

Understanding the Effects of MTV's *16 and Pregnant* on Adolescent Girls' Beliefs, Attitudes, and Behavioral Intentions Toward Teen Pregnancy

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This article examines the impact of a popular documentary series about teen pregnancy, MTV's 16 and Pregnant, on adolescent girls' pregnancy-related attitudes, beliefs, and behavioral intentions. The results suggest that girls who watched 16 and Pregnant, compared with a control group, reported a lower perception of their own risk for pregnancy and a greater perception that the benefits of teen pregnancy outweigh the risks. The authors also examined the relationships between homophily and parasocial interaction with the teen moms featured in 16 and Pregnant and attitudes, beliefs, and behavioral intentions, finding that homophily predicted lower risk perceptions, greater acceptance of myths about teen pregnancy, and more favorable attitudes about teen pregnancy. Parasocial interaction demonstrated the same pattern of results, with the addition of also predicting fewer behavioral intentions to avoid teen pregnancy. Last, results revealed that teen girls' perceptions that the message of 16 and Pregnant was encouraging of teen pregnancy predicted homophily and parasocial interaction with the teen moms. Theoretical and practical implications are discussed.

The most recent data available from the Centers for Disease Control and Prevention indicated that in 2009 approximately 410,000 teens gave birth in the United States. Although the U.S. teen birthrate has declined since it spiked in 2006, it is still higher than in any other developed country. Approximately 39 births and 72 pregnancies occur per 1,000 girls age 15–19 years (Ventura, Abma, Mosher, & Henshaw, 2008).

Concurrently, MTV has aired a documentary series about teen pregnancy, *16 and Pregnant*, which was the mostly highly rated cable show among female viewers 12–34 years of age in 2010 (The National Campaign to Prevent Teen and Unplanned Pregnancy [hereafter, The National Campaign], 2010a; TV by the Numbers, 2010). Each episode follows the life of a 16-year-old girl as she navigates pregnancy, labor and delivery, and care of her baby. MTV's website describes the series as a documentary focused on the challenges of teen pregnancy, and The National Campaign promotes *16 and Pregnant* as “a great tool for teaching and for initiating conversation”

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with teens about pregnancy and teen parenthood (The National Campaign, 2010a). Clearly, the intended effect of *16 and Pregnant* is to prevent teen pregnancy; however, the influence of the series on pregnancy-related outcomes for adolescent girls has not been adequately examined. Informed by entertainment-education theory and research (Singhal & Rogers, 1999), the present study experimentally tests the effects of short-term exposure to *16 and Pregnant* on adolescent girls' pregnancy-related attitudes, beliefs, and behavioral intentions.

Literature Review: Entertainment-Education

Research suggests that sexual health messages embedded in entertainment programming may reduce sexual risk-taking (Singhal & Rogers, 1999; Sood, 2004). This literature draws from the entertainment-education perspective, which posits that entertainment media can promote positive health-related decisions because they can overcome the resistance viewers have to overtly educational messages (Moyer-Gusé, 2008). Because these programs seek to entertain audiences, they can be uniquely effective in persuading audiences without inciting reactance and counter-arguing. Research from the entertainment-education perspective has demonstrated that media can be effective in improving sexual health related to family planning (Vaughn, Regis, & St. Catherine, 2000), condom effectiveness (Collins, Elliott, Berry, Kanouse, & Hunter, 2003), HIV/AIDS (Singhal & Vasanti, 2005), and sexually transmitted infections (Brodie et al., 2001).

16 and Pregnant may be conceptualized as an entertainment-education program, as it seeks to entertain and educate its target audience. First, the goal of entertainment education is typically overt behavioral change (Greenberg, Salmon, Patel, Beck, & Cole, 2004). In the case of *16 and Pregnant*, producers, in consultation with the National Campaign, deliberately designed the show to curb teen pregnancy (The National Campaign, 2010a). Second, each episode of the show contains callouts or epilogues (Singhal & Rogers, 1999) that gives viewers information about where they can learn more about prevention of teen pregnancy. These features suggest that the educational aspect of the show is as deliberate as the entertainment aspect of the show.

The effects of exposure to entertainment-education stimuli for improving health outcomes may be explained chiefly by social cognitive theory (Bandura, 2009). According to this perspective, human knowledge and behavior acquisition can occur through observation of media models, a process called *vicarious learning*. Applied to media contexts, social cognitive theory suggests that viewers would be likely to model behavior if they see that behavior as positively reinforced through the display of positive outcomes (Bandura, 2009). In addition, viewers can learn from observing others' mistakes and can alter their own actions to avoid receiving similar negative consequences (Moyer-Gusé & Nabi, 2010). The idea behind *16 and Pregnant* is that viewers will see the negative consequences that come to those who have *not* followed positive behavior (i.e., safe sex; Dinh, 2010). Thus, adolescents who view *16 and Pregnant* may learn the consequences of teen pregnancy without having to experience them personally. Whereas the depiction of negative consequences of teen pregnancy (e.g., emotional turmoil, academic failure) would discourage teen pregnancy, the portrayal of positive consequences (e.g., bonding with baby, receiving gifts) might encourage favorable thoughts about teen pregnancy.

A content analysis of the first two seasons of *16 and Pregnant* (Peters, 2011) revealed a mixed message regarding the consequences of teen pregnancy. Coded on the scene level, the series depicted more negative (48%) than positive (18%) consequences of pregnancy; however, the depicted rewards, as well as the monetary compensation and celebrity received by the teen moms, may nevertheless be appealing to adolescent girls.

To date, a small number of studies have examined adolescents' responses to *16 and Pregnant*. First, in conjunction with MTV, one study surveyed a national sample of *16 and Pregnant* viewers and found that the majority reported the show to be informative and a real look at teen pregnancy. However, by only asking regular viewers to report on their already existing perceptions of the show, the study did not directly test the effects of the show on adolescents' pregnancy intentions (The National Campaign, 2010b). Second, a recent study used *16 and Pregnant* as a vehicle for a directed discussion about teen pregnancy with young adolescents (Ortiz et al., 2011). Results suggested that the intervention did not predict increased intentions to avoid pregnancy. The study did not, however, test the effects of the show alone (without a led discussion) on adolescents' intentions. A third survey-based study examined whether the association between viewing *16 and Pregnant* and its spin-off, *Teen Mom*, and college women's pregnancy-risk behavior, was moderated by parental communication (Wright, Randall, & Arroyo, 2012). The results showed that frequent viewing was associated with an increased probability of having engaged in recent intercourse for women whose fathers did not communicate with them about sex while growing up.

The Present Study

The main outcome variable for entertainment-education, grounded in social cognitive theory, is behavior change (Singhal & Rogers, 1999). Because the present study is an experiment designed to assess short-term effects, we measured behavioral intentions. In addition, inspired by the theory of planned behavior, we also measured three variables that are thought to be predictive of behavioral change (Ajzen, 1991). First, we measured participants' normative beliefs about teen pregnancy, including their perception of being a teen parent. Second, we measured their behavioral beliefs, reflected in their assessment of risk for getting pregnant. Third, we measured participants' attitudes about teen pregnancy, or their positive evaluation of being a teen parent.

Given the explicit purpose of *16 and Pregnant* to prevent teen pregnancy (Dinh, 2010), coupled with the mixed messages regarding consequences of teen pregnancy that might unintentionally serve to encourage teen pregnancy (Peters, 2011), we pose nondirectional research questions instead of hypotheses. It is important to note that for Research Question 1, we also simultaneously examined the effect of self-reported regular viewing of the show.

Research Question 1: Do participants assigned to view *16 and Pregnant* report differing levels of (a) acceptance of myths about teen pregnancy, (b) perceptions of personal risk, (c) attitudes toward teen pregnancy, and (d) behavioral intentions to avoid teen pregnancy, compared with participants assigned to a control condition?

In keeping with social cognitive theory (Bandura, 2009), audiences' affinity with media models, defined here as *homophily* and *parasocial interaction*, will be useful in understanding adolescent girls' response to *16 and Pregnant*. According to social cognitive theory, behavioral models who are perceived to be attractive and similar to the viewers will be the most influential in shaping viewers' behavior.

Homophily is defined as the degree to which viewers perceive themselves to be like the characters in terms of traits, abilities, and backgrounds (Hoffner & Cantor, 1991). Parasocial interaction occurs when the viewer perceives a relationship of friendship with a media personality based on affective ties with that persona (Horton & Wohl, 1956; Rubin & Rubin, 2001). Parasocial interaction, thus, is grounded in

attraction to a media persona (Cohen, 2001; Rubin & Rubin, 2001), whereas homophily is based on similarity (Cohen, 2001). Both homophily and parasocial interaction have been shown to be positively associated with learning outcomes (Eyal & Rubin, 2003).

Research Question 2: Does homophily predict (a) acceptance of myths about teen pregnancy, (b) perceptions of risk about teen pregnancy, (c) attitudes about teen pregnancy, and (d) behavioral intentions to avoid teen pregnancy?

Research Question 3: Does parasocial interaction predict (a) acceptance of myths about teen pregnancy, (b) perceptions of risk about teen pregnancy, (c) attitudes about teen pregnancy, and (d) behavioral intentions to avoid teen pregnancy?

To further elucidate the nature of homophily and parasocial interaction in the present study, we also investigated predictors of these two variables. We anticipated two groups of variables would be related to homophily and parasocial interaction. First, we speculated that participants who regularly watch *16 and Pregnant* and who were fans of the show would be most likely to exhibit homophily and parasocial interaction. Our reasoning was that participants' past viewing and involvement with the show would aid in their proclivity to see the circumstances of teen pregnancy through the teen moms' eyes. Second, given the mixed messages about the consequences of teen pregnancy in the series (Peters, 2011), we thought it important to account for viewers' *perceptions* of the message about teen pregnancy in *16 and Pregnant*. Viewers who perceive the main message of *16 and Pregnant* to be encouraging of teen pregnancy might exhibit more homophily and parasocial interaction with the teen moms.

Research Question 4: Will past viewing of *16 and Pregnant*, identification as a fan of *16 and Pregnant*, and/or the perception that *16 and Pregnant* is encouraging of teen pregnancy predict (a) homophily and/or (b) parasocial interaction?

Method

Participants

To address our research questions, 137 adolescent girls participated in an online field experiment, as well as a survey, assessing their nonmanipulated regular viewing of *16 and Pregnant*. To enhance sample diversity, we recruited participants from various online sources, instead of using a locally homogeneous sample. As a first step, we posted the recruitment announcement on fan websites (hosted on Fanpop, Livejournal, Tumblr, and Facebook) for television shows popular with teen audiences (e.g., *Glee*, *The Vampire Diaries*, *Gossip Girl*). We did not want to specifically recruit fans from *16 and Pregnant* websites because we sought to maximize variance in previous viewing experience of *16 and Pregnant*.

Participants were offered a financial incentive of US\$25. Participants were only paid if they completed all experimental procedures. Of 137 initial participants, seven were dropped for noncompletion. Four additional participants were dropped for failing the manipulation check.

The majority of the participants were from the United States (96.0%, $n = 121$), representing 39 states. The remaining ($n = 5$) were non-U.S. residents. Because the non-U.S. residents would likely exhibit cultural differences on the issue of teen pregnancy, we excluded them from the sample, thus reducing our final sample to 121 participants.

The age of participants ranged from 14 to 18, with a mean age of 16.82 years ($SD = 0.99$). The majority of participants were Caucasian (73.6%, $n = 89$); the remaining were 12.4% ($n = 15$) African American, 5.0% ($n = 6$) Native American, 3.3% ($n = 4$) Latino, 3.3% ($n = 4$) Asian, and the remaining 2.5% ($n = 3$) did not identify with any of these categories.

Design and Procedure

For the experimental portion of the study, the design was a between-subjects posttest-only online experiment with two conditions: exposure to one of two prototypical episodes of *16 and Pregnant* ($n = 63$) and a control condition which consisted of exposure to one of two episodes of another MTV reality show that is not related to teen pregnancy, *Made* ($n = 58$). Adolescents girls were invited to participate in a study on “popular MTV reality programming.”

We chose to use an exposure control condition to increase our confidence that it is exposure to content specific to *16 and Pregnant*, and not exposure to teen reality television in general, that affects the pregnancy-related outcomes. *Made* documents high school students who want to be made into a new identity or role. We chose *Made* as the control stimulus for two reasons. First, it features high school students who are the same age as those who are featured on *16 and Pregnant* (i.e., 14–18 years old). Second, the production qualities and format of the show are similar to those on *16 and Pregnant*.

If a participant met the selection criteria (female, ages 14–18 years), she contacted the study administrator via email. Because participation required parents’ approval, we asked participants who were younger than 18 years of age to send us their parent’s e-mail address so he or she could submit the consent form. Once parental consent was secured, the teen completed a youth assent form and proceeded to the study’s website. The participant was randomly assigned to watch an episode of *16 and Pregnant* or *Made*.

The episodes were divided into two halves. To ensure that participants actually watched the episode, after each half, the participant answered informational questions about the episodes they just viewed. This fact check consisted of 12 items. We expected that participants who had just viewed their assigned episodes should be able to answer at least 50% of these items correctly. Four participants were excluded because their test score failed to reach 50%.

After viewing the episodes, participants reported their homophily and parasocial interaction toward the teen character in the episode. Last, participants were told that they were going to answer questions about health concerns affecting teenagers today; subsequently, they completed the dependent measures and their demographic information.

Stimulus Materials

To select prototypical episodes of *16 and Pregnant*, we drew from a content analysis of the first two seasons of the show (Peters, 2011). We initially selected five episodes of *16 and Pregnant* that followed the pattern of results found in the content analysis. To select the final episodes that were used in the experiment, we conducted pretesting of the stimuli. In total, 110 women at a large, Midwestern University participated in

the pretesting of the stimuli. On average, they were 19.7 years old ($SD = 0.87$) and approximately 80% were White.

Fifty-six of the pretest participants viewed the *16 and Pregnant* episodes and rated the message characteristics of the episode and their affinity with the teen mom. From the five pretested episodes, episodes from Season 3 titled “Emily” and “Aubrey” were the most similar on 15 message characteristics.¹ Furthermore, the participants did not rate Emily and Aubrey differently on homophily or parasocial interaction.

We selected five episodes of *Made* that featured White female lead characters who were engaged in similar action-oriented makeovers (i.e., boxer, punk rocker, rock star, snowboarder, motorcross rider). Fifty-four participants rated these episodes for seven message characteristics² and affinity toward the main teen character featured in the episode. Of all the possible pairings, we chose the episodes featuring the boxer and the punk rocker because they did not differ significantly on any of the message characteristics or either of the affinity variables.

Supporting our selection, there was not a statistically significant difference on participants’ ratings of the teen moms in *16 and Pregnant* and the female lead characters in *Made* on homophily [*16 and Pregnant* $M = 2.21$ ($SD = 0.75$) vs. *Made* $M = 2.38$ ($SD = 0.88$), $t(107) = 1.09$, $p = .28$] or parasocial interaction [*16 and Pregnant* $M = 2.30$ ($SD = 0.64$) vs. *Made* $M = 2.32$ ($SD = 0.65$), $t(107) = .10$, $p = .92$].

Measures

Descriptive statistics of the main variables are shown in Table 1.

16 and Pregnant Variables

Homophily

We measured homophily using five items from Andersen and de Mancillas’ (1978) homophily scale (e.g., “The [teen mom/female *Made* character] shares my beliefs”). Internal consistency was adequate ($\alpha = .77$).

Parasocial Interaction

To measure parasocial interaction, we used seven items from Rubin’s (1994) Parasocial Interaction Scale (e.g., “I would like to meet her in person”). Internal consistency was adequate ($\alpha = .68$).

¹For each of the five episodes of *16 and Pregnant*, pretest participants were asked to rate the extent to which the episode featured 15 salient messages, based on the repetitive narrative elements documented in a content analysis of the first two seasons of *16 and Pregnant* (Peters, 2011). The message characteristics included the following: (a) how supportive the teen mom’s parents were, (b) how supportive the teen dad’s parents were, (c) how supportive the teen dad was toward the teen mom, (d) the commitment in the teen parents’ relationship, (e) the certainty of the future of the teen parents’ relationship, (f) the happiness of the teen mom, (g) the demonstrated responsibility of the teen mom, (h) the happiness of the teen dad, (i) the demonstrated responsibility of the teen dad, (j) the success of the mom’s educational/professional pursuits, (k) the success of the teen dad’s educational/professional pursuits, (l) the financial stability of the teen mom, (m) the financial stability of the teen dad, (14) the ability of the teen mom to take care of the baby, and (n) the ability of the teen dad to take care of the baby.

²For each of the pretested episodes of *Made*, we attempted to mirror the message characteristics that were rated for *16 and Pregnant*. Seven message characteristics were rated for *Made*: (a) how supportive the teen’s parents were, (b) how supportive the teen’s friends were, (c) how supportive the teen’s family members (other than parents) were, (d) how supportive the teen’s *Made* coach was, (e) the happiness of the teen, (f) the demonstrated responsibility of the teen, and (7) the success of the teen in her *Made* pursuit.

Table 1. Descriptive statistics of main variables

| | <i>M</i> | <i>SD</i> | No. of Items | α | Min | Max |
|--|----------|-----------|-----------------|----------|-----|-----|
| Homophily | 3.27 | 0.73 | 5 | .77 | 1 | 5 |
| Parasocial interaction | 3.15 | 0.56 | 7 | .68 | 1 | 5 |
| Previous viewing of <i>16 and Pregnant</i> | 2.67 | 0.97 | 1 | NA | 1 | 5 |
| Fan identification with <i>16 and Pregnant</i> | 2.83 | 0.72 | 1 | NA | 1 | 5 |
| Message perception of <i>16 and Pregnant</i> | 3.59 | 1.46 | 1 | NA | 1 | 7 |
| Acceptance of teen pregnancy myths | 3.09 | 1.21 | 6 | NA | 0 | 6 |
| Personal risk of teen pregnancy | 3.48 | 1.79 | 1 | NA | 1 | 7 |
| Benefits over risk about teen pregnancy | 3.48 | 1.60 | 1 | NA | 1 | 6 |
| Teen pregnancy avoidance possibility | 4.79 | 1.68 | 1 | NA | 1 | 7 |
| Attitudes toward teen pregnancy | 3.48 | 1.60 | 12 | .78 | 1 | 6 |
| Behavioral attention toward teen pregnancy | 4.83 | 1.66 | 3 | .67 | 1 | 7 |

Note. Cronbach's alpha was not calculated for *acceptance of teen pregnancy myths* because it was possible that participants could accept some of the myths while not accepting others. NA = not applicable.

Viewing of 16 and Pregnant

Participants reported how often they viewed *16 and Pregnant* on a 5-point scale ranging from 0 (*never*) to 4 (*whenever it's on*). For the analysis of variance models, we categorized 49 participants who reported *never* and *rarely* as nonregular viewers, and we grouped 77 participants who viewed the program *sometimes*, *often*, and *whenever it's on* as regular viewers.

Fan Identification

Participant reported the extent to which they identified as fans of *16 and Pregnant*. Responses ranged from 1 (*very weak*) to 5 (*very strong*). Participants who had never watched *16 and Pregnant* before did not answer this question.

Message Perception

Participants who were assigned to the experimental condition answered the following question: "To what extent do you believe the episode of *16 and Pregnant* that you viewed encouraged or discouraged teen pregnancy?" Responses ranged from 1 (*very discouraging*) to 7 (*very encouraging*).

Teen Pregnancy Variables

Acceptance of Teen Pregnancy Myths

We asked participants to assess whether they believe six myths about teen pregnancy to be true. For example, we asked participants to assess whether the following statement was true or false: "Most teenage fathers stay involved with the young woman they have made pregnant." Although the reality is that this statement is false, the results of the content analysis of *16 and Pregnant* suggest that this is true of most of the episodes in the series. We summed how many the participants erroneously accepted as truth.

Perceptions of Pregnancy Risk

To assess perceptions of pregnancy risk, we used three items from the Adolescent Risk Perception Survey (Benthin, Slovic, & Severson, 1993). Although we initially

thought these items would comprise a global index of beliefs about pregnancy risk, they were not internally consistent. Thus, we examined each item individually:

1. "To what extent do you believe that you would be personally at risk for getting pregnant?" Participants responded on a 7-point scale ranging from 1 (*very much likely*) to 7 (*not at all likely*)
2. "To what extent are the benefits of teen pregnancy greater than the risks associated with it?" Participants responded on a 7-point scale ranging from 1 (*risks much greater than the benefits*) to 7 (*benefits much greater than the risks*)
3. "To what extent can someone your age avoid getting pregnant?" Participants responded on a 7-point scale ranging from 1 (*cannot be avoided*) to 7 (*can be avoided*).

Teen Pregnancy Attitudes

To measure attitudes toward pregnancy, participants rated their agreement with seven items from the Teen Attitude Pregnancy Scale (Somers, Johnson, & Sawilowsky, 2002). These items assessed participants' feeling of readiness to be a teen parent, e.g., "I am responsible enough to be a parent." In addition, items assessing attitudinal ambivalence toward becoming pregnancy were included (e.g., "If I got pregnant, I would be forced to grow up too fast"; Bruckner, Martin, & Bearman, 2004; East, Khoo, & Reyes, 2006). The items were averaged to comprise a global attitude regarding teen pregnancy. Internal consistency was acceptable ($\alpha = .78$).

Behavioral Intentions

Participants rated their agreement with three items adapted from the Personal Intentions subscale of the Teen Attitude Pregnancy Scale (Somers et al., 2002). For example, participants rated their agreement on a 1 (*strongly disagree*) to 5 (*strongly agree*) scale with the following statement: "I intend to resist sex if contraceptives are unavailable." Internal consistency was acceptable ($\alpha = .67$).

Results

Research Question 1

To address Research Question 1, we ran analysis of variance models, with both past viewing experience of *16 and Pregnant* and condition as factors. Although we found some main effects for both factors, there were no interaction effects between regular viewing and assignment to condition. For Research Question 1a addressing the main effects on teen pregnancy myth acceptance, participants who viewed the *16 and Pregnant* episode did not exhibit a statistically significant difference in accepting myths about teen pregnancy compared with viewers assigned to the *Made* condition, $F(1, 117) = 1.06$, $p = .31$, observed power = .18. The influence of previous viewing habits on participants' acceptance of teen pregnancy myths, however, was statistically significant, $F(1, 117) = 4.93$, $p = .05$, partial $\eta^2 = .03$. Regular viewers ($M = 3.28$, $SD = 1.15$) reported higher acceptance of myths compared with nonregular viewers ($M = 2.87$, $SD = 1.26$).

For Research Question 1b, participants assigned to *16 and Pregnant* ($M = 3.86$, $SD = 1.73$) reported significantly lower perceived personal risk for getting pregnant than did those assigned to the control condition ($M = 3.28$, $SD = 1.76$), $F(1, 117) = 4.48$, $p = .04$, partial $\eta^2 = .04$. Participants' previous viewing of the series also had a significant effect on their perceived pregnancy risk, $F(1, 117) = 5.82$, $p = .02$, partial $\eta^2 = .05$. Regular viewers ($M = 3.84$, $SD = 1.65$) reported lower personal risk of getting pregnant compared with nonregular viewers ($M = 3.15$, $SD = 1.86$).

In addition, participants who watched *16 and Pregnant* perceived the benefits of teen pregnancy to be greater than the risks ($M = 3.95$, $SD = 1.46$) compared with participants who watched *Made* ($M = 3.15$, $SD = 1.58$), $F(1, 117) = 9.06$, $p = .003$, partial $\eta^2 = .07$. The effect of participants' viewing habits was also statistically significant, $F(1, 117) = 6.98$, $p = .009$, partial $\eta^2 = .06$, suggesting that participants who regularly watched *16 and Pregnant* ($M = 3.81$, $SD = 1.50$) perceived the benefits of teen pregnancy to be greater than those who did not ($M = 3.17$, $SD = 1.60$).

There was not a statistically significant difference between participants in the *16 and Pregnant* condition and those in the *Made* condition on the general perception of teens' ability to avoid pregnancy, $F(1, 117) = 1.66$, $p = .20$, observed power = .05. Participants' viewing history of the series had no effect on this variable either, $F(1, 117) = 0.03$, $p = .87$, observed power = .06.

To address Research Question 1c, participants who watched *16 and Pregnant* did not report a statistically significant difference in their attitudes towards teen pregnancy compared with participants in the *Made* condition, $F(1, 117) = 0.23$, $p = .63$, observed power = .08. However, participants' regular viewing experience had a significant impact, $F(1, 117) = 20.67$, $p < .001$, partial $\eta^2 = .15$. Regular viewers of *16 and Pregnant* ($M = 3.04$, $SD = 0.28$) reported more favorable attitudes toward teen pregnancy than nonregular viewers ($M = 2.66$, $SD = 0.62$).

For Research Question 1d, there was not a significant difference in behavioral intentions to avoid teen pregnancy between the experimental and control group, $F(1, 117) = 0.01$, $p = .97$, observed power = .05; however, participants' regular viewing had a statistically significant effect, $F(1, 117) = 12.89$, $p < .001$, partial $\eta^2 = .10$. Regular viewers ($M = 3.91$, $SD = 0.68$) indicated lower behavioral intentions to avoid teen pregnancy than nonregular viewers ($M = 3.51$, $SD = 0.56$).

Research Question 2

Research Question 2 examined the relationship between homophily and pregnancy-related variables.³ Because participants had to rate their level of homophily with the teen moms, this research question was only investigated for those who viewed the *16 and Pregnant* episodes. We entered participants' demographic characteristics in the first block of hierarchical regression models and homophily in the second block. The results are in Table 2. For Research Question 2a, viewers' homophily with the teen moms in *16 and Pregnant* predicted their acceptance of teen pregnancy myths, even after controlling for the demographic variables. For Research Question 2b, participants' homophily with the teen moms predicted perception of personal risk of getting pregnant, whereby more homophily predicted less perception of risk. Likewise, homophily predicted the perception of greater benefits associated with teen pregnancy than risks and the perception that teen pregnancy cannot be avoided. For Research Question 2c, homophily predicted more favorable attitudes towards teen pregnancy. Last, for Research Question 2d, homophily did not exhibit a statistically significant effect on behavioral intentions to avoid teen pregnancy.

Research Question 3

Research Question 3 examined relations between parasocial interaction and the pregnancy-related variables⁴ (see Table 3). For Research Question 3a, parasocial

³We examined the interactions between message perceptions regarding teen pregnancy and homophily. None of these interactions were significant.

⁴We examined the interactions between message perceptions regarding teen pregnancy and parasocial interaction. None of these interactions were significant.

Table 2. Hierarchical regression models examining the relations between homophily and pregnancy variables

| | Teen pregnancy myths acceptance | Perceived risk of teen pregnancy | | | Attitudes toward teen pregnancy | Behavioral intentions to avoid teen pregnancy |
|--------------------|---------------------------------|----------------------------------|--------------------|-----------------------|---------------------------------|---|
| | | Personal risk | Benefits over risk | Avoidance possibility | | |
| Step 1 | | | | | | |
| Age | .00 | -.02 | -.21 | .24 | -.15 | .20 |
| Education (father) | .16 | .12 | .08 | .10 | .02 | .04 |
| Education (mother) | -.22 | -.04 | .11 | -.08 | -.09 | .20 |
| Race | .19 | .24+ | .19 | -.07 | .26+ | -.23+ |
| Adjusted R^2 | .01 | .00 | .03 | .00 | .01 | .06 |
| Step 2 | | | | | | |
| Homophily | .36** | .29* | .28* | -.33* | .29* | -.20 |
| ΔR^2 | .12** | .07* | .07* | .09* | .08* | .03 |

Note. For all models, $N=61$. Race is dummy coded as 1 = White; 0 = non-White. Personal risk was coded on a 7-point scale ranging from 1 (*very much at risk*) to 7 (*not at all at risk*). Avoidance possibility was coded on a 7-point scale ranging from 1 (*cannot be avoided*) to 7 (*can be avoided*). Coefficients are standardized betas.

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

interaction with the teen mom in *16 and Pregnant* predicted higher acceptance of myths about teen pregnancy.

For Research Question 3b, parasocial interaction significantly predicted perceptions of personal risk of getting pregnant, suggesting the stronger parasocial interaction,

Table 3. Hierarchical regression models examining the relations between parasocial interaction and pregnancy variables

| | Teen pregnancy myths acceptance | Perceived risk of teen pregnancy | | | Attitude toward teen pregnancy | Behavioral intention for avoiding teen pregnancy |
|------------------------|---------------------------------|----------------------------------|--------------------|-----------------------|--------------------------------|--|
| | | Personal risk | Benefits over risk | Avoidance possibility | | |
| Step 1 | | | | | | |
| Age | .00 | -.02 | -.21 | .24+ | -.15 | .20 |
| Education (father) | .16 | .12 | .08 | .10 | .02 | .04 |
| Education (mother) | -.22 | -.04 | .11 | -.08 | -.09 | .11 |
| Race | .19 | .24+ | .19 | -.07 | .26+ | .20 |
| Adjusted R^2 | .00 | .00 | .03 | .00 | .01 | -.23+ |
| Step 2 | | | | | | |
| Parasocial interaction | .30* | .41** | .43** | -.20 | .34** | -.24+ |
| ΔR^2 | .08* | .16** | .18** | .04 | .11** | .05+ |

Note. For all models, $N=59$. Race is dummy coded as 1 = White; 0 = non-White. Personal risk was coded on a 7-point scale ranging from 1 (*very much at risk*) to 7 (*not at all at risk*). Avoidance possibility was coded on a 7-point scale ranging from 1 (*cannot be avoided*) to 7 (*can be avoided*). Coefficients are standardized betas.

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

Table 4. Hierarchical regression models examining predictors of homophily and parasocial interaction with teen moms featured in *16 and Pregnant*

| | Homophily | Parasocial interaction |
|---|-----------|------------------------|
| Step 1 | | |
| Age | -.21 | .02 |
| Education (father) | -.04 | -.20 |
| Education (mother) | -.09 | -.03 |
| Race | .35* | .09 |
| Adjusted R^2 | .08+ | .00 |
| Step 2 | | |
| Previous viewing of <i>16 and Pregnant</i> | -.01 | .09 |
| Fan identification | -.12 | -.12 |
| ΔR^2 | .01 | .03 |
| Step 3 | | |
| Perception of message of <i>16 and Pregnant</i> as encouraging of teen pregnancy | .36** | .52*** |
| ΔR^2 | .11** | .22*** |

Note. For all models, $N=59$. Race is dummy coded as 1 = White; 0 = non-White. Personal risk was coded on a 7-point scale ranging from 1 (*very much at risk*) to 7 (*not at all at risk*). Avoidance possibility was coded on a 7-point scale ranging from 1 (*cannot be avoided*) to 7 (*can be avoided*). Coefficients are standardized betas.

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

the lower the perceived personal risk of getting pregnant. Also, parasocial interaction predicted the perception of greater benefits over the risks associated with teen pregnancy, but it was not a predictor of the belief that teen pregnancy can be avoided.

For Research Question 3c, parasocial interaction predicted favorable attitudes about teen pregnancy. Last, for Research Question 3d, parasocial interaction negatively predicted behavioral intentions to avoid teen pregnancy at a level of marginal significance. Again, in total, parasocial interaction consistently predicted the pregnancy-related outcomes.

Research Question 4

To test Research Question 4, which examined the predictors of homophily and parasocial interaction, we ran two hierarchical regression models with demographic variables entered on the first block, participants' viewing experience and identification as fans on the second block, and 3 participants' perception of the message about teen pregnancy on *16 and Pregnant* on the third block. The only variable that significantly predicted both homophily and parasocial interaction was the perception of teen pregnancy on *16 and Pregnant*. Specifically, the perception that *16 and Pregnant* encouraged teen pregnancy predicted greater homophily and parasocial interaction with the teen moms. Results are reported in Table 4. In addition, White participants were more likely to exhibit homophily.

Discussion

Although the common wisdom regarding *16 and Pregnant*, originating from popular media (e.g., MTV) and influential advocacy groups such as the National Campaign (2010a), has been that the show is doing an important public service in stemming the tide of teen pregnancy, the results of this initial field experiment suggest otherwise. A one-time viewing of a prototypical episode of *16 and Pregnant* had a statistically significant impact on adolescents' perceived risks of pregnancy. Compared with

adolescent girls who watched MTV's *Made*, those who viewed *16 and Pregnant* were less likely to perceive themselves at risk for pregnancy and more likely to believe that the benefits of teen pregnancy outweigh risks. The results are disconcerting in light of research suggesting that adolescents' low perceived risk for pregnancy is a substantial barrier to teen pregnancy prevention (Hamani et al., 2007).

How might we explain these unintended effects? First, for the effect of *16 and Pregnant* on the adolescents' low perceived risk of getting pregnant, the show's lack of attention to conception and contraception might create a buffer between the girls and their own feelings of vulnerability regarding pregnancy. The results of a content analysis of the first two seasons of *16 and Pregnant* found that messages about sexual health, including contraception, were remarkably absent in the show (Peters, 2011). The "Emily" and "Aubrey" episodes used in the present study briefly mentioned that the teen moms were having intercourse with their steady boyfriends but failed to use contraception. It is possible, then, that the episodes simply did not offer them the opportunities to model behaviors regarding contraception, thus creating the impression that risk of getting pregnant is not a salient concern. Also, given some of the positive consequences of pregnancy featured on the show, such as the bond between mother and baby, viewers who watched *16 and Pregnant* might perceive getting pregnant to be less of an adverse "risk" and more of a positive experience.

Second, for the effect of *16 and Pregnant* on the perception that the benefits of teen pregnancy outweighs the risks, we must keep in mind that along with the negative consequences of teen pregnancy depicted on the show, there are also undeniable positive consequences. Although both Emily and Aubrey had to deal with drastic changes to their education, had difficult living situations, and experienced relational difficulties, their episodes were packaged as narratives with some degree of resolution. Thus, by the end of the episodes, both seemed satisfied with the differing paths their lives had taken. Although there was turmoil, difficulties were relatively resolved by the end of the episodes. And, perhaps most important, they both had healthy babies who brought them a great deal of joy. Both expressed that despite their regret over the timing of their pregnancies, they were completely in love with their infants. Thus, although there are more negative than positive consequences on the scene level (Peters, 2011), the episode-level consequences might ring as positive to the viewers of *16 and Pregnant*.

Still, it is important to recognize that for the four other dependent variables, there were no main effects of condition detected. Thus, the one-time viewing of *16 and Pregnant* did not result in measurable differences in participants' teen pregnancy myth acceptance, perceptions of the ability to avoid teen pregnancy, attitudes about teen pregnancy, nor behavioral intentions to avoid teen pregnancy. In fact, although not the main goal of the present study, the influence of previous viewing experience of *16 and Pregnant* was more consistent than the experimental manipulation of viewing *16 and Pregnant*. In each case, regularly viewing *16 and Pregnant* resulted in beliefs, perceptions, attitudes, and behavioral intentions that were opposite to the intended goal of *16 and Pregnant* to prevent teen pregnancy. Thus, these results suggest that there is a need for further research to study long-term, nonmanipulated exposure to *16 and Pregnant*. Perhaps there is a cumulative and gradual effect of the show that would be best studied longitudinally.

As celebrity physician Dr. Drew Pinsky stated on *The Today Show*, the supposed effectiveness of *16 and Pregnant* is based on a "peer counseling model" (*The Today Show*, 2010). The 16-year-old moms featured on the show can do a more effective job in teaching the teen audience about the perils of teen pregnancy than parents or adult educators because the show allows the audience members to see for themselves the negative consequences from teens who look and act like them. In contrast to Pinsky's argument, our results suggest that the more the participants expressed homophily

toward the teen moms, the more they accepted myths about teen pregnancy, the less they believed themselves to be at risk for teen pregnancy, the more they perceived the benefits of teen pregnancy to outweigh the risks of teen pregnancy, and the more favorable their attitudes about teen pregnancy. Likewise, for parasocial interaction, the same pattern of results was demonstrated with one addition over homophily—parasocial interaction with the teen moms also decreased behavioral intentions to avoid pregnancy.

Again, how do we explain these unintended effects of *16 and Pregnant* in relation to homophily and parasocial interaction? Revisiting social cognitive theory (Bandura, 2009), a likely explanation lies in the series' portrayal of consequences of teen pregnancy. If participants perceive themselves to be similar to the teen moms who are ultimately joyful that they have infants, even despite their struggles, it makes sense that they would be less inclined to express beliefs, attitudes and behavioral intentions to avoid pregnancy. Similarly, if they respond to the teen moms in a positive way so that they could imagine having a real-life relationship with them, then their affinity with teens who ultimately are happy and satisfied with their infants might dampen their beliefs, attitudes, and behavioral intentions to avoid teen pregnancy.

Somewhat unexpected was that homophily and parasocial interaction exhibited negative correlations with participants' estimates of their risks for becoming pregnant. On the basis of social cognitive theory, we might expect that viewers who perceive themselves to be similar to the teen mom, who has experienced the risk (i.e., unplanned pregnancy), would also perceive themselves to be at a greater risk for pregnancy. The results run counter to this perspective; however, they are in line with the other results of the study. Specifically, the affinity variables predicted greater acceptance of myths about teen pregnancy and more favorable attitudes toward teen pregnancy. In addition, parasocial interaction was associated with fewer behavioral intentions to avoid pregnancy. We conjecture that these adolescents may not actually perceive pregnancy to be a risk, which has a negative connotation. Rather, they may view pregnancy as offering potential benefits rather than risks. Thus, perceived similarity and the development of a parasocial relationship with a teen mom on *16 and Pregnant* may foster the belief for adolescent girls that teen pregnancy would not be a risky endeavor.

Further contextualizing our findings for homophily and parasocial interaction was the result that viewers' perception of the message about teen pregnancy on *16 and Pregnant* is correlated with both homophily and parasocial interaction. Thus, a plausible explanation of this finding is that for viewers who think that the show encourages teen pregnancy, it was easier to perceive themselves to be similar to the teen moms and to engage in more parasocial interaction with them. These findings point to the importance of considering viewers' *perception* of the message, despite the intentions of the show to discourage teen pregnancy (Dinh, 2010) and despite the actual frequencies of positive and negative consequences of teen pregnancy featured on the show (Peters, 2011).

In sum, although research on entertainment-education suggests that scripted entertainment television shows can be effective in teaching audiences about sexual topics (e.g., Brodie et al., 2001; Collins et al., 2003), the format and genre of *16 and Pregnant* might work against the intended purpose of preventing teen pregnancy. On scripted shows, writers and producers can control the message to suit intended health goals. On *16 and Pregnant*, the stories are told through the perspective of the young girls who have contradictory things to say about teen pregnancy, who might undersell the value of prevention and contraception, and who might convey the notion that teen pregnancy is a way to garner attention from others, if not the people in their lives who are featured on the episodes, then at least from MTV who put them on TV. Compared with a scripted show, in which the health content

is written with a specific goal in mind, the health message in *16 and Pregnant* might be more implicit and open to interpretation (Levin-Zamir, Lemish, & Gofin, 2011).

Limitations and Future Directions

Conducting a field experiment for this initial test of *16 and Pregnant* presented some limitations that future research will need to address. First, replicating the present research as a controlled laboratory experiment will help to present more control into the experiment. In addition, adding a pretest to the design of a controlled laboratory study will allow us to examine within-subject change in pregnancy-related beliefs, perceptions, attitudes, and behavioral intentions. Second, studying the impact of *16 and Pregnant* longitudinally will help to understand how participants' nonmanipulated viewing of the show contributes to understandings of teen pregnancy over time. The cross-sectional approach to addressing the impact of the nonmanipulated viewing variables does not permit us to make causal conclusions for those research questions.

Issues with measurement also presented some limitations to the present research. Despite our use of previously established, validated measures, internal consistency of two of the variables—parasocial interaction and behavioral intentions to avoid teen pregnancy—were surprisingly low. In addition, we were not able to average the risk variables because they did not intercorrelate. One of the risk variables measured participants' belief that the benefits of pregnancy outweigh the negative risks of it. We did not measure the opposite belief, assessing the impact of the show on participants' belief of the negative consequences of teen pregnancy. Thus, follow-up research will seek to improve on these measures.

Conclusion

The results of the present study suggest that *16 and Pregnant* might have unintended impacts on adolescents girls who it seeks to educate about the trials and turmoil of teen pregnancy. If, as MTV claims, the goal is to “spur a decrease in teen pregnancy” (Dinh, 2010, para. 1), the initial evidence that directly tests the effectiveness of the show suggests that this goal might as yet be elusive.

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