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What is This?
Examining the Impact of Celebrity Gossip Magazine Coverage of Pregnant Celebrities on Pregnant Women’s Self-Objectification

K. Megan Hopper¹ and Jennifer Stevens Aubrey²

Abstract
The present experimental study examined the impact of celebrity gossip magazine coverage on pregnant women through the lens of objectification theory (Fredrickson & Roberts, 1997). In total, 301 pregnant women were randomly assigned to view highly sexually objectifying full-body images and accompanying text depicting pregnant celebrities, low objectifying headshot-only images and accompanying text depicting celebrities, or images of baby products with no people depicted (control). Exposure to the headshot-only condition resulted in significantly more self-objectification than exposure to control images. We speculate exposure to the headshot-only images primed self-objectification in participants because they visualized nonpregnant, thin, toned, and sculpted celebrity bodies that are frequently objectified by the media. Further analyses revealed that participants’ stage in pregnancy, history with pregnancy, and age moderated the main effects. Among those in their first trimester, assignment to the headshot-only condition significantly predicted state self-objectification; however, among those in their third trimester, the full-body condition predicted state self-objectification at a level of marginal significance. Further, exposure to the headshot-only stimuli predicted self-objectification for those having no prior live births. Among those participants in the younger age group, exposure to the headshot-only condition significantly predicted self-objectification; however, among those in the middle age group, the full-body condition significantly predicted self-objectification.

Keywords
media, self-objectification, pregnancy, celebrity gossip magazines

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Attractiveness in U.S. culture, particularly for women, has increasingly been linked to slenderness (Grogan, 1999). Studies have found that there is a clear trend toward a thinner ideal in our culture, and there is pressure among women to conform to this thin ideal (Garner, Garfinkel, Schwartz, & Thompson, 1980; Wiseman, Gray, Mosimann, & Ahrens, 1992). The media not only consistently idealize the thin female body but also focus on women’s bodies more so than any other aspect of their identities. However, the thin ideal is problematic for women to exhibit when carrying out the highly important function of pregnancy. During pregnancy, most women rapidly surpass the culturally accepted and normalized boundaries for women’s bodies (Cusk & Allardice, 2003). However, popular media, especially gossip magazines, depict many celebrities as being no less glamorous, nor toned, while pregnant than when they are not.

Possibly because of the aberration from the thin ideal, historically images of pregnant women have been scant in U.S. culture. For example, in researching images of pregnancy over the last century, Matthews and Wexler (2000) found few publicized photographs of pregnant women, which led them to assert that for many years, the public display of pregnant women induced a state of “cultural anxiety” (p. 2) in seeing a woman’s body in such an unconstricted and unidealized state. However, beginning with the 1991 Vanity Fair cover photo of a naked and pregnant Demi Moore, Deziel (2006) argues, the onslaught of sexualized representations of pregnant celebrities in the media began.

In the years since the watershed of Demi Moore’s Vanity Fair cover, some argue that pregnant women are now “being represented as most other women in our culture: as an object of the gaze packaged to create and play on the desires of the viewer” (Matthews & Wexler, 2000, p. 201). For many women, Holmes and Redmond (2006) asserts, celebrities’ bodies are often cultural indicators of the perfect woman, featuring long legs, full breasts, and flat stomachs. These idealized cultural indicators have the potential to become comparison targets for some women to measure the worth of their own bodies. Thus, it is important to examine the impact that the sexual objectification of pregnant celebrities might have on pregnant women because pregnant celebrities undoubtedly provide a site for comparison regarding what type of pregnant body is desirable and what type of pregnant body incites discussion and criticism. Indeed, Deziel (2006) argues that many pregnant celebrities do not appear as any less glamorous and toned as when not pregnant, which communicates to pregnant women that their bodies are still being held to impossible standards.

Although a great deal of research has examined the effects of sexual objectification of women on women’s body image (Fredrickson, Roberts, Noll, Quinn, & Twenge, 1998; Harrison & Fredrickson, 2003; Noll & Fredrickson, 1998; Tiggemann & Lynch, 2001), much of this research focused on young women, especially college women. Research has not yet examined the impact of sexual objectification on women during pregnancy. Recent evidence suggests that the pregnancies of celebrities provoke much discussion, surveillance, and sometimes praise or criticism, depending on how the body “performs” during pregnancy (Douglas & Michaels, 2004). For example, a recent content analysis of U.S. celebrity gossip magazines found that the appearance of speculated to be pregnant, pregnant, and recently postpartum celebrities was mentioned in photograph captions more often than the
appearance of nonpregnant celebrity women (Hopper, 2009). Although celebrity gossip magazines comment on all celebrities’ bodies more so than any other aspects, the greater preoccupation these magazines have on pregnant celebrities’ bodies displaces any discussion of the internal experiences these celebrities are having as well as the health of the baby they are carrying. These findings demonstrate the importance of examining this phenomenon in greater detail as a focus on pregnant women’s appearance takes away from the very point of pregnancy—carrying and sustaining the life of another human being. Thus, the present study investigates how exposure to sexually objectified celebrities affects pregnant women’s state level of self-objectification.

Celebrities and Magazines

Scholars have argued that the U.S. media system sustains a cultural obsession with celebrity that trains audiences to be careful inspectors of bodies and outward appearance (Holmes & Redmond, 2006). This is because celebrities speak with their bodies and thus are subject to a gaze created by popular media that spotlights the shape and size of their bodies much less often than close-ups of their faces. For female celebrities, popular media focus on photographing their perfect bodies in order for them “to-be-looked at” (p. 121).

The images, traits, and cultural ideals of celebrities are widespread, disseminated, replayed, and copied by all forms of media (Holmes & Redmond, 2006). One particularly pervasive media purveyor of celebrity information is celebrity gossip magazines, also referred to as tabloids. Gossip magazines are one of the three main subgenres of women’s magazines (along with fashion and lifestyle), and they often include stories about celebrities frequently emphasizing celebrity babies (Hermes, 1995).

Although scholars have thoroughly examined and critiqued women’s lifestyle magazines (e.g., Covert & Dixon, 2008; Douglas & Michaels, 2004; Gupta, Zimmerman, & Fruhauf, 2008; Tuchman, 1978; Wolf, 1991), there has been much less research attention on the subgenre of celebrity gossip magazines. However, celebrity gossip magazines should not be ignored by scholarly research for several reasons. First, gossip magazines are an important medium to examine because, according to Abrahamson (2007), they not only are a result of the current social reality but also help to shape that reality. This is especially true of gossip magazines because, as the name of the genre implies, these magazines are often used socially, as portable devices providing topics to share and discuss with others. Second, it is important to examine gossip magazines because entertainment and news have increasingly become blurred resulting in a surge of “infotainment.” For example, popular celebrity gossip magazines such as People ranked 12th among the top 100 largest magazines based on circulation in 2009 and US Weekly ranked 42nd (Magazine Publishers of America, 2010). According to Mnookin (2003), this type of magazine has soared in popularity because of a growing obsession in the United States with celebrity news. These magazines allow insight into both celebrities’ professional and personal lives. By devoting coverage to celebrities when they are speculated to be pregnant, confirmed pregnant, or recently postpartum, the celebrities may seem more accessible to the public (Carlson, 2008). Third, and most important to the present analysis, celebrity gossip magazines are an important medium to examine because
they have been found to sexually objectify pregnant celebrities’ bodies more often than nonpregnant celebrities’ bodies (Hopper, 2009). This suggests that celebrity gossip magazines focus on the appearance of women when they are pregnant more so than when they are not, which points to a cultural preoccupation with the bodies of pregnant celebrities. Goldenberg, Goplen, Cox, and Arndt (2007) argue that U.S. media focus a great deal on pregnancy, but mostly with regard to celebrity bodies that present idealistic and unrealistic images of pregnancy. On one hand, these portrayals could make viewing pregnancy more acceptable by members of society, but on the other hand, these portrayals can make women more self-conscious about their appearance because of the obsession these magazines have with pregnant celebrities’ bodies.

Theoretical Framework: Objectification Theory

To examine the impact of messages about pregnancy in gossip magazines, we used objectification theory (Fredrickson & Roberts, 1997). According to the theory, a sexually objectifying culture socializes individuals to develop a similar perspective of the self. Sexual objectification “occurs whenever a person’s body, body parts, or sexual functions are separated out from his or her person, reduced to the status of mere instruments, or regarded as if they were capable of representing him or her” (Fredrickson & Roberts, 1997, p. 175). When an individual is sexually objectified, he or she implicitly learns that his or her worth is primarily based on his or her body and how it can be used by others, a perspective called self-objectification. Self-objectifying individuals tend to focus on their externally perceivable traits rather than their internal traits. Self-objectification can be a chronic, trait-like tendency; however, it can also become a state when individuals are in certain situations or are exposed to certain stimuli that can temporarily intensify self-objectification by making personal appearance particularly salient (Harrison & Fredrickson, 2003).

Engagement in self-objectification has several consequences for individual’s subjective experiences as laid out by objectification theory. According to Fredrickson and Roberts (1997), a focus on one’s own external traits can develop into a consistent self-conscious monitoring of one’s own outer appearance that can negatively affect one’s attention to other important tasks and feelings. For example, engaging in self-objectification can lead to harmful consequences such as feelings of shame and anxiety, an inability to experience peak motivational states, and a disconnect between individuals’ external bodies and their own inner bodily experiences. Thus, several scholars have examined the effects of engaging in self-objectification (e.g., Aubrey, 2006a, 2007; Fredrickson et al., 1998; Harper & Tiggemann, 2008; Tiggemann & Lynch, 2001).

Although influences on body self-consciousness might include interpersonal, social, cultural, and biological factors, certainly an aggressive purveyor of sexual objectification is the media (Fredrickson & Roberts, 1997). Sexual objectification occurs through the gaze of others on the female body. Fredrickson and Roberts (1997) assert that the media inhabit the objectifying gaze in two major ways. First, the gaze is exhibited in visual media that portray interpersonal encounters in which men are portrayed as looking at women more frequently than women are portrayed looking at men. Second, the gaze is exhibited in visual media
Several content analyses have examined how media objectify both women and men (Archer, Iritani, Kimes, & Barrios, 1983; Frith, Shaw, & Cheng, 2005; Kolbe & Albanese, 1996; Stankiewicz & Roselli, 2008; Thompson, 2000). Further, textual messages that appear in conjunction with visual images (i.e., magazine headlines, photo captions, and article text) have been found to also serve to objectify individuals (Hopper, 2009; Malkin, Wornian, & Chrisler, 1999). The media’s use of sexual objectification has been the focus of research examining the effects of media portrayals on women’s self-objectification (Aubrey, 2006a, 2006b, 2007; Harper & Tiggemann, 2008; Harrison & Fredrickson, 2003).

Objectification theory (Fredrickson & Roberts, 1997) suggests the importance of examining women’s proclivity to self-objectify during important lifespan changes. For example, the theory proposes “that having a reproductively mature female body may create a shared social experience, a vulnerability to sexual objectification, which may in turn create a shared set of psychological experiences” (p. 175). This is largely because, as Fredrickson and Roberts (1997) argue, a woman’s body experiences drastic changes throughout her lifetime. Changes in the female body can be attributed to hormones (which play a large role in pregnancy), which then influence women’s experience of sexual objectification by creating changes in the body that are visible to others. Thus, objectification theory proposes that sexual objectification will be most experienced by women during the stages in their lifespan when they are at peak reproductive potential. It seems plausible, then, that pregnancy is another time in a woman’s life that would be influential in her experiences of sexual objectification as the pregnant body goes through drastic changes in a relatively short amount of time, and those changes become increasingly visible to others as the pregnancy progresses.

Despite the usefulness of objectification theory (Fredrickson & Roberts, 1997) for examining self-consciousness about appearance throughout the lifespan, existing research has not done so in regard to the specific aspect of pregnancy. Further, as the media have been found to play an important role in self-objectification processes (Aubrey, 2006a, 2006b; Harper & Tiggemann, 2008; Harrison & Fredrickson, 2003), how the media affect women during pregnancy, in particular, is important to investigate.

Several researchers have employed experimental designs exposing individuals to objectified media images and testing whether those images influence individuals to self-objectify (Aubrey, Henson, Hopper, & Smith, 2009; Harper & Tiggemann, 2008; Harrison & Fredrickson, 2003). For example, Harper and Tiggemann (2008) tested the effects of exposing young women to magazine advertisements that included either a thin woman alone, a thin woman with at least one attractive man, or ads with no images of people. They found more reports of state self-objectification occurred in the women who viewed the ads that included images of thin women, both alone and with attractive men, than those who viewed the ads with no images of people in them. Similarly, in samples of high school women and college women, experimental research has demonstrated that self-objectification can be triggered simply by assigning women to view images of other women’s bodies, which are often displayed in the media (Aubrey et al., 2009; Harrison & Fredrickson, 2003). It would seem
plausible, then, that similar results would be found in pregnant women, an aim of the present study.

Hypothesis 1: Pregnant women who are exposed to highly objectifying magazine excerpts of pregnant celebrities will report more self-objectification than pregnant women not exposed to highly objectifying content.

Body Image During Pregnancy

Pregnancy represents a major reproductive milestone that is important to examine in conjunction with self-consciousness about appearance because it produces a great deal of change in the outward appearance in a relatively short amount of time. The body becomes a source of cultural preoccupation for a woman during pregnancy because it is characterized by a large amount of weight gain and overall transformations of the shape of her body (Strang & Sullivan, 1985). As pregnancy disrupts women’s ability to adhere to the standard thin female form, many pregnant women report one of the biggest stressors of pregnancy to be changes in their body image, which may also contribute to depression in new mothers (Crawford & Unger, 2004). In a society that equates slenderness with attractiveness, how pregnancy affects a woman’s outward appearance is particularly important to consider. For example, according to the 1997 Psychology Today’s Body Image Survey, “pregnancy is increasingly being seen not as a normal body function but as an encumbrance to body image” (Garner, 1997, p. 85). Specifically, results of the survey indicated that a third of the female participants reported an important source of negative feelings about their bodies was the experience of pregnancy.

Research has examined how body image fluctuates at different times during pregnancy. For example, research suggests that women in the early stages of pregnancy were most likely to report they had greater amounts of dissatisfaction with their bodies (Duncombe, Wertheim, Skouteris, Paxton, & Kelly, 2008; Skouteris, Carr, Wertheim, Paxton, & Duncombe, 2005). In addition, pregnant women’s tendencies to engage in social comparison while in early pregnancy predicted their being more concerned with weight and shape. These findings may be due to women comparing their changing bodies during the early stages of pregnancy with nonpregnant women who have gained weight, rather than other pregnant women (Duncombe et al., 2008). As a woman’s pregnancy progresses, she may become used to her bodily changes and accept them as a normal part of a successful pregnancy. In a qualitative study examining pregnant women’s perceptions of fatness, weight, and body shape during differing stages of pregnancy, Earle (2003) found that many women in the first trimester felt others were likely to mistake them for being fat rather than being pregnant. These women, Earle asserts, were anxious to develop a more noticeable bump on their midsections to indicate they were pregnant and to dispel the notion they were fat.

Thus, this research suggests that the stage of pregnancy might operate as an important moderating variable in the relation between experimental condition and participants’ reported self-objectification. As women in the early stages of pregnancy reported dissatisfaction with their bodies due to simply feeling fat or were worried others would mistake their
changing shape for fatness (Duncombe et al., 2008; Earle, 2003; Skouteris et al., 2005), it is possible that pregnant women in their first trimester might be the most vulnerable to sexually objectifying media images. On the other hand, because women in their third trimester experience the greatest discrepancy from their prepregnancy bodies, women in the last stage of pregnancy might be the most vulnerable to the portrayal of celebrities who appear to be fit and slender even throughout their pregnancy. Based on this rationale, we examined stage of pregnancy as a moderator in the main relationship:

Hypothesis 2: Pregnant women’s stage of pregnancy will moderate the relationship between exposure to sexually objectifying messages about pregnant celebrities and their level of state self-objectification.

In addition, it is possible that the number of births women have had prior to their current pregnancy would affect their self-consciousness about their appearance. For instance, women who are experiencing their first pregnancy might worry that their bodies will not return to their prepregnant state once postpartum. By contrast, women who have been pregnant and have delivered children before have a better idea of how their bodies will rebound and therefore may be more focused on the babies they are carrying rather than on their bodies. In support of this conjecture, Strang and Sullivan (1985) found differences in body image attitudes among those who had given birth once and those who had multiple births during the postpartum period. Specifically, they found that women who had given birth more than once viewed their postpartum bodies more positively than women who had given birth only once. Thus, it would seem these differences in perceptions may appear among a population of currently pregnant women.

Hypothesis 3: Women who are in their first pregnancy will exhibit a stronger relationship between exposure to highly sexually objectifying messages about pregnant celebrities and their level of state self-objectification than women who have already had a successful pregnancy.

Method

The main experimental study was a between-subjects design with random assignment to one of three conditions: exposure to high sexually objectifying images of pregnant celebrities \((n = 103)\), exposure to low sexually objectifying images of pregnant celebrities \((n = 92)\), and exposure to control images focusing on baby products with no people featured \((n = 106)\).

Pretest

First, to derive the stimuli for the current study, we pilot-tested the stimuli with 11 pregnant women who were recruited through snowball sampling procedures. The photos in the stimuli were taken from print and online versions of US Weekly, People, OK!, National
“High sexual objectification” was defined as pictures of women featuring a high degree of body display (Aubrey et al., 2009). For the purposes of the present study, photos of pregnant celebrities were deemed as sexually objectifying if they adhered to two criteria: (a) the celebrity was wearing little clothing and (b) if her belly was emphasized either by the use of clothing or full skin exposure of the belly. High sexually objectifying captions were those that specifically reference pregnant celebrities’ bodies. “Low sexual objectification” was defined as photos of the same women that featured only their heads and shoulders. Thus, the low-objectifying stimuli did not include bodies to submit the sexualizing gaze to. Captions were deemed as low sexually objectifying if they did not mention pregnant celebrities’ bodies or appearance whatsoever. We used the same celebrities to enhance internal validity and ensure that any effects were not conflated by some celebrities being seen as more or less attractive than others.

The 11 pretest participants viewed a variety of full-body and headshot photos of 30 different celebrities. The participants saw 30 photos featuring the entire bodies of 30 different celebrities as well as 10 photos of a selection of the same 30 celebrities cropped to include only their heads and shoulders. For the full-body photos of pregnant celebrities, the amount of exposure of the celebrities’ bodies ranged from some of the celebrities wearing bikinis with their bellies fully exposed to some of the celebrities fully clothed with little skin exposed but with tight clothing accentuating their pregnant bellies. Pretest participants viewed each photo and rated the amount of sexual objectification present in each photo on an 11-point scale (0 = not at all sexually objectifying; 10 = extremely sexually objectifying). Sexual objectification was defined for the participants as follows:

> Sexual objectification occurs whenever a person’s body, body parts, or sexual functions are separated out from his or her person, reduced to the status of mere instruments, or regarded as if they were capable of representing him or her. When objectified, people are treated as bodies—and in particular, as bodies that exist for the pleasure of others. (Fredrickson & Roberts, 1997, p. 175)

Participants also rated the extent to which each image made them think about their own bodies (0 = not at all; 5 = very much), the extent to which they identified with the celebrity in each image (0 = not at all; 5 = very much), and the extent to which they liked the celebrity (1 = a lot; 4 = not at all).

The means and standard deviations for the five celebrities selected for inclusion in the full-body highly sexually objectifying stimuli are presented in Table 1. Ultimately, the five celebrities selected for inclusion in the stimuli were Nicole Kidman, Heidi Klum, Angelina Jolie, Nicole Richie, and Tori Spelling because they were rated the highest by participants in regard to the extent of sexual objectification present in their photos. In addition, these celebrities were selected because they did not differ significantly in regard to participants’ ratings of identification and liking of the celebrities.

In addition, the pretest sought to determine whether participants could distinguish between the full-body and the headshot-only photos. See Table 2 for these analyses. Paired samples t tests were conducted between the full-body images and the headshot-only images.
Table 1. Results of Study 1 Full-body Stimuli Pretest

<table>
<thead>
<tr>
<th></th>
<th>Kidman</th>
<th>Klum</th>
<th>Jolie</th>
<th>Richie</th>
<th>Spelling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Sexual objectification</td>
<td>3.30</td>
<td>2.91</td>
<td>4.55</td>
<td>3.45</td>
<td>4.60</td>
</tr>
<tr>
<td>Self-objectification</td>
<td>1.90</td>
<td>0.74</td>
<td>2.36</td>
<td>1.12</td>
<td>2.20</td>
</tr>
<tr>
<td>Celebrity liking</td>
<td>2.33</td>
<td>1.00</td>
<td>1.73</td>
<td>0.91</td>
<td>2.50</td>
</tr>
<tr>
<td>Identification</td>
<td>2.20</td>
<td>0.42</td>
<td>2.64</td>
<td>1.03</td>
<td>2.30</td>
</tr>
</tbody>
</table>

Note: Sexual objectification was measured on an 11-point scale (0 = not at all sexually objectifying; 10 = extremely sexually objectifying). Self-objectification was measured by the extent to which each image made participants think about their own bodies on a 6-point scale (0 = not at all; 5 = very much). The extent to which participants liked each celebrity and each photo were measured on a 4-point scale (1 = a lot; 4 = not at all). Ratings of identification with each celebrity were measured on 6-point scale (0 = not at all; 5 = very much).

Table 2. Paired Samples t Test of Full-Body and Headshot-Only Celebrity Images

<table>
<thead>
<tr>
<th></th>
<th>Full-body</th>
<th>Headshot</th>
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<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Heidi Klum objectification</td>
<td>4.70</td>
<td>3.60</td>
</tr>
<tr>
<td>Angelina Jolie objectification</td>
<td>4.60</td>
<td>3.17</td>
</tr>
<tr>
<td>Tori Spelling objectification</td>
<td>6.45</td>
<td>1.57</td>
</tr>
</tbody>
</table>

* p < .05.

The analyses revealed there was a statistically significant difference in ratings of sexual objectification between the full-body Tori Spelling (M = 6.45, SD = 1.57) and headshot-only (M = 2.73, SD = 2.41) images, t(10) = 4.80, p = .001; between the full-body Heidi Klum (M = 4.70, SD = 3.59) and headshot-only (M = 1.00, SD = 0.000) images, t(9) = 3.26, p = .010; and between the full-body Angelina Jolie (M = 4.60, SD = 3.17) and the headshot-only (M = 1.20, SD = 0.42) images, t(9) = 3.32, p = .009.

Participants

In the main experimental study, 301 pregnant women participated. Participants were recruited through Live Journal and Facebook, both social networking sites, as well as through postings on pregnancy chat rooms (e.g., babycrowd.com and iparenting.com) and through a university-wide mass announcement email (N = 294). In addition, a small portion of the participants (N = 7) were solicited by referrals from undergraduate students enrolled in...
an introductory communication course. All participants were entered in a raffle with a chance to win one of three US$50 gift certificates to Amazon.com.

The participants were on average 29.20 years old ($SD = 4.58$). In total, 92.2% ($N = 278$) of the participants identified as White, 2.6% ($N = 8$) as African American, 2.3% ($N = 7$) as Hispanic, 1.3% ($N = 4$) as Asian Pacific Islander, and 0.3% ($N = 1$) as Native American. The remaining 1.0% ($N = 3$) did not identify with any of these categories. On a scale from 1 (some high school) to 5 (advanced degree achieved), participants reported an average of 3.98 ($SD = 0.82$) to describe their highest level of education completed. The participants were on average 22.53 weeks ($SD = 10.73$) pregnant. For live births, the mode score was 0 ($SD = 1.00$) and the range was 0 to 8.

**Design and Procedure**

Before participants viewed the stimuli, they completed a survey on SurveyMonkey assessing their amount of overall media consumption including magazine readership and television exposure; amount of viewing of the specific magazines included in the study (Life & Style, People, OK!, National Enquirer, and US Weekly) as well as pregnancy, fitness, and beauty magazines; and exposure to television shows that focus on real-life pregnant women (18 and Counting, I Didn’t Know I Was Pregnant, 16 and Pregnant, A Baby Story, and Bringing Home Baby). In addition, the survey asked participants to indicate what stage of pregnancy they are currently in, how many live births they have had as well as to provide several demographic variables (e.g., age, occupation, highest level of education achieved). Interspersed throughout the survey were measures of body surveillance, body esteem, and appearance comparison tendencies as control variables with various distracter questions so as not to tip off the participants to the true purpose of the study.

After completing the initial survey, each participant was randomly assigned to a condition to view through SurveyMonkey containing 10 photos and photo captions in only one of the three categories. Participants were randomly assigned to one of three conditions: (a) a high sexually objectifying condition that included photos featuring pregnant celebrities’ full bodies and captions calling attention to their bodies, (b) a low sexually objectifying condition that included photos of pregnant celebrities’ faces only and captions that included no reference to the appearance of the same pregnant celebrities, and (c) photos and captions depicting baby products with no people featured. There were two versions of the full-body condition counterbalanced to control for order effects.

Once the data were collected, independent samples $t$ tests were calculated to examine any differences between the counterbalanced versions of the full-body photos. The $t$ tests were not statistically significant; thus, the data from the participants who viewed the full-body stimuli were collapsed into one condition for subsequent data analysis.

The main SurveyMonkey link for this study was set to randomly assign each participant who logged in to one of the three condition websites. Participants were able to access the assigned website and the related pre- and postexposure questionnaires on SurveyMonkey from a computer of their choosing.
Participants were told that their purpose was to evaluate magazines specifically targeting pregnant women by rating the quality of the magazine photos and captions. To mask the purpose of the study, participants were also asked to rate the magazine excerpt on a 5-point scale (1 = very low, 5 = very high) in terms of how well it ranked for visual quality, ability to grab their attention, and their level of interest. In addition, to enhance participants’ attention to the photos and captions, they were asked to identify which magazine they thought the image had originally appeared in and to write a sentence describing why they thought the image had appeared in that particular magazine. Immediately following exposure to each photo and photo caption, they completed the dependent measure assessing self-objectification.

**Stimuli**

Five photos and accompanying photo captions were used for each condition based upon Groesz, Levine, and Murnen’s (2002) meta-analysis finding that experimental studies investigating media impact on body image reported the greatest effect sizes when presenting participants with one to nine stimuli. Thus, those assigned to the high sexually objectifying pregnant celebrity condition viewed five full-color photos with accompanying photo caption text featuring five sexually objectified pregnant celebrities and five “filler” images of baby products to mask the true purpose of the study. Those assigned to the low sexually objectifying headshot-only pregnant celebrity condition viewed five full-color photos with accompanying captions featuring five pregnant celebrities, but the images only showed their faces and the text did not objectify them. They also viewed the same five “filler” images as the objectifying condition. Those assigned to the control condition viewed 10 full-color photos with accompanying captions featuring baby products, with no people appearing. These images included the same five “filler” images presented to the other two conditions plus five additional “filler” images.

Immediately following exposure to the stimuli, participants filled out the dependent measure: the Twenty Statements Test (measuring state self-objectification). Participants were told they were to take the Twenty Statements Test in addition to evaluating magazine excerpts because the researchers wanted to know more about them as potential magazine readers. At the end of the experiment, participants were presented with a paragraph debriefing them of the true purpose of the experiment.

**Dependent Preexposure Measures**

**Dependent Measure**

**State self-objectification.** The Twenty Statements Test employed by Fredrickson et al. (1998) was administered to measure state self-objectification. Participants were asked to describe themselves by completing 20 sentences beginning with “I am ______.” Two independent coders categorized participants’ responses into one of six groups: (a) body shape and size (e.g., “I am fat”, “I am short”), (b) other physical appearance (e.g., “I am brunette”, “I am cute”),
(c) physical competence (e.g., “I am weak”, “I am active”), (d) traits or abilities (e.g., “I am nice”, “I am smart”), (e) states or emotions (e.g., “I am sad”, “I am worried”), and (f) miscellaneous (e.g., “I am pregnant”).

State self-objectification was operationalized as the frequency with which a participant produces a response classified in the “body shape and size” or “other physical appearance” categories. The independent coders were two female graduate students. Ten percent of the statements were double-coded. Intercoder reliability was calculated using Cohen’s kappa and was adequate at .87 for both the body shape and size and other physical appearance categories.

Control Variables

We measured several variables as possible covariates. Participants self-reported their age; weight and height (used to calculate their body mass index [BMI]); overall media consumption including magazine readership and television exposure; amount of viewing of the specific magazines included in the study as well as pregnancy, fitness, and beauty magazines; and exposure to television shows that focus on real-life pregnant women.

Before exposure to the stimuli, all participants reported their body surveillance, measured via the Surveillance subscale of the Objectified Body Consciousness Scale (McKinley & Hyde, 1996). The scale included five items (e.g., “I rarely think about how I look”). Participants rated their level of agreement with each item on a 5-point scale (1 = strongly agree; 5 = strongly disagree). Cronbach’s alpha for this sample was .80. Participants also reported their body esteem, measured via the Body Esteem Scale (BES; Franzoi & Shields, 1984). The subscales employed in this analysis list 12 characteristics and functions of the body such as weight, appearance of stomach, and breasts. Prior to being exposed to the stimuli, participants rated how they feel about each part or function of their body on a 5-point scale (1 = have strong negative feelings; 5 = have strong positive feelings). Cronbach’s alpha was .88.

Results

Preliminary Analyses

Descriptive statistics for the key variables under study can be found in Table 3. Participants made .80 (SD = 1.09) statements about their appearance on average with a range of 0 to 7. Participants also reported an average score of 3.14 (SD = 0.55) with a range of 1 to 5 on the body surveillance and an average score of 2.99 (SD = 0.76) with a range of 5 on the body esteem measure. The participants were on average 22.53 weeks (SD = 10.73) pregnant with a range of 1 to 41 weeks. For live births, the mode score was 0 (SD = 1.00) and the range was 8.

An overall regression model investigating the main effect of condition on state self-objectification with all possible covariates entered on the same block revealed no significant effects. To check random assignment, age, BMI, week of pregnancy each woman was
Table 3. Descriptive Statistics for Key Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>State self-objectification</td>
<td>0.80</td>
<td>1.09</td>
<td>0.00-7.00</td>
<td>255</td>
</tr>
<tr>
<td>Age</td>
<td>29.20</td>
<td>4.58</td>
<td>19.00-45.00</td>
<td>301</td>
</tr>
<tr>
<td>Week of pregnancy</td>
<td>22.53</td>
<td>10.73</td>
<td>1.00-41.00</td>
<td>297</td>
</tr>
<tr>
<td>Number of live births</td>
<td>0.70</td>
<td>1.00</td>
<td>0.00-8.00</td>
<td>301</td>
</tr>
<tr>
<td>Body surveillance</td>
<td>3.14</td>
<td>0.55</td>
<td>1.00-5.00</td>
<td>301</td>
</tr>
<tr>
<td>Body esteem</td>
<td>2.99</td>
<td>0.76</td>
<td>1.00-5.00</td>
<td>299</td>
</tr>
</tbody>
</table>

currently in, number of previous live births, overall media consumption, magazine readership, body surveillance, and body esteem scores across the conditions was compared in order to examine any differences between participants in the three conditions. There were no significant group differences in BMI, $F(2, 286) = 0.76, p > .05$; magazine subscriptions, $F(2, 298) = 2.22, p > .05$; time spent reading magazines each week, $F(2, 300) = 0.35, p > .05$; time spent watching television per day $F(2, 301) = 0.59, p > .05$; frequency of celebrity gossip magazine readership $F(2, 301) = 0.91, p > .05$; and frequency of celebrity gossip magazine purchase $F(2, 301) = 0.16, p > .05$. There was a significant difference across conditions for age, $F(2, 300) = 3.15, p < .05$. Therefore, age was entered as a covariate in all subsequent analyses.

Hypothesis 1

The first hypothesis predicted that the pregnant women who were exposed to highly objectifying magazine excerpts of pregnant celebrities would report more self-objectification than pregnant women who were not exposed to highly objectifying content. To test Hypothesis 1, which investigated the main effect of condition on state self-objectification, we conducted an analysis of covariance (ANCOVA) with state self-objectification as the dependent variable, condition as the factor, and age entered as a covariate. A main effect for condition was revealed, $F(2, 237) = 3.89, p = .02, \eta^2 = .03$. Post hoc tests employing the Scheffé procedure at $p < .05$ compared mean scores. Although not what was predicted in Hypothesis 1, post hoc analyses indicated that participants in the headshot low sexually objectifying condition ($M = 0.97, SD = 1.38$) reported significantly more self-objectification than participants in the control condition who viewed baby products only ($M = 0.56, SD = 0.91$). Participants in the high sexually objectifying full-body condition ($M = 0.91, SD = 0.96$) were not significantly different from the other two groups.

Hypothesis 2

The second hypothesis predicted that pregnant women’s stage of pregnancy would moderate the relationship between exposure to sexually objectifying messages about pregnant celebrities and their level of state self-objectification. To investigate Hypothesis 2, multiple
regression models were estimated for each trimester (Trimester 1 = Weeks 1 through 12, Trimester 2 = Weeks 13 through 28, and Trimester 3 = Weeks 29 and above) participants reported being in with condition (one with the full-body condition dummy coded against the headshot-only condition and one with the headshot-only condition dummy coded against the full-body condition) and age as the independent variables and self-objectification serving as the dependent variable. The results demonstrated that for the participants in their first trimester (Weeks 1-12 of the pregnancy), exposure to headshot-only images positively predicted self-objectification, $\beta = .32$, $t = 2.25$, $p = .03$. The results of the regression for the full-body condition demonstrated that for participants in the first trimester, exposure to full-body images did not significantly predict self-objectification, $\beta = .12$, $t = 0.74$, $p = .46$. The regression model indicated that neither the full-body nor the headshot-only conditions were statistically significant for those in the second trimester (Weeks 13-28 of pregnancy), $F(2, 101) = 0.48$ with an adjusted $R^2$ of .01. Last, for participants in their third trimester (Weeks 29 and beyond of pregnancy), the full-body images positively predicted self-objectification, $\beta = .23$, $t = 1.89$, $p = .06$, at a level of marginal significance. However, the headshot-only condition did not statistically significantly predict self-objectification for participants in their third trimester, $\beta = .18$, $t = 1.45$, $p = .15$.

Thus, as predicted, these findings suggest that the results do vary by trimester. Specifically, exposure to the low sexually objectifying headshot-only images and text predicted state self-objectification for those in their first trimester, whereas exposure to the highly sexually objectifying full-body images and text marginally predicted state self-objectification for participants in their third trimester.

**Hypothesis 3**

The third and final hypothesis predicted that the women in their first pregnancy would exhibit a stronger relationship between exposure to highly sexually objectifying messages about pregnant celebrities and their level of state self-objectification than women who had already had a successful pregnancy.

To investigate Hypothesis 3, multiple regression models were estimated separately for participants who had a previous live birth and those who had not. In each, condition (one with the full-body condition dummy coded against the headshot-only condition and one with the headshot-only condition dummy coded against the full-body condition) and age served as the independent variables, and self-objectification served as the dependent variable. For participants with no previous live births, the headshot-only condition predicted self-objectification, $\beta = .18$, $t = 1.93$, $p = .06$, at a level of marginal significance. On the other hand, the relationship between both the full-body and headshot-only conditions and self-objectification, $F(2, 116) = 1.69$, $p = .11$ with an adjusted $R^2$ of .01, was not statistically significant for the women who had had previous live births. Therefore, there is some tentative support for the moderating role of number of pregnancies. That is, for those participants who had not given birth to a child prior to their current pregnancy, exposure to the headshot-only pictures and captions predicted state self-objectification at a level of marginal significance.
Post Hoc Analyses

As we found theoretically meaningful results for the role of pregnancy week and number of previous live births, we wanted to investigate if any of the other covariates had a moderating influence. Thus, we ran six additional regression models with each covariate (age, BMI, overall media consumption, magazine readership, body surveillance, and body esteem) on Step 1, condition on Step 2, and the interaction between condition and the covariate on Step 3. None of the covariates were statistically significant except for age.

To further examine the role of age in the relationship between condition and self-objectification, we divided the sample into three age groups (younger: 19- to 27-year-olds, middle: 28- to 30-year-olds, and older: 31- to 45-year-olds) based on the distribution of ages. Multiple regression models were estimated for each of the three age groups with condition (one with the full-body condition dummy coded against the headshot-only condition and one with the headshot-only condition dummy coded against the full-body condition) as the independent variable and self-objectification serving as the dependent variable. The results demonstrated that for the participants in the younger age group of the sample (19- to 27-year-olds), exposure to headshot-only images positively predicted self-objectification, $\beta = .29, t = 2.67, p = .009$. The results of the regression for the full-body condition demonstrated that for the younger set of participants, exposure did not significantly predict self-objectification, $\beta = .10, t = 0.963, p = .34$.

For those in the middle age group (28- to 30-year-olds), the results demonstrated that exposure to the full-body condition positively predicted self-objectification, $\beta = .31, t = 2.43, p = .02$. However, the headshot-only condition was not a statistically significant predictor of self-objectification for those in the middle age group, $\beta = .12, t = 0.909, p = .37$. Last, for those in the older age group (31- to 45-year-olds), neither the headshot-only nor the full-body condition were statistically significant, $F(2, 80) = 0.06$ with an adjusted $R^2$ of $-.02$.

Thus, these findings suggest that the results do not vary by all individual difference influences but do vary by age. Specifically, exposure to the low sexually objectifying headshot-only images and text predicted state self-objectification for those in the younger age group, whereas exposure to the highly sexually objectifying full-body images and text predicted state self-objectification for participants in the middle age group.

Discussion

Despite the proliferation of pregnant celebrities in gossip magazines, research thus far has not examined how media exposure affects women’s self-consciousness about their appearance while pregnant. Thus, the present study investigated the effect of exposure to the sexual objectification of pregnant celebrities in gossip magazines on currently pregnant women’s state levels of self-objectification. Although not in the direction predicted, noteworthy differences in self-objectification emerged between the three conditions in the present study. The results of Hypothesis 1 revealed participants who viewed the low sexually objectifying images and text experienced more self-objectification than those who viewed the control stimuli. Self-objectification was measured by adding up the number of
appearance-related words that participants used to complete 20 “I am _____” statements. The pregnant women participating in this study who viewed low sexually objectifying headshot-only photos of celebrities and read accompanying text used more appearance-related statements to describe themselves compared with the pregnant women who viewed images of baby products.

These results are contradictory to past research that has found a link between individuals’ exposure to objectifying images and increased levels of self-objectification (Harper & Tiggemann, 2008; Harrison & Fredrickson, 2003). However, past research examining the impact of sexually objectifying images on individuals’ self-objectification has largely been studied in populations of college women and adolescent girls. As there are no known studies of the impact of sexually objectifying media exposure on women while pregnant, research has not yet examined what triggers self-objectification during pregnancy and whether the experience of being pregnant causes changes in the self-objectification process.

It was clear that the celebrities featured in the highly sexually objectifying stimuli presented in this study were pregnant. However, although the low sexually objectifying images featured the heads of celebrities who were pregnant, it was not evident to participants in either the images or the text that these celebrities were pregnant. Therefore, seeing images of celebrities who were not visibly pregnant, whether sexually objectified or not, might have primed their self-objectification because they may have visualized in their heads what the bodies attached to the celebrities they saw in the headshot images looked like and visualized them as being nonpregnant, thin, toned, and sculpted. In support of this, Holmes and Redmond (2006) argue that celebrities speak with their bodies and thus are subject to a gaze created by popular media that spotlights the shape and size of their bodies much less often than close-ups of their faces. Thus, images of thin, toned, and sculpted celebrity bodies are so prevalent in our culture and these bodies are so frequently objectified by the media that it is likely just seeing their heads triggered these women to visualize images of these celebrities’ bodies that they had previously been exposed to. This visualization, in turn, may have caused them to see themselves as objects to be evaluated by others because their pregnant bodies differed from their visualization of that thin ideal. This assertion is purely speculative at this point and is awaiting further research to test whether our argument has fuller support.

We did not directly test a priming effect of headshot-only images because investigation of priming was not a primary aim of the original conceptualization of the present study. In addition, because the present analysis did not examine the effects of full-body images of nonpregnant celebrities on pregnant women’s self-objectification, it is not clear whether seeing these images would increase self-objectification more so than seeing full-body images of pregnant celebrities or headshot-only images of celebrities. Future research is needed to further clarify this process.

The results of Hypotheses 2 and 3 further elucidated the results of Hypothesis 1 by examining the moderating role of stage of pregnancy and participants’ status as already having experienced a live birth. In line with Hypothesis 1, results indicated that exposure to the low sexually objectifying headshot-only images and accompanying text predicted self-objectification for those in the first trimester of their pregnancy (Weeks 1 through 12).
This makes sense in light of research showing that women in the early stages of pregnancy experience the greatest amounts of dissatisfaction with their bodies because their bodies do not appear to others as pregnant but rather as having simply gained weight (Duncombe et al., 2008; Skouteris et al., 2005). It is possible, then, that the pregnant women in their first trimester were still holding their bodies up to cultural expectations for nonpregnant bodies to meet the thin ideal. As with the discussion of Hypothesis 1, it could be that the headshot-only images triggered first-trimester participants to visualize images of these celebrities’ bodies as meeting the thin ideal, even if those bodies were not pictured. Therefore, visualizing those images may have caused women to see themselves as objects to be evaluated by others because they felt they looked like they had gained weight rather than being pregnant and thus their bodies differed from their visualization of that thin ideal. As with Hypothesis 1, our explanation of this process is speculative at this juncture and is awaiting further research to provide more concrete support for the occurrence of this visualization.

By contrast, exposure to the highly sexually objectifying full-body images and accompanying text predicted self-objectification (at a level of marginal significance) for those in the third trimester of their pregnancy (29 weeks and beyond). For those in the third trimester of their pregnancy, it is much more evident that they are indeed pregnant. Thus, when they see a sexually objectified full-body image of a celebrity who is also clearly pregnant and sexually objectified, the third-trimester participants were more apt to similarly see themselves as objects to be evaluated by others.

Further, results indicated the relationship between condition and self-objectification was not statistically significant for the women who were in their second trimester of pregnancy (Weeks 13 through 28). It is during the second trimester in which most women are able to first feel their babies move inside of them and experience the internal sensations of carrying a baby (American Pregnancy Association, 2010). These experiences could encourage pregnant women in their second trimester to see themselves as being valued for what is going on inside of their bodies rather than their being objects to be evaluated by others. Thus, for women in the second trimester, their stage of pregnancy appears to mitigate the influence of the sexually objectifying media portrayal on their own state level of self-objectification.

Hypothesis 3 examined the main effect of condition on self-objectification for those pregnant women who had no previous live births in comparison with those who had one or more previous live births. Results indicated that exposure to the low-objectifying headshot-only images and accompanying text marginally increased self-objectification for those who reported having no prior live births. On the other hand, the relationship between condition and self-objectification was not statistically significant for the women who reported one or more prior live births. Those with no previous live births may be more anxious about and focused on the external appearance of their pregnant bodies because they are unsure about how their bodies will rebound once they give birth. Those who have gone through pregnancy and have given birth previously might have a better idea of how the external appearance of their pregnant body is only temporary and thus see themselves less as objects to be evaluated by others. Support for this explanation is provided in research examining body image perceptions of recently postpartum women. For example, Strang and Sullivan (1985) found first-time mothers felt more negatively about their postpartum bodies than women
who had given birth to more than one child. They explained the more positive postpartum body image in women who had experienced pregnancy and the postpartum period more than once as resulting from these women having prior experience with changes to their bodies while pregnant as well as an idea of how their bodies could rebound and how long it would take to experience that rebound.

Based on the theoretically meaningful findings regarding the moderating influences of trimester and number of previous live births, we also conducted post hoc analyses examining the influence of other individual difference variables. The only other covariate found to have a moderating influence was the age of the participants. The findings of age differences were analogous to the findings regarding the moderating influence of pregnancy trimester. Results indicated that for those in the younger age group (19- to 27-year-olds), exposure to the low-objectifying headshot-only images and accompanying text increased their self-objectification. However, for those in the middle age group (28- to 30-year-olds), exposure to the highly objectifying full-body images and accompanying text increased self-objectification.

As with the discussion of the hypotheses guiding this study, it could be that the headshot-only images triggered the younger participants to visualize images of these celebrities’ bodies as meeting the thin ideal, even if those bodies were not pictured. Younger participants may be more concerned with their pregnant bodies deviating from the thin ideal displayed so often by celebrities and their nonpregnant bodies. For those in the middle age group, they may be more concerned with how their bodies will be able to bounce back once they give birth and therefore are more affected by exposure to celebrities who are obviously pregnant. Results also indicated that the relationship between condition and self-objectification was not statistically significant for women in the older age group (31- to 45-year-olds). It may be that older women are less affected by the media and are more concerned with maintaining their health as well as the health of the child they are carrying rather than how they look while pregnant.

The present study has implications for objectification theory (Fredrickson & Roberts, 1997). The results of Hypothesis 1 indicated that self-objectification can be triggered by seeing headshot-only images. Specifically, this analysis used recognizable celebrities and therefore headshot-only images may still enhance self-objectification because women have become accustomed to picturing these women’s full bodies. That is, women may picture the bodies attached to those heads on their own rather than having to see them. Individuals may have schemata, or stored cognitive representations of what female celebrities look like, such as having thin, toned bodies. Therefore, the headshot images may have primed this schemata and caused women to recall the thin and toned bodies associated with nonpregnant celebrities, which are often valued more so than any other aspect of a celebrity. This, in turn, could have temporarily induced the pregnant women to see themselves primarily as objects to be looked at by others or to engage in state self-objectification. Thus, the results of the present analysis indicate that headshot images may also trigger self-objectification, which had not previously been studied in objectification theory research. Within the scope of the present study, we were not able to more fully examine why the headshot images triggered self-objectification. Future research is needed to investigate whether there is more evidence to support our speculation of the priming effect of these images.
The findings of the present study should be interpreted in light of a few limitations that deserve mention. A first limitation involves the pretest ratings of the amount of sexual objectification present in the stimuli. One of the images of the five celebrities selected for inclusion in the main experiment, Nicole Kidman, had a mean rating of 3.30 on the 11-point Sexual Objectification Scale (0 = not at all sexually objectifying; 10 = extremely sexually objectifying). Although quite low on the scale, Kidman was selected based upon participants’ similar ratings of her in comparison with the other celebrities selected on the measures of self-objectification, liking, and identification. An additional limitation concerns how state self-objectification was operationalized. Our operationalization was rather conservative as a statement such as “I am pregnant” was categorized as miscellaneous rather than as part of the body shape and size or other physical appearance groups. Due to this conservative operationalization, the overall amount of participants’ state self-objectification was low but on par with previously published estimates of self-objectification (Aubrey et al., 2009; Harrison & Fredrickson, 2003). For both of these limitations, the results can be taken as a conservative portrait of the effects of sexual objectification on pregnant women’s self-objectification.

A procedural limitation is that some of the participants may have suspected the true purpose of the experiment and therefore may have responded to the dependent measures based on that knowledge. Another limitation involves the lack of diversity within the sample as this study involved predominately White women (92%). Further, because the study could only be completed online, individuals who did not have access to a computer or to the Internet could not participate in the study.

Pregnancy is one context in many women’s lives in which meeting the cultural ideals for a thin and toned female body are particularly hard to achieve. Pregnancy is also a stage that appears to have a unique impact on women’s experience of self-objectification. Examining the impact of exposure to sexually objectifying images and text during this important time helps to provide a better understanding of women’s self-consciousness about their appearance during differing stages of their lifespan.

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Notes
1. All participants rated Heidi Klum a 1 on the Sexual Objectification Scale.
2. These analyses were not conducted for differences between full-body and headshot-only images for Kidman and Richie because headshot images of those two celebrities were not included in the pretest stimuli. Only 10 of the images included in the pretest were headshot only because it was deemed more important to include a greater number of full-body images in the pretest. As the full-body images varied in the amount of body display as well as facial expression, pose, and celebrity pictured, whereas the
headshot-only images only varied in regard to the celebrity pictured and facial expression, it was crucial to provide pretest participants with a wider range of full-body images to rate. The full-body shots of Kidman and Richie were compared in a paired sample \( t \) test with headshot images of Ellen Pompeo and Jennifer Garner, who were rated similarly on all of the pretest categories to Kidman and Richie, and the \( t \) tests were not statistically significant.

3. Post hoc analyses employing the Scheffé procedure at \( p < .05 \) compared mean scores on age. These analyses indicated that participants in the full-body condition were significantly older (\( M = 30.01, SD = 4.60 \)) than participants in the control condition (\( M = 28.43, SD = 4.41 \)).

References


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