

Reality Television Predicts Both Positive and Negative Outcomes for Adolescent Girls

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Objective To assess the influence of media, specifically reality television, on adolescent behavior.

Study design A total of 1141 preteen and adolescent girls (age range 11-17) answered questions related to their reality television viewing, personality, self-esteem, relational aggression, appearance focus, and desire for fame.

Results Our results indicated that the influence of reality television on adolescent behavior is complex and potentially related to the adolescents' intended uses and gratifications for using reality television. Reality television viewing was positively related to increased self-esteem and expectations of respect in dating relationships. However, watching reality television also was related to an increased focus on appearance and willingness to compromise other values for fame. Reality television viewing did not predict relational aggression.

Conclusion The potential influences of reality television use on adolescent girls are both positive and negative, defying easy categorization. (*J Pediatr* 2013;162:1175-80).

Reality television includes several subgenres, including talent competitions, dating shows, real-life shows, and makeover shows. During the past decade, reality television shows have regularly dominated the top 10 television show ratings.¹ Nonetheless, research on reality television has been sparse.

Some investigators have examined the issue of reality television viewing and appearance concerns. In one study, researchers found that watching cosmetic surgery programs increased disordered eating attitudes in women with pre-existing thin-ideal internalization but not other women.² In another study an author considered the impact of cosmetic surgery–focused reality programming and found that such shows had little impact on body image but did promote positive beliefs about the benefits of cosmetic surgery.³ The author concluded that the effects of such shows are probably not alarming but may have some subtle influences. Young adults are more likely to wish to alter their appearance through cosmetic surgery after having seen cosmetic surgery reality programming.^{4,5} Other research has suggested that reality television connectedness (ie, feeling as if one relates personally to the show content) correlates with a focus on one's appearance (valuing physical appearance as a major facet of self-esteem), although did not relate to academic performance.⁵

Another study indicated that viewing reality dating shows predicted adversarial sexual attitudes, a focus on one's appearance, and sexual double standards, but these correlations were mediated by viewer engagement.⁶ Negative outcomes were related more to viewers' desires to learn from the shows and beliefs that they were entertaining and valuable rather than from direct exposure. Dating programs did not predict real-life sexual behaviors of viewers. Other research suggested that watching dating shows was related to discussions of sex among teens, but not their expectations for dating relationships.⁷ These results suggest that a uses and gratifications approach to understanding media use may best explain reality television viewing.⁸ Several recent studies have suggested the uses and gratifications approach is particularly useful in understanding the effects of reality television.^{9,10}

Although results from previous studies are somewhat mixed, they suggest that reality programming may be related to an increased focus on one's appearance. Less is known about other outcomes, such as relational aggression or self-esteem. Furthermore, most existing work has been done with young adults, and very little empirical work has examined the influence of reality television in adolescence. Given that the uses and gratifications approach suggests that the use of media is not passive but involves an interaction between the viewer and media, we sought to examine the interaction between adolescent personality and reality television viewing. The current study examines the correlational relationship between reality television viewing with self-esteem, focus on one's appearance, relational aggression, expectations of respect in dating relationships, desire for fame, and willingness to sacrifice other values to become famous.

Methods

All procedures passed through the local institutional review board and were designed to meet federal standards for ethical research with human participants. Participants in the current study were 1141 adolescent girls (age range 11-17 years, $M = 14.3$, $SD = 2.1$) who participated in the Real to Me survey research project of the Girl Scout Research Institute (Table I). This article is the empirical reporting of those results and the only journal article in which we cite these data. Participants were recruited via an online survey, with the pool of participants matched to the US

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Table 1. Demographic information for the current sample

Mean age, y	14.3 (<i>SD</i> = 2.1)
Ethnicity, %	
White	68.4
African American	14.0
Asian American	6.0
Hispanic	13.2
Native American	1.8
Other	2.7
Mean hours watched of television per week	12.4 (<i>SD</i> = 11.7)

population of adolescents in regard to geography, ethnicity, and urbanicity. This sample is nonrandom. Regarding ethnicity, 68.4% of girls identified as white American, 14% as African American, 6% as Asian American, 1.8% as Native American, 13.2% as Hispanic, and 2.7% as other. Girls were permitted to select more than one ethnic category, given the probability of girls from multiple ethnic backgrounds; thus, the numbers add to greater than 100%.

All measures were created internally for the Real to Me project by the Girl Scout Research Institute. All items described below used Likert scale items unless indicated otherwise. All scales were developed by the Girl Scout Research Institute. The full survey is available on request to the authors.

Reality Television Viewing

Participants were asked to report their frequency of viewing each of the 4 main types of reality programming, namely, talent competition shows, dating shows, real-life programming, and makeover shows. A composite variable for total reality television viewing was calculated from these 4 items. Coefficient alpha for this composite measure was adequate at 0.70, suggesting general consistency in watching reality television across subgenres. We also assessed hours spent weekly watching television generally.

Skepticism of Reality Television

Increasingly, people are becoming aware that “reality” television often is scripted and not necessarily indicative of reality. The hypothesis that reality television will have impact on behavioral outcomes is particularly predicated on the concern such shows will be perceived by viewers as “real.”² Thus, controlling for viewer skepticism regarding the “reality” of such shows is important. Six items were constructed for this purpose that inquired as to the perceived reality of reality television programming. Sample items include “Real-life based reality shows (eg, *Jersey Shore*, *16 and Pregnant*, *The Hills*) are completely real and unscripted” and “The relationships portrayed between girls on reality shows are an accurate reflection of how it is in real life.” Coefficient alpha for the resulting scale was 0.72.

Histrionic Personality Traits

The uses and gratifications model of media use suggests that individual personality styles drive the use of media and lessons learned from it. In the case of reality television

programming, histrionic personality traits (attention-seeking, emotional shallowness) appeared particularly relevant. It may be that teens with histrionic traits are more likely to seek out reality television programming and may also be more likely to demonstrate negative outcomes (eg, focus on one’s appearance, relational aggression, fame seeking). Thus, controlling for these personality traits appeared important, and we used 3 items to tap into this construct related to attention seeking and emotional shallowness. Sample items include “I will do things that go against my personal values to get people to like me” and “Sometimes I act crazy to get attention.” Coefficient alpha of the resultant scale was 0.70.

Self-Esteem

Self-esteem was measured by the use of a 27-item scale that tapped into girls’ perceptions of themselves as positive and capable. Sample items include “I’m very happy with the person I am today” and “I see myself as a role model to other girls.” Coefficient alpha for this scale was 0.77.

Focus on Appearance

Focus on one’s appearance was measured with 3 forced-choice items in which required girls to choose whether they would prefer to be recognized for their physical beauty or for their intelligence, inner beauty, or talent. Coefficient alpha was 0.64 for this scale.

Relational Aggression

Relational aggression was measured with a 12-item scale that tapped into issues such as gossiping, being mean to others, and lying to others to get ahead. Sample items include “Gossiping is a normal part of a relationship between girls” and “Sometimes you have to be mean to others to get what you want.” Coefficient alpha for this scale was 0.79.

Expectations of Respect in Dating Relationships

Girls’ expectations for having mutually respectful dating relationships were measured using a 3-item scale. Sample items include “How likely do you think it will be that you will have a healthy romantic relationship in the future” and “How likely do you think it will be that romantic partners will always treat you with respect.” Coefficient alpha for this scale was 0.74.

Becoming Famous

A single Likert scale item “How important is it for you to become famous in your future” was used to measure girls’ desire to become famous.

Compromise for Fame

Girl’s willingness to compromise other values in order to become famous was measured using a 12 item scale. Girls were asked how likely they would be to engage in a number of activities such as “pretend to be someone you’re not,” “wear sexy or revealing clothing,” “put down or mistreat someone else,” “getting pregnant on purpose,” and “drop out of school.” Coefficient alpha for this scale was 0.92.

Data Analyses

The influence of reality television viewing, with age, ethnicity, skepticism about reality television, and histrionic personality controlled, on each of the outcome variables was tested via the use of linear regression. Ethnicity was dummy-coded for each category; thus, we compare all individuals of that ethnicity with all other individuals. Multicollinearity was not an issue for any of these analyses with the lowest tolerance of 0.31 and the highest variance inflation factor of 3.22. The highest scores were among the ethnic variables, specifically white American, African American, and Hispanic, likely because of the option for participants to select more than one of these categories. Rerunning analyses without the ethnic variables did not change the results for other predictor variables. Thus, we are confident that multicollinearity issues were minimal.

Results

Bivariate relationships between the predictor and outcome measures are presented in [Table II](#). To reduce type I error attributable to multiple comparisons, a Bonferroni correction of 0.0011 was used for statistical significance. Linear regression was used with age, ethnicity, skepticism of reality television, and histrionic traits entered as predictors. The resultant model was statistically significant ($R = 0.41$, $P = .001$). Skepticism of reality television not surprisingly predicted lower viewing ($\beta = -0.38$, 95% CI = -0.43 , -0.33) and was by far the strongest predictor of reality television viewing. Weaker predictors included age ($\beta = 0.10$, 95% CI = 0.04 , 0.16) and histrionic traits ($\beta = 0.07$, 95% CI = 0.01 , 0.13) although these are perhaps too small to warrant practical consideration.¹¹

More descriptively, only 12.1% of girls reported watching reality television shows “rarely or never” across all 4 subgenres. Per each subgenre, 77.3% of girls reported watching reality talent competition shows “sometimes” or “regularly,” as did 28.7% of girls for reality dating shows, 60.9% of girls for “real-life” reality shows, and 58% of girls for makeover shows.

The regression model for self-esteem was statistically significant ($R = 0.25$, $P = .001$). Reality television viewing was, in fact, the only predictor of self esteem and was positively correlated ($\beta = 0.19$, 95% CI = 0.13 , 0.25) with a small effect size. None of the other included study variables predicted girls’ self-esteem.

The regression model for appearance focus was statistically significant ($R = 0.37$, $P = .001$). Focus on one’s appearance was significantly predicted by reality television viewing ($\beta = 0.08$, 95% CI = 0.02 , 0.14), although this relationship was weak. Other predictors of appearance focus included age ($\beta = 0.12$, 95% CI = 0.06 , 0.18), skepticism of reality television ($\beta = -0.08$, 95% CI = -0.02 , -0.14), and histrionic traits ($\beta = 0.29$, 95% CI = 0.24 , 0.34). With the exception of a moderately strong histrionic effect, most of these effects were weak in size.

The regression model for relational aggression was statistically significant ($R = 0.52$, $P = .001$). Relational aggression was significantly predicted by age ($\beta = 0.20$, 95% CI = 0.14 , 0.26), Asian ethnicity ($\beta = 0.08$, 95% CI = 0.02 , 0.14), although this was only a weak effect, and histrionic traits ($\beta = 0.46$, 95% CI = 0.41 , 0.50). Reality television viewing did not significantly predict relational aggression. Once again, histrionic traits demonstrate a moderately strong effect, with a small effect for age.

The regression model for expecting respect in dating relationships was statistically significant ($R = 0.17$, $P = .01$). Expecting respect was significantly predicted by reality television viewing ($\beta = 0.10$, 95% CI = 0.04 , 0.16), as well as histrionic traits ($\beta = -0.12$, 95% CI = -0.06 , -0.18). Both of these effects are small in size.

The regression model for desiring fame was statistically significant ($R = 0.38$, $P = .001$). Desiring fame was significantly predicted by age ($\beta = -0.12$, 95% CI = -0.06 , -0.18), African-American ethnicity ($\beta = 0.10$, 95% CI = 0.04 , 0.16), skepticism of reality television ($\beta = -0.09$, 95% CI = -0.03 , -0.15), and histrionic traits ($\beta = 0.27$, 95% CI = 0.22 , 0.32). Reality television viewing did not predict the desire to be famous. All effects were small in size with histrionic traits being the strongest of them.

The regression model for willingness to compromise other values for fame was statistically significant ($R = 0.52$, $P = .001$). Willingness to compromise other values for fame was significantly predicted by reality television viewing ($\beta = 0.11$, 95% CI = 0.05 , 0.17), age ($\beta = 0.08$, 95% CI = 0.02 , 0.14), and histrionic traits ($\beta = 0.50$, 95% CI = 0.45 , 0.54). The effect for histrionic traits is moderately strong, with effects for reality television viewing and age small to weak. All standardized regression coefficients are presented for all regressions in [Table III](#).

Table II. Bivariate correlations between all predictor and outcome measures in the current study

Measure	1	2	3	4	5	6	7	8	9
1. Reality television viewing	1.00	-0.39*	0.15*	0.23*	0.17*	0.16*	0.10	0.12*	0.20*
2. Reality television skepticism		1.00	-0.24*	-0.14*	-0.16*	-0.15*	-0.05	-0.21*	-0.14*
3. Histrionic personality traits			1.00	0.02	0.30*	0.45*	-0.10*	0.31*	0.51*
4. Self-esteem				1.00	-0.01	-0.09	0.23*	0.19*	-0.04
5. Focus on one’s appearance					1.00	0.38*	-0.11*	0.23*	0.39*
6. Relational aggression						1.00	-0.27*	0.22*	0.53*
7. Expectations of respect							1.00	-0.02	-0.16*
8. Becoming famous								1.00	0.31*
9. Compromise for fame									1.00

* $P < .0011$.

Table III. Standardized regression coefficients for linear regression results for the association between reality television viewing and all outcome variables with other variables controlled

Predictor variable	Self-esteem	Focus on one's appearance	Relational agg.	Expect respect	Fame	Comp
Age	0.01	0.12 (0.06, 0.18)*	0.20 (0.14, 0.26)*	0.03	-0.12 (-0.06, -0.18)*	0.08 (0.02, 0.14)*
White	-0.03	0.05	-0.04	0.01	-0.03	0.03
African American	0.06	-0.05	0.06	-0.03	0.10 (0.04, 0.16)*	0.01
Asian American	-0.05	-0.02	0.08 (0.02, 0.14)*	-0.07	-0.03	0.03
Native American	-0.02	-0.04	-0.04	-0.01	-0.03	-0.01
Hispanic	0.03	-0.02	-0.01	0.03	-0.01	0.03
Skepticism of reality television	-0.05	-0.08 (-0.02, -0.14)*	-0.03	-0.03	-0.09 (-0.03, -0.15)*	0.02
Histrionic traits	-0.05	0.29 (0.24, 0.34)*	0.46 (0.41, 0.50)*	-0.12 (-0.06, -0.18)*	0.27 (0.22, 0.32)*	0.50 (0.46, 0.54)*
Reality television viewing	0.19 (0.13, 0.25)*	0.08 (0.02, 0.14)*	0.03	0.10 (0.04, 0.16)*	0.04	0.11 (0.05, 0.17)*

Expect respect, expectations of respect; Fame, becoming famous; Comp, compromise for fame.
* $P < .05$.

Discussion

On the positive side, reality television viewing was related to increased self-esteem as well as expectations of respect in dating relationships. However, reality television viewing was associated with increased appearance focus and willingness to compromise other values for fame. Reality television viewing was not related to relational aggression or the desire for future fame. We emphasize that these relationships were correlational in nature and we do not mean to imply causality. Within our sample, reality television watching correlated only $r = 0.14$ (although statistically significant) with general television use, suggesting that reality television consumption is a relatively distinct phenomenon and the relationships found here cannot be easily explained by more general television effects.

Perhaps contrary to expectations, reality television viewing was not related to relational aggression. Recently, some scholars have posited that perhaps aggression is not so clearly learned through imitation as had previously been thought.^{12,13} Given that relational aggression has been found to be very common across reality television subgenres,¹ the lack of correlation in the present study suggests that reality television relational aggression is not being modeled by viewers. The effect size in the regression was little different from zero ($\beta = 0.03$, 95% CI = -0.03, 0.09) suggesting that type II error is unlikely. Some studies have suggested that aggression is more likely learned from peers or families, rather than media¹⁴ and that may be the case here as well. Unfortunately peer and family variables were not included in the present study. In the current study, histrionic traits were, by far, the strongest predictor of relational aggression, suggesting that aggression may be better viewed as internally motivated rather than externally cued.

Even the outcome for focus on one's appearance may not be as negative as we initially implied. For instance, this variable focuses on evaluations of beauty and their self-importance, not necessarily disturbed body image, which would be of more clinical importance. Focus on one's appearance and self-esteem were not correlated in our study

($r = -0.01$), suggesting that a focus on one's appearance is not necessarily related to harmful outcomes in young girls. Indeed, given that the adolescent years typically involve the onset of dating, focus on one's appearance may represent reasonable concerns rather than an irrational misattribution of value. This is not to say that girls should not be encouraged from focusing on other aspects of their worth (eg, intelligence, talent, decision making) when evaluating themselves. Rather, the lack of correlation between appearance focus and self-esteem suggests girls may already be doing this.

The relationship with willingness to compromise for fame is more clearly negative. Many of the choices some girls were willing to make to seek fame involved clearly unethical (lying, betraying others) or risky (getting pregnant on purpose as a teen) behaviors. To the extent that reality television viewing may be involved in teens' willingness to take greater risks, this issue is worthy of further pursuit.

Age was a consistent predictor among many of our outcomes. Older girls were more likely to watch television, have a greater focus on their appearance, engage in more relational aggression, and express more willingness to compromise for fame, although interestingly they desire fame less than younger girls. These age-related trends raise the possibility that interest in reality television may be part of a broader developmental shift in motivations and interest. If one uses the uses and gratifications approach, it may be that older girls are more interested in reality television because the relational aggression in those shows provides an outlet or means of identification with the relational aggression experienced in their actual lives. Naturally, more research would be welcome on this issue.

In understanding these myriad relationships, it may help to approach media use from the perspective of uses and gratifications.⁸ This requires something of a shift from the traditional social science model of media use which has generally posited effects through direct imitation.^{12,13} The effects of media effects may be a more subtle and interactive process that involves interactions between viewers and media. For instance, throughout our analyses, the intrapsychic factor of histrionic personality traits was a far stronger predictor,

particularly of negative outcomes, than was reality television viewing, although individuals higher in histrionic traits were more likely to seek out reality television programming.

Whether girls do or do not understand the staged nature of much of reality programming, it may be that girls seek out this form of media to enhance their sense of self-esteem and expectations for dating relationships. In this sense, the relationships and conflicts viewed in reality programming may serve as a kind of mental dress rehearsal for girls' own future relationships, as well as their sense of efficacy in handling such relationships. Given that reality shows tend to focus on the imperfections of their stars, seeing imperfections in others on television may help enhance girls' sense of self-worth.

The use of a uses and gratifications paradigm will involve a considerable shift in the way that media effects research is typically conducted. Most media effects approaches remain rooted in the belief that media is something done to viewers, particularly youth. However, the involvement of the viewer in the process may be far more active and effects far more subtle than proposed by traditional media effects theories. More research from the uses and gratifications perspective, examining how youth are active participants in media, rather than simply passive victims, would be of great value. We argue that this shift in theoretical paradigm, however, may lead to a more sophisticated understanding of the interaction of media such as reality television with young viewers.

The current study has limitations. First, it is correlational in nature and, thus, causal inferences cannot be made from the current data. Further studies using prospective data would be helpful in delineating time sequencing of media use and outcome data. Experimental studies of reality television use would also be of value. The addition of such studies may assist with causal inferences. In addition our online sampling approach may have resulted in a sample that is weighted toward girls with relatively high technological savvy. Thus, our results should not be generalized to all teen girls. Second, the current study did not include important control variables, such as peer and family environment variables. Further research may wish to consider including controls for these influences. Third, although we assessed the focus on one's appearance, we did not include measures of body dissatisfaction, which would have been a more clearly negative outcome. Further research should consider body dissatisfaction as a potential outcome. Finally, our results are for general reality television use. We did rerun our analyses on our 4 subcategories of reality television and found little difference in our results. However further research may wish to consider specific subcategories of reality television more closely for potential differences in effects. Trained raters could be used to examine show content of specific shows and examine these in relation to viewer behavior.

On balance, our results suggest that the associations between reality television and behavioral outcomes for adolescent girls are complex and subtle. As noted by others,¹⁵ concerns about serious public health consequences of media use are quite common. However, at least for reality television

viewing, we found little evidence that would lead us to conclude consuming such media rises to the level of a public health concern. Reality television viewing was associated with variable positive and negative outcomes, most of these small in terms of effect size. This fits well with research in other entertainment domains that suggests that the effects of media can be quite variable, as well as more complex and subtle than is sometimes thought.¹⁶ It may be that the psychological and behavioral health of teenage girls is less malleable than has sometimes been speculated.

Or, it may be that reality television, for whatever reason, is not a primary conduit through which girls receive information on how they should behave. For instance, technology may be more likely to influence teens through means that allow youth to communicate directly, as with social media. It seems reasonable to suggest that media research would be well-served by focusing on uses and gratifications-based approaches to understanding media use. Such approaches emphasize the viewer as an active participant in selecting and interpreting media and differ somewhat from the traditional media effects paradigm, in which the viewer is implicitly assumed to be a passive vessel for media messages. The uses and gratifications approaches does not preclude the possibility that the media may influence viewers, however, but assumes such influences are more complex, subtle, and interactive than often portrayed in the traditional media effects model. Our data here add some preliminary support to this view. Using this theoretical approach suggests it is important for future research to consider the individual and the media choices he or she makes as a more central part of the process of media use and effects. Media use is likely driven by the internal needs and reactions of the individual viewer rather than something done to viewers by media. Given the popularity of reality television among the current generation of youth, investigating their relationship with behavioral outcomes among youth is an important avenue of study. ■

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50 Years Ago in *THE JOURNAL OF PEDIATRICS*

Pleural Effusion in the Neonatal Period

Perry RE, Hodgman J, Cass AB. *J Pediatr* 1963;62:838-43

Perry et al presented a single case of a term newborn infant with chylous pleural effusion, and reviewed eleven other cases that had been reported in the literature. Many of these required repeated thoracentesis before resolution. Three patients died from malnutrition (protein loss) and secondary infection. The etiology of pleural effusion in most of these cases was thought to be due to defects in the thoracic duct.

Injury to the thoracic duct during thoracic surgery is the most common cause of chylous pleural effusion nowadays. Other causes include pulmonary lymphangiectasia or other lymphatic anomalies, superior vena cava thrombosis, congenital heart disease, birth trauma, and chromosomal anomalies. In most cases, the pleural effusion resolves with time, if the patient can be adequately supported. At the time of the original article, the only treatment option was intermittent drainage of the effusion. Fifty years later we have multiple options for drainage, nutritional support, and pharmacological or surgical intervention. Management includes insertion of a thoracotomy tube with a closed drainage system, nutritional support with the use of reduced fat or fat-free formulas, intravenous lipid emulsion infusion, and, if there is hypoalbuminemia or hypogammaglobulinemia, treatment with intravenous albumin or immunoglobulin infusions. Additional treatment options include octreotide¹ administration and pleurodesis for refractory cases.

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