecht University. In advance of the study, participants and their parents were asked (through an informed consent letter) if they were willing to participate. Only three parents did not want their child to take part in the study. Adolescents were only included after they themselves and their parents had given permission to provide their data for research purposes. Participants were not obligated to fill in items about specific sexual activities, given that these items had an added answering category: "I don't want to answer this question". The participants had a regular school hour (50 minutes) to fill in the

questionnaire. There were two research assistants present during this school hour who introduced the questionnaire, stressed that data would be handled confidentially and that anonymity was guaranteed, and could answer possible questions.

Measures

Sexualized media consumption. Sexualized media consumption was defined as: the consumption of images through television, magazines and the Internet, that showed sex or images associated with sexuality. Adolescents' self-reported consumption of sexualized media images was assessed with six items, that tapped into the use of different media such as magazines, television programs, Internet, and movies. Examples of questions are; "How often in the last six months did you read a pornographic magazine?" and "How often in the last six months did you watch a sex-movie on television?" Answers were scored on a 5-point Likert-scale, ranging from 1 = never to 5 = very often. Internal consistency of items was high ($\alpha = .84$ at T1, $.88$ at T2, $.88$ at T3, and $.80$ at T4).

Permissive sexual attitudes. A permissive sexual attitude is defined as: an attitude where people are more tolerant and think more liberal about sexuality and freedom in sexual activities. Adolescents' self-reported sexual attitudes were assessed by measuring the extent to which they agreed with eleven statements of a sexually permissive nature. Answers were scored on a 5-point Likert-Scale, ranging from 1 = totally wrong to 5 = totally right. Examples of statements in this question are: "Having sex without a condom", "Having sex with somebody you just met" and "Having sex purely for fun, not because you're in love". Internal consistency of this item set was high ($\alpha = .85$ at T1, $.88$ at T2, $.87$ at T3, and $.88$ at T4).

Parental communication. Parental communication was defined as: parents' open communication with their children about sexual subjects. Co-viewing (i.e., explaining sexualized media content to one's child and commenting on it's less realistic aspects) is also

an aspect of parental communication. Parental communication was measured by the amount of times adolescents reported that their parents communicated with them about specific sexual subjects, on ten items. Answers were scored on a 5-point Likert-Scale, ranging from 1 = never to 5 = very often. Examples of these questions are: “How often do you talk with your mother about love and relationships?”, “How often do you talk with your father about what you like sexually?” Internal consistency of this item set was high ($\alpha = .86$ at T1, $.90$ at T2, $.87$ at T3, and $.85$ at T4).

Parental control. Parental control was defined as: the extent to which parents restricted and criticized the media use of their child. Answers were scored on nine items with a 5-point scale, ranging from 1 = never to 5 = very often. Examples of these questions are: “My parents explain that the information in magazines is not always trustworthy” and “My parents tell me that I am not allowed to watch certain television programs”. Internal consistency of this item set was high ($\alpha = .79$ at T1, $.84$ at T2, $.83$ at T3, and $.85$ at T4).

Analysis Strategy

First of all, descriptive statistics were performed to calculate the means and standard deviations for sexual media consumption, sexual permissive attitude, parental communication, and parental control at all four waves. Subsequently, Pearson correlations were calculated to examine the bivariate relationships between sexual media consumption and permissive sexual attitudes, parental communication, and parental control. Finally, in order to examine to what extent there is a relationship between sexualized media consumption and permissive sexual attitudes, I performed a series of hierarchical linear regression analyses. These analyses were controlled for age, gender, nationality (i.e., Dutch/non-Dutch), educational level, religious background and having a computer or television in one’s room. In addition, earlier levels of sexual permissive attitudes at T1 were controlled for. Next, adolescents’ media consumption, parental control and parental communication at T1 were

entered into the model as predictors. Finally, the interaction terms between permissive sexual attitudes and parental communication and permissive sexual attitude and parental control were entered. Explained variance of each regression model was examined by means of R^2 .

Results

At baseline, 428 (52,3% female) of the 511 participants reported consuming sexual media. The means and standard deviations were calculated for sexual media consumption, parental communication, parental control and permissive sexual attitude at four waves. The results in Table 1 indicate that on average, youth report that they “never” to “sometimes” consume sexual media during wave 1, 2, and 3. At wave 4 this changed to “sometimes” and “regularly”, so they consume more. For parental communication youth answered that on average, they “never” to “sometimes” talked with their parents about sexual subjects during wave 1,2, and 3. At wave 4 this changed to “sometimes” and “regularly”. This same pattern counts for parental control, indicating that both occur more often over these two years. Concerning youth’s permissive sexual attitude towards certain statements about sex, they scored “wrong” to “not wrong/not right” on the first 3 waves. At wave 4, they most often answered “not wrong/ not right” to “right” which shows a more permissive attitude.

To examine the relationships between the four constructs at each wave, Pearson correlation coefficients were calculated which are displayed in Table 2. To guarantee no violation of the assumptions of normality, linearity and homoscedasticity, preliminary analyses were performed. The autocorrelations for sexual media consumption ($r = .50-.73, p < .01$), parental communication ($r = .40-.68, p < .01$) and parental control ($r = .35-.62, p < .01$) are strong, showing stability. Furthermore, the correlations indicate a significant longitudinal relationship between sexual media consumption and subsequent permissive sexual attitudes; high levels of sexual media consumption are linked to more permissive sexual attitude.

To examine the predictions and strengths of the relationships between the four constructs, a series of hierarchical multiple regression analyses was performed. The four examined constructs were centered at their means. The regression analyses should establish whether sexual media consumption predicted youth's subsequent permissive sexual attitudes. In predicting permissive sexual attitude at T2, the independent variables (IV) consisted of the variables that were controlled for; age, gender, educational level, ethnicity, religion, having an own television and having an own computer with Internet. In step 2, the IV was permissive sexual attitude at T1. In step 3 the IVs were sexual media consumption T1, parental communication and parental control. In step 4, the IVs were both the interaction terms. These interaction terms consist of the product of sexualized media consumption in combination with parental communication or control, and this influence on youth's permissive sexual attitude.

Regarding the regression analyses for wave 3 and 4, most of the variables stayed the same, except that the dependant variable changed for each wave, as did the control variables age, TV in own room and PC in own room (these were specified at each of the waves separately as predictors). Results are displayed in Table 3. After controlling for permissive sexual attitude at T1, sexual media consumption T1, parental communication T1 and parental control T1 were not significant predictors. This indicates that there is no longitudinal relationship between these three constructs and permissive sexual attitudes. In all four steps, gender was a significant, negative predictor for permissive sexual attitude at T2, T3 and T4. This indicates that boys generally have a more permissive sexual attitude than girls. Other predictors that did attain significance were participants' ethnicity and religion. Ethnicity was a significant, negative predictor for permissive sexual attitude at T2 ($\beta = -.15, p < .05$) and T4 ($\beta = -.14, p < .05$). Religion was a significant, positive small predictor of permissive sexual attitude at T4 ($\beta = .16, p < .05$). These results show that as they grow older, there is a stronger relationship between youth's ethnicity and/or religion, and their reported permissive sexual

attitude. This indicates that Dutch participants, and participants that are not religious, have a more permissive sexual attitude in comparison to non-Dutch and religious participants, respectively. In step 2 and 3, religion is again a significant, positive but small predictor for permissive sexual attitude at T4 ($\beta = .15, p < .05$) and ($\beta = .15, p < .05$). The total model explained 30% of youth's permissive sexual attitude at T4 (Table 3).

The interaction terms were significant predictors for permissive sexual attitude at T3. The interaction sexual media consumption T1 \times parental communication T1 is a significant, positive and small predictor for permissive sexual attitude at T3 ($\beta = .14, p < .01$). This means that sexualized media consumption in combination with parental communication has an effect on the way that sexualized media influences youth. Regarding the interaction sexual media consumption \times parental control T1, there is a significant, negative average effect ($\beta = -.24, p < .001$). To further examine these interactions the two constructs (parental communication and parental control) were split at their means (see Table 1), thus creating one below average and one above average parental communication group and parental control group. A bivariate correlation test was then performed for both groups, investigating the association between sexualized media consumption at T1 and permissive sexual attitudes at T3. For youth whose parents communicate about sexual subject more than average, sexualized media had a somewhat bigger influence on their permissive sexual attitude ($r = .340$) than for lower parental communication ($r = .250$). In addition, for youth whose parents exert above average control through restricting and criticizing their media use, sexualized media had a bigger influence on their permissive sexual attitude ($r = .309$) than for youth whose parents were less controlling ($r = .207$).

Discussion

In the present longitudinal study, I analyzed the data of 331 adolescents, aged 14 to 17,

who participated in four waves from 2009 to 2010. The goal was to investigate if there would be a relationship between youth's sexualized media consumption and their permissive sexual attitudes, and what role parents communication about sex and monitoring of media use would play in this relationship. There was no significant longitudinal relationship between sexualized media consumption and permissive sexual attitude. In addition, parental communication and control only had an effect on the relationship between sexualized media consumption and permissive sexual attitude at T3. This indicates, after splitting the group in two, that when parents communicate about sexual subjects with their children more than average, the relationship between sexualized media consumption and permissive sexual attitudes is relatively strong. Also, when parents exert above average control of their child's media use, the relationship between sexualized media consumption and permissive sexual attitudes is relatively strong.

Sexualized Media Consumption and Permissive Sexual Attitude

After controlling for permissive sexual attitude at T1, sexualized media consumption, parental communication and parental control were not predictors for permissive sexual attitudes at the other waves. This indicates that watching more sexualized media does not cause a more permissive sexual attitude. This is in contradiction with my first hypothesis based on the social learning theory and cultivation theory, and findings by Braun-Courville & Rojas (2009), who *did* find an association between media and sexual attitudes. Factors that might explain the differences in results was that the present study was longitudinal, whereas theirs was cross-sectional with one measurement moment showing only a instantaneous association and limiting the ability to attribute causal effects. Also, their target group was aged between 12 and 22 which constitutes a larger age range. The results *do* match with findings in Nikken and De Graaf's (2011) longitudinal study in which they also did not find that sexualized media consumption was associated with permissive sexual attitudes.

Ofcourse, apart from these methodological considerations, it might be the case that sexualized media consumption is not related to permissive sexual attitude at this age. Perhaps this can be explained in that the relationship “works the other way around”: the sexual attitude youth have at a certain age may steer their media consumption behavior. Yet another explanation may be that because this age group is quite young and overall is characterized by a relatively conservative sexual attitude, there simply is not enough variance yet in this measure to explain on the basis of sexual media consumption.

The Role of Parental Communication and Control

Parental communication and control (the moderators) have a significant influence on the relationship between sexual media consumption and permissive sexual attitude at wave 3, however not in the predicted direction and not as a protective factor. An explanation for this counterintuitive finding may be found in youth’s sexual readiness at that age, which may also lead to more curiosity about the subject. Sexual readiness may trigger adolescents to want to find out more. Therefore, they will have a stronger tendency to communicate with their parents about sexual subjects, and secondly this may make them more aware of the information presented in the media, thereby influencing their attitude more strongly (Brown & L'Engle, 2009). Also, after talking with their parents about sex, youth can become more susceptible to the subject and find more recognition and association in what they see in the media, picking up more information out of the messages displayed. Regarding parental control, again sexual readiness and related curiosity might be a key factor in this relationship. When parents restrict media use with certain measures or try to exert control, youth often react by doing exactly the opposite or become even more interested in the subject. This can lead to more media use, subsequently triggering their attitude change through sexualized information and images. Parents need to find a balance between satisfying youth’s curiosity and exerting control (Villani, 2001). The fact that these interactions occur at T3 may be

because parents are often hesitant in talking to their children about sexual subjects at an early age, so often only start doing so later along adolescence for example around the age of 16.

Because of this the expected results may not have been found at earlier waves.

Gender, Ethnicity and Religion

Gender was a significant predictor for permissive sexual attitudes. This indicates that boys have a more permissive sexual attitude than girls, which is in line with results from a meta-analysis by Oliver and Hyde (1993). Hendrik, Hendrik, Slapion-Foote and Foote (1985) also found that females are more conservative and males more permissive. Ethnicity was also a significant predictor for permissive attitudes at T2 and T4, and religion significantly predicted permissive sexual attitudes at T4. These results show that Dutch participants and participants that are not religious, have a more permissive sexual attitude than foreign or religious participants. It is well known that people with religious values often do not support liberal sexual attitudes. Thornton and Camburn (1989) found that young people who attend church frequently and who value religion, are less experienced sexually and have less permissive attitudes. Concerning ethnicity, Dutch people tend to have a liberal and open attitude (Delbanco, Lundy, Hoff, Parker & Smith, 1997). A reason that foreign people (in this study mainly: Turkish, Moroccan and Antillean or Aruban) may be less sexually permissive, could be that for these ethnicities their religious background often plays an important part in their life. Often, sex is a forbidden subject and sexual contact before marriage is forbidden (Vennix & Vanwesenbeeck, 2005). Therefore, religion can influence their sexual attitudes.

Limitations and Strengths

While the present study may provide more insight into the relationships between sexualized media consumption, permissive sexual attitude, parental communication and parental control, there are some methodological shortcomings. First of all, the age range may have been too small. As mentioned above, different results may have been found like findings

by Braun-Courville & Rojas (2009) with a bigger age range. Perhaps sexualized media consumption has more influence on youth's sexual attitude at a later age. In this study youth reported that they "never" to "sometimes" consume sexual media during wave 1, 2, and 3, changing to "sometimes" and "regularly" at T4. The same pattern was found for permissive sexual attitudes, youth become more permissive but are still at the low end of the scale by the end of the study, possibly because of their young age and inexperience. For an even better indication of youth's attitude when watching more sexualized media, further research could add more waves with older children to this longitudinal study. A second limitation is that all schools participating in this study were situated near the urban agglomeration of western Holland, so caution must be taken in generalizing the results to the whole of The Netherlands. A third limitation concerns the remarkable finding that youth with a higher educational level had a greater chance of dropping out. Since the group of children with a high education participating in this study is already smaller than the lower educated group, this may give a skewed representation.

A strength of the present study is the fact that it was longitudinal instead of cross-sectional like earlier studies. Thus I was able to examine a relationship over time, creating a completer insight into adolescents' psychosexual development. A second strength is that wave 1 was administered at a relatively young age. It is very interesting to start at the age of 14, instead of at older ages like in other studies, since there are children who may already start to develop sexually at this young age. A third major strength is the fact that the effect of parental communication and control were added as potential moderators on the relationship, since it is not realistic to expect that the media influences all children in a similar way. Against this background, this study shows that parental communication and control can have an effect on how youth is influenced by the media, even if the effect was small. This is an interesting, noteworthy result, especially since it turns out to work in the opposite direction than expected.

Further research could examine this effect in depth and also investigate whether communication and control by the mother or the father differs.

In conclusion, my results do not provide evidence for a longitudinal relationship between sexualized media consumption and permissive sexual attitudes. Nevertheless this study shows that parental communication and control can have an effect on this relationship, although in a counterintuitive direction. This supports the idea that adolescents, when ready, may start communicating more with their parents and build resistance towards their parents' control efforts, so as to be able to act on their readiness and consequent curiosity. These results have important implications for our media consuming society, and this study plays a part in providing insight in the effect of sexualized media on permissive sexual attitudes in adolescence.

References

- Andre, T., Frevert, R. L., & Schuchmann, D. (1989). From whom have college students learned what about sex?" *Youth & Society*, 20, 241-268.
- Bandura, A. (1978). Reflections on self-efficacy. *Advances in Behaviour Research and Therapy*, 1, 237-269.
- Black, S. M., Simkin, L., Ledsky, R., Perkins, C., & Calabrese, J.M. (2001). Effects of a parent-child communications intervention on young adolescents' risk for early onset of sexual intercourse. *Family Planning Perspectives*, 33, 52-61.
- Bogt, T. ter, Engels, R. C. M. E., Bogers, S., & Kloosterman, M. (2010). "Shake it baby, shake it": Media preferences, sexual attitudes and gender stereotypes among adolescents. *Sex Roles*, 63, 844-859.
- Braun-Courville, D. K., & Rojas, M. (2009). Exposure to sexually explicit web-sites and adolescent sexual attitudes and behaviors. *Journal of Adolescent Health*, 45, 156-162.
- Brown, J. D. (2002). Mass media influences on sexuality. *The Journal of Sex Research*, 39, 42-45.
- Brown, J. D., Childers, R. W., & Waszak, C. S. (1990). Television and adolescent sexuality. *Journal of Adolescent Health Care*, 11, 62-70.
- Brown, J. D., Greenberg, B. S., & Buerkel-Rothfuss, N. L. (1993). Mass media, sex, and sexuality. *Journal of Adolescent Health Care*, 11, 62-70.
- Brown, J. D., & L'Engle, K. (2009). X-Rated: Sexual attitudes and behaviors associated with U.S. early adolescents' exposure to sexually explicit media. *Communication Research*, 36, 129-151.
- Buerkel-Rothfuss, N. L., & Mayes, S. (1981). Soap opera viewing: The cultivation effect. *Journal of Communication*, 32, 108-115.

- Buerkel-Rothfuss, N. L., & Strouse, J. S. (1993). Media exposure and perceptions of sexual behaviors: The cultivation hypothesis moves to the bedroom. In B. S. Greenberg, J. D. Brown & N. L. Buerkel-Rothfuss (Eds.), *Media, sex, and the adolescent* (pp. 225-247). Cresskill, NJ: Hampton Press.
- Calderone, M. S. (1989). Overview: Family education for sexuality. In C. Cassell & P. M. Wilson (Eds.), *Sexuality education: A resource book* (pp. 3-12). New York: Garland.
- Daugherty, L. R., & Burger, J. M. (1984). The influence of parents, church, and peers on the sexual attitudes and behaviors of college students. *Archives of Sexual Behavior, 13*, 351-359.
- Delblanco, S., Lundy, J., Hoff, T., Parker, M., & Smith, M. D. (1997). Public knowledge and perceptions about unplanned pregnancy and contraception in three countries. *Family Planning Perspectives, 29*, 70-75.
- Donnerstein, E., & Smith, S. (2001). Sex in the media: Theory, influences, and solutions. In D. G. Singer & J. L. Singer (Eds.), *Handbook of children and the media* (pp. 289-307). Thousand Oaks, CA: Sage.
- Döring, N. M. (2009). The Internet's impact on sexuality: A critical review of 15 years of research. *Computers in Human Behavior, 25*, 1089-1101.
- Escobar-Chaves, S. L., Tortolero, S. R., Markham, C. M., Low, B. J., Eitel, P., & Thickstun, P. (2005). Impact of the media on adolescent sexual attitudes and behaviors. *Pediatrics, 116*, 303-326.
- Hendrick, S., Hendrick, C., Slapion-Foote, M. J., & Foote, F. H. (1985). Gender differences in sexual attitudes. *Journal of Personality and Social Psychology, 48*, 1630-1642.
- Jaccard, J., Dodge, T., & Dittus, P. (2002). Parent-adolescent communication about sex and birth control: A conceptual framework. *New Directions for Child and Adolescent Development, 97*, 9-41.

- Kesterton, D., & Coleman, L. (2010). Speakeasy: a UK-wide initiative raising parents' confidence and ability to talk about sex and relationships with their children. *Sex Education, 10*, 437-488.
- Klein, M., & Gordon, S. (1992). Sex education. In E. C. Walker & M. C. Roberts (Eds.), *Handbook of clinical child psychology* (2nd ed., pp. 933-949). New York: Wiley.
- Kunkel, D., Farrar, K. M., Eyal, K., Biely, E., Donnerstein, E., & Rideout. (2007). Sexual socialization messages on entertainment television: Comparing content trends 1997-2002. *Media Psychology, 9*, 595-622.
- Lam, C. B., & Chan, D. K. S. (2007). The use of cyberpornography by young men in Hong Kong: Some psychosocial correlates. *Archives of Sexual Behavior, 36*, 588-598.
- Lo, V., & Wei, R. (2005). Exposure to Internet pornography and Taiwanese adolescents' sexual attitudes and behavior. *Journal of Broadcasting & Electronic Media, 49*, 221-237.
- Malamuth, N. M., & Impett, E. A. (2001). Research on sex and the media: What do we know about effects on children and adolescents? In D. G. Singer, & J. L. Singer (Eds.), *Handbook of children and the media* (pp. 269-287). Thousand Oaks: Sage.
- Nikken, P., & Graaf, H., van (2011). *Seks in de media: Wat doen jongeren ermee? Een onderzoek met twee metingen*. Retrieved on wednesday 2 november 2011 from: <http://www.nji.nl/publicaties>
- Oliver, M .B., & Hyde, J. S. (1993). Gender differences in sexuality: A meta-analysis. *Psychological Bulletin, 144*, 29-51.
- Peter, J., & Valkenburg, P. M. (2008). Adolescents' exposure to sexually explicit Internet material, sexual uncertainty, and attitudes toward uncommitted sexual exploration: Is there a link? *Communication Research, 35*, 569-601.

- Somers, C. L., & Paulson, S. E. (2000). Students' perceptions of parent-adolescent closeness and communication about sexuality: relations with sexual knowledge, attitudes, and behaviors. *Journal of Adolescence*, *23*, 629-644.
- Strasburger, V. C., & Donnerstein, E. (1999). Children, adolescents, and the media: Issues and solutions. *Pediatrics*, *103*, 129-139.
- Strouse, J. S., & Buerkel-Rothfuss, N. L. (1987). Media exposure and the sexual attitudes and behaviors of college students. *Journal of Sex Education and Therapy*, *13*, 43-51.
- Thornton, A., & Camburn, D. (1989). Religious Participation and Adolescent Sexual Behavior and Attitudes. *Journal of Marriage and Family*, *51*, 641-653.
- Vennix, P., & Vanwesenbeeck, I. (2005). *Seksualiteit en relaties van Turkse en Marokaanse Nederlanders*. Utrecht: Rutgers Nisso Groep.
- Villani, S. (2001). Impact of media on children and adolescents: A 10-year review of the research. *Journal of the American Academy of Child and Adolescent Psychiatry*, *40*, 392-401.
- Ward, L. M. (2002). Does television exposure affect emerging adults' attitudes and assumptions about sexual relationships? Correlational and experimental confirmation. *Journal of Youth and Adolescence*, *31*, 1-15.
- Ward, L. M. (2003). Understanding the role of entertainment media in the sexual socialization of American youth: A review of empirical research. *Developmental Review*, *23*, 347-388.
- Ward, L. M., & Friedman, K. (2006). Using TV as a guide: Association between television viewing and adolescents' sexual attitudes and behavior. *Journal of Research On Adolescence*, *16*, 133-156.

- Werner-Wilson, R.J., Fitzharris, J. L., & Morrissey, K. M. (2004). Adolescent and parent perceptions of media influence on adolescent sexuality. *Adolescence, 39*, 303-313.
- Wingood, G.M., DiClemente, R.J., Harrington, K., Davies, S., Hook, E.W., & Kim Oh, M. (2001). Exposure to X-rated movies and adolescents' sexual and contraceptive-related attitudes and behaviors. *Pediatrics, 107*, 1116-1119.
- Zillmann, D., & Bryant, J. (1988). Pornography's impact on sexual satisfaction. *Journal of Applied Social Psychology, 18*, 438-453.

Tabel 1

Means (M) and Standard deviations (SD)

	T1	T2	T3	T4
Sexual media consumption	1.49 (.60)	1.50 (.67)	1.48 (.65)	2.43 (.50)
Parental communication	1.54 (.55)	1.55 (.61)	1.54 (.55)	2.52 (.47)
Parental control	1.80 (.60)	1.73 (.60)	1.69 (.57)	2.66 (.54)
Permissive sexual attitude	2.14 (.55)	2.26 (.62)	2.23 (.59)	3.10 (.51)

Tabel 2

Pearson correlation matrix between sexual media consumption, parental communication, parental control and permissive sexual attitude.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1) Sexual media consumption T1	-															
2) Sexual media consumption T2	.73**	-														
3) Sexual media consumption T3	.52**	.53**	-													
4) Sexual media consumption T4	.57**	.53**	.50**	-												
5) Parental communication T1	.17**	.18**	.16**	.04	-											
6) Parental communication T2	.21**	.27**	.34**	.04	.50**	-										
7) Parental communication T3	.19**	.33**	.15**	.05	.48**	.68**	-									
8) Parental communication T4	.16**	.09	.18**	.12**	.40**	.59**	.59**	-								
9) Parental control T1	.20**	.13**	-.01	.01	.32**	.20**	.22**	.11*	-							
10) Parental control T2	.17**	.14**	.05	.01	.21**	.36**	.35**	.29**	.53**	-						
11) Parental control T3	-.00	.03	-.01	.06	.26**	.31**	.42**	.32**	.49**	.62**	-					
12) Parental control T4	.13*	-.02	.04	.13**	.25**	.21**	.26**	.39**	.35**	.43**	.57**	-				
13) Permissive sexual attitude T1	.56**	.39**	.31**	.40**	-.01	.01	.02	-.02	-.05	-.06	.15**	-.11*	-			
14) Permissive sexual attitude T2	.44**	.43**	.29**	.18**	.02	.16**	.18**	.02	-.00	.04	.02	-.14*	.64**	-		
15) Permissive sexual attitude T3	.28**	.30**	.43**	.29**	-.07	.05	-.02	.06	-.11*	-.01	-.08	.14**	.60**	.63**	-	
16) Permissive sexual attitude T4	.19**	.07	.11**	.32**	-.10	-.05	-.04	.06	-.10	.03	.04	-.03	.43**	.40**	.51**	-

** p< 0.01 (1-tailed)

* p< 0.05 (1-tailed)

Tabel 3

Hierarchical regression analyses: Sexual media consumption, parental communication and parental control at T1, and permissive sexual attitude at T2, T3 and T4.

Variable	Permissive sexual attitude T2	Permissive sexual attitude T3	Permissive sexual attitude T4
Step 1			
Gender	-.27***	-.33***	-.28***
Age	.07	-.02	-.03
Educational level	.01	-.06	.05
Ethnicity	-.15*	-.10	-.14*
Religion	.14	.12	.16*
Own TV in room	-.06	.00	.01
Own PC in room	-.04	-.14*	-.04
Step 2			
Gender	-.13**	-.20***	-.17**
Age	.08	.01	.02
Educational level	-.05	-.09	.01
Ethnicity	-.07	-.06	-.08
Religion	.06	.09	.15*
Own TV in room	.01	.02	.00
Own PC in room	-.04	-.08	.04
Permissive sexual attitude T1	.59***	.51***	.38***
Step 3			
Gender	-.10*	-.21***	-.17**
Age	.07	.02	.02
Educational level	-.06	-.10*	.01
Ethnicity	-.06	-.05	-.09
Religion	.06	.08	.15*
Own TV in room	.01	.02	-.01
Own PC in room	-.04	-.08	.04
Permissive sexual attitude T1	.55***	.56***	.40***
Sexual media consumption T1	.09	-.07	-.05
Parental communication T1	.03	-.00	-.06
Parental control T1	-.09	-.07	.05
Step 4			
Gender	-.09*	-.17***	-.18**
Age	.07	.03	.02
Educational level	-.07	-.11*	.01
Ethnicity	-.06	-.05	-.09
Religion	.07	.02	.14*
Own TV in room	.02	.02	-.02
Own PC in room	-.04	-.09	.05
Permissive sexual attitude T1	.58***	.63***	.39***
Sexual media consumption T1	.06	-.046	.03
Parental communication T1	-.15	-.055	.15

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Parental control T1	.04	.001	-.07
Sexual media consumption	.27	.14**	-.36
× parental communication			
Sexual media consumption	-.23	-.24***	.21
× parental control			
Step 1 ΔR^2	.14	.19	.16
Step 2 ΔR^2	.30	.23	.12
Step 3 ΔR^2	.01	.01	.01
Step 4 ΔR^2	.01	.05	.01
Total model R^2	.46	.48	.30

Note: sexual media consumption, parental communication and parental control were centered.
at their means. Standardized betas are presented for both main and interaction effects.

* $p < .05$.

** $p < .01$.

*** $p < .001$