

# Alcohol Prevention Children Love to Learn!

The New Mexico Media Literacy Project

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*A single 45 minute presentation deconstructing alcohol ads was found to significantly change mid-school students attitudes concerning identifying with general advertisements and the social expectancies about the perceived benefits of drinking. No significant changes were found when testing for the realism of general advertisements or the realism of alcohol ads.*

## Literature Review

National PTA's, Teachers' professional organizations, and the President have all endorsed media literacy. Children who understand that the media are not real are less likely to adopt unhealthy attitudes or behaviors that are depicted in the media (1,2). Media education represents a new and exciting approach to protecting children and adolescents from the unhealthy effects of media—an approach which is not dependent on Madison Avenue's willingness to accept responsibility for its advertising.

A media-literate child or adolescent can access, analyze, evaluate, and even produce media. Many studies suggest that such education can, in fact, produce less vulnerable children and adolescents (3,4,5). Studies of media literacy programs which attempt to educate children about advertising, for example, have been shown to be effective in increasing their critical viewing skills of advertising (6,7). Slater, *et. al.* found that classes about resistance to advertisers' persuasive appeals have both short and long term effects. Exposure to such classes predicts cognitive resistance and counter-arguing of persuasive advertisements months and years after completion of the class (8). Many other countries, including Canada, Great Britain, Australia, and several Latin American nations have successfully incorporated media education into school curricula (2).

A Prevention Research Center study found a direct correlation between the amount of exposure and the reception children give to alcohol ads and the incidence of their drinking (10). Media literacy training exposes the techniques alcohol companies use to target adolescents, building their resiliency. A recent study conducted at Washington State University found a change in children's intention to drink alcohol after a media education program. It showed that 3<sup>rd</sup> graders given media literacy training around alcohol ads showed significant attitudinal changes. They were less likely to rate alcohol ads positively, were less attracted to alcohol promotional material, and showed greater disdain for alcohol commercials (9). Follow-up work has found that adolescents make drinking decisions using a progressive, logical decision-making process that can be overwhelmed by wishful thinking. The potential risk for underage drinking from frequent exposure to persuasive alcohol portrayals via late-night talk shows, sports, music videos, and prime-time television is moderated by parental reinforcement and counter-reinforcement of messages. Austin recommends that interventions acknowledge and counter the appeal of desirable and seemingly realistic alcohol portrayals in the media and alert parents to the potential for unintended adverse effects from media consumption (15).

As with alcohol prevention, research using media literacy to prevent eating disorders is in its infancy. Stormer & Thompson found (11) and replicated (12) that very brief instruction in media literacy given to women in college produced

significant pre-to-post program reductions in appearance- and weight-related anxiety, and in idealization of the slenderness embodied by fashion models and actresses. Irving, DuPen, and Berel found that high school girls viewing a media literacy film on body image and discussing it reported less internalization of a “thin” beauty standard and lower perceived realism of media images than did their comparison group (16).

Media literacy education may also reduce children’s susceptibility to violence. A study conducted with English 8-9 year-olds demonstrated changes in children’s comprehension and awareness of media violence (13). In 1983, Huesmann, *et al.* found statistically significant changes in children’s attitudes about media violence using media literacy. Their treatment consisted of two training sessions within a 2-week period where third graders wrote essays for a video about how harmful television violence can be (14).

## Method

Presentations were designed using examples of alcohol ad deconstructions created by the New Mexico Media Literacy Project (NMMLP). These can be found on the CD-ROM *Reversing Addiction*, published by the project. The test instrument was based on an instrument developed by Austin (9), and piloted at parochial schools in Albuquerque during the spring of ’99.

Santa Fe, NM has four middle schools. The school with the greatest socio-economic diversity was chosen as a comparison. It administered pre and post tests in cycle with the other three schools, but did not receive treatment until after the completion of the post test. One or two teachers were identified from each school and paid a stipend to act as an “Adbusters Club” sponsor. Sponsors received a half day of media literacy training.

Each school then scheduled assemblies for their student body to attend a 45 minute, state of the art, multimedia presentation describing how alcohol ads are created and what is their intended purpose. The ads were projected onto a large screen and deconstructed in detail, some frame by frame. At the close of these presentations, students were encouraged to join their Adbusters Club. Between 10 and 50 students did so at each school.

Clubs met 6 times after school for an hour. Each club was tasked to produce a 30 second PSA to prevent drinking and driving. The local cable television company was contracted to film and edit the spots, and air them for 2 months on MTV, TNT, USA and Nickelodeon. Excited at the prospect of working with children, the cable company’s production staff meet with each club at their meeting prior to the spots being filmed. Editorial content was left completely up to each club, although club sponsors were encouraged not to attack alcohol producers and or urge political action. These recommendations were made to

insure that government funds were not be used for lobbying and to avoid jeopardizing the goodwill and cooperation in other efforts shown by the local beer distributor.

### *Sampling and Diagnostic Procedures*

The New Mexico Media Literacy Project evaluated a single, 45 minute media literacy training using items for a pretest and posttest that, for the most part, came from Washington State University's Erica Austin's research on the Message Interpretation Model (MIP) (17). Subscale scores were examined rather than using the full-scale score for the 23-item instrument, since the scale as a whole did not seem sensitive enough to pick up differences between treatment and comparison groups, and the subscales more specifically denoted how the NMMLP's training positively impacts middle school children. The theory that Austin tested holds "that internalization of a message can range from the belief that it may be representative of social norms, to the belief that it represents the individual's own experience, to the belief that it represents a reality to which an individual might aspire" (p. 9). According to the MIP mode, internalization of a persuasive message occurs at a number of increasingly rigorous levels using a combination of logical and emotionally based processing strategies. The levels include desirability, perceived realism, norms and perceived similarity, identification, expectancies, and behavior. This study examined the attitudes of perceived desirability, perceived realism, identification, and social expectancies. All students at each of the schools were tested and then samples of classrooms were taken from each of four mid-schools in the Santa Fe area. A little more than 100 students were analyzed from each of the four schools. One school was the comparison school while the other three served as treatment schools.

### **Results**

There was complete pre and posttest data for 247 treatment and 68 comparison 7<sup>th</sup> and 8<sup>th</sup> graders from four Santa Fe middle schools. Some pretests and posttests were unusable because the student was absent from one or the other of the tests. About 486 pretests had been collected, but the second treatment group (Ad Busters) were not used in this group because of the small number of participants (N = 17) and the 6<sup>th</sup> grade treatment group (N =50) was not used in the major analyses because there was no 6<sup>th</sup> grade comparison group. Additional analyses will be done on them at a later time.

Standard diagnostic techniques to clean data of any outliers were used before analyses were run. Three outliers were eliminated from the pretest scores and three from the posttest scores because their standardized score was three or more standard deviations above or below the mean. Two students, in both the pretest

and the posttest, had marked almost all the items totally opposite from what would have been desirable. On the pretest one female wrote-in “hot” for her ethnicity. Two of the students whose posttest scores were eliminated wrote “alien” or “none” for their ethnicity. The student who wrote “alien” also commented : “Most (items) are the same thing in different words. Get something new.” Standardizing raw scores helps one to eliminate participants who have responded in a haphazard or alienating fashion so that the results are less biased. For the four subscales: perceived desirability (6 items); perceived realism (6 items); identification (4 items); and social expectancies (7 items) students had to respond to approximately 75% of the items to get a valid score. If they had responded to fewer items than 75% their data was not used.

Item analysis using Cronbach’s alpha to look at the intercorrelations of the items on each of the subscales indicated that the identification and social expectancies scales were reliable especially since they were attitude scales which usually are much lower than, say, achievement scales (see Table 1). The reliability of the perceived desirability scale was a little lower than would be hoped, but part of the problem is that all these scales had relatively few items. Items were not dropped from perceived realism since it would only have increased the alpha to .63 with 1.00 indicating perfect correlations between all items.

Table 1: Reliability Analyses of Subscales

<b>Subscale</b>	<b>Alpha</b>	<b>N</b>	<b>Items</b>
Perceived desirability	.70	375	6
Perceived realism	.60	380	6
Identification	.84	383	4
Social expectancies	.84	379	7

### *Subscales*

For the subscales themselves a high score was more favorable which meant disagreeing with most of the 23 items. Items 7 and 21 were recoded so that they were consistent with the other items. The scores ranged from 1 to 4 and the average item score was used for each subscale which meant subscale scores ranged from 1 to 4.

### *Analyses & Interpretation*

Four 2X2 mixed ANOVA designs using one repeated factor (time) as represented by the pretest and the posttest scores and a group variable (treatment vs. comparison), as well as the interaction between them, were analyzed. The GLM command in SPSS 10.05 was used to do these analyses. There were significant differences on each of the subscale scores, and, for the most part, they were what were expected.

There was a significant difference for time,  $F(1, 313) = 11.29, p < .001$ , with time explaining only 4% of the possible 100% of the variance in pretest/posttest scores for perceived realism. Neither the interaction between time and group, nor the effect of group was significant, so nothing certain can be said about the treatment versus the comparison group. Homogeneity of variance between the groups, which is an important assumption to meet for ANOVA designs, was met for both the repeated factor (Box's M) and group (Levene's test). No difference was found on the pretest scores for perceived realism which indicates that, essentially, the two groups were starting from similar attitudes. This is important to check to show equivalent groups when not using random sampling which is always impossible in a school environment.

It's hard to explain why both groups experienced a similar improvement in the attitude about perceiving the unreality in advertising, and beer advertising specifically unless an internal threat to validity like maturation or an external threat to validity like just being exposed to the pretest sensitized even the comparison students to critically examine the fraud in advertising.

Items for perceived realism included:

1. Ads on TV tell the truth.
2. TV is a realistic source of information for what makes people popular.
9. TV is a realistic source of information for what is trendy.
12. Companies who make ads only want me to buy things I need.
14. TV is a realistic source of information for how teenagers act.
23. TV is a realistic source of information for what makes people successful.

At least part of the reason for no difference in the perceived realism of the treatment and comparison groups could be because of the low alpha coefficient (.60) of this subscale. The items may be vague and may need more specificity and more variety.

For perceived desirability, the assumption of homogeneity of variance was fine for the repeated factor as well as the group variable, although there was a pretest difference with the treatment group ( $M = 2.24, SD = .54$ ) having a higher (more favorable) score on their attitude of perceived desirability than the comparison group ( $M = 2.08, SD = .46$ ). In other words they were more critical of the unreality in TV ads even before the treatment. As with the previous analysis,

there was a significant difference for time with the perceived desirability subscale,  $F(1, 313) = 3.87, p = .05$ , only explaining 1% of the variability in the change between the pretest and the posttest.

Items for perceived desirability included:

- 3. People in beer ads seem happy.
- 7. Bad things often happen to people shown drinking alcohol on TV.  
(reverse-coded)
- 10. People drinking alcohol in beer ads are attractive.
- 16. People drinking alcohol in beer ads seem popular with their friends.
- 19. People drinking alcohol in beer ads seem to be having fun.
- 21. People drinking alcohol on TV seem to have a lot of problems.  
(reverse-coded)

The most interesting and productive findings were with the identification and social expectancies subscales. There was a significant interaction difference between group and time for identification, which is the “desire to emulate a portrayal because it will bring the positive results shown in the ads” (17, p. 12),  $F(1, 313) = 5.65, p = .018$ , explaining 2% of the variance in the identification scores. Simple effects tests to determine specifically where in the interaction the significance was, indicated that there was a significant difference for the treatment group with its posttest score ( $M = 3.03, SD = .63$ ) being higher than its pretest score ( $M = 3.11, SD = .70$ ). In other words, there was a more encouraging attitude for the mid-schoolers as far as not identifying with the people in ads. There was not a difference in pretest and posttest scores for the comparison group. Simple effects tests for the posttest scores indicated that the treatment group scored higher ( $M = 3.11, SD = .70$ ) than the comparison group ( $M = 2.82, SD = .61$ ). The fact that there were no pretest differences between the treatment and the comparison groups helps to confirm the significant growth in attitude for the treatment group over the comparison group. There was also a significant difference in the pre/posttest change for group,  $F(1, 313) = 5.78, p = .017$ , explaining 2% of the differences in the groups. As graph 2 shows, treatment students, on average, increased their scores .08 which was almost one whole movement on the 1-4 Likert scale, while the comparison decreased their identification score (-.125). The homogeneity assumption was again met for both the repeated factor and group.

Identification items were:

- 4. I wish I could do things that people in ads do.
- 11. I wish I could look like people I see on TV.

17. I wish I could be like people on TV programs.
22. I wish I could be like people in TV ads.

For the last subscale, social expectancies, which is the expectation that alcohol ads leave one with, there was a significant interaction between time and group,  $F(1, 313) = 8.18, p = .005$ , explaining 3% of the variance in the social expectancies scores. Again, following up the interaction with simple effects to determine where the significant differences were, indicated that there was a significant difference between the pre and posttest scores of the comparison group with the posttest scores being lower ( $M = 3.04, SD = .62$ ) than their pretest scores ( $M = 3.23, SD = .52$ ). Somehow, over the pre/posttest period the comparison group became more accepting of the explicit and implicit promises made by alcohol ads. There was no difference between the pre ( $M = 3.08, SD = .63$ ) and posttest scores ( $M = 3.09, SD = .65$ ) of the treatment group. The groups did not differ on their pretest scores which is a good sign, but they did not differ on their posttest scores either as indicated by graph 3. There was also a significant difference between the two groups on the pre and posttest differences but this has been interpreted more specifically in the above text under the interaction effect.

Social expectancies items were:

5. Drinking alcohol makes you feel happy.
6. Beer is a good reward after a hard day.
8. Drinking together is a sign of a good relationship.
13. Drinking alcohol makes a party more fun.
15. Drinking alcohol helps you fit in.
18. You find beer at a good party.
20. Drinking is a good way to relax.

## Discussion

According to these data, the media literacy training implemented by the NMMLP appears to do its best job in helping change mid-schoolers attitudes so that they do not identify as readily with the images and portrayals in alcohol ads. This finding could be important for preventing underage drinking since Grube's research has found that the more children like alcohol ads, the more likely they are to drink (10). These findings are preliminary and additional analyses will be done on the small subsample of 6<sup>th</sup> graders, as well as on the Ad-Busters group which was too small ( $N = 17$ ) to include as an extended treatment group in these analyses.

Limitations of this study which could improve the findings in the future if a similar design were used, are to give the teachers who collect the data more

training in the importance of following accepted procedures for data collection so that there is less unsystematic error in the data. Also, instrument revision of the perceived realism and perceived desirability items could help with additional information regarding changing mid-schoolers attitudes about alcohol ads.

## References

1. Committee on Communications, American Academy of Pediatrics. Media education (policy statement). *Pediatrics* 1999, in preparation.
2. Brown JA. Television "critical viewing skills" education: Major media literacy projects in the United States and selected countries. Hillsdale, NJ: Lawrence Erlbaum, 1991.
3. Huston AC, Donnerstein E, Fairchild H et al: Big world, small screen: The role of television in American society. Lincoln, NE: University of Nebraska Press, 1992.
4. Singer DG, Zuckerman DM, Singer JL. Helping elementary school children learn about TV. *J Communication* 1980; 30:84-93.
5. Dorr A, Graves SB, Phelps E. Television literacy for young children. *J Communication* 1980; 30:71-83.
6. Roberts DF, Christenson P, Gibson WA, Moser L, Goldberg ME. Developing discriminating consumers. *J Communication* 1980; 30: 94-105.
7. Feshbach S, Feshbach ND, Cohen SE. Enhancing children's discrimination in response to television advertising: The effects of psychoeducational training in two elementary school-age groups. *Developmental Review* 1982; 2:385-403.
8. Slater, MD *et. al.* (1996). Adolescent counter arguing of TV Beer advertisements; Evidence for effectiveness of alcohol education and critical viewing discussion. Journal of Drug Education, Vol. 26, no. 2: pp. 143-158.
9. Austin EW, Johnson KK. Effects of general and alcohol-specific media literacy training on children's decision making about alcohol. *J Health Communication* 1997; 2:17-42.

10. Grube JW, Wallach, L. Television Beer Advertising and Drinking Knowledge, Beliefs, and Intention among Schoolchildren. *American Journal of Public Health*. February 1994, Vol. 84. No 2.

11. Stormer, SM & Thompson, JK (1995, November) The effect of Media Images and Sociocultural beauty ideals on college-aged women: A Proposed Psychoeducational Program. Paper presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Washington, DC.

12. Stormer, SM, Thompson, JK, & Huff B (1998, November) An evaluation of two media-focused psychoeducational programs for body image: Preliminary findings. Paper presented at the annual meeting of the Association for the Advancement of Behavior Therapy.

13. Gunter B. The question of media violence. In: Bryant J, Zillmann D (eds). Media effects: Advances in theory and research. Hillsdale, NJ: Lawrence Erlbaum, 1994, pp. 163-211.

14. Huesman LR, Eron LD, Klein R, Brice P, Fischer P. Mitigating the imitation of aggressive behaviors by changing children's attitudes about media violence. *J Personality Social Psychology* 1983; 44:899-910.

15. Austin, EW, Pinkleton, BE, Fujioka, Y. The Role of Interpretation Processes and Parental Discussion in the Media's Effects on Adolescents' Use of Alcohol *PEDIATRICS* Vol. 105 No. 2 February 2000, pp. 343-349.

16. Irving, L, DuPen, J, Serel, S. A Media Literacy Program for High School Females. *EATING DISORDERS* 6:119-131, 1998.

17. Pinkleton, B. E., & Austin, E. W. (1999). Effects of perceived beer ad & PSA quality on high school students' alcohol-related beliefs and behaviors. Paper presented at the health Communications Division of the International Communication Association, San Francisco.