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### A Model of Adolescents' Seeking of Sexual Content in their Media Choices

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#### Abstract

This paper reports on the extent to which adolescents report *actively seeking sexual content* in media, identifies from which media they report seeking, estimates the association between seeking sexual information and romantic and sexual behavior, and shows that active seeking of sexual content in media sources is explained by an intention to seek such content using the Integrative Model of Behavioral Prediction, a reasoned action approach. The data are a national sample of 810 adolescents aged 13-18 years. Results show that fifty percent of adolescents reported actively seeking sexual content in their media choices, which included movies, television, music, internet pornography sites, and magazines. Males sought sex content more than females and gender differences were greatest for seeking from internet pornography sites, movies, and television. Path analysis demonstrate that seeking sexual content is well predicted by intentions to seek and intentions are primarily driven by perceived normative pressure to seek sexual content.

The sexual health and development of adolescents in the United States is often compromised by risks for a sexually transmitted infection, HIV infection, and/or unplanned pregnancy. Exposure to sexual media is one of several factors that promote risky sexual behavior. Public opinion (Hennessy et al., 2008) as well as scientific evidence (Bleakley et al., 2008; Brown et al., 2006; Collins, 2005; Hennessy et al., 2009; L'Engle et al., 2006; Somers & Tynan, 2006) suggest that exposure to sexual content in media is associated with early sexual initiation and/or progression of sexual activity as well as the extent and timing of sexual intercourse (Aubrey et al., 2003) and a range of other sexual behaviors. (Bleakley et al., 2008; Brown et al., 2006; Collins, 2005; Hennessy et al., 2009; L'Engle et al., 2006; Somers & Tynan, 2006). Exposure to sexual content on television (e.g., sexually oriented genres or specific programs) is also associated with expectations about sex, perceptions about peer sexual behavior, and permissive attitudes about sex (Annenberg Media Exposure Research Group (AMERG), 2008; Ashby et al., 2006; Brown & Newcomer, 1991; Brown et al., 2006; Collins et al., 2009; Pardun et al., 2005; Ward, 2002; Ward & Friedman, 2006).

Little is known about the factors that influence exposure to sexual content. Bleakley et al. demonstrated that the relationship between exposure to sexual content and sexual activity can be characterized by a feedback loop: the more sexual activity adolescents engage in, the more likely they are to be exposed to sex in media and the more they are exposed to sex in media, the more likely they are to have progressed in their sexual activity (Bleakley et al., 2008). Focusing on the simultaneity between behavior and exposure shifts research attention from estimating exposure effects on behavior, the more conventional "media effects" perspective, to the treatment of exposure to sexual media content as a behavior in its own right (Slater, 2007). Thus, exposure to sexual media content is a dynamic process under the control of individuals.

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The "uses and gratifications" paradigm in communication research provides an appropriate framework for understanding how sexual activity and/or experience affects exposure to sexual content and how seeking sex in media choices affect adolescent behavior (Katz et al., 1974; Ruggiero, 2000). One of the assumptions of the uses and gratifications approach is that media use is purposive and motivated: people are active audience members who select specific media and use it to satisfy their needs, interests, and preferences. From this perspective, the dependent variable of interest is a communication behavior (i.e., media use) as opposed to a health behavior (i.e., sexual behavior). Although uses and gratifications is not so much an explanatory theory as much as it is a research paradigm, there is a body of literature that supports the incorporation of its tenets into media effects research (Rubin, 2002). An early review (Katz et al., 1973) and research reports on the uses of religious television (Abelman, 1987), the internet (Ko et al., 2005), reality television shows (Papacharissi & Mendelson, 2007), and radio (Albarran et al., 2007), all highlight the reality of an active audience selecting from an array of media.

As applied to sexual content, the uses and gratifications paradigm assumes that some adolescents intentionally seek out sexual content in their media choices, resulting in increased exposure to media sex. Several research studies demonstrate that young adults report getting information about sex from media sources. For example, Bradner et al. looked at data from the National Survey of Adolescent Males when the respondents were 22-26 years of age (Bradner et al., 2000). Ninety-two percent reported getting information about AIDS from the media (defined as television, magazines, or radio), 59% reported using the media to get information about STIs, and 78% reported using the media to get information about STIs, and 78% reported using the media to get information about sex from much of the information received from the media sources was from active seeking or passive exposure. In another study, 57% of adolescents from a convenience sample in the Philadelphia area (N = 459) reported learning about sex from the media (Bleakley et al, 2009). Among those who reported using the media as a source of information about sex, television and movies were cited as the most informative.

Only two studies predict adolescent exposure to sexual content in the media. A study by Kim et al. found that increased exposure to sexual content was positively associated with such variables as friends approval of sex, noncoital sexual experience, having a television in the bedroom, unsupervised time after school, participation in sports, active viewing of television, average television viewing, motivation to learn from television, and several demographic characteristics such as age, race, and gender (Kim et al., 2006). Findings from the second study that also used psycho-social variables as predictors were consistent with these results, although not all of the findings were replicated (Bleakley et al., 2008). Other than these two studies, researchers know very little about the determinants of exposure to sexual media content as a *behavior* and even less about specifically seeking out sexual content as a predictor of total sex content exposure.

#### Predicting Intentions to Search for Sexual Media Content

The Integrative Model of Behavioral Prediction is used here to understand and predict selfdirected behavior of adolescents' seeking of sexual content in the media (Fishbein & Ajzen, 2010). According to the model, behavior is primarily determined by intentions, although one may not always be able to act on one's intentions because environmental factors and or a lack of skills and abilities may make performance difficult if not impossible. Intention to perform a specific behavior is a function of one's favorableness or unfavorableness towards performing the behavior (i.e., attitudes), perceptions about what others think and do with regards to performing the behavior (i.e., normative pressure), and beliefs about one's ability to perform the behavior in the presence of barriers to doing so (i.e., self-efficacy). In summary, the Integrative Model assumes that actively seeking sexual content will be predicted by intentions and that attitudes, normative pressure, and self efficacy towards performing the behavior will best predict the respondent's intention to actively seek sexual content. This paper (1) presents data on the extent to which adolescents report *actively seeking sexual content* in media, (2) identifies from which media they report seeking, (3) estimates the association between seeking sexual content and romantic and sexual behavior, and (4) determines how well the active seeking of sexual content in various media sources is explained by an intention to seek such content.

#### **Sample and Methods**

A sample of adolescents (N = 810) ages 13-18 years old completed a 15-20 minute online survey. The sample was recruited through a survey research firm (Knowledge Networks) which used a random digit dialing methodology to obtain a nationally representative panel of respondents. The sampling frame, updated quarterly, was the United State telephone population. The methodology is described elsewhere (Knowledge Networks, 2008). For this particular study participating teens were recruited by Knowledge Networks in three ways. First, 18 year old respondents who were panelists on their nationally representative panel (determined through random digit dialing) received the survey (n = 335) and it was completed by 52%. Second, Knowledge Networks maintains a representative panel of 13-17 year olds (n = 792) who also received the survey, of which 70% completed. Finally, teens not on the panel but who were in the household of an adult panel member were also invited to fill out the survey (n = 491); 16.8% completed the survey. Respondents had a mean age of 16 years (SD: 1.58), 52% were female and 75% were white.

#### **Defining Sexual Content**

Respondents were given the following definition of sexual content: "In this survey, sexual content is defined as talking about or showing: hooking-up/making out; sexy clothes; nudity; sex (oral, anal, or vaginal); safe sex (condoms, birth control, etc.); sex crimes (rape) or homosexuality (gay or lesbian)." After receiving this definition respondents were asked: "Now we would like to know about how you use media to learn about sex. Thinking about the <u>past 30 days</u>: how much have you actively looked for sexual content in each of the following media?" The response categories were "None," "A little," "Some," and "A lot." The list of media included television shows, music or music videos, magazines like Playgirl or Playboy, other kinds of magazines, movies, sexual health internet websites, pornography websites, online chat rooms, and podcasts.

#### Seeking Behavior

A seeking for sex content variable was created by summing the number of sources from which a respondent indicated that he or she sought sexual content (i.e., the respondent reported seeking a little, some, or a lot versus not reporting seeking at all). Values ranged from 0 (sought from no sources/ no seeking) to 9 (sought from all sources). A dichotomized version of this variable was also created so that a value of "0" represented no active seeking, and a value of "1" represented seeking from at least 1 of the above sources (Mean = .51, SD = .50).

#### **Pre-Coital and Coital Behaviors**

We also administered a set of dichotomous pre-coital behavioral items based on previous research (Jakobsen, 1997; O'Donnell L. et al., 2006; O'Sullivan et al., 2007). From these items, a subset of these pre-coital behaviors scaled very well from both a correlational standard using the KR20 alpha coefficient (Streiner, 2003) and an difficulty ordered (e.g. Guttman scale) standard using Loevinger's *H*. *H* is a measure of unidimensionality defined

by the items being ordered along an unobserved "difficulty" dimension such that all items after the initial failure are also failed and all items before the initial failure are passed (Ringdal et al., 1999). If the items scale using this definition, then empirical index scores correspond to passing the number of difficulty-ranked items less than or equal to the observed score and failing all difficulty-ranked items greater than the value of the observed score. As Ringdal et al. (1999, page 27) summarize, "...H is interpreted as an index for the degree to which subjects can be accurately ordered by means of k items."

The items were equally difficult for males and females, and in order of increasing difficulty were: hugged, held hands, kissed, cuddled with, touched over clothes, touched breasts/ breasts being touched, touched private parts, saw naked, and *was naked with him/her*. The index ranged from 0 to 9, and the average value for males was 4.03 (SD = 3.06) and for females was 4.54. (SD = 3.06), a statistically significant difference between means. (On average, the females in the sample are about half a year older than the males). In addition, 19.6% of the sample reported ever having vaginal sex. Ninety-three percent of those adolescents who had sex were between the ages of 16-18 years.

#### **Romantic Relationship Behaviors**

An index of romantic relationships was also constructed to measure interest in the adolescents of the opposite sex. We used items from the same studies noted above and the items scaled well from a correlational (using the KR20 alpha) and an ordered difficulty perspective (using Loevinger's *H*). The ordering did not vary between genders and the items in terms of increasing difficulty were: you liked someone romantically, you thought of yourself as a couple, you exchanged gifts, you declared love for one another, you currently have a romantic partner, and you have met the parents of your of romantic partner. This index ranged from 0 to 6 and the average for males was 2. 86 (SD = 1.89) and the average for females was 3.29 (SD = 1.98); these means were statistically discernable from each other.

#### Integrative Model Measures for Seeking Sexual Content

The theoretical measures were as follows: *Intentions:* How likely is it that you will actively look for sexual content in the media in the next 30 days?, coded as "-3" = very unlikely to "3" = very likely (Mean: -1.71; SD: 1.83). Attitudes: "Do you think your actively looking for sexual content in the media in the next 30 days would be .... " and the assessed statements were semantic differential items Simple/complicated, Bad/good, Foolish/wise, Unpleasant/ pleasant, Not enjoyable/enjoyable, Difficult/easy, and Harmful/beneficial, all coded from "-3" to "3" (Mean: -0.26; SD: 1.38; Alpha=0.84). Normative Pressure: Most people who are important to me think that I should/should not actively look for sexual content in the media in the next 30 days, coded from "-3" = Should not to "3" = Should, Most people like me will not/will actively look for sexual content in the media in the next 30 days, coded as "-3" = Will not actively look to "3" = Will actively look, and Most people like me have not/ have actively looked for sexual content in the media in the past 6 months, coded as "1" = Have not to "7" = Have (Mean: -1.17; SD: 1.61; Alpha=0.81). Self-Efficacy: If I really wanted to, I am certain that I could actively look for sexual content in the media in the next 30 days, coded as "-3" = Certain I could not to "3" = Certain I could (Mean: 1.42; SD: 2.10).

#### **Statistical Analysis**

Descriptive analyses were conducted using Chi-square tests to examine differences in the frequency of actively seeking sexual content by age and gender. Correlational analysis related seeking behavior to our sexual behavior outcomes. The correlations are presented by age because of age-related developmental differences, for example how sexual activity is

usually more prevalent among older adolescents. Finally, path analysis was used to test the Integrative Model with actively seeking sexual media content as the behavior. Group analyses were conducted to investigate age and gender interactions. Mplus was used for the path analyses because it allows for models with both categorical and continuous mediating and dependent variables.

#### Results

#### Active Seeking Behavior

Fifty-one percent of the sample reported actively seeking sexual content from at least one media source. As shown in Table 1, the source cited with the most frequency was movies, followed by television, music, pornography websites, magazines, sexual health internet websites, magazines like Playgirl/Playboy, online chat rooms, and podcasts. Males were more likely to seek from any source than females (63.4% and 39.5% respectively;  $\chi^2$ =45.99, p < .05) and males sought from a significantly higher average number of sources (t=4.78, p < .05). There were no significant age differences in seeking from any source or in the mean number of sources used to seek sexual content (F=0.76, df=5, p=0.58).

#### Association of the Active Seeking of Sexual Content with Romantic and Sexual Behaviors

Table 2 presents the bivariate correlations of seeking sexual content from any source and 3 behavioral outcomes: the relationship behavior scale, the pre-coital behavior scale, and lifetime vaginal sex. Seeking sexual content was correlated with the pre-coital index and the relationship behavior index at higher levels for males, particularly younger males, compared to females in the same age groups. The correlation between having reported lifetime vaginal sex and the seeking of media sex was stronger for adolescents males aged 16-18 (r = .53) than the correlation for females aged 16-18 years (r = .30). Of the teens who reported having vaginal sex in their lifetime, 68% reported seeking sexual content. Of the teens who did not have vaginal sex, 47% actively sought sexual content ( $\chi^2$ =21.38, df = 1, p < .05).

#### Integrative Model Analysis for Actively Seeking Sexual Content

Seeking sexual content in the media from any source was predicted with considerable accuracy from one's intention to actively seek out sexual content in the media. The path analysis in Figure 1 show that intentions to seek sexual content were predicted by attitudes, perceived normative pressure, and self efficacy; all relationships were statistically significant at the p<.05 level. The  $R^2$  for intention from the three Integrative Model mediators was .60. The findings suggest that the intention to actively seek sexual content is largely influenced by normative, as well as attitudinal, considerations. The negative effects of self efficacy on intentions to seek ( $\beta$ =-0.08) were expected when most respondents do *not* intend to perform the behavior in question (Fishbein & Ajzen, 2010, page 66); recall that average of the intention measure for the sample was -1.71 on a scale from -3 to +3. Sixty percent of the variance in seeking sexual content was explained by intention to seek.

#### Integrative Model Group Analysis

An interest in gender/age group differences in the correlations between seeking and the romantic and sexual behavioral scales prompted a stratified path analysis of the Integrative Model. The sample was divided into the following four groups (as shown in Table 2): males ages 13-15 (n = 153), males ages 16-18 (n = 219), females ages 13-15 (n = 132), and females ages 16-18 (n = 280). Although the size of the coefficients differed, the pattern remained the same for each group. That is, intentions were associated primarily with perceived normative pressure, followed by attitudes. Intentions predicted seeking behaviors in all four groups. The one difference was that the relationship between self efficacy and

intentions, and self efficacy and behavior, were no longer statistically significant in any of the groups. This is most likely due to smaller sample sizes in the groups compared to when the model is run the full sample. The fit statistics for the group model were good, although not as good as the full sample:  $\chi^2$ =11.340, df=7, p=.12; RMSEA=0.06; CFI=0.99; TLI=0.97.

#### Discussion

Adolescents reported actively seeking sexual content from a variety of media sources. But movies, television, music, and internet pornography sites topped the list. There were gender differences in the amount of seeking reported and seeking from specific media. Males reported more seeking than females across all media. Differences between males and females were greatest when it came to seeking from internet pornography sites, movies, and television, respectively. It is clear that adolescents are exposing themselves to sexual content, although identifying the respondents' reasons for doing so was not possible from these data. It is also plausible given the differences in seeking that males and females may have different reasons and/or motivations for seeking sex content. For example, males' seeking of sexual content from internet pornography sites suggests that they are interested in more explicit media. Additionally, the associations between seeking sexual content and relationship behaviors, pre-coital behaviors, and lifetime vaginal sex, respectively, were greater among both younger and older adolescent males when compared to females of the same age. Although the correlation between seeking and vaginal sex could not be calculated due to a small sample of 13-15 year olds who reported having sex, seeking is more common for males and younger adolescents. This relationship might reflect of a combination of two factors: a developmental susceptibility to media, in that exposure to sexual content in media exerts larger effects on younger adolescents compared to older adolescents, and the timing of the initiation into the world of romantic relationships. However, because the data collected were cross-sectional, the causal direction of this association is ambiguous.

The reasons why adolescents search for sexual content may vary, ranging from informationgathering to seeking normative validation for their behavior. Sexually active youth also may be more interested in media sex due to other social or environmental factors such as communication with friends or family members about sex. Actively seeking out sexual content may therefore be related to an adolescent's sexual behavior through its relationship to exposure. Youth exposed to sex content because they sought it out may be different than others who were exposed to media sex without purposely seeking it out. Such youth may be more motivated due to increased romantic and /or sexual interests. Indentifying the specific behavioral beliefs that underlie seeking sexual content is also important because they may be modifiable and thus the target of behavioral interventions (Fishbein & Yzer, 2003). As with condom use (Albarracín et al., 2001; Sheeran & Taylor, 1999), smoking (Van De Ven et al., 2007), exercise and physical activity (Hagger et al., 2001; Hausenblas, Carron & Mack, 1997), healthy eating (Conner, Norman & Bell, 2002), binge drinking (Cooke, Sniehotta & Schüz, 2007) and other health behaviors (Hardeman et al., 2002), actively seeking sexual content from any of media source was predicted with considerable accuracy from one's intention to actively seek out sexual content. Results from the path analysis showed that intentions to seek sexual content were predicted by attitudes, perceived normative pressure, and self efficacy. However, intention to actively seek sexual content is primarily influenced by normative considerations: what the respondent thinks significant others are doing and what significant others think the respondent should do.

As previously indicated, researchers do not know how much of the variance in total exposure to sexual media content is accounted for by seeking behavior. This is a critical question that needs to be explored with future research. If actively seeking sexual content accounts for a significant amount of an adolescent's overall exposure to sexual content, we

could assume that exposure is a self-directed behavior and motivated by the need for information or validation, before and/or after engaging in relationship and sexual behaviors. Alternatively, if exposure to media sex is not well predicted by the active seeking of sexual content, models of exposure which focus on other factors such as the media and family environment (e.g., when certain media are "on" in the background, having a television in the adolescent's bedroom, family policies concerning television and other media use) might be more informative.

This research has some limitations. Most importantly, the behavioral, normative, and control beliefs that underlie (and determine) attitudes, normative pressure, and self efficacy as they pertain to seeking sexual content were not identified by this study. While the results indicated that the Integrative Model successfully predicted seeking behavior, to fully understand why adolescents' search for sexual content in the media, it is necessary to know the relevant behavioral, normative and control beliefs that ultimately underlie one's intention to seek and thus their seeking behavior (Fishbein & Ajzen, 2010). In addition, the sample was predominantly White. A sample with more African-American and Hispanic youth is needed to determine if these patterns hold across different racial and ethnic backgrounds. Finally, because of time and financial constraints, measures of exposure to sexual content were not possible to collect. In summary, adolescents reported actively seeking sexual content in the media. Although the extent to which active seeking is related to their total exposure to sexual content in media is unknown, these results suggest the need to learn more about what predicts adolescents' total exposure to sexual content and to understand the exposure/behavior relationship as it pertains to sexual activity and other developmental outcomes such as engaging in romantic relationships.

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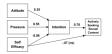
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#### Figure 1.

Path Analysis Results for Integrated Model on Actively Seeking Sexual Content (N = 784) Notes: Fit statistics:  $\chi^2$ =1.21, df=2, p=.57; RMSEA=0.00; CFI=1.00; TLI=1.00. Mediator and outcome variable error terms and correlations between the three exogenous variables not shown for clarity.

#### Table 1

Percentages of Actively Seeking Sexual Content by Gender

	Males % (n=382)	Females % (n=428)	Total % (N=810)
Active seeking from any source	63.4	39.5	50.7*
Seeking from movies	48.1	31.2	39.2*
Seeking from television	40.9	26.8	33.4*
Seeking from music	32.5	24.8	28.5*
Seeking from pornography internet sites	39.5	13.4	25.7*
Seeking from other magazines	19.3	16.3	17.7
Seeking from sexual health websites	20.8	16.9	18.7
Seeking from chat rooms	17.2	10.5	13.6*
Seeking from magazines like Playgirl, Playboy	18.0	8.3	12.8*
Podcasts	11.0	7.6	9.2
Mean number of sources used	2.42 (SD 2.72)	1.54 (SD 2.54)	1.95 (2.66

Notes: Statistically significant differences between genders (p < .05) indicated with an \*in the "Total" column.

# Table 2

Bivariate Polychoric Correlations of Actively Seeking Sexual Content from Any Source and Sexual Outcomes, by Age Group and Gender

	Males Ages 13-15 A (n=158)	Females ges 13-15 (n=137)	Males ] Ages 16-18 A (n=224)	Females Ages 16-18 (n=291)	Total
Relationship Behavior Scale	.47	.20	.25	.14	.20
Pre-coital Sexual Behavior Scale	.47	.28	.52	.20	.33
Lifetime Vaginal Sex		'	.53	.30	.30

Notes: All correlations are statistically significant from zero (p < .05). Correlations not present for 13-15 year olds because of small sample size of those who reported having vaginal sex.