Ecological Momentary Assessment of the Association Between Exposure to Alcohol Advertising and Early Adolescents' Beliefs About Alcohol

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Abstract

Purpose—To evaluate the momentary association between exposure to alcohol advertising and middle school students' beliefs about alcohol in real-world settings and to explore racial/ethnic differences in this association.

Methods—Middle school students ($N = 588$) carried handheld data collection devices for 14 days, recording their exposures to all forms of alcohol advertising during the assessment period. Students also responded to three investigator-initiated control prompts (programmed to occur randomly) on each day of the assessment period. After each exposure to advertising and at each control prompt, students reported their beliefs about alcohol. Mixed effects regression models compared students' beliefs about alcohol between moments of exposure to alcohol advertising and control prompts.

Results—Students perceived the typical person their age who drinks alcohol (prototype perceptions) more favorably and perceived alcohol use as more normative at times of exposure to alcohol advertising than at times of non-exposure (i.e., at control prompts). Exposure to alcohol advertising was not associated with shifts in the perceived norms of Black and Hispanic students, however, and the association between exposure and prototype perceptions was stronger among non-Hispanic students than among Hispanic students.

Conclusions—Exposure to alcohol advertising is associated with acute shifts in adolescents' perceptions of the typical person that drinks alcohol and the normativeness of drinking. These associations are both statistically and substantively meaningful.

Keywords

alcohol advertising; alcohol-related beliefs; drinking; early adolescence; ecological momentary assessment

Despite alcohol industry self-regulation, young people are exposed to alcohol advertising at a startling rate. Youth see nearly 300 alcohol advertisements each year—an estimate that excludes online advertisements, promotional items, product placements, and advertisements for wine [1]. This level of exposure is worrisome given that more than a dozen prospective cohort studies link adolescent advertising exposure to initiation and escalation of alcohol use and the development of alcohol-related problems [2-6]. Little is known, however, about the process underlying this association. This makes it difficult to design interventions to reduce the harmful influence of alcohol advertising on adolescent drinking.

According to cognitive social learning and decision-making theories, exposure to alcohol advertising affects behavior by fostering more favorable beliefs about drinking. Pro-alcohol beliefs are engaged *at each advertising exposure* and strengthened with repeated exposure, thus creating the susceptibility to drink when an opportunity arises [7-9]. To test this process, it is crucial to measure beliefs about alcohol at the moment of exposure to advertising.

Experimental studies have used between-subjects designs to compare the beliefs of participants who have been exposed versus not exposed to alcohol advertising and found some evidence for a short-term effect of exposure on beliefs about drinking [10]. These studies permit estimation of causal effects but typically expose respondents to advertising in the artificial context of the laboratory, making it difficult to draw conclusions about the effects of alcohol advertising in natural settings.

Correlational field studies have assessed prior exposure (typically via retrospective or cued recall) and attempted to link that exposure to beliefs measured much later [11-13]. Such studies typically demonstrate positive associations between levels of exposure and pro-alcohol beliefs, evidence that is consistent with the theoretical process described above. Although these studies provide important information, their assessment of exposure is subject to recall bias [14] and they lacks information about the immediate changes in beliefs that are theorized to occur upon exposure to advertising and mediate changes in drinking behavior [7].

The present study addresses these limitations by using ecological momentary assessment (EMA) to gather real-world data on adolescents' beliefs about alcohol at moments of exposure to alcohol advertising. EMA is a valuable tool for minimizing recall bias and obtaining detailed information on events of interest and people's immediate cognitive and behavioral reactions to those events [15]. In this study, youth served as their own controls by completing assessments of their beliefs at randomly sampled moments of non-exposure to advertising during a two-week monitoring period. This within-subjects analysis allowed us to test the hypothesis that youths' beliefs about alcohol would be more favorable directly following exposure to alcohol advertising than at times of non-exposure. The specific beliefs that we investigated include normative beliefs, alcohol expectancies, and alcohol prototypes. Normative beliefs (beliefs about the prevalence of alcohol use among one's peers) and expectancies (beliefs about the consequences of alcohol use) are key features of social cognitive models of media influence [7-8]; each has been linked to exposure to alcohol

advertising or media depictions of alcohol use and increased alcohol use over time [11-12, 16-18]. Alcohol prototypes (beliefs about the typical person one's age who uses alcohol) are a key feature of the prototype-willingness model, which has proven to be a particularly useful model for examining media effects on adolescent alcohol consumption [16, 19].

Given that youth from different racial/ethnic groups may identify differently with the people portrayed in alcohol advertisements or be differentially skeptical of the motives or messages of advertisers [7], we also explored whether momentary associations between exposure and beliefs differed by students' race/ethnicity. This is an important issue for investigation given that Hispanic and African American youths are more exposed to alcohol advertising [20-23] and may be targeted by alcohol advertisers [24].

Methods

Participants

We recruited 606 middle school students from two large school districts, after school clubs, and community organizations in Southern California with flyers and other notices. Enrollment occurred on a rolling basis over 10 months (September 2013 to June 2014). We talked with parents by phone to determine children's eligibility. Children were eligible if they were ages 11-14, could speak and write English, and had no psychological condition that would preclude participation. Multiple children per family were eligible provided that each child met all eligibility criteria. All procedures were reviewed and approved by our institution's IRB.

General Procedures

Each participant and a parent/guardian came to a neighborhood study center for assessment and training immediately prior to beginning the EMA protocol. During this session, participants completed a paper questionnaire that assessed demographics, intentions to drink alcohol in the next six months (1 = *definitely no* to 4 = *definitely yes*), and lifetime alcohol use (even a sip; yes/no), and were trained to use a handheld device for EMA. The standardized training consisted of a 60-minute oral presentation accompanied by electronic slides. Participants were also given a phone number for technical support throughout the study. The median number of participants per training session was nine.

EMA Procedures

We issued each participant a handheld data collection device with custom-built EMA software installed. Devices used included the Samsung Galaxy Player, Samsung Galaxy Mini, Samsung Galaxy Y Duos, and HTC Explorer. The same data collection application was used regardless of device. All device functions besides the EMA software were inaccessible to participants. Data were encrypted and secure on the device, and each device required a password for entry. Participants were instructed to keep their device with them at all times except while at school, charge the device at night, initiate data entry each time they encountered an alcohol advertisement, and respond to random prompts (see below). Participants were told to practice using the device during the training day and that the study's data collection period would begin the following day and continue for 14 total days.

Before leaving the study center, participants practiced recording an advertisement and responding to a random prompt (practice data were excluded from the analysis). At the end of the assessment, participants returned the device to the study center for data uploading.

Exposure event reports

We instructed participants to initiate an assessment whenever they encountered an alcohol advertisement during the 14-day monitoring period. They reported exposure to television, radio, newspaper, and magazine advertisements; billboards; sponsorship of music and sporting events; retail point-of-sale advertisements; brand-logoed items such as hats and t-shirts; and various forms of online advertising (banner advertisements, video advertisements, and advertisements on social networking sites such as Facebook and Instagram). Youth also recorded exposures to movies and music in which specific brands of alcohol were shown or mentioned. During training, participants were taught to distinguish portrayals of alcohol use in movies or music that are incidental or generic vs. portrayals in which an alcohol brand is evident. At each exposure assessment, participants responded to survey questions about the exposure (e.g., indicating the medium involved via a dropdown menu) and their beliefs about alcohol (see below). In training, we emphasized that participants should not deviate from their normal activities to "find" advertisements.

Random prompt reports

Three times a day, the device prompted participants to complete a brief assessment of alcohol beliefs—we refer to these as random prompt reports. The random prompt reports provide an assessment of students' beliefs at times when they were not exposed to alcohol advertising. This allowed for a comparison of students' beliefs at times of exposure to alcohol advertising versus at times of non-exposure. Audible prompts alerted participants that it was time to complete a random prompt survey. These assessments were spread throughout the day using a sampling schedule stratified by period of day [25]. On school days, one random prompt was issued between 7am and 8am, one between 3pm and 6pm, and one between 6pm and 9pm. On non-school days, one prompt was issued between 9am and 1pm, one between 1pm and 5pm, and one between 5pm and 9pm. If a signal occurred during an activity they could not interrupt, participants could delay the assessment for up to 15 minutes, after which an incomplete assessment was recorded as missing.

Description of Incentives

Participants earned $60 for completing the baseline questionnaire, attending training, and carrying the device for 14 days. To incentivize compliance, we paid an additional $25 to participants who responded to 76-84% of the random prompts, and an additional $60 to participants who responded to 85% of them.

Dependent Measures

At each exposure event and random prompt, participants completed four measures. *Perceptions of the typical person one's age who drinks* (referred to hereafter as "prototype perceptions") was based on a measure used by Gibbons et al. [19]. Participants were asked to "think about boys or girls your age who drink alcohol" and rate how 1) popular, 2)

attractive, and 3) cool they are (1 = *not at all* to 4 = *very*; α = 0.90). *Perceived norms* was based on a measure used by Thomsen and Rekve [26]. Participants indicated their agreement (1 = *strongly disagree* to 4 = *strongly agree*) with the statements, "Most teenagers drink alcohol," "Most teenagers I know drink alcohol," and "Most students in my grade drink alcohol (α = 0.79)." *Positive outcome expectancies* and *negative outcome expectancies* were based on measures used by Austin et al. [7]. Participants judged how likely (1 = *not at all* to 4 = *very*) it is that the following outcomes would result "if someone your age had 3 or 4 drinks of alcohol in a row:" feel more relaxed, feel more friendly, and feel happy (positive expectancies α = 0.90); get a hangover, feel out of control, and feel sick to their stomach (negative expectancies α = 0.88). Scores on each measure were equal to the average across measure items. Short (1 item) and long (3 item) versions of each measure were randomly assigned at a given assessment to reduce response burden over the two-week monitoring period. A chained regression-based imputation [27] was used to adjust for items not included on the short form and accounted for the correlation among a measure's items.

Statistical Analysis

We used mixed effects regression models (MRMs) for continuous outcomes to compare beliefs about alcohol between moments of exposure to advertising (event reports) and random prompts (control reports). Models account for clustering of observations within an individual and allow for an unequal number of observations across participants and unequal spacing of observations in time. We ran separate MRMs predicting prototype perceptions, positive and negative outcome expectancies, and perceived norms.

Formally, the MRM for belief *y* of student *i* (i = 1,…, N students) at assessment *j* (j = 1,…, n_i assessments) is specified as follows:

$$y_{ij} = \mu_i + \theta\, ad_{ij} + x'_{ij}\beta + \varepsilon_{ij},$$

where y_{ij} is a survey measure (e.g. prototype perceptions) for the *i*th student at assessment *j*, ad_{ij} is a variable representing the type of assessment (1 = event report, 0 = random prompt), θ is the average change in belief as a function of exposure to an alcohol advertisement (i.e., the fixed effect for exposure), and μ_i is a student-specific normally-distributed random effect, which allows each student to have a distinct average level of beliefs and captures clustering of reports by subject. x'_{ij} is a vector of covariates and β is the corresponding vector of fixed effects for the covariates. The vector of covariates included age, gender, race/ethnicity, intentions to drink alcohol, and a set of interaction terms to evaluate differences in the effects of exposure by student race/ethnicity. ε_{ij} is a normally-distributed error term representing the part of y_{ij} that cannot be predicted by the model's explanatory variables.

We used a first-order autoregressive model to account for serial correlation of errors. Accounting for the correlation between measures from the same subject is necessary to obtain accurate standard errors for the model parameters. The choice of correlation structure makes no assumptions about the associations between the dependent and independent variables [28].

A large drop in reported exposures to alcohol advertisements on Day 14 of data collection suggested that most participants were not aware that they were required to report exposures on this day. We therefore only examine reporting on Days 1-13.

Results

Characteristics of the analysis sample are shown in Table 1. Five participants lost or broke their device and thus their data were irretrievable. An additional 12 participants did not respond to any of the random prompts and one student withdrew from the study. Data from these 18 participants were not included in the analyses described here. The remaining 588 participants were about evenly distributed across ages 11-14, slightly less than half were female, and Hispanics, non-Hispanic Whites (referred to hereafter as Whites), and non-Hispanic Blacks (referred to hereafter as Blacks) were about equally represented. Nearly two-thirds were from households with both parents, and few (23%) had tried drinking even a few sips of alcohol.

Compliance and Descriptive Information on Exposure to Alcohol Advertising

A total of 22,932 random prompts were issued over the course of the study (3 prompts per day × 13 days × 588 participants). Participants responded to 15,469 of these prompts, for an average compliance rate of 67% or approximately 2 of 3 scheduled prompts per participant per day. Hispanics and Blacks exhibited lower compliance than Whites, and having a sibling in the sample and getting good grades were positively associated with compliance. To correct for potential bias in our regression coefficients due to noncompliance, we applied weights equal to the inverse probability of compliance based on race/ethnicity, sibling status, and grades in school (technical notes available upon request).

A detailed non-response analysis of reported exposures to alcohol advertisements provided evidence of a fatigue effect: Participants reported steadily decreasing numbers of advertisements as the monitoring period progressed. We used weights to correct for this fatigue effect and more accurately represent the mix of advertisements to which participants were exposed (technical notes available upon request). Across the 13-day monitoring period, participants reported exposures to a total of 6,695 advertisements. Adjusting for fatigue in reporting, we estimate that youth were exposed to 23,446 advertisements, or approximately 3.1 advertisements (95% CI, 3.0–3.1) per student per day. Thirty-eight percent of alcohol advertisements seen by youth were outdoor advertisements, 26% were television advertisements, 9% were point-of-sale advertisements, 7% were print (magazine or newspaper) advertisements, and 6% were radio advertisements. Each of the other categories accounted for less than 5% of total exposures. There were no differences in the number of exposures reported by students who had versus had not tried alcohol.

Random Effects Regression Models

Prototype perceptions—Prototype perceptions were significantly more positive at moments of exposure to advertising than at randomly sampled moments of non-exposure (Table 2). In addition, students who were older and intended to drink in the next 6 months had more favorable prototype perceptions. We found a significant interaction between

advertising exposure and Hispanic ethnicity suggesting that exposure had a weaker effect on perceptions among Hispanics (marginal difference 0.015 for Hispanics vs. 0.029 for non-Hispanic Whites, Table 3). No other racial/ethnic differences were observed. To understand the strength of the effect[1] of exposure, we compared it to the effect of age and found that the effect of a single exposure to alcohol advertising on the prototype perceptions of non-Hispanic students is equivalent to being 1 year older.

Perceived norms—Drinking alcohol was perceived to be significantly more normative at times of exposure to alcohol advertising than at randomly sampled moments of non-exposure. Girls, older students, and students who intended to drink perceived drinking alcohol to be more normative than did boys, younger students, and students who do not intend to drink, respectively (Table 2). Significant interactions between exposure to advertising and both Hispanic ethnicity and Black race indicate that the association between exposure and perceived norms was not present among students of these backgrounds (marginal difference 0.005 for Hispanics and Blacks vs. 0.019 for Whites, Table 3). Among Whites, the strength of the effect of a single exposure to advertising on perceived norms was equivalent to being 8 months older.

Positive outcome expectancies—There was no evidence of a momentary association between exposure to alcohol advertising and positive outcome expectancies (Table 2). However, being older, female, or intending to drink alcohol in the next 6 months were all associated with more positive alcohol outcome expectancies.

Negative outcome expectancies—There was also no evidence of a momentary association between exposure to alcohol advertising and negative outcome expectancies. However, being female was associated with more negative outcome expectancies, and intending to drink alcohol was associated with less negative outcome expectancies.

Discussion

Cognitive social learning and decision-making theories emphasize the role of immediate cognitive reactions to alcohol advertisements as drivers of adolescents' decisions to drink. However, momentary associations between exposure to advertising and beliefs about drinking have never been evaluated in real-world settings. Ours is the first study to use momentary data collected in naturalistic settings to characterize the temporal association between exposure to alcohol advertising and beliefs. We found that adolescents perceived the typical person their age who drinks alcohol more favorably and perceived alcohol use as more normative at times of exposure to alcohol advertising than at times of non-exposure. Furthermore, we found that the effect of a single exposure on these beliefs is equivalent to being approximately 1 year older. Prior research suggests a year of aging would increase the percentage of drinkers in a typical sample this age from 15% to 29% [29]. Although the effects of advertising exposure likely wear off with time, they appear to accumulate with repeated exposure [30]. According to our data, youth see an estimated 1,000 alcohol advertisements per year. We would not expect a year of exposure to increase drinking a

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[1]Use of the term "effect" here is for the purpose of exposition only and not meant to imply a causal relationship.

thousand fold. In fact, research examining the relationship between population-level exposure to television advertising and brand-specific consumption of alcohol among youth indicates that the effects of alcohol advertising taper off at higher levels of exposure [31]. Continual exposure may, however, create and maintain this year of difference between youth with average exposure and a hypothetical youth with no exposure.

The lack of association between exposure and outcome expectancies is consistent with the findings of some prior laboratory experiments [32]. Together these findings cast doubt on the idea that alcohol advertising fosters more favorable outcome expectancies at the time of exposure. Instead, effects appear to be rooted in perceptions of others, including drinkers, not perceptions of drinking consequences. This may be a result of the focus of advertising [33]. That is, alcohol advertisements may communicate more about who you are or who you can be if you consume a particular brand of alcohol (the Dos Equis "most interesting man in the world" campaign is a tongue-in-cheek version of this), than about what will happen if you drink. Thus, it will be important for researchers to pay more attention to social perceptions and processes in future studies of alcohol advertising and underage drinking.

Exposure to alcohol advertising was not associated with shifts in perceived norms among Blacks and Hispanics, and the association between exposure and prototype perceptions was stronger for non-Hispanics than it was for Hispanics. These findings are consistent with a growing body of evidence that demonstrates racial/ethnic differences in media influence on health behavior. Generally, these studies suggest weaker effects of media among minority adolescents than among Whites [19, 34-35]. There has been some suggestion that this is due to infrequent portrayal of minorities in the media [36] and a general perspective that orients minority adolescents more toward independence or distinctiveness than conformity or compliance [37]. More research is needed to substantiate these ideas and perhaps uncover important features of resilience in minority adolescents that could be incorporated into media literacy, counter-marketing, and other prevention efforts.

The current study moves the field forward with its unique application of EMA to provide a closer view of the process by which advertisements are presumed to influence beliefs about alcohol. Our results are consistent with prior studies, but advance our knowledge substantially, providing data more closely aligned with theory underpinning those prior studies and ruling out some alternative explanations for their results (e.g., omitted variables accounting for selective exposure to advertising as well as correlated attitudes about drinking). Another noteworthy strength is our use of state-of-the-art methods to correct for missing data, which is an under-addressed problem in EMA research [38]. Prior EMA studies have often ignored non-reporting of events. This missing data can result in biased estimates of association. Failure to correct for non-reporting implicitly assumes that reports are missing completely at random, an assumption challenged by evidence of a fatigue effect and associations between nonresponse and race/ethnicity, sibling status, and grades in school in our data. Our use of established inverse probability weighting methods relaxes this assumption and reduces bias due to non-reporting of exposure events.

Some limitations of our study should be noted. First, we lacked information about the specific content of advertisements and thus could not ascertain whether the presence or

absence of certain features of advertisements moderated the strength of the associations that we observed. Second, our sample of adolescents may not be representative. A commonly cited drawback of EMA is that it requires a technologically sophisticated sample that is motivated to carry data collection devices over a prolonged period [39]. Third, EMA data are correlational. Although our case-crossover design provides strongly suggestive evidence of a causal link between exposure to alcohol advertising and beliefs about alcohol, we cannot rule out that an unobserved third variable is responsible for one or more of the observed associations. Fourth, although previous EMA studies have typically not demonstrated reactivity [40], carrying the devices and making frequent recordings may have altered participants' perceptions and appraisals of the alcohol advertisements that they encountered. Finally, our study did not examine changes in behaviors. Additional research is needed to determine whether the momentary changes in beliefs observed in this study accumulate over time and predict initiation and progression of alcohol use.

Acknowledgments

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Implications and Contribution

This study uses momentary data collected in naturalistic settings to characterize the temporal association between exposure to alcohol advertising and beliefs about alcohol. The findings demonstrate that adolescents, when exposed to alcohol advertising, perceive the typical person their age who drinks alcohol more favorably and perceive alcohol use to be more normative.

Table 1

Participant characteristics (N = 588)

Characteristic	Number	Percentage
Age (years)		
11	140	24
12	152	26
13	161	27
14	133	23
15	2	0.3
Female	268	46
Race/ethnicity		
Non-Hispanic White	146	25
Hispanic	150	26
African-American	170	29
Other	122	21
Intact nuclear family	365	62
Tried alcohol	138	23

Table 2

Results of mixed effects regression models predicting alcohol-related beliefs from exposure to alcohol advertising and covariates

	Estimate (95% CI)	*p*
Predicting prototype perceptions		
Intercept	.505 (.298, .711)	<.001
Exposure to alcohol advertising[a]	.029 (.019, .039)	<.001
Age, in years	.029 (.013, .046)	.001
Female	.026 (-.009, .061)	.143
Race/ethnicity[b]		
Hispanic	.042 (-.007, .093)	.096
Black, non-Hispanic	.035 (-.014, .083)	.162
Other race, non-Hispanic	-.010 (-.063, .043)	.717
Intention to drink[c]	.115 (.069, .159)	<.001
Exposure to alcohol advertising × Hispanic	-.014 (-.027, .000)	.047
Exposure to alcohol advertising × Black, non-Hispanic	.004 (-.008, .017)	.500
Exposure to alcohol advertising × Other race, non-Hispanic	.002 (-.012, .017)	.756
Predicting perceived norms		
Intercept	.471 (.310, .637)	<.001
Exposure to alcohol advertising[a]	.019 (.009, .029)	<.001
Age, in years	.033 (.020, .046)	<.001
Female	.063 (.035, .091)	<.001
Race/ethnicity[b]		
Hispanic	.112 (.073, .152)	<.001
Black, non-Hispanic	.134 (.096, .173)	<.001
Other race, non-Hispanic	.031 (-.011, .073)	.144
Intention to drink[c]	.089 (.056, .127)	<.001
Exposure to alcohol advertising × Hispanic	-.014 (-.027, -.001)	.034
Exposure to alcohol advertising × Black, non-Hispanic	-.014 (-.026, -.002)	.028
Exposure to alcohol advertising × Other race, non-Hispanic	-.014 (-.028, .000)	.056
Predicting positive outcome expectancies		
Intercept	.587 (.371, .814)	<.001
Exposure to alcohol advertising[a]	.010 (-.001, .022)	.087
Age, in years	.036 (.018, .053)	<.001
Female	.057 (.019, .094)	.003
Race/ethnicity[b]		
Hispanic	-.006 (-.060, .047)	.812
Black, non-Hispanic	-.013 (-.065, .039)	.626
Other race, non-Hispanic	-.019 (-.075, .038)	.516
Intention to drink[c]	.054 (.014, .110)	.029

	Estimate (95% CI)	*p*
Exposure to alcohol advertising × Hispanic	-.020 (-.036, -.00)	.011
Exposure to alcohol advertising × Black, non-Hispanic	-.017 (-.032, -.002)	.022
Exposure to alcohol advertising × Other race, non-Hispanic	-.010 (-.026, .007)	.272
Predicting negative outcome expectancies		
Intercept	.836 (.632, 1.041)	<.001
Exposure to alcohol advertising[a]	-.004 (-.016, .008)	.473
Age, in years	.010 (-.006, .026)	.220
Female	-.040 (-.075, -.005)	.025
Race/ethnicity[b]		
Hispanic	.030 (-.019, .080)	.233
Black, non-Hispanic	.024 (-.024, .072)	.325
Other race, non-Hispanic	-.009 (-.061, .043)	.740
Intention to drink[c]	.059 (.015, .104)	.010
Exposure to alcohol advertising × Hispanic	-.010 (-.026, .006)	.228
Exposure to alcohol advertising × Black, non-Hispanic	.004 (-.011, .019)	.613
Exposure to alcohol advertising × Other race, non-Hispanic	.003 (-.014, .021)	.718

Note. Number of observations = 22,164

[a]Versus random prompts.

[b]Comparison group is non-Hispanic White.

[c]Person-level variable, measured at baseline, indicates any response other than "definitely no" to the question, "Do you think you will drink any alcohol in the next 6 months?"

Table 3

Marginal difference[a] (95% CI) between exposure to alcohol advertisement and random (control) prompts by student race/ethnicity

	Prototype perceptions	Perceived norms	Positive outcome expectancies	Negative outcome expectancies
White, non-Hispanic	.029 (.019, .039)	.019 (.009, .029)	.010 (-.001, .022)	-.004 (-.016, .008)
Black, non-Hispanic	.033 (.025, .041)	.005 (-.003, .013)	-.007 (-.016, .002)	.000 (-.010, .009)
Hispanic	.015 (.006, .024)	.005 (-.004, .013)	-.010 (-.020, .001)	-.014 (-.025, -.004)
Other	.031 (.020, .042)	.005 (-.005, .015)	.001 (-.012, .013)	-.001 (-.024, .012)

[a]Estimated difference averaged over all other dependent variables of the models shown in Table 2.