Despite the general consensus that consuming large quantities of alcohol can be dangerous, research has shown that alcohol abuse by college students continues to be an issue (Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002; Knight et al., 2002; National Institute of Alcohol Abuse and Alcoholism [NIAAA], 2004; Wechsler, Lee, Kuo, & Lee, 2000). Approximately 80% of college students drink and 23% of undergraduates binge drink more than once a week (NIAAA, 2004; Wechsler et al., 2000). Binge drinking is defined as drinking that leads to a blood alcohol concentration (BAC) of .08% or more, which is achieved through the consumption of approximately 4-5 alcoholic beverages within a 2-hour time span (NIAAA, 2004). According to criteria outlined in the DSM-IV, 31% of undergraduates are classified as alcohol abusive (Knight et al., 2002). Finally, 2.1 million students, out of a sample of 8 million students, indicated they had driven while intoxicated (Hingson et al., 2002). Three million of these individuals indicated they had ridden with a driver who they knew to be intoxicated.

Many media campaigns directed toward young people and their drinking behaviors have been created in response to these and similar statistics. Petty, Priester, and Brinol (2002) outlined the two components of a successful campaign. First, the message must be effective in appropriately altering the recipients' attitudes. Second, these altered attitudes must cause recipients to make changes in their corresponding behaviors.

In the past—and still today—many variations of public service announcements (PSAs) were incorporated into the media in hopes of altering unhealthy or dangerous behaviors (Brown & Walsh-Childers, 2002; Harris, 2004). Unfortunately, however, there are many limitations to this social marketing technique (Harris, 2004). For example, PSAs on alcohol use are subject to limited funding, appear less frequently on television, and are generally of poorer quality than prodrinking images and advertisements. PSAs are also rarely aired during peak television-viewing hours, which makes PSAs less likely to reach the target audience (Brown & Walsh-Childers, 2002; Harris, 2004).

Acknowledging the limitations of the PSA strategy, more promising techniques have been implemented to create change through media—television in particular. Considering that the average person will watch 3 to 4 hours of television every day, television programs are an attractive medium for social marketing campaigns (Brown & Walsh-Childers, 2002). Beyond the amount of television being viewed, the media in general are perceived as a likely source for social marketing campaigns. Previous research has shown that the media are able to effectively provide information about and models for health-related attitude and behavior changes on an individual level (Brown & Walsh-Childers, 2002).

Currently, especially in developing, third-world
countries, the technique of Entertainment-Education (E-E) has been used to replace or supplement PSAs. E-E incorporates educational messages—designed to inform and influence viewers' attitudes and behaviors pertaining to their health—into an entertainment format (Kennedy, O’Leary, Beck, Pollard, & Simpson, 2004). Characters portrayed in these programs are rewarded for making recommended behavioral changes related to their health, such as depicting a promising future after taking necessary steps to get sober. Other characters are severely punished for not adopting the proposed changes, such as dying in a car wreck due to drunk driving. Finally, a third group—called transitional characters—are included to inspire audience identification. These characters observe the health issue from many perspectives, decide to alter their own attitudes and behaviors despite overwhelming obstacles, succeed in making positive changes, and are finally rewarded in a way that inspires the target audience to take action (Kennedy et al., 2004).

Theoretical support for E-E comes from Bandura’s social cognitive theory (Bandura, 1986, 2002). Bandura’s theory states that modeling a particular behavior as well as the consequences can effectively induce learning in the viewer (Kennedy et al., 2004; Trull, 2005). It is also important that the role model encounter and overcome likely barriers to reaching an overarching goal. The model must build the viewer’s self-efficacy in addition to supporting the notion that attitude and behavior changes will result in a positive outcome (Bandura, 1986, 2002). Thus, Bandura’s social cognitive theory suggests that an E-E television program has value in that it can encourage persistence in the face of barriers and depict positive consequences as a result of adopting the modeled attitude or behavior change (Brown & Walsh-Childers, 2002).

In addition to Bandura’s social cognitive theory, the health belief model lends theoretical support to E-E (Rosenstock, 1974). This theory posits that health behavior is influenced by (a) how susceptible individuals feel they are to a disease or outcome, (b) the perceived seriousness of a disease or behavior, (c) how great individuals perceive benefits of behavior change to be, (d) the lack of overwhelming barriers to taking action, and finally (e) cues to action. In this way, serialized drama, such as a weekly television program, provides a format in which the prevalence and severity of a disease or behavior may be introduced, followed by an illustration of the benefits of taking action, and finally suggestions on how to avoid or alter dangerous behaviors.

Along with theoretical underpinnings, there is also practical support for the efficacy of E-E programs. First, studies have shown that information has a greater impact on the audience when presented within a novel storyline, such as within an E-E program, rather than through strictly informative material (Brinson & Brown, 1997; Parrott, 1995). Second, the nature of serialized television allows the storyline of previous episodes to be repeated and developed in future episodes. This characteristic is important according to media theory, which states that repetition of a theme is important in increasing awareness of an issue (Rosenzweig, 1999; Sherry, 2002). In addition, when an individual’s favorite character on a popular television show discusses a health-related issue within the context of the program, the viewer is likely to attend to the information, which provides the opportunity for learning—and later attitudinal or behavioral change (Papa et al., 2000; Sherry, 2002). More specifically, because most individuals view the same shows every week, parasocial relationships (PSRs) and parasocial interactions (PSIs) are likely to develop and perhaps trigger referential involvement—or, the consideration of behavior change as a result of how well the viewer is able to relate to the message (Papa et al., 2000). Klimmt, Hartman, and Schramm (2006) identified PSRs as “a special type of ‘interpersonal involvement’ that combines different phenomena such as interaction, identification, and long-term identification with media personae” (p. 292). PSIs are those in which viewers may talk at the character (i.e., speak to the television as though the character can hear them), invest cognitive effort thinking about the fictional character, experience similar emotions as the character, or find the mood of the fictional character contagious (Klimmt et al., 2006; Papa et al., 2000). PSIs may also prompt viewers to engage in more postviewing cognitions and discussions with others about the characters or the show—thus creating a social learning environment—in contrast to random television watching (Klimmt et al., 2006; Papa et al., 2000). Due to the development of these relationships and interactions, the characters are highly effective in inspiring active message processing, which improves memory for the information and thus is more likely to influence behavior change (Kennedy et al., 2004; Larson, 1991; Papa et al., 2000; Parrott, 1995).

As indicated, in recent years producers have begun incorporating E-E into their programming. For example, in many developing countries, radio and television programs have been written specifically to convey prohealth messages and information (Harris, 2004). From 1975-1982 Mexico’s private network, Televisa, aired seven telenovelas (soap operas) that promoted gender equality, adult literacy, sexual responsibility, and family planning (Brown & Singhal, 1990; Rogers & Singhal, 1990). These popular shows were effective in that viewers often requested services discussed within
the programs (Lozano, 1992).

With Televisa’s success in promoting prosocial and prohealth messages, many other countries were inspired to try similar methods. In 1987, Kenya began broadcasting the soap opera Tushauriane (“Let’s Discuss”) that focused on family planning. The show became Kenya TV’s most popular program to date (Brown & Singhal, 1990). From 1993-1997, the Tanzanian radio soap opera Twende na Wakati (“Let’s Go With the Times”) had measurable effects on the population’s adoption of family planning methods. In this soap opera, Tunu, the wife of an alcoholic truck driver, adopts a family planning method and then leaves her HIV-positive husband. Tunu is rewarded for her decisions with a better life for her family and herself. Her actions as a transitional character were especially important for listeners because they modeled self-efficacious behavior, which is important for viewers/listeners in their decision to take action (Rogers et al., 1999).

Another example of successful E-E programming can be seen in South Africa’s TV, radio, and public health campaign, Soul City, which dealt with HIV and tuberculosis prevention and control, maternal and child health, housing and urban reform, domestic violence, violence against women, youth sexuality, hypertension, and alcohol and tobacco abuse (Singhal & Rogers, 1999). The enormous success of the campaign is attributable to its multimedia approach: a prime-time TV drama, a radio drama series broadcast daily in eight different languages, health-education booklets, newspaper coverage, and community recognition and events. One example of the campaign’s success is that, before Soul City, only 3% of the population indicated that it was necessary to tell one’s partner if one is HIV positive. Not long after Soul City began, however, 75% of the population indicated that it was necessary to tell their partner if they had the disease (Harris, 2004).

Despite the recognized success of E-E programs in other countries, there is some concern about its potential for success in more media-saturated areas such as the United States (Sherry, 2002). Specifically, the prevalence of prodrinking messages makes it difficult for viewers to accept the prohealth messages. Also, private ownership of the media as well as First Amendment concerns have made it difficult for the government and nonprofit organizations to remove negative or unhealthy yet popular messages—such as consuming large quantities of alcohol—in order to deliver lengthy prosocial messages through entertainment media (Brown & Walsh-Childers, 2002).

To date, no long-running E-E campaigns have been created for entertainment television in the United States. Instead, some producers have agreed to collaborate with public health professionals, including the CDC, to incorporate elements of E-E into their entertainment programs (Kennedy et al., 2004). For example, in the 1980s, Professor Jay Winsten of the Harvard School of Public Health worked with writers, producers, and executives to incorporate into television a new concept: the use of a designated driver (Rosenzweig, 1999). It is likely that this concept contributed to the significant decrease in drunk-driving fatalities recorded by the late 1990s. Other examples of E-E programming include AIDS awareness messages appearing on popular soap operas such as General Hospital, procondom messages on Friends, and a rape hotline appearing on the screen following a two-part episode involving rape on the show Felicity (Brown & Walsh-Childers, 2002).

More recently, research has been done to study the direct impact of E-E messages. In August 2001, a research group monitored calls to an AIDS hotline following two episodes of the popular soap opera, The Bold and The Beautiful (Kennedy et al., 2004). In the first episode, one of the characters was diagnosed with HIV. In the second episode, the HIV-positive character told his fiancée about his disease. Following both episodes, the number of phone calls to the provided hotline rose dramatically. Of the callers, 57% indicated that they intended to make a change or take action after seeing the show, 44% said they intended to be tested, and 28% said they intended to use a condom.

Research on the use of E-E in television programming has made it possible to identify specific factors that influence the overall effectiveness of a program’s message (Rogers & Singhal, 1990). As discussed previously, drawing out a novel storyline over several episodes, creating memorable and appealing characters with whom viewers are able to create PSRs or to have PSIs, and providing suggestions for future actions are very important in E-E (Brinson & Brown, 1997; Kennedy et al., 2004; Klimmt et al., 2006; Papa et al., 2000; Parrott, 1995). In addition to these techniques, the producer and researchers should carefully consider their target audience in order to tailor the message appropriately as well as depict small steps in behavior change rather than suggesting a total attitude or behavior overhaul (Harris, 2004). In general, emotional appeals have been found to be more effective than cognitive appeals in stimulating someone to learn about a health-related issue. Along the same lines, it appears that the message should not be too blatant. PSAs have been criticized for trying to “sell” a behavior, which actually causes resistance in the viewers (Brown & Walsh-Childers, 2002).

Present Study
In response to the statistics on college students’ abuse of alcohol as well as the average person’s rate of televi-
consumption per day, the present study explored various portrayals of alcohol use and abuse within programs watched by college students. In contrast to the restrictions placed on cigarette advertising, alcohol ads—especially for beer and wine—appear frequently in the media (Brown & Walsh-Childers, 2002). For example, prodrinking references outnumber negative ones by more than a 10 to 1 margin on television and in movies (Brown & Walsh-Childers, 2002). These messages do not go unnoticed. Studies show that there is a direct relationship between alcohol advertising and positive associations with alcohol and intentions to drink (Brown & Walsh-Childers, 2002).

Therefore, it is necessary to explore what messages are being delivered to college students through entertainment television programs as well as what impact the information has on these viewers. The overall purpose of the present study was twofold: (1) to explore what information pertaining to the use of alcohol (prodrinking versus prohealth or E-E) is being portrayed in current entertainment television watched by college students, and (2) how college students perceive this information. In the first section of the survey, we asked questions pertaining to participants’ current use of alcohol in addition to how they perceive alcohol use in society. Participants then used their autobiographical memory to answer questions about a television show that had portrayed one or more characters abusing alcohol.

We hypothesized that approximately 80% of our sample would drink, which is based on the findings from previous studies concerning college students’ drinking habits (NIAAA, 2004; Wechsler et al., 2000). Second, we hypothesized that nearly all participants would be able to recall an entertainment television show that had portrayed drinking as a health-related issue. This hypothesis was based on research that shows the average person consumes 3 to 4 hours of television on a daily basis coupled with the knowledge that during the average hour of prime-time television, there will be several alcohol references (Brown & Walsh-Childers, 2002). Also, prodrinking and prohealth messages appear during both peak and nonpeak viewing hours, which indicates that any viewer could be subject to references to alcohol (Brown & Walsh-Childers, 2002; Harris, 2004). Next, we hypothesized that the participants who do consume alcohol will be more entertained by the programs and the episodes will hold their attention better than those who do not drink any alcohol. This hypothesis is based on the concept that the drinking group will be able to more easily identify with the characters who drink on the programs and/or the events surrounding the characters’ use of alcohol. Finally, we hypothesized that although the majority of themes pertaining to alcohol use within the programs watched by college students would be prodrinking in nature, we also expected some incorporation of E-E themes.

Method

Participants
The sample for this exploratory study was composed of 189 undergraduates (100 men, 89 women) enrolled in general psychology at a large midwestern university. The age range was 18 to 25 years with a mean age of 19. Finally, 90% of students were Caucasian, 3% were African American, 3% were Asian, 3% were Hispanic, and .5% were Alaskan.

Materials
For the study, the authors constructed a two-part exploratory survey (see Appendix for complete survey). The first section focused on the participants’ demographic information, drinking behaviors and patterns, their perception of alcohol use in society, and whether they knew anyone who abuses or has abused alcohol. The number of drinks that participants reported they typically consume in one sitting determined drinking behavior. We determined four drinking level groups by considering NIAAA’s definition of binge drinking, or approximately 4-5 alcoholic beverages in a two hour time span (NIAAA, 2004). Therefore, the first group included participants who reported that they typically drink less than what is considered to be binge drinking, or 1-3 drinks at one time. The next group included participants who reported that they consume approximately the minimum level of consumption necessary to be defined as binge drinking, or 4-6 drinks at one time. The third group consisted of participants who reported that they typically consume above the approximate minimum level of consumption necessary to meet the definition of binge drinking, or 7 or more drinks in one sitting. The final group consisted of participants who reported that they do not drink alcohol.

Section two of the survey focused on the participants’ autobiographical memory for a particular entertainment television show of their choosing, which had “portrayed alcohol abuse as a health-related issue for one or more of the characters.” It is important to note that although autobiographical memory may be flawed, the purpose of the present study was to understand how college students perceived and remembered the information they viewed. Thus, perception was more important to this study than accuracy of memory. The authors constructed the second section of the survey by taking into consideration previously-defined, successful E-E concepts. The purpose of many of these questions was to discover what messages pertaining to alcohol use are incorporated in television programs.
watched by college students and whether or not these messages are incorporating E-E methods. For example, the question about the number of episodes dedicated to the topic is relevant because repetition and development of a theme is an important component of E-E (Rosenzweig, 1999; Sherry, 2002). This question revealed how many programs are using this tool. Other examples would be the questions about how often viewers watched the show, how entertaining viewers found the episodes to be, and how well the episodes kept the viewers’ attention. Again, these questions are important because the results could show effective use of E-E methods. As discussed, using a novel storyline as well as compelling characters with whom viewers can create PSRs is important in the efficacy of E-E (Brinson & Brown, 1997; Papa et al., 2000; Parrott, 1995). If viewers watch the show regularly, are entertained by it, and find that the episodes are able to keep their attention, this is perhaps an indication that the viewers are creating PSRs with the characters on screen as well as, generally, attending to the information.

On the second section of the survey, participants identified what alcohol-related themes were included in their television program. This section of the survey also asked participants about how the nonalcohol-abusing characters were impacted. For both questions, participants viewed a list and selected all themes that applied to their program. The researchers created these two lists by compiling an inventory of the themes pertaining to alcohol use and abuse, as well as how nonalcohol-abusing individuals are impacted by the drinking of those close to them, which were mentioned within the literature reviewed for this study. Both lists of themes were created to directly address the question of whether or not E-E themes are incorporated into the programs watched by college students.

Procedure
This survey was included in a packet of unrelated questionnaires administered to students during a mass testing session held after class. A graduate student from the department hosted the session. Students attended the mass testing in order to earn credit toward their required number of research participation hours for general psychology. Any student enrolled in general psychology was invited to attend the mass testing session.

Results
Of the 186 participants, 18% indicated that they did not drink (N = 33), 31% responded that they typically drank 1 to 3 drinks in a sitting (N = 57), 26% drank 4 to 6 drinks in one sitting (N = 49), and 25% drank 7 or more drinks in one sitting (N = 47). These results are consistent with our first hypothesis, which was based on previous research showing that approximately 20% of college students do not drink (NIAAA, 2004; Wechsler et al., 2000). Subjects’ drinking behavior became the first quasi-experimental variable used for analysis. Specific questions then became the isolated dependent variables.

The first isolated dependent variable considered participants’ views on the severity of alcohol abuse as an issue in society, which is an important factor in E-E according to the health belief model (Rosenstock, 1974). In the first section of the survey, the following question was asked: “Do you feel alcohol abuse is an issue in our society?” These results are provided in Table 1. Using drinking behavior as the independent variable, statistical significance between the means was revealed in a one-way ANOVA, F(3, 182) = 5.34, p < .05, with simple main effects tests showing that the heaviest-drinking group rated alcohol abuse as a significantly less serious issue than any of the other three groups on a scale from 1 (not at all an issue) to 7 (very severe issue). There was a general trend indicating that the more a person drank in one sitting, the less apt they were to see alcohol abuse in society as an issue.

To the question “Do you know anyone personally who abuses or has abused alcohol?” 72% of participants (n = 185) answered yes, 16% answered no, and 12% indicated that they were unsure. If participants answered yes to this question, they were then asked to answer the question “How could you tell they abused alcohol?” All of the participants’ written explanations of alcohol abuse met the definition criteria for alcohol abuse and/or alcohol dependence as outlined by the American Psychiatric Association (DSM-IV-TR, 2000).

Of the 189 participants, 77% could recall a television show that fit the survey criteria as outlined at the beginning of section two of the survey. This finding

<p>| TABLE 1 |
| Mean Responses on a 7-Point Scale to the Question “Do You Feel Alcohol Abuse is an Issue in Our Society?” |</p>
<table>
<thead>
<tr>
<th>Drinks at one time</th>
<th>M</th>
<th>SEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>None (n = 33)</td>
<td>5.42</td>
<td>0.24</td>
</tr>
<tr>
<td>1-3 (n = 57)</td>
<td>5.49&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.16</td>
</tr>
<tr>
<td>4-6 (n = 49)</td>
<td>5.02&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.18</td>
</tr>
<tr>
<td>7 or more (n = 47)</td>
<td>4.55&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.19</td>
</tr>
</tbody>
</table>

<sup>a</sup>These two groups are different from one another at p < .05
<sup>b</sup>Different from all other groups at p < .05
is consistent with our second hypothesis that nearly all participants would be able to recall an entertainment television show that had portrayed drinking as a health-related issue. These participants listed 61 different television programs in the following categories: 40% were comedy/sitcom, 36% were drama, 18% were reality television, and 3% were soap operas. Also, approximately 78% of these participants (i.e., 112), reported that they watch the show at least occasionally to almost always. Only 22% reported that they did not, or usually did not, watch the show regularly that they had indicated on the survey. According to responses, approximately 50% of the shows dedicated three or fewer episodes to the topic of alcohol abuse, 27% dedicated 4-9 episodes to the topic, 14% dedicated 10 or more episodes to the topic, and 12% dedicated an entire season to alcohol abuse. Also, 55% of the alcohol-abusing characters listed were men, 32% were women, and 10% of the shows had both male and female alcohol-abusing characters. Finally, the range for the characters’ ages—according to participants—was 16 to 60 years ($M = 31$), with participants reporting that 18% of the alcohol-abusing characters were under the legal drinking age of 21.

Participants then rated how entertaining the episodes were on a scale from 1 (not at all entertaining) to 7 (very entertaining) as well as the episodes’ ability to keep the viewer’s attention on a scale from 1 (not very well) to 7 (very well). The overall mean for how entertaining the viewers found the episode(s) of their show to be was 4.64. The overall mean for how well the episodes kept the viewers’ attention was 5.04.

The authors used the perceived entertainment value of the episodes as a dependent variable relative to subjects’ drinking behavior. A one-way ANOVA, $F(3, 139) = 4.55, p < .05$, which was followed by simple main effects tests, revealed a significant difference between the mean rating of perceived entertainment value of the episodes by the group who reported they do not drink, and the other three groups. Specifically, the show was significantly less likely to keep the attention of those individuals who reported they do not drink. This finding confirms the second part of our third hypothesis that those who consume alcohol will report that the episodes kept their attention better than those who do not drink any alcohol.

A second quasi-independent variable examined in the first section of the survey was whether the participant knew someone who abuses or abused alcohol. The participants who knew someone who abuses alcohol gave a mean rating of 5.29 on the scale inquiring about how well the episode(s) kept their attention. The individuals who did not know anyone who abuses

<table>
<thead>
<tr>
<th>Drinks at one time</th>
<th>Entertainment</th>
<th>SEM</th>
<th>Attention</th>
<th>SEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>3.90</td>
<td>0.38</td>
<td>4.00</td>
<td>0.38</td>
</tr>
<tr>
<td>1-3</td>
<td>4.43</td>
<td>0.26</td>
<td>4.92</td>
<td>0.26</td>
</tr>
<tr>
<td>4-6</td>
<td>4.58</td>
<td>0.28</td>
<td>5.12</td>
<td>0.28</td>
</tr>
<tr>
<td>7 or more</td>
<td>5.28</td>
<td>0.27</td>
<td>5.62</td>
<td>0.23</td>
</tr>
</tbody>
</table>

*aDifferent from all other groups at $p < .05$  
*bDifferent from all other groups at $p < .05$
or abused alcohol gave a mean rating of 4.41 on the attention scale. Finally, the participants who were unsure whether or not they knew someone who abuses or abused alcohol gave a mean rating of 4.27. Statistical significance between the means was found using a one-way ANOVA, \( F(2, 141) = 4.34, p < .05 \), which indicated that the attention rating was significantly higher for those participants who knew someone who abuses or abused alcohol than for those participants who did not know anyone who abuses or abused alcohol.

A fourth question on the second part of the survey asked “Would you say the person (i.e. the character on the show) abusing alcohol was an alcoholic?” This question was answered by 145 participants. Of those, 68% marked yes or probably yes, 20% marked not sure, and 12% marked no or probably no. According to participants' autobiographical memory (\( n = 144 \)), only 32% of all characters received treatment (19% of participants were unsure if characters were treated) and only 13% were treated effectively according to participants' perceptions of the shows' events.

Next, the two most-often reported genres of television shows (comedies and dramas) were partitioned by whether the character who abused alcohol was treated (see Table 3). According to a chi-square test, \( \chi^2(2, N=109) = 12.46, p < .05 \), there was a significant difference between the two types of shows. Participant responses indicated that only 17% of characters in the comedy shows were treated while 41% of the characters featured in the dramas received treatment.

All of the alcohol-related themes identified by participants as being included in their television program were further partitioned by show genre. Table 4 provides a list of the themes from the survey, which are organized in descending rank order based on the percentage of participants who indicated that a theme from the survey was included in their television show.

In addition to treatment, results indicated that comedies and dramas differed significantly in their portrayal of two of the themes listed (see Table 4). Using one-way ANOVAs, dramas were found to be significantly more likely than comedies to provide suggestions for how to communicate about drinking, \( F(1, 105) = 4.10, p < .05 \), and significantly less likely to portray drinking as a fun recreational activity, \( F(1, 105) = 5.75, p < .05 \). Similarly, participants identified how the nonalco-

<p>| TABLE 3 |
| Percentages of Answers to the Question “Was This Character Treated for Alcohol Abuse?” |</p>
<table>
<thead>
<tr>
<th>Show Genre</th>
<th>Treated</th>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comedy (( n = 58 ))</td>
<td>17</td>
<td>71</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Drama (( n = 51 ))</td>
<td>41</td>
<td>37</td>
<td>22</td>
<td></td>
</tr>
</tbody>
</table>

*Comedies and dramas different from one another at \( p < .05 \)

<p>| TABLE 4 |
| Percentages of Participants Who Reported Themes Present in Entertainment Programs |</p>
<table>
<thead>
<tr>
<th>Theme</th>
<th>Percentage Reporting Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking to relieve stress</td>
<td>70</td>
</tr>
<tr>
<td>Drinking to forget</td>
<td>61</td>
</tr>
<tr>
<td>Drinking to avoid emotions</td>
<td>58</td>
</tr>
<tr>
<td>Drinking to loosen up</td>
<td>56</td>
</tr>
<tr>
<td>Drinking as a fun recreational activity</td>
<td>55(^a)</td>
</tr>
<tr>
<td>Drinking as a normal activity</td>
<td>54</td>
</tr>
<tr>
<td>Emotional issues (result)</td>
<td>50</td>
</tr>
<tr>
<td>Drinking to avoid responsibility</td>
<td>43</td>
</tr>
<tr>
<td>Drinking to fit in socially</td>
<td>42</td>
</tr>
<tr>
<td>Change in perception of why people drink</td>
<td>37</td>
</tr>
<tr>
<td>Need for moderation</td>
<td>37</td>
</tr>
<tr>
<td>Physical health issues (result)</td>
<td>36</td>
</tr>
<tr>
<td>Unplanned sex (result)</td>
<td>35</td>
</tr>
<tr>
<td>Emotional support for abusers</td>
<td>35</td>
</tr>
<tr>
<td>Increase in awareness of alcohol abuse</td>
<td>35</td>
</tr>
<tr>
<td>Need for designated driver</td>
<td>32</td>
</tr>
<tr>
<td>Emotional support for family/friends</td>
<td>30</td>
</tr>
<tr>
<td>Change in perception of who drinks</td>
<td>30</td>
</tr>
<tr>
<td>Treatment options</td>
<td>29</td>
</tr>
<tr>
<td>Increase in knowledge about alcohol abuse</td>
<td>29</td>
</tr>
<tr>
<td>Change in attitude about alcohol abuse</td>
<td>25</td>
</tr>
<tr>
<td>Suggestions for communicating about drinking</td>
<td>21(^b)</td>
</tr>
</tbody>
</table>

---

\(^a\)Comedies significantly more likely to portray than dramas at \( p < .05 \)

\(^b\)Dramas significantly more likely to portray than comedies at \( p < .05 \)
hol-abusing characters on the programs were impacted by selecting themes from a list. Table 5 provides the list of themes from the survey as well as the percentage of participants who selected each theme. The authors partitioned the list of themes pertaining to the impact on nonalcohol-abusing characters by comedies and dramas. Interestingly, these top two show genres again differed significantly on theme appearance within the programs (see Table 5). Using one-way ANOVAs, comedies were significantly more likely not to show much impact on the nonalcohol-abusing characters, $F(1, 104) = 16.08, p < .05$, were significantly more likely to portray the drinking as humorous to the nonalcohol-abusing characters, $F(1, 104) = 12.42, p < .05$, were significantly less likely to portray the nonalcohol-abusing characters as embarrassed by the drinking, $F(1, 104) = 8.04, p < .05$, were significantly less likely to show the nonalcohol-abusing characters upset or distressed, $F(1, 104) = 30.07, p < .05$, and were significantly less likely to show the nonalcohol-abusing characters as being forced to take care of others, including the person drinking, $F(1, 104) = 21.32, p < .05$.

Finally, it is important to note from an E-E standpoint that Tables 4 and 5 show appearances of pro-health themes in the programs, as well as prodrinking themes. In Table 4, 8 of the top 11 reported themes were prodrinking in nature. However, as shown in Table 5, participants reported more prohealth themes than prodrinking themes, with 55% of participants reporting that nonalcohol-abusing characters were upset or distressed by the drinking of others. Only 26% of participants indicated that the nonalcohol-abusing characters were not impacted much.

Discussion

In sum, as depicted by Tables 4 and 5 as well as the results showing significant differences between the themes portrayed in comedies versus dramas, this study indicates that college students receive both prohealth and prodrinking messages and images through the entertainment television they consume. Unfortunately, results shown in Table 4 suggest that prodrinking messages are still the most prevalent source of information regarding alcohol use portrayed in entertainment television. However, Tables 4 and 5 highlight the appearance of alcohol-related, prohealth themes as well. These findings are consistent with the authors’ final hypothesis that although the majority of themes selected by participants would be prodrinking in nature, some E-E themes would be found within the programs.

Many programs, although more often dramas than comedies, provided a variety of prosocial and prohealth messages related to alcohol use (i.e., E-E). Some of the E-E themes identified within these programs addressed the effects of alcohol abuse on the user, the effects on nonusers, the consequences, as well as cues to action and general information regarding how to deal with alcohol abuse. Again, Bandura’s social cognitive theory indicates that incorporation of these types of themes is essential when attempting to induce learning and behavior change in viewers (Bandura, 1986; Kennedy et al., 2004; Trull, 2005).

More specifically, the results concerning the themes pertaining to the impact on nonalcohol-abusing characters are evidence of E-E incorporation in entertainment television watched by college students. Although approximately 26% of the participants indicated that there was not much impact on the nonalcohol-abusing characters in the show and 16% indicated that the nonalcohol-abusing characters found the drinking humorous, the remaining “negative themes of impact” were identified as being present in a program by at least 14% of participants or more. The concept of the nonalcohol-abusing characters being impacted is useful for E-E because an awareness of how inappropriate behavior can impact others is often a good motivator for attitude or behavior change related to substance abuse (Fields, 2007; Rosenstock, 1974).

In addition to themes, results showed that other potentially effective E-E concepts were in use within

TABLE 5

Percentage of Participants Reporting Themes of Impact on Nonalcohol-abusing Characters

<table>
<thead>
<tr>
<th>Theme</th>
<th>Percentage Reporting Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not impacted much</td>
<td>26$^a$</td>
</tr>
<tr>
<td>Upset/distressed</td>
<td>55$^b$</td>
</tr>
<tr>
<td>Forced to care for others</td>
<td>49$^b$</td>
</tr>
<tr>
<td>Annoyed by drinking</td>
<td>34</td>
</tr>
<tr>
<td>Embarrassed by the drinking</td>
<td>32$^b$</td>
</tr>
<tr>
<td>Emotionally/mentally abused</td>
<td>25</td>
</tr>
<tr>
<td>Ignored the drinking</td>
<td>18</td>
</tr>
<tr>
<td>Were abandoned</td>
<td>17</td>
</tr>
<tr>
<td>Found the drinking humorous</td>
<td>16$^a$</td>
</tr>
<tr>
<td>Were physically abused</td>
<td>14</td>
</tr>
</tbody>
</table>

$^a$Comedies significantly more likely to portray than dramas at $p < .05$

$^b$Dramas significantly more likely to portray than comedies at $p < .05$
the listed programs. For example, 50% of the television programs that participants listed dedicated more than three episodes to the topic of alcohol abuse and 78% of participants reported watching the shows at least occasionally. Again, it is important in E-E to draw out a storyline over several episodes and to create appealing characters that keep the viewer interested (Brinson & Brown, 1997; Kennedy et al., 2004; Klimmt et al., 2006; Papa et al., 2000; Parrott, 1995).

Unfortunately, however, the findings from the present exploratory study also suggest that how alcohol use is portrayed within entertainment television programming should continue to be addressed. For example, despite the finding that participants perceived 68% of the characters to be alcoholics, only 32% of the characters were treated, and only 13% of treatments were perceived by participants as effective. Also, within comedies—one of the two most-frequently listed genres on the survey—only 17% of the characters were treated. The significant differences between comedies and dramas in this study suggest that comedies may be used less often as a source for E-E. Future research should continue to examine the realistic portrayal of alcoholism and treatment within all genres. If further research reports similar findings, producers of television programs should strongly consider the principles outlined within Bandura’s social cognitive theory (Bandura, 1986, 2002) and Rosenstock’s (1974) health belief model. These theories support the importance of airing more accurate depictions of alcoholism and the severity of the disease, susceptibility, the impacts on others, benefits of change, cues for action, and successful and realistic treatment.

Results from this study also showed that the more participants drank, the less of an issue they found alcohol abuse to be in society. This information is alarming in that the health-belief model indicates that individuals are only motivated to change their health-related behaviors if they perceive the effects as serious and themselves as vulnerable (Rosenstock, 1974). Applying the health-belief model to the results suggests that these participants will be less likely to engage in attitude or behavior change unless targeted specifically.

Fortunately, however, the analysis from the present study does indicate that carefully planned E-E campaigns have the potential to impact the heaviest-drinking group. For example, as partially predicted, individuals who drank 7 or more drinks in one sitting were significantly more entertained by the identified programs than the individuals in the other three groups. Also, as predicted, the episodes were significantly more likely to keep the attention of all three groups of drinkers when compared to the nondrinkers. In other words, the show was significantly more likely to keep the attention of the participants who drink alcohol than those who do not drink. These data suggest that the heaviest drinkers are perhaps developing parasocial relationships (PSRs) with some of the characters on screen. Obviously the fact that the heaviest drinkers are more entertained and all drinkers are more attentive to the episodes discussing alcohol use indicates that, at the very least, some form of identification with the characters is occurring. If this is accurate, producers and researchers should continue to explore and monitor how best to present characters on television with whom college-aged drinkers can most easily relate, and who are most likely to influence them to drink responsibly.

In addition to monitoring the heaviest, and probably the most at-risk, drinking group, future research should continue to examine the general trends of E-E television programming on alcohol use as well as how E-E messages can successfully be transmitted through other media formats. Studies on movies and alcohol use have suggested that alcohol use in movies is more prevalent than in any other media (Brown & Walsh-Childers, 2002). Therefore, it is important to look at how E-E messages on alcohol use could be effectively integrated into other forms of media such as in movies, music, and the internet.

Despite the useful information gained from this study, future research should address some of its limitations. First, the present study used participants’ autobiographical memory for the second section of the survey. In order to eliminate concerns about the accuracy of participants’ memories, future researchers could conduct an experiment that shows specific, serialized E-E scenes to participants and then measures the impact on the participants. Additionally, future researchers should consider using a less-exploratory method by administering previously-created surveys with established norms.

If research on and application of E-E messages continues, it could play a significant role in helping to discourage alcohol abuse by college students. The present study has provided information about the use of alcohol by college students as well as how they perceive alcohol use. Specifically, the study provides useful insight into how college students perceive information about alcohol use as it is depicted in entertainment television. Finally, the results of the study provide an indication of the importance of Entertainment-Education programming.

References
Bandura, A. (2002). Social cognitive theory of mass communication. In J. Bryant & D. Zillmann (Eds.), Media effects: Advances in...


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APPENDIX

SURVEY

The following survey assesses how college students are impacted by the portrayal of alcohol use and abuse in entertainment television programs. Please answer the following questions as accurately and honestly as possible. Please do not put your name or any identifying information on this sheet in order to ensure that your responses are completely anonymous.

Age __________ Race /Ethnicity ____________ Gender ________

On average, how often do you drink alcohol? (Fill in the blank spaces with the number of times you drink during one of the time frames listed or indicate if you no longer drink alcohol. If you do not drink at all, place a zero in the blank spaces.)

_____ times/week _____ times/month _____ times/year _____ I use to drink but quit

If you do drink alcohol, how many alcoholic drinks do you consume in one sitting/at one time?

1 2-3 4-6 7-9 10 or more

Do you feel alcohol abuse is an issue in our society?

Not at all 1 2 3 4 5 6 7 Very severe issue

How do you define alcohol abuse?

Do you know anyone personally who has/does abuse(d) alcohol?

Yes No Not Sure

If yes, how could you tell they abuse(d) alcohol?

Think of an entertainment television show (comedy, drama, reality television, soap opera, or other) that portrayed alcohol abuse as a health-related issue for one or more of the characters. By “health-related” we mean that the alcohol use is somehow related to a character’s physical, emotional, or mental state or to their general well being.

Name of television show: ______________________________________

Type of television show (Circle One):

Comedy/Sitcom Drama Reality TV Soap Opera Other_______________

Do you watch this show regularly?

No Usually Not Occasionally More often than not Almost always

About how many episodes were dedicated to this alcohol-related topic (Circle one)?

1 2-3 4-5 6-7 8-9 10 or more Entire season

Overall, how entertaining did you find these episode(s)?

Not at all entertaining 1 2 3 4 5 6 7 Very entertaining

Overall, how well did these episode(s) keep your attention?

Not very well 1 2 3 4 5 6 7 Very well

About how long ago did you watch this/these episode(s)?

_____ Within last month _____ A few months ago _____ Last year _____ More than one year ago _____ Not sure

Gender of the character abusing alcohol?

Male Female Approximate age ______

How could you tell they abused alcohol?

Would you say the person abusing alcohol was an alcoholic?

Definitely yes Probably yes Not sure Probably not Definitely not

Was this character treated for alcohol abuse?

Yes No Not Sure

If yes, how were they treated?

Was the treatment effective?

Yes No Not Sure

How could you tell?
If the person was not treated, do you think they should have received treatment (Circle number)?

No 1 2 3 4 5 6 7 Yes

Why or why not?

What themes relating to alcohol were included in the program? (Check all that apply)

____ Increase in awareness of alcohol abuse
____ Treatment options for alcohol abuse
____ Emotional support for abusers
____ Emotional support for relatives/friends of abuser
____ Increase in knowledge about alcohol abuse
____ Change in attitude about alcohol abuse
____ Change in perception of who drinks
____ Change in perception of why people drink
____ Suggestions for communicating about drinking
____ Need for moderation when drinking
____ Need for designated drivers
____ Others? ____________________________

____ Drinking as a normal activity
____ Drinking as a fun recreational activity
____ Drinking to relieve stress
____ Drinking to avoid responsibility
____ Drinking to loosen up
____ Drinking to forget
____ Drinking to fit in socially
____ Drinking to avoid emotions
____ Unplanned sexual activity
____ Physical health issues as a result of drinking
____ Emotional issues as a result of drinking

How were the nonalcohol-abusing characters of the program impacted? (Check all that apply)

____ They were not impacted much
____ They were abandoned
____ They found the drinking humorous
____ They ignored the drinking
____ They were embarrassed by the drinking
____ Other? ____________________________

____ They were annoyed by the drinking
____ They were upset or distressed
____ They were emotionally/mentally abused
____ They were physically abused
____ They were forced to take care of others (including the person drinking)

Did the program provide any tips on getting additional information or support following the program? (For example, a hotline number or website) If so, what was provided

Was this program personally meaningful to you? If so, how?

What (if any) action(s) did you take following the program? (Check all that apply)

____ Called hotline/visited website
____ Intended to drink less
____ Actually drank less
____ Used a designated driver
____ Sought help
____ Other? ____________________________

____ Encouraged others to seek help
____ Changed attitude/tolerance of alcohol abuse
____ Thought about television show
____ No action
____ Took another drink

What suggestions do you have as to how this program could be changed to better communicate the issue of alcohol abuse and to promote a reduction in alcohol abuse within society?