

Original article

# How does alcohol advertising influence underage drinking? The role of desirability, identification and skepticism

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Manuscript received January 7, 2005; manuscript accepted August 30, 2005.

## Abstract

**Purpose:** To investigate, using an information processing model, how persuasive media messages for alcohol use lead to concurring beliefs and behaviors among youths.

**Methods:** Data were collected in 2000–2001 using computer-assisted, self-administered interviews with youths aged 9–17 years ( $n = 652$ ).

**Results:** Latent variable structural equations models showed that skepticism was negatively associated with positive affect toward alcohol portrayals and positively with the desire to emulate characters portrayed in alcohol advertisements. These, in turn, predicted expectancies and liking of/desire for beer toys and brands, which predicted alcohol use. Parental guidance decreased alcohol use directly and indirectly by lessening influences of positive affect toward advertising.

**Conclusions:** Media alcohol portrayals influence children's drinking through a progressive decision-making process, with its influence underestimated by typical exposure-and-effects analyses. © 2006 Society for Adolescent Medicine. All rights reserved.

## Keywords:

Adolescents; Alcohol; Youth; Media; Advertising; Decision-making

Although we know that associations exist between persuasive media messages and young people's drinking decisions [1–5], we know surprisingly little about how these messages affect youths' decision making. We do know that awareness of alcohol advertising is associated with favorable beliefs about drinking and, in turn, with intentions to drink as an adult [2]. But awareness does not necessarily lead to persuasion because persuasive messages can be rejected or can backfire [6–8].

This study investigates how persuasive messages lead to concurring beliefs and behaviors. According to the Message Interpretation Process (MIP) model [9–12], individuals progressively internalize messages using a combination of logically and emotionally dominated processing strategies. The model, supported by decision-making theory [13,14], social cognitive theory [15], and dual-process theories of persuasion

[16], proposes that certain responses to messages interrelate in ways that progressively lead to behavioral decisions [9–12]. If a portrayal corresponds closely to personally relevant reference groups, for example, children will be more likely to wish to emulate the portrayal [17–19]. If children admire a mediated reference group such as models in an advertisement, they will tend to expect that imitating the models' behaviors will bring positive results [11,17–19].

This study applied the MIP's emotionally dominated route to decision making (Figure 1) to examine how positive affect evoked by alcohol advertising influences youths' decision making and how skepticism can help reduce the persuasive power of positive affect. The model shows how positive affect can bias more logical processing (based on reality testing), leading individuals to draw conclusions based on wishful thinking (i.e., affective processing) [10–12,17–21]. Ultimately, this should lead to greater liking of beer brands and beer-themed merchandise (e.g., toys with beer logos), in turn leading to a greater likelihood of choosing to own a beer-themed product or, particularly among older youth, of consuming alcohol.

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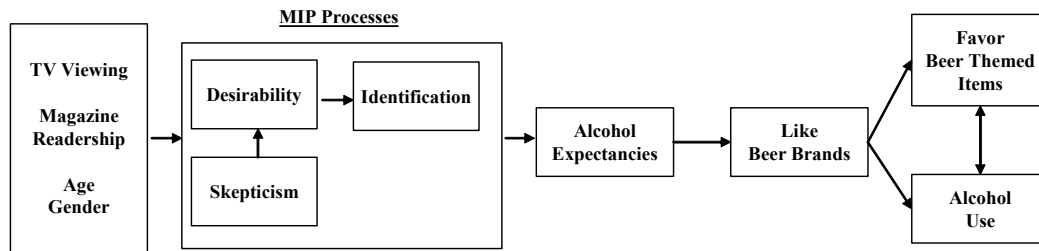


Figure 1. The hypothesized message interpretation process model (affect-oriented route).

The MIP model also holds that logic-based processing can reduce the impact of emotionally dominated processing [21–23]. This is illustrated by an apparent contradiction recently found in experimental tests of the model. Media literacy interventions intended to increase skepticism also increased perceptions of advertising desirability, even while they reduced positive attitudes toward advertising and susceptibility to peer influences [24,25]. This coincides with studies showing that heightened awareness of persuasive tactics increases skepticism and decreases susceptibility [25,26]. Accordingly, this study expected to find that skepticism increases reports of desirability even though desirability positively predicts identification (i.e., emulation). If the logical basis of desirability has been strengthened through skepticism, the predictive power of MIP desirability on identification should decrease.

This study also incorporates media exposure to test how decision-making processes posited by the MIP model mediate the potential effects of exposure to alcohol advertising. This contrasts the current model with an alternative view, that exposure to media that frequently glorify or portray alcohol consumption by itself produces beliefs consistent with the portrayals [27]. Finally, this study examines how parental guidance reduces the potentially persuasive effects of alcohol advertising, in support of the view that parents can reduce the persuasive effects of media messages [17,20]. Counter-reinforcement of persuasive media messages by parents should increase young people's skepticism toward the media portrayals, reduce message desirability, reduce identification, and reduce liking for beer brands and beer-themed goods.

## Methods

### Sampling and data collection

Analyses were based on the Wave one data of a three-year longitudinal study (2000–2003) of youths aged 9–16 years at baseline from nine counties in the San Francisco Bay Area. A random-digit-dial (RDD) method and brief parental screening interview established eligibility. One child was selected randomly per household. The sample was stratified by age and gender to fill 16 quota cells (eight age  $\times$  two gender). Of 786 youth recruited, 652 participated. Data were collected in En-

glish via computer-assisted, in-home, self-administered 45–60-minute surveys after written consent was obtained during the home visit.

### Measures

**Television viewing.** Respondents reported hours of television they typically watched on each weekday (Monday through Thursday), Friday, Saturday, and Sunday. A TV-hour indicator was constructed from the sum of daily TV viewing in a week. Respondents indicated how often in the past 12 months (1 [never]–10 [5 or more times a week]) they watched television sports. Finally, seven primetime sitcoms/dramas, indicated by Nielsen data as capturing a high percentage of the 13–17-year-old audience, were selected. Respondents indicated whether they watched “all or most of the way through” each of them in the past 30 days. An indicator was constructed for the number of programs watched (0–7).

**Magazine readership.** Respondents indicated on a four-point scale (never–very often) how often they read magazines in general.

**Skepticism.** Respondents indicated their level of agreement on four-point scales (disagree strongly–agree strongly): “Alcohol ads make drinking seem better than it really is” and “Companies that make ads want me to buy things that I don’t really need.” A mean score represented overall skepticism.

**Desirability.** Respondents indicated their level of agreement on four-point scales (disagree strongly–agree strongly) whether: “The women in alcohol ads are always good looking,” “Men in beer ads are strong,” and “People drinking beer in TV ads seem to have lots of friends.” Internal consistency of these measures (Cronbach alpha) was .78.

**Identification.** Respondents answered, on four-point scales (disagree strongly–agree strongly), whether: “I wish I were as good looking as most people in the beer ads,” “I want to have as much fun as the people in the beer ads do,” and “I want to have as many friends as the people in the beer ads do.” Cronbach alpha = .80.

**Alcohol expectancies.** Respondents indicated, on a series of four-point scales, how likely (very unlikely–very likely) it

was, for them personally, that having three or four drinks of any alcohol would lead to positive consequences (feel relaxed, feel happy, feel friendly, feel confident, feel outgoing, have fun, feel easy with expressing feelings, and feel more at ease around people) and negative consequences (get into trouble with the police, get a hangover, harm health, out of control, do something regret later, feel sick, and get into fistfights). Cronbach alpha was .90 for the positive expectancy scale and .84 for the negative expectancy scale.

*Like beer brands.* After viewing five 30-second television advertisements for five beer brands, respondents indicated how much they like or dislike each brand of beer, on four-point scales (dislike it a lot–like it a lot). Cronbach alpha = .91.

*Favor beer-themed items.* After viewing four pictures of goods (including T-shirt, playing cards, model plane, and

basketball) that displayed beer brands or logos, respondents indicated how much they would like to own each item on a five-point scale (not at all–very much). Cronbach alpha = .81. Also, after viewing four pictures of paired goods (T-shirt, playing cards, model plane, and basketball) that included one item with a soft drink brand/logo and another one with a beer brand/logo, respondents indicated which one they would prefer to have for their birthday. A sum score (0–4) indicated the number of times a beer-themed item was selected.

*Alcohol use.* Frequency of drinking alcohol in the past 12 months was ascertained using a 10-point scale (not at all–everyday). Beverage-specific frequency and usual quantity consumed in the past 30 days were also asked for four categories of alcoholic beverages (beer and malt liquor, wine cooler, wine, and liquor). Because wine consumption was low for this sample, consumption measures of wine and

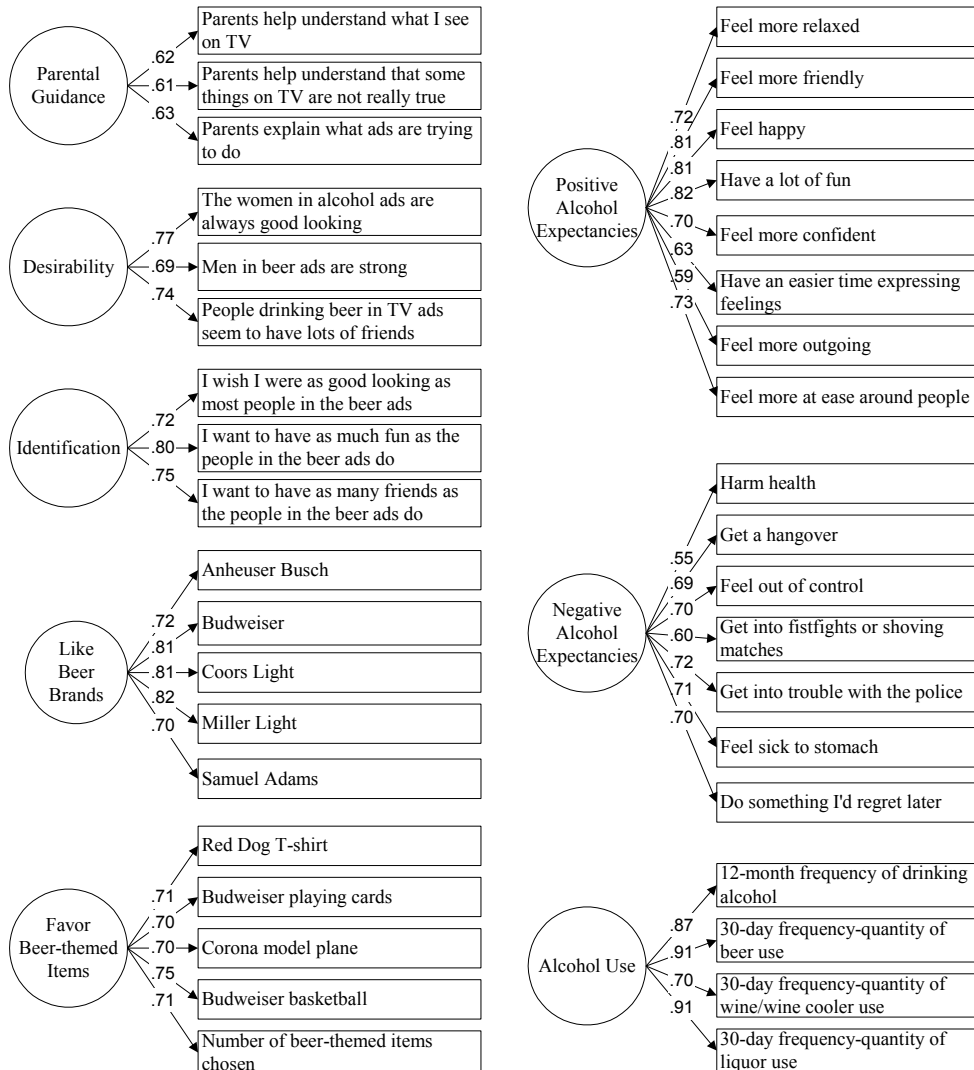


Figure 2. Latent variables and standardized factor loadings.

wine coolers were combined. Cronbach alpha was .89 for these drinking measures.

**Parental guidance.** Respondents indicated how often, on a three-point scale (never–often), their parents talked with them to (a) help them understand what they see on television, (b) help them understand that some things on television are not really true, and (c) explain to them what ads are trying to do. Cronbach alpha = .65.

*Demographic characteristics* included age and gender.

## Results

### Sample characteristics

The sample consisted of 53% males; 47% Caucasian American, 20% Latino American, 10% Asian and Pacific Islander American, 8% African American, 2% Native American, and 13% multi-ethnicity and ethnicity unknown. Their age ranged from 9 to 17 years (mean [SD] = 12.8 [2.21]). About 23% reported drinking alcohol in the past 12 months and 15% reported alcohol use in the past 30 days, with no significant gender differences. Few of the youth aged 9–11 ( $n = 207$ ) reported alcohol use: three respondents reported past-12-month use and one reported past-30-day use. In contrast, 31% of those aged 12–17 reported past-12-month use and 21% reported past-30-day use.

### Measurement models

The MIP model was tested using a latent variable structural model (maximum likelihood) implemented through EQS software [28]. Missing data were handled using the EM imputation method in EQS. A grand measurement model was first specified using data from the total sample. Eight latent variables were specified: parental guidance, desirability, identification, positive alcohol expectancies, negative alcohol expectancies, liking beer brands, favoring beer-themed goods, and alcohol use. No cross-factor loading was allowed. No error covariance

was added to the model. Because the data were not normally distributed, robust estimates of the standard errors were requested. Finally, per Hu and Bentler's recommendation [29], a cutoff value close to .95 for comparative fit index (CFI) and a cutoff value close to .06 for root mean squared error of approximation (RMSEA) were used to indicate good model fit. The analyses showed that the measurement model fit the data adequately (CFI = .928, RMSEA = .042; Figure 2). In addition, the correlations between constructs in the MIP model were in the right directions (Table 1).

### Cross-gender group comparison

This grand measurement model was then applied to males and females and the two measurement models were solved simultaneously without any equality constraint in factor loadings across the two models and later with all possible cross-group equality constraints. These two analyses represent the least and most restrictive constraint assumptions. The unconstrained gender-group model fit the data adequately (CFI = .917, RMSEA = .031), as did the fully constrained model (CFI = .919, RMSEA = .031). Multivariate Lagrange Multiplier (LM) tests indicated that out of the 30 equality constraints, only one was not reasonable ( $p = .012$ ). The two models thus appeared to fit the data equally well; the issue of gender differences in factor loadings thus becomes less important. The further cross-gender group analyses were conducted without any equality constraint in factor loadings.

### Cross-age group comparison

This grand measurement model also was applied to two age subgroups (i.e., ages 9–11 vs. ages 12–17), but with no alcohol use variables because the 9–11-year-olds consumed almost no alcohol. The unconstrained age-group model fit the data adequately (CFI = .923, RMSEA = .031), as did the fully constrained model (CFI = .916, RMSEA = .032), although less well than the unconstrained model. Releasing the eight unreasonable equality constraints, indicated by the

Table 1  
Correlations between the constructs in the MIP model

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. TV hours per week	1.00												
2. TV sports	.12**	1.00											
3. Primetime TV	.22***	.09*	1.00										
4. Magazine readership	.05	.15***	.14***	1.00									
5. Parental guidance	.06	.07	-.07	-.06	1.00								
6. Skepticism	-.10**	.08	.03	.15***	.05	1.00							
7. Desirability	-.12*	.06	.14***	.17***	-.19***	.50***	1.00						
8. Identification	-.02	.14**	.18***	.12*	-.21***	.25***	.55***	1.00					
9. Positive expectancies	-.01	.05	.22***	.13**	-.35***	.20***	.46***	.46***	1.00				
10. Negative expectancies	.01	.12*	.00	.04	.19***	.22***	.03	-.09	-.20***	1.00			
11. Like beer brands	.02	.15***	.17***	.08*	-.26***	.06	.20***	.39***	.44***	-.22***	1.00		
12. Favor beer-themed items	.13**	.28***	.03	.03	-.27***	.06	.18***	.31***	.29***	-.17***	.56***	1.00	
13. Alcohol use	-.04	.00	.08	.06	-.32***	-.02	.14***	.16***	.43***	-.37***	.37***	.30***	1.00

MIP = Message Interpretation Model.

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

Table 2  
Significant direct effects in the structural models for males and females

Predictors	Males	Females
<b>Alcohol use</b>		
Positive alcohol expectancies	.21***	.23***
Negative expectancies	-.24***	-.26***
Like beer brands	.20***	.18***
Parental guidance	-.15***	-.19***
R <sup>2</sup>	.29	.31
<b>Favor beer-themed items</b>		
Like beer brands	.46***	.58***
TV hours	.10**	.14**
Watch TV sports	.10**	.14**
Parental guidance	-.12***	-.23***
R <sup>2</sup>	.28	.46
<b>Like beer brands</b>		
Identification	.20***	.22***
Positive alcohol expectancies	.30***	.37***
Negative alcohol expectancies	-.15***	-.18***
Watch TV sports	.08*	.09*
R <sup>2</sup>	.24	.32
<b>Positive alcohol expectancies</b>		
Desirability	.16**	.14**
Identification	.26***	.24***
Parental guidance	-.16***	-.19***
Watch primetime TV	.11**	.10**
Age	.25***	.35***
R <sup>2</sup>	.40	.42
<b>Negative alcohol expectancies</b>		
Skepticism	.18**	.39***
Identification	-.11*	-.10*
Watch TV sports	.12**	.11**
Age	-.19***	-.16***
R <sup>2</sup>	.08	.16
<b>Identification</b>		
Desirability	.57***	.52***
Watch primetime TV	.12**	.11**
R <sup>2</sup>	.35	.30
<b>Desirability</b>		
Skepticism	.45***	.42***
Parental guidance	-.23*** <sup>a</sup>	-.06 <sup>a</sup>
Watch primetime TV	.11**	.12**
TV hours	-.11**	-.12**
Age	.25***	.25***
R <sup>2</sup>	.43	.34
<b>Skepticism</b>		
TV hours	-.12***	-.14***
Read magazines	.10**	.12**
Parental guidance	.11**	.16**
Age	.21***	.22***
R <sup>2</sup>	.05	.10

Note: Cell coefficients are standardized regression coefficients.

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

<sup>a</sup> Coefficients that are statistically different at  $\alpha = .05$ .

LM tests, slightly improved the model fit (CFI = .924, RMSEA = .030). The released equality constraints included three factor loadings in positive expectancies, three in favoring beer-themed items, one in desirability, and one in liking beer brands. Because both models fit the data equally well, the further cross-age group analyses were conducted

twice: without any and with some equality constraints in factor loadings.

### Structural models

Structural models were specified according to the MIP theory (Figure 1). Overall TV hours, viewing of primetime television programs and TV sports, magazine readership, parental guidance, age, and gender were exogenous predictors of the MIP processes and ultimate outcomes (i.e., favoring beer-themed items and alcohol use). Exogenous variables were allowed to freely correlate with each other. LM tests were used to help ascertain what parameters (i.e., structural paths) could be added to improve model fit and Wald tests were used to ascertain where parameters could be dropped without worsening model fit, until fit indices showed an adequate fit.

### Cross-gender group comparison

Structural models were first fit separately for males and females. Structural paths significant in one model but not in the other were added to the other model to make the two models identical. Multi-group analyses then were undertaken by constraining each of the path coefficients to be equal across the male and female models. The unreasonable equality constraints indicated by the multivariate LM tests were subsequently released. The final model of this cross-gender group comparison fit the data adequately (CFI = .911, RMSEA = .029). Table 2 presents the unstandardized and standardized path coefficients ( $b$  and  $\beta$ ) and significance level of each coefficient in the final model. Major results from this procedure also appear in Figure 3. Overall, the MIP processes were almost identical for males and females, except two paths. The association between parental guidance and desirability was stronger for males and the association between skepticism and negative expectancies was stronger for females.

Thus, those who watched more primetime TV found alcohol portrayals in alcohol advertising more desirable and wished to emulate them more. They also held more positive alcohol expectancies. As a result, watching primetime TV was indirectly related to favoring the beer-themed items ( $\beta_{\text{male}} = .04$ ,  $\beta_{\text{female}} = .06$ ;  $ps < .001$ ). Similarly, watching primetime TV was indirectly related to alcohol use ( $\beta_{\text{male}} = .06$ ,  $\beta_{\text{female}} = .06$ ;  $ps < .001$ ).

Frequency of watching television sports was not related to any MIP variables but was positively related to liking beer brands and favoring beer-themed items. Interestingly, youth who watched more television sports also perceived negative consequences of drinking as more likely.

Youth who spent more hours watching television found goods with beer logos more desirable and were less skeptical about alcohol advertising, but found portrayals less desirable. Total TV hours were also indirectly related to favoring beer-themed items in a negative direction for both males ( $\beta = -.01$ ,  $p < .05$ ) and females ( $\beta = -.02$ ,  $p < .05$ ).

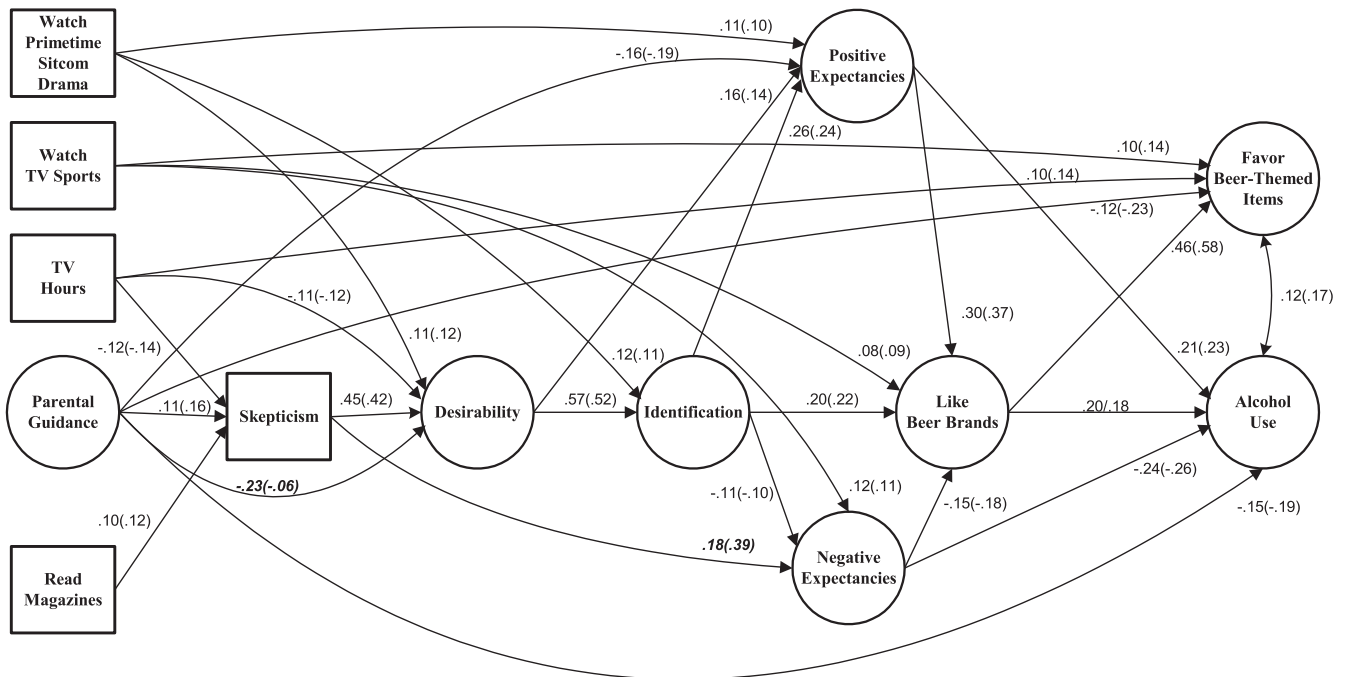


Figure 3. Cross-gender comparison of the Message Interpretation Processes model. The path coefficient for females is in the parentheses and follows the coefficient for males. Bolded-italic coefficients are significantly different between males and females. Model fit: CFI = .911; RMSEA = .029.

.05). Nevertheless, total TV hours were overall positively related to favoring beer-themed items ( $\beta_{\text{male}} = .08$ ,  $\beta_{\text{female}} = .13$ ;  $ps < .01$ ). Total TV hours were indirectly and negatively related to alcohol use only for males ( $\beta = -.01$ ,  $p < .05$ ).

Youth who read magazines more often were more skeptical about advertising. Magazine readership also was indirectly and positively related to favoring beer-themed items only for males ( $\beta = .003$ ,  $p < .05$ ). In contrast, magazine readership was indirectly and negatively related to alcohol use only for females ( $\beta = -.01$ ,  $p < .05$ ).

Consistent with the MIP theory, desirability of alcohol portrayals was positively associated with identification, which in turn predicted positive alcohol expectancies, negative alcohol expectancies, and liking beer brands. Desirability also directly predicted positive alcohol expectancies. Positive alcohol expectancies then positively predicted liking beer brands and alcohol use. Negative alcohol expectancies also predicted liking beer brands. Liking of beer brands then predicted favoring beer-themed items and alcohol use. As a result, favoring beer-themed items was indirectly related to desirability ( $\beta_{\text{male}} = .10$ ,  $\beta_{\text{female}} = .13$ ;  $ps < .001$ ) and to identification ( $\beta_{\text{male}} = .13$ ,  $\beta_{\text{female}} = .19$ ;  $ps < .001$ ). Similarly, alcohol use was indirectly related to desirability ( $\beta_{\text{male}} = .12$ ,  $\beta_{\text{female}} = .11$ ;  $ps < .001$ ) and identification ( $\beta_{\text{male}} = .14$ ,  $\beta_{\text{female}} = .14$ ;  $ps < .001$ ).

Skepticism was positively related to desirability of alcohol portrayals. Skepticism was also positively related to negative alcohol expectancies, which was negatively related to alcohol use and to liking beer brands. Skepti-

cism thus was indirectly and negatively related to alcohol use for females ( $\beta = -.07$ ,  $p < .01$ ), but not for males. In contrast, skepticism was indirectly and positively related to favoring beer-themed items for males ( $\beta = .03$ ,  $p < .01$ ).

Youth who perceived greater parental guidance were more skeptical about alcohol portrayals. In addition, males who perceived less parental guidance found alcohol portrayals more desirable ( $\beta = -.23$ ). Perceived parental guidance was also negatively related to positive alcohol expectancies, favoring beer-themed items, and alcohol use.

#### Cross-age group comparison

The cross-age group analyses were conducted with some and without any equality constraints in factor loadings. Further, because the 9–11-year-olds reported almost no alcohol use, favoring beer-themed items was the only ultimate outcome variable in the 9–11-year-old model. Predictors of alcohol use were ascertained for youth aged 12–17, but these effects were not subjected to cross-group comparison. The model with some constraints in factor loadings fit the data (CFI = .912, RMSEA = .029) as well as the model with no constraint in factor loadings did (CFI = .913, RMSEA = .029). Moreover, the patterns of relations and sizes of the path coefficients were similar across the two analyses. Due to space limitations, we report only results from the analysis with no constraint in factor loadings (Table 3 and Figure 4).

Overall, the MIP processes were almost identical for the two age groups, except two paths. The associations between

Table 3  
Significant direct effects in the structural models for youth aged 9–11 and 12–17 years

Predictors	Aged 9–11 years	Aged 12–17 years
Alcohol use <sup>a</sup>		
Positive alcohol expectancies	-	.22***
Negative expectancies	-	-.31***
Like beer brands	-	.18***
Parental guidance	-	-.13*
R <sup>2</sup>		.31
Favor beer-themed items		
Like beer brands	.43***	.49***
TV hours	.12**	.11**
Watch TV sports	.14***	.12***
Parental guidance	-.13**	-.16**
Gender (male)	.27***	.25***
R <sup>2</sup>	.38	.43
Like beer brands		
Identification	.24***	.21***
Positive alcohol expectancies	.28***	.30***
Negative alcohol expectancies	-.18***	-.13***
Gender (male)	.16***	.14***
R <sup>2</sup>	.24	.32
Positive alcohol expectancies		
Desirability	.08 <sup>b</sup>	.24*** <sup>b</sup>
Identification	.28***	.23***
Parental guidance	-.20***	-.20***
Watch primetime TV	.14***	.13***
Gender (male)	.02 <sup>b</sup>	-.15*** <sup>b</sup>
R <sup>2</sup>	.18	.25
Negative alcohol expectancies		
Skepticism	.25***	.21***
Parental guidance	-.10 <sup>b</sup>	.20*** <sup>b</sup>
Watch TV sports	.11**	.11**
R <sup>2</sup>	.08	.11
Identification		
Desirability	.61***	.41***
Watch TV sports	.11*	.09*
Watch primetime TV	.09*	.10*
R <sup>2</sup>	.40	.19
Desirability		
Skepticism	.47***	.47***
Parental guidance	-.11**	-.19**
R <sup>2</sup>	.22	.24
Skepticism		
TV hours	-.12***	-.14***
Read magazines	.11**	.13**
Parental guidance	.08*	.14*
R <sup>2</sup>	.03	.05

Note: Cell coefficients are standardized regression coefficients.

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

<sup>a</sup> Few youth aged 9–11 years reported alcohol use; alcohol use thus was not included in the analysis for this group.

<sup>b</sup> Coefficients that are statistically different at  $\alpha = .05$ .

parental guidance and negative alcohol expectancies and between desirability and positive alcohol expectancies were stronger for the 12–17-year-olds compared with those for the 9–11-year-olds. In addition, magazine readership was related positively and indirectly to favoring beer-themed

items for youth aged 12–17 ( $\beta = .004$ ,  $p < .05$ ), but not for youth aged 9–11.

Skepticism was related indirectly and positively to favoring beer-themed items for youth aged 12–17 ( $\beta = .03$ ,  $p < .01$ ), but not for youth aged 9–11. Skepticism was positively related to negative alcohol expectancies, which in turn was negatively related to liking beer brands for all youth and negatively related to alcohol use for youth aged 12–17.

Parental guidance was positively related to negative alcohol expectancies but negatively related to alcohol use for youth aged 12–17. Thus, for youth aged 12–17, parental guidance was also indirectly and negatively related to favoring beer-themed items ( $\beta = -.06$ ,  $p < .001$ ) and alcohol use ( $\beta = -.14$ ,  $p < .001$ ).

## Discussion

By testing a theoretical model of information processing, this study has demonstrated that interpretations of messages are at least as important as media exposure to adolescent alcohol use. This study also showed that message interpretation processes were similar for males and females and for youth aged 9–11 and 12–17.

The MIP model posits that individuals arrive at decisions through partly logical and partly affect-based processes. The analysis overall showed how individuals progressively internalize messages to employ them in eventual decisions about behavioral choices, and the MIP model traced the affect-oriented route to behaviors. Desirability of media portrayals of alcohol use predicted the desire to emulate those portrayals, called identification, which predicted liking of beer brands and positive alcohol expectancies. There was no significant relation between skepticism (the logic-based processing) and alcohol use. Children's desire for beer-themed merchandise appeared to be related to alcohol use, indicating marketing effects of alcohol branding and merchandising on children and adolescents.

These results are important because if expectancies are not just logic-based, they are unlikely to be refuted successfully by purely logic-based campaigns. Skepticism may indirectly prevent underage drinking through its direct effect on negative expectancies. Unfortunately, the counter-balancing effects from skepticism were weaker than those from affect-based processing. This study, however, did not trace the complete logic-oriented path to decision-making posited by the MIP model, which could demonstrate an additional role for skepticism.

The relatively weak influences of media exposure measures used in this study may reflect their generality but also suggest that the intervening decision-making process is vital to consider. Conclusions based primarily on potential exposure measures may underestimate the influences of alcohol advertising on underage drinking.

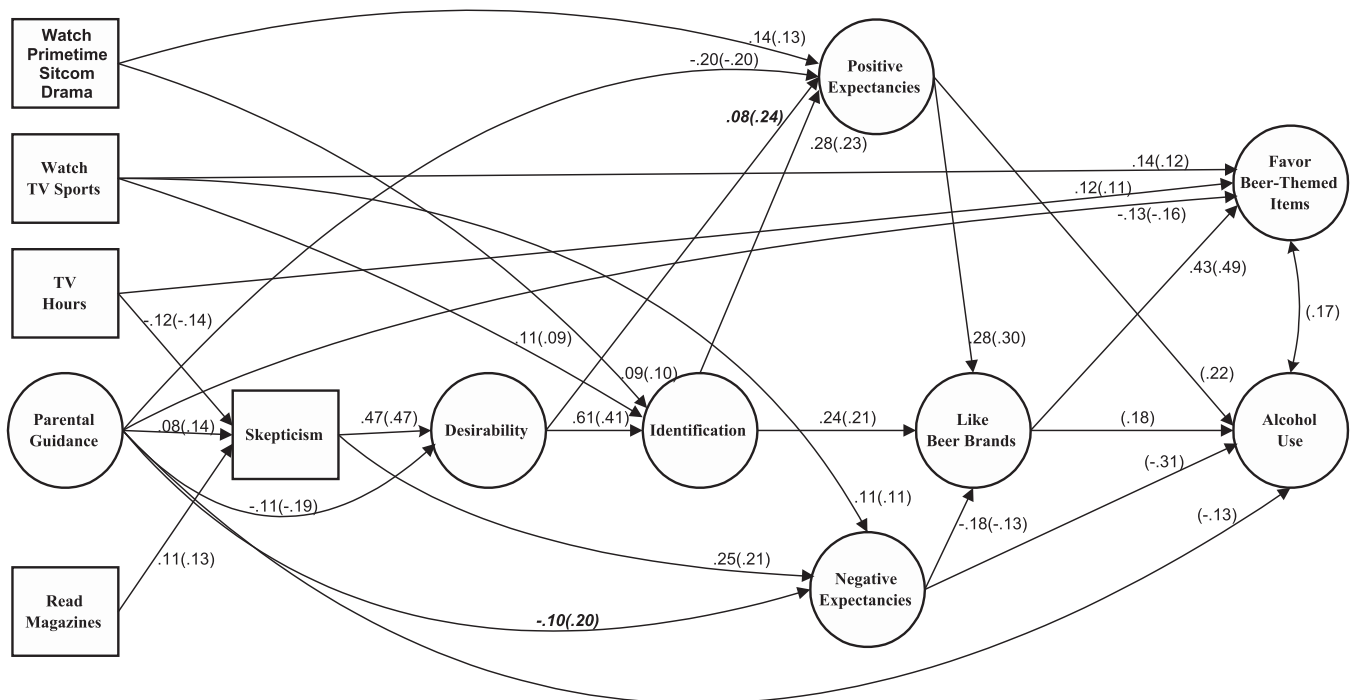


Figure 4. Cross-age group comparison of the Message Interpretation Processes model. The path coefficient for youth aged 12–17 years is in the parentheses and follows the coefficient for youth aged 9–11 years. Bolded-italic coefficients are significantly different between the two age groups. The 9–11 group reported almost no alcohol use; there is thus no path from any other variable to alcohol used for this age group. Model fit: CFI = .913; RMSEA = .029.

Parental guidance of television viewing affected skepticism and desirability as well as positive alcohol expectancies in beneficial ways. Parental guidance also directly and negatively affected youths' decisions to choose beer-themed items and to drink alcohol. These findings strongly suggest that parents can help counter media effects and influence children's alcohol expectancies by teaching them to improve their information processing and critical skills. Efforts to strengthen this pattern of influence may be more effective and longer lasting than edicts, given that youth are increasingly becoming responsible for their own decisions and may be less responsive to orders given by authority figures [30].

These results, although demonstrating the complexity of decision making, also demonstrate complexities of measurement. Skepticism and desirability appeared to be double-edged, having logical as well as affective characteristics and implications. Skepticism appears to increase individuals' awareness of advertising techniques while simultaneously reducing individuals' susceptibility to them. This suggests that awareness of the seductive nature of advertisements comprises a necessary component of skepticism. Future research should explore this issue further.

### Acknowledgments

This study was funded in part by National Institute of Alcohol Abuse and Alcoholism Grant R01 AA12136.

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