The Persuasive Potential of Messages about Sexual Assault:

An Investigation of College Students' Attitudes and Intended Behaviors

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Abstract

Given the pervasive nature of sexual assault on college campuses, the present study aimed to understand whether television could be used to educate students on issues pertaining to sexual assault. Factors consistent with the Entertainment Overcoming Resistance Model (Moyer-Gusé, 2008) that could impact persuasiveness were also investigated. Undergraduate student participants (n = 187) took part in an experiment wherein they watched one of two episodes of *Grey's Anatomy*, one with stories about sexual assault and the other with none, and then answered questions regarding their viewing experience, rape myth acceptance, sexual consent intentions, and protective drinking behavior intentions. Participants in the manipulation group reported stronger intentions to stop or limit drinking than those in the control group. Within the manipulation group, transportation was the strongest predictor of the outcomes investigated that were directly addressed within the episode, whereas sympathy was the strongest predictor for outcomes that were addressed indirectly. Finally, in the manipulation condition, participants who had previously viewed more of the show experienced more sympathy while viewing this episode, which led to more story-consistent attitudes and intended behaviors. Overall, results indicate that television could be an important tool within sexual assault prevention programs to the extent that viewing elicits transportation and victim sympathy and is realistic and familiar to students.

Keywords: Entertainment Overcoming Resistance Model, television, sexual assault prevention

Public Significance Statement: Viewing an entertainment television program that included stories regarding sexual assault increased college students' intentions to engage in protective drinking behaviors. The findings also indicate that when used as a sexual assault prevention tool,

television may be more persuasive if students engage with the story and characters, perceive the

show to be realistic, and have prior familiarity with the series.

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Sexual aggression and assault are pervasive problems on college campuses. Research indicates that as many as 20% of undergraduate women experience sexual assault during their time in college, and they also experience less "severe" sexual misconduct, such as unwanted touching, routinely (Papp & McClelland, 2020). To address these issues, numerous prevention programs have been proposed and tested over several decades. Based on reviews of this research, some of the topics addressed in effective interventions include rape myths and attitudes, victim empathy, and drinking behaviors (Vladutiu, Martin, & Macy, 2011). In recent years, sexual consent education has also been a focus of prevention efforts (Muehlenhard, Humphreys, Jozkowski, & Peterson, 2016). When considering the major topics involved, it is apparent that entertainment media could be used as a tool for educating undergraduate students. For example, based on theories of media psychology and empirical research, media can influence viewers' levels of empathy (Prot et al., 2014). However, there is little published research to date regarding how entertainment media might be used for this purpose on college campuses.

To address this gap, the present study explores the potential effectiveness of television as a tool for educating undergraduate students regarding issues pertaining to sexual assault. The specific outcomes investigated include both attitudes, rape myth acceptance in particular, and intended behaviors, including those related to sexual consent and protective drinking strategies. This study includes an experiment wherein the overall impact of viewing was assessed, but the primary goal of the study was to investigate factors that may impact the persuasiveness of media messages on this topic. These factors include facets of the viewing experience that are consistent

with the Entertainment Overcoming Resistance Model (Moyer-Gusé, 2008) such as sympathy, empathy, transportation, and perceived persuasive intent and also perceived realism.

Entertainment Overcoming Resistance Model

The Entertainment Overcoming Resistance Model (EORM, Moyer-Gusé, 2008) suggests that entertainment-education programs are more effective than traditional methods of persuasion because of numerous factors that reduce resistance to being persuaded. More specifically, the EORM predicts that consumption of entertainment, especially narratives, can lead to story-consistent attitudes and beliefs. The model includes seven propositions, which each describe features of entertainment that lead to the reduction of a particular type of resistance. For example, narrative structure and enjoyment reduce selective avoidance. The features of entertainment included largely fall into one of two categories: involvement with the characters and involvement with the narrative. Multiple aspects of character involvement are incorporated in the model, including parasocial interaction, liking, identification, and perceived similarity. Narrative involvement is present in the model as transportation or being cognitively and emotionally engaged with the story. Based on the model's overall premise, individuals who are more involved with the characters and the narrative will have more story-consistent attitudes and beliefs.

Research Support

Quite a few studies have examined the propositions of the EORM empirically, and Ratcliff and Sun (2020) recently published a meta-analysis of that research. They examined the results of nine experimental and 25 cross-sectional studies. Most studies involved stories about health issues like drug and alcohol use and disease prevention, including safe sex practices, and a few others dealt with social issues like bullying and diversity. One of the major findings of

Ratcliff and Sun's meta-analysis was that greater engagement, especially identification and transportation, was associated with less resistance to persuasion. The present study deals with similar but distinct behaviors to those investigated in prior research.

Research Regarding Media Exposure and Sexual Assault

There is some prior research on the use of entertainment media and sexual assault related outcomes amongst undergraduate students. For example, in cross-sectional studies, researchers found that sports media consumption was associated with lower intent to intervene in a sexual assault situation amongst men (Hust et al., 2013) and that reading men's magazines was associated with the intent to sexually coerce (Hust et al., 2019). Whereas these studies demonstrate the potential for media to have negative effects, associations with positive outcomes have also been found. Another cross-sectional study found that watching more crime dramas was associated with greater intent to intervene in a sexual assault situation (Hust et al., 2013). It appears from these findings that the outcomes, whether positive or negative, depend on the content. Further reinforcing this point, a follow up study on crime dramas found that associations with rape myth acceptance and sexual consent intentions varied by TV show (Hust et al., 2015).

All of these studies point to the potential for self-selected media to influence college students' attitudes and behaviors, but what about media use that is not self-selected? In a semester-long field experiment, students were asked to read five issues of a mini-magazine, designed by the researchers to be entertaining, containing either sexual assault-related messages (several variations) or general messages. Overall, results indicated that the mini-magazines were effective in increasing self-efficacy related to prevention and in generating more accurate perceived norms. This research highlights the potential of entertainment media to be used for education regarding sexual assault, but it does have some limitations. One limitation pertains to

practical application. Not every campus program has the resources to create and disseminate

original entertainment media. There is value then in identifying the utility of media that already

exists. Other limitations relate to generalizability of the findings. The materials used were text

based and the messages were communicated in journalistic form rather than fictional narrative.

Based on a meta-analysis of factors that impact persuasiveness by Shen, Sheer, and Li (2015),

there may be even more benefit to showing students audiovisual rather than text-based messages.

A study of Korean adults by Bae, Lee, and Bae (2014) points to factors that may impact the

success of such efforts. In their cross-sectional study, the researchers asked participants about

their experiences viewing a fictional film about real-life sexual assaults that took place at a

Korean school for hearing-impaired children. The outcome investigated was the intention to sign

a petition supporting a new law protecting the human rights of disabled individuals. The

researchers found that amongst those who had seen the film greater sympathy and empathy were

associated with greater transportation, which was associated with greater intention to sign the

petition. Consistent with the proposition of the EORM, these findings point to the potential of

character and narrative involvement, specifically sympathy and empathy and transportation, to

influence intended behaviors.

Perceived Realism

Another aspect of viewing that may influence whether an individual is persuaded by a

narrative is perceived realism. Perceived realism is the degree to which the viewer thinks the

media portrayal is similar to events in the real world (Hall, 2003), and theoretically it is

associated with both character and narrative involvement (Busselle & Bilandzic, 2008; Cho,

Shen, & Wilson, 2014; Green, 2004). Based on the propositions of the EORM, perceived realism

may therefore impact the persuasiveness of a narrative. Empirical support for this argument was

found by Cho, Shen, and Wilson (2014). In a study of undergraduates, they found that some dimensions of perceived realism were associated with identification and transportation, which were then associated with story-consistent attitudes.

Another reason that perceived realism contributes to narrative persuasion is that it makes the viewer feel more at risk of experiencing the depicted situation. In an experimental study on sexual health, undergraduate students who thought the television episode they viewed was more realistic also perceived their own risk of getting an STD to be higher (So & Nabi, 2013). It is plausible then that when viewing a narrative involving sexual assault, viewers who think the story is more realistic will feel more at risk, and they will therefore have stronger intent to engage in protective behaviors.

The Current Study

The theory and research reviewed are the basis for the predictions of the present study. The EORM (Moyer-Gusé, 2008) predicts attitudes and beliefs that are consistent with the narrative. Therefore, story content must form the foundation for specific predictions. In the present study, participants were randomly assigned one of two stories in the form of two television episodes. The manipulation group viewed an episode featuring two stories about sexual assault that emphasized trauma to the victim, denounced victim blaming, described sexual consent, and illustrated how drinking is sometimes involved in sexual assault. The control group viewed an episode of the same television show featuring no stories related to sexual assault. With these details in mind, we made the following predictions. First, based on the overall premise of the EORM, we expected that participants in the manipulation group would have more story-consistent attitudes and intended behaviors as compared to the control group.

H1: Participants in the manipulation group will have lower rape myth acceptance (H1a), greater sexual consent intentions (H1b), and greater protective drinking behavior intentions (H1c) as compared to the control group.

Second, based on the features of entertainment that facilitate persuasion included in the EORM (Moyer-Gusé, 2008) and related empirical research (Bae, Lee, & Bae, 2014; Ratcliff and Sun, 2020), we predicted that among participants who watched the story about sexual assault, experiencing greater sympathy, empathy, and transportation while viewing, and perceiving less persuasive intent would be associated with greater story-consistent attitudes and behaviors. Based on research regarding perceived realism, we also expected that perceived realism would be associated with greater story-consistent attitudes and behaviors (Cho, Shen, & Wilson, 2014, So & Nabi, 2013). We made predictions regarding three specific story-related outcomes:

H2: Within the manipulation group, sympathy (H2a), empathy (H2b), transportation (H2c), and perceived realism (H3d) will be negatively associated with rape myth acceptance, and perceived persuasive intent (H2e) will be positively associated with rape myth acceptance.

H3: Within the manipulation group, sympathy (H3a), empathy (H3b), transportation (H3c), and perceived realism (H3d) will be positively associated with sexual consent intentions, and perceived persuasive intent (H3e) will be negatively associated with sexual consent intentions.

H4: Within the manipulation group, sympathy (H4a), empathy (H4b), transportation (H4c), and perceived realism (H2d) will be positively associated with protective drinking-related behavior intentions, and perceived persuasive intent (H2e) will be negatively associated with protective drinking-related behavior intentions.

Finally, it is conceivable that prior familiarity with a TV show would impact the experience of

viewing a particular episode in ways that are relevant to the current study. For example, an

individual might experience greater sympathy for a character who they already like. Similarly, a

person might be more easily transported into a narrative world that they have already seen, and

watching an entertainment program regularly could decrease the perception that any given

episode is intended to persuade. However, empirical research testing such presumptions was not

found. We therefore posed a research question.

>RQ1: Does prior viewing play a role in the significant associations between sympathy,
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>empathy, transportation, perceived realism, and perceived persuasive intent and the
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>dependent variables (rape myth acceptance, sexual consent intentions, and drinking-
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>related behavior intentions)?

Method

The following methods were used to test the hypotheses and address the research

question. Institutional Review Board approval was granted prior to data collection.

Participants

At a small, Midwestern liberal arts college, 198 undergraduates were recruited for this

study. Students received course credit in exchange for participation. A total of 11 participants

failed an attention check (a multiple-choice question regarding the episode they were assigned to

watch) and were removed. Therefore, the final sample included 187 participants. The sample

included more females (69.0%) than males (30.5%) with one participant identifying as a

transgender woman. The age of participants ranged from 18 to 28 with an average age of 19.6

years old ($SD = 1.33$). Most participants (87.7%) identified as White or European-American with

the remaining participants identifying as Black or African-American (1.6%), Hispanic or

Latina/o or Chicana/o (3.7%), Asian or Asian-American (1.1%), American Indian or Alaskan

Native (0.5%), or a combination of these (5.3%). The vast majority of participants described

themselves as exclusively or predominately heterosexual (96.3%) with a small number of

participants identifying as bisexual (2.7%) and exclusively or predominantly homosexual (1%).

Design

A post-test only, control group design was used. Because the primary hypotheses

included the manipulation group only, more participants were assigned to that group than the

control group, at a rate of approximately 4:1.

Procedure

Participants completed the study online, and they were randomly assigned to either the

manipulation group or the control group. All participants then went through the following

process: 1) granting informed consent, 2) reading instructions that asked them to watch the

ensuing television episode alone and with headphones, if possible, 3) viewing their assigned

episode, 4) answering questions regarding the experiment's stimulus and dependent variables,

and 5) answering demographic questions.

Materials

Participants saw one of two 45-minute episodes of the medical drama *Grey's Anatomy*.

Participants in the manipulation group viewed Episode 19 of Season 15 entitled, "Silent All

These Years." The episode primarily focuses on a doctor named Jo who interacts in flashbacks

and the present with two rape victims. The victim Jo interacts with in flashbacks is her mother,

who describes a sexual assault that happened to her while she was a college student. The victim

Jo interacts with in the present is a patient who was just sexually assaulted after drinking at a bar.

The episode is largely about the significant physical and psychological effects of sexual assault.

The issue of victim blaming is explicitly addressed within the episode, and it also includes a discussion of sexual consent. Participants in the control group viewed Episode 22 of Season 15 entitled "Head Over High Heels." The major storylines in the episode include doctors Meredith and Andrew exploring their relationship, Richard reconnecting with an old friend, and Owen beginning therapy for trust issues. The episode contains no content related to sexual assault.

Measures

Internal consistencies for the following measures are reported in Table 2.

Sympathy

Sympathy was measured using the Ad Response Sympathy Scale (Escalas & Stern, 2003) with changes made to reflect television viewing rather than ad viewing. Participants were asked to indicate their level of agreement with five statements on a 7-point Likert scale. The items measured the degree to which participants felt as though they could identify and understand the characters' problems. For example, "Based on what was happening in the show, I understood what the characters were feeling."

Empathy

Empathy was measured using the Ad Response Empathy Scale (Escalas & Stern, 2003) with changes made to reflect the nature of the material being viewed. Participants were asked to indicate their level of agreement with five statements on a 7-point Likert scale. These items reflected the degree to which participants felt as though the events of the show were happening to them. For example, "While watching the show, I felt as though I was one of the characters."

Transportation

Transportation was measured using items from Green and Brock's (2000) Transportation Scale. Because the scale was created in reference to written narratives, eight relevant items of 11

were selected and then adapted. Participants were asked to respond to the statements on a 7-point

scale (1 not at all, 7 very much). Sample items include, "I was mentally involved in the show

while watching it," and, "The story affected me emotionally."

Perceived Persuasive Intent

Perceived persuasive intent was measured using a semantic differential scale that asked

participants the degree to which they believed the show was designed to entertain (1) versus

persuade (7) (Moyer-Gusé & Nabi, 2010).

Perceived Realism

Perceived realism was measured using items selected and adapted from Busselle's (2001)

Perceived Realism Scale. Participants were asked to indicate their level of agreement with three

statements on a 7-point Likert scale. The three statements included: "Characters in drama

programs, like *Grey's Anatomy*, are very similar to people in the real world," "The personal

problems characters have in drama programs, like *Grey's Anatomy*, are very similar to problems

real people have," and "The issues that come up in drama programs, like *Grey's Anatomy*, are

very similar to issues in the real world."

Dependent Variables

Rape myth acceptance was measured using two subscales of the Subtle Rape Myths Scale

(McMahon & Farmer, 2011), *she asked for it* and *it wasn't really rape*. Sample statements

include, "When girls go to parties wearing slutty clothes, they are asking for trouble," and, "If a

girl doesn't physically fight back, you can't really say it was rape." Participants were asked to

rate their level of agreement with eleven statements on a 5-point Likert scale. The factor

structure of the scale was analyzed using a principal components analysis with direct oblimin

rotation. Two factors with eigenvalues over 1.0 were found. One item was cross-loaded and was

eliminated. When the analysis was conducted again, the same two factors emerged. One item loaded on the incorrect factor and was removed. The remaining items were used to create two variables: *she asked for it* (4 items) and *not really rape* (5 items).

Sexual consent behavior intentions were measured using a scale by Hust et al. (2014) that contains three subscales. Participants were asked to indicate their level of agreement with 10 statements on a 7-point Likert scale. The factor structure of the scale was examined using a principal components analysis with direct oblimin rotation, and three factors were found with eigenvalues over 1.0. One item was cross loaded. It was removed, and the analysis was conducted again. Three factors were found, and they were consistent with those reported by Hust et al. (2014). One subscale, *seeking sexual consent*, had an item with relatively low factor loading, and including that item produced low internal consistency. The corresponding statement, "I would not have sex when my partner and I are too intoxicated to give consent," was particularly relevant to the present study, so it was instead treated as a separate, single-item dependent variable called *no sex while intoxicated*. The remaining items were used to create variables representing *seeking sexual consent* (2 items), *refusing unwanted sexual activity* (3 items), and *adhering to sexual consent* (3 items).

Protective drinking-related behavior intentions were measured using the *stopping / limiting drinking* and *avoiding serious negative consequences* subscales of the Protective Behavioral Strategies scale (Martens et al., 2005). Participants were asked to indicate how often they intend to engage in 10 specific behaviors when using alcohol or "partying" on a 6-point scale (1 never, 6 always). A principal components analysis using direct oblimin rotation revealed two factors that were consistent with the original subscales. These were used to create variables representing *stopping / limiting drinking* (7 items), for example, the intention to, "alternate

alcoholic and nonalcoholic drinks," and *avoiding serious drinking consequences* for example to, "know where your drink has been at all times."

Covariates

To assess prior viewing, after reading a description of the total number of episodes that have aired, participants were asked what percentage of all *Grey's Anatomy* episodes they have seen. Viewing circumstances were measured by asking participants what kind of screen they used to watch the episode and whether they used headphones or not. Demographics were measured through questions about gender, race, age, sexual orientation, and year in school.

Results

Preliminary Analyses and Data Analysis Plan

We first explored variations in how participants watched the episode. Specifically, we examined screen size and sound. Participants viewed the episode on these types of screens: laptop (89.3%), computer monitor or television (8.5%), and smartphone (1.6%). One participant selected "other" without specifying further. Regarding sound, most participants (65.2%) used headphones or earbuds. Based on a series of t-tests and correlation analyses, there were no statistically significant associations between the type of screen participants used to view the episode or how they listened to the episode and any of the predictor or dependent variables.

We proceeded by testing our hypotheses and addressing our research question. Hypothesis 1 was evaluated by conducting t-tests comparing the mean scores of the control and manipulation groups for each dependent variable (rape myth acceptance, sexual consent intentions, and protective drinking behavior intentions). The results are reported in Table 1. The remaining hypotheses were tested within the manipulation group only. First, we examined the correlations between the predictor variables (sympathy, empathy, transportation, perceived

persuasive intent, and perceived realism) and the dependent variables (same as above). Next, we conducted a series of hierarchical regression analyses to 1) see if the associations remained significant when controlling for demographic variables and 2) gauge the relative importance of each predictor. In step one, we entered gender, year in school, and identifying as non-Hispanic White. These were chosen based on exploratory analyses and the fact that women are expected to endorse rape myths to a lesser degree and to engage in more protective drinking-related behaviors. In step two, we added sympathy, empathy, transportation, perceived persuasive intent, and perceived realism. Multicollinearity statistics were examined for each model, and no issues were found. Finally, we conducted mediation analyses using PROCESS Model 4 (Hayes, 2018) to examine whether prior viewing was associated with the dependent variables via significant predictor variables.

Comparing Control and Manipulation Groups

H1 predicted that participants in the manipulation group would have lower rape myth acceptance (H1a), greater sexual consent intentions (H1b), and greater protective drinking behavior intentions (H1c). As reported in Table 1, all of the mean scores were in the predicted direction with the exception of the *not really rape* subscale. However, the only statistically significant difference was for *stopping or limiting drinking* with participants in the manipulation group reporting stronger intentions to stop or limit their drinking behaviors. Thus, H1 received very limited support.

Rape Myth Acceptance

H2 predicted that within the manipulation group, sympathy, empathy, transportation, and perceived realism would be negatively associated with rape myth acceptance, and perceived persuasive intent would be positively associated with rape myth acceptance. As shown in Tables

2 and 3, greater transportation while viewing was associated with lesser endorsement of *she asked for it* and *not really rape* in both the correlation and hierarchical regression analyses. In addition, experiencing greater empathy while watching was correlated with lesser endorsement of *she asked for it*, but that association was not significant in the corresponding hierarchical regression analysis. Regarding our expectations for rape myth acceptance, H2 was supported in regard to transportation (H2c) and partially supported in regard to empathy (H2b), but hypotheses regarding the other three predictor variables (H2a, H2d, H2e) were not supported.

Sexual Consent Intentions

H3 predicted that within the manipulation group, sympathy, empathy, transportation, and perceived realism would be positively associated with sexual consent intentions, and perceived persuasive intent would be negatively associated with sexual consent intentions. However, as depicted in Tables 2 and 3, the results revealed different associations by type of intended behavior. Participants who experienced greater transportation while viewing reported stronger *seeking consent* and *adhering to consent* intentions based on both the correlation and hierarchical regression analyses. Empathy also emerged as a significant, negative predictor of *seeking consent* in the hierarchical regression analysis. Additionally, participants who experienced more empathy while viewing reported stronger *no sex while intoxicated* intentions. However, in the hierarchical regression, perceived persuasive intent was the only significant predictor of that outcome with participants who perceived more persuasive intent reporting lower *no sex while intoxicated* intentions. Finally, participants who experienced more sympathy while viewing reported stronger *refusing unwanted sexual activity* intentions in both analyses.

Regarding our predictions for sexual consent intentions, the hypotheses related to sympathy (H3a), empathy (H3b), and transportation (H3c) received some support in the form of

associations with one or more subscales. The hypothesis regarding perceived persuasive intent (H3e) received very little support because it was only a significant predictor of one subscale when controlling for other variables. Finally, the hypothesis regarding perceived realism (H3d) was not supported.

Protective Drinking-Related Behavior Intentions

H4 predicted that amongst the manipulation group, sympathy, empathy, transportation, and perceived realism would be positively associated with protective drinking behavior intentions, and perceived persuasive intent would be negatively associated with these intentions. In the correlation analyses (Table 2), four of five predictor variables were associated with *stopping or limiting drinking* and *avoiding serious drinking consequences*. The only variable not significantly correlated was perceived persuasive intent. Fewer predictors remained significant when included alongside the others and demographic variables (Table 3). Greater sympathy while viewing and perceived realism were associated with stronger *stopping and limiting drinking* intentions, and greater sympathy was associated with stronger *avoiding serious drinking consequences* intentions. On the whole, there was some support for the predictions related to protective drinking-related behavior intentions and sympathy (H4a), empathy (H4b), transportation (H4c), and perceived realism (H4d). The strongest support was for the association between sympathy and these intentions. There was no support for the hypothesis related to perceived persuasive intent (H4e).

The Role of Prior Viewing

RQ1 asked what role prior viewing of the program would have in the associations between the predictor variables and dependent variables. Prior viewing was only associated with one of the predictor variables, sympathy, $r = .22, p = .009$. Thus, models where sympathy was

associated with the dependent variable in the results reported above were considered. Based on time order (series viewing preceding viewing during the study), mediation models predicting *refusing unwanted sexual activity*, *stopping or limiting drinking*, and *avoiding serious drinking consequences were analyzed* (i.e., prior viewing → predictor variable → dependent variable). As reported in Table 4, significant indirect effects were found in each of these analyses. Prior viewing was associated with greater sympathy while watching the episode which in turn predicted greater *refusing unwanted sexual activity*, *stopping or limiting drinking*, and *avoiding serious drinking consequences* intentions. The answer to the research question is that prior viewing does lead to greater sympathy, which is associated with some of the dependent variables.

Discussion

The purpose of this research was to investigate the effectiveness of entertainment as a tool for educating college students on topics related to sexual assault. Based on the EORM (Moyer-Gusé, 2008), we hypothesized that watching a relevant story would lead to narrative-consistent attitudes and intended behaviors. However, comparisons between the control and manipulation groups showed that the influence of viewing was limited. The only significant finding was that those who watched the story about sexual assault reported greater intention to stop or limit drinking. Whereas not all of our hypotheses were supported, this is nonetheless an important result. The issue of sexual assault on college campuses is a pressing one, and any means for influencing students' behaviors, including those related to drinking, is needed (Bird, Gilmore, George, & Lewis, 2016). Additionally, the results are based on an experiment wherein the only intervention was viewing the episode. Effective prevention programs often employ single-gender discussion groups (Vladutiu, Martin & Macy, 2011). Future research should

examine the usefulness of entertainment media within larger programs, for example, viewing a television show and then discussing the depicted issues.

There are also important takeaways from our closer examination of the manipulation group. Consistent with the propositions of the EORM (Moyer-Gusé, 2008), participants who experienced greater sympathy, empathy, and transportation and who perceived the show to have less persuasive intent reported more story-consistent attitudes and behaviors in some cases. Interestingly, the results varied based on the outcome analyzed. In fact, a notable pattern emerged. Narrative engagement was most strongly associated with attitudes and intentions that were directly addressed within the episode; whereas character engagement was most strongly associated with messages that were indirectly addressed.

Within the episode, the myths *she asked for it* and *it wasn't really rape* were refuted directly. One of the victims suggested that others would blame her for being raped because of how she dressed and because she was drinking, but the doctors told her explicitly that it was not her fault. The other victim described how she felt that others would not think that she was raped because the assault took place during a date but how ultimately she came to understand that rape is what happened to her. The ideas of *seeking consent* and *adhering to consent* were dealt with just as directly. There was a conversation between a teenage boy and his stepfather about the importance of gaining consent from one's sexual partner and also looking for continued consent. Analyses showed that transportation, being cognitively and emotionally involved with the story, was the strongest predictor of all four of these outcomes. One potential explanation for these results lies in counterarguing. Theoretically, the reason that transportation makes narratives more compelling than traditional persuasive messages is that it reduces the viewer's tendency to mentally argue against the message. Viewers who are swept up in the narrative are less prone to

engage in that type of thinking (Moyer-Gusé, 2008). It seems likely that direct messages would be counterargued more than indirect ones. It follows then that the reason transportation emerged as the strongest predictor of direct messages (but not less direct ones) is that participants engaged in less counterarguing when they were transported.

In contrast, character engagement was the strongest predictor of persuasion when it came to indirect messages of the episode. The results related to *refusing unwanted sexual activity* (a sexual consent intention) provide one example. Within the episode, this message of refusing unwanted sexual activity was less clear. In fact, one of the victims described how she was unsuccessful in stopping the assault even when she said no and fought back. This could have led viewers to feel less self-efficacy regarding the issue. Instead, participants who more felt sympathy for the characters reported greater intention to say no to unwanted sexual advances. This could be interpreted as consistent with the proposition of the EORM that identification changes outcome expectancies (Moyer-Gusé, 2008). Participants who had sympathy for the characters took away the message that it is important to reject unwanted advances, even if the characters were not successful in doing so, because of the negative outcomes that they saw.

Sympathy was also the strongest predictor of protective drinking behaviors. Again, messages within the episode related to drinking were not direct. One of the victims described how she was raped after drinking at a bar, but there was no mention of the need for moderating one's drinking behaviors. Nonetheless, experiencing sympathy while viewing was associated with greater *stopping or limiting drinking* and *avoiding serious drinking consequences* intentions. The possible connection between identification and changing outcome expectancies is even clearer in this case. It is quite plausible that individuals who had sympathy for the

characters regarded sexual assault as an outcome of drinking behaviors, changing their outcome expectancies.

On the whole these findings point to different persuasive mechanisms for direct versus indirect messages within the same story. Whereas prior research has documented how explicit messages *after* a narrative impact persuasion (e.g., Moyer- Gusé, Jain, & Chung, 2012), we are unaware of any studies that have examined the impacts of varying types of messages within the same narrative. In fact, many studies that have examined the features that make narratives persuasive have included a single attitudinal or behavioral outcome related to the overall message, which makes such comparisons impossible (e.g., Bae, Lee, & Bae, 2014; Cohen, Weimann-Saks, Mazor-Tregerman, 2017; Moyer- Gusé, Chung, & Jain, 2011; Moyer- Gusé & Nabi, 2010; So & Nabi, 2013). Future research should examine the influence of direct and indirect messages further. Additionally, we did not measure outcome expectancies or counterarguing, so our explanation of these findings is largely based on theory. This points to another important topic for future studies. Researchers should confirm whether more or less direct messages embedded in narratives are persuasive via differing variables.

Another form of character engagement, empathy, was also investigated and the related results were mixed. Experiencing what the character was experiencing was associated with lower endorsement of *she asked for it*, *no sex while intoxicated*, and protective drinking behaviors, but not when controlling for other variables. As described above, transportation and sympathy were the stronger predictors in those analyses. Perceived persuasive intent was also examined, but that perception appeared to have little influence on attitudes or intended behaviors. Regarding the final predictor variable, perceived realism, there was one significant finding. It was consistently associated with *stopping or limiting drinking* intentions. Participants who thought the episode

was more similar to the real world reported more story-consistent intended behaviors, which is similar to other findings regarding perceived realism and narrative persuasion (Cho, Shen, & Wilson, 2014).

The research question asked whether prior *Grey's Anatomy* viewing would play a role in the significant associations found between the predictor and dependent variables, and it did. Results revealed that participants who had watched more of the show experienced more sympathy while viewing this episode. In mediation analyses then, participants who had watched more of the show experienced more sympathy, which in turn was associated with story-consistent intended behaviors. Notably, the effects of prior viewing were indirect only.

The findings of this study have important practical implications for sexual assault prevention programming. First, if entertainment media is to be used to educate undergraduates, it should be done so in a way that facilitates transportation. Whereas levels of transportation will vary from individual to individual (Dal Cin, Zanna, & Fong, 2004), there are steps that can be taken to encourage transportation. One part of transportation is becoming engrossed, not distracted by things in the environment (Green & Brock, 2000). To facilitate fewer distractions, students could be asked to watch the episode as they would a movie in a theater, silently, with mobile phones off, in a dimly lit space, and with ample volume. Second, our findings related to sympathy point to the importance of choosing stories that portray victims. Depicting the devasting effects of sexual assault appears key to reducing rape myth acceptance and increasing intent to gain and adhere to consent. Third, the fact that perceived realism was a significant predictor points to the importance of choosing entertainment media that students will find realistic. Because of its quality, using existing entertainment media may be beneficial in this regard. Finally, prior viewing was indirectly associated with intended behaviors, which indicates

that choosing media that college students are already familiar with could be beneficial. Overall, maximizing transportation, sympathy, and perceived realism may also maximize the positive effects of viewing.

Limitations

Although this research has important implications, it is not without limitations. One drawback of the present study is that the sample recruited for the control group was relatively small. This limited our ability to detect differences between the two groups. Whereas in a few cases the mean scores between dependent variables were nearly identical, null findings regarding some of the rape myths and sexual consent intentions may have been due to a lack of power. In fact, several of the tests were approaching significance. The generalizability of the study is also somewhat limited. Whereas this research was conducted with undergraduate students, the target population for many sexual assault prevention programs, these particular students attended a Midwestern liberal arts college at the time of the study. They are also a relatively homogenous group in terms of race and other demographics. Future research should seek to replicate these findings with different samples. We also used one particular episode of television. This is a common practice amongst media psychology researchers, but nonetheless this also limits the generalizability of our findings. Finally, this study only examined effects in the short term. It would be beneficial to conduct longitudinal research to see whether the effects found are enduring.

Conclusion

On the whole, this study provides support for the overall contention that entertainment media could be used as a tool for sexual assault prevention on college campuses. Using existing

media, especially television, may have a positive impact through narrative and character

involvement. Prior viewing enhances some of these effects.

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Table 1

Descriptive Statistics for Key Variables by Condition

		n	M (SD)	t	df	Cronbach's alpha or r
Seeking sexual consent	Control	38	6.70 (0.51)	-0.29	185	.68***
	Manipulation	149	6.73 (0.59)			
No sex while intoxicated	Control	38	6.13 (1.17)	-1.30	185	
	Manipulation	149	6.41 (1.18)			
Refusing unwanted sexual activity	Control	38	5.98 (0.96)	-0.24	185	.81
	Manipulation	149	6.03 (1.06)			
Adhering to sexual consent	Control	38	6.83 (0.33)	-0.68	185	.78
	Manipulation	149	6.88 (0.34)			
Rape myth - she asked for it	Control	38	1.67 (0.70)	1.70	185	.79
	Manipulation	149	1.47 (0.65)			
Rape myth - not really rape	Control	38	1.15 (0.37)	-0.94	185	.83
	Manipulation	149	1.22 (0.42)			
Stopping or limiting drinking	Control	38	3.79 (1.25)	-3.08**	185	.89
	Manipulation	149	4.41 (1.07)			
Avoiding serious drinking consequences	Control	38	5.46 (0.96)	-1.75	185	.78
	Manipulation	149	5.74 (0.64)			

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

Table 2

Bivariate Correlations between Predictors and Dependent Variables in the Manipulation Condition

	Cronbach's alpha[a]	Seeking sexual consent	No sex while intoxicated	Refusing unwanted sexual activity	Adhering to sexual consent	Rape myth - she asked for it	Rape myth - not really rape	Stopping or limiting drinking	Avoiding serious drinking consequences
Previous Viewing		-.09	.04	-.16	.07	-.21*	-.16	.04	.23**
Sympathy	.76	.05	.10	.19*	.15	.00	-.09	.20*	.19*
Empathy	.92	-.10	.17*	-.11	.03	-.17*	-.12	.20*	.17*
Transportation	.73	.20*	.14	-.02	.32***	-.31***	-.27**	.22**	.23**
Persuasive intent		.00	-.13	.01	.04	.10	.11	.15	.06
Perceived realism	.90	.14	.00	.06	.12	-.07	-.16	.32***	.20*

Note.[a] = internal consistency was calculated for the full sample. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 3

Hierarchical Regressions Predicting Dependent Variables

	Seeking sexual consent	No sex while intoxicated	Refusing unwanted sexual activity	Adhering to sexual consent	Rape myth - she asked for it	Rape myth - not really rape	Stopping and limiting drinking	Avoiding serious drinking consequences
	β	β	β	β	β	β	β	β
Covariates[a]								
Gender[b]	-.07	.04	-.13	.04	-.27**	-.12	.31***	.38***
Year in school	-.24**	-.16	-.04	-.10	-.08	.00	-.17*	-.10
White or European-American[c]	.04	.07	.13	-.02	.04	.10	.20*	.08
Adj. R^2	.04	.01	.02	-.01	.06	.00	.15	.14
F	3.34*	1.67	1.89	0.56	4.34**	1.23	9.73***	9.31***
	(3, 145)	(3, 145)	(3, 145)	(3, 145)	(3, 145)	(3, 145)	(3, 145)	(3, 145)
Predictors								
Sympathy	.04	.06	.21*	.12	.05	-.04	.16*	.16*
Empathy	-.24*	.15	-.19	-.17	-.01	.00	.02	.00
Transportation	.31**	.10	.04	.37***	-.27**	-.23*	.04	.09
Perceived persuasive intent	-.05	-.17*	-.01	.00	.13	.15	.05	.00
Perceived realism	.08	-.08	.05	.03	-.01	-.13	.18*	.08
ΔR^2	.09	.07	.06	.13	.08	.09	.08	.05
F	3.24**	2.05*	1.92	2.86**	3.38**	2.35*	5.88***	4.69***
	(8, 140)	(8, 140)	(8, 140)	(8, 140)	(8, 140)	(8, 140)	(8, 140)	(8, 140)

Note. [a] Coefficients reported for step one. [b] 0 = male, 1 = female; [c] 0 = Yes, 1 = No. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4

Mediation Analyses of Prior Viewing Predicting Dependent Variables via Sympathy

Dependent variable:	Refusing unwanted sexual activity	Stopping and limiting drinking	Avoiding serious drinking consequences
Predicting Sympathy			
Grey's Anatomy viewing	.01**	.01**	.01**
Predicting Dependent Variable			
Grey's Anatomy viewing	.00	.00	.00
Sympathy	.50**	.46**	.16*
Indirect Effects			
Viewing ➔ sympathy ➔ dependent variable	.002*	.002*	.001*

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. Controlling for gender, year in school, and identifying as White / European-American.