



Supported by
The Robert Wood Johnson Foundation

THE EFFECT OF COMMUNITY CHARACTERISTICS ON THE TOBACCO & ALCOHOL RETAIL ENVIRONMENT

Sandy Slater, MS, University of Illinois at Chicago

Erin Ruel, MA, University of Illinois at Chicago

Frank Chaloupka, PhD, University of Illinois at Chicago

Yvonne Terry, MSA, University of Michigan

Melanie Wakefield, PhD, Anti-Cancer Council of Victoria

Dianne Barker, MHS, Barker Bi-Coastal Health Consultants

Gary Giovino, PhD, MS, Roswell Park Cancer Institute

<http://www.uic.edu/orgs/impacteen>



ImpacTeen and YES! are part of Bridging the Gap: Research Informing Practice for Healthy Youth Behavior, supported by the Robert Wood Johnson Foundation.

INTRODUCTION

- Cigarettes and alcohol are both heavily advertised and promoted consumer products.
- The Tobacco Industry may be changing its advertising and promotional strategies in response to restrictions imposed as a result of the Master Settlement Agreement.
- In 1999, the Tobacco Industry increased its spending on tobacco promotions (i.e., gift with purchase, buy one get one free) and point-of-sale advertising.
- These increases in expenditures account for nearly all the overall increase in spending by the Tobacco industry.
- The Alcohol Industry spends over \$1 Billion on advertising (t.v., radio, print, and outdoor ads) annually with 65 percent of those funds being used to market beer.
- The Alcohol Industry spends 3 or 4 times this amount to promote its products which includes price promotions and point-of-sale materials in retail outlets.

Source: Federal Trade Commission

INTRODUCTION *(Continued)*

- There has been growing emphasis on the influence community and environmental factors have on tobacco and alcohol use.
- Part of this increased interest has focused on issues surrounding the possibility of efforts by the industry to target pricing, promotion and advertising based on a neighborhood's predominant ethnic representation and income level.
- Literature in this area is still limited with researchers just beginning to focus their attention on issues surrounding the tobacco and alcohol retail environment.
- This study examines how tobacco and alcohol advertising, promotions, and prices vary with community characteristics such as ethnicity, age and income of its residents.



*A Policy Research Partnership
to Reduce Youth Substance Use*

METHODS

Community Selection

- Selection of communities was determined by the location of separate nationally representative public school (excludes parochial, private, magnet, alternative, etc.) samples of 8th, 10th, and 12th grade students.
- For each index school, a catchment area, or community, was defined, reflecting the area from which the school draws its students.
- A list of all likely tobacco and alcohol retailers located within the specified area was then generated.
- From that list a random sample of up to 30 tobacco and alcohol retail outlets was selected for on-site observation (if less than 30 a census of retailers was selected).



METHODS *(Continued)*

1999 Store Observation Data

- Random sample of 2,972 tobacco and alcohol retailers within 165 8th, 10th, and 12th grade school communities. (581 stores excluded from the analysis because of missing data or rapid response site)
- Observations conducted in 1999 from 2/16 to 6/23 to record price information for cigarettes and beer, and evaluate levels of tobacco and alcohol advertising, promotions and branded functional objects.

2000 Store Observation Data

- Random sample of 2,998 tobacco and alcohol retailers within 167 8th, 10th, and 12th grade school communities. (1109 stores excluded from the analysis because of missing data or rapid response site)
- Observations conducted in 2000 from 2/29 to 7/8 to record price information for cigarettes and beer, and evaluate levels of tobacco and alcohol advertising, promotions and branded functional objects.

Community SES Data

- 1999 and 2000 estimates obtained from GeoLytics, Inc., based on the 1990 Census and estimating local current change via number of currently mailable households.
- Mapped to observed stores at the block group level using FIPS code identification.

ANALYSIS

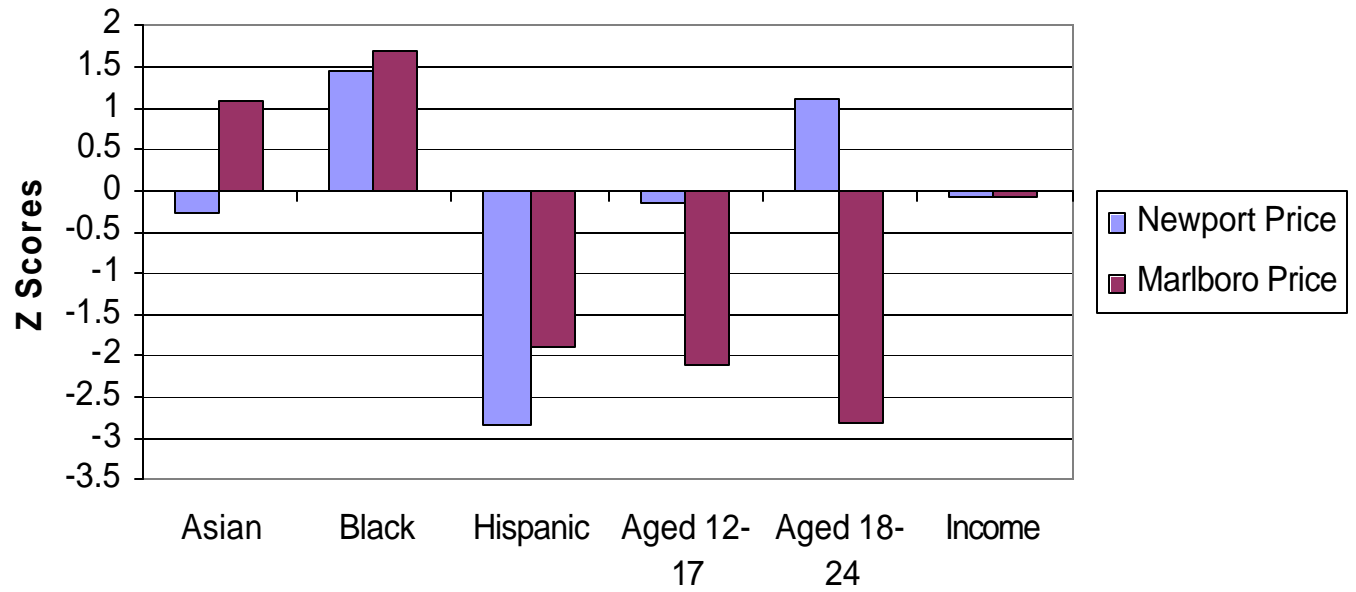
- Due to multi-stage sampling method, there was clustering within catchment areas.
- Ran random intercept models, which adjusted standard errors to account for the clustering.
- For Price, a continuous measure, used SAS 8.0 proc mixed. For the dichotomous variables we used MIXOR, a program designed by Don Hedeker for clustered data with ordinal outcomes.
- Controlled for time, store type, store size, region of the country, population density, and tax (in price models only).

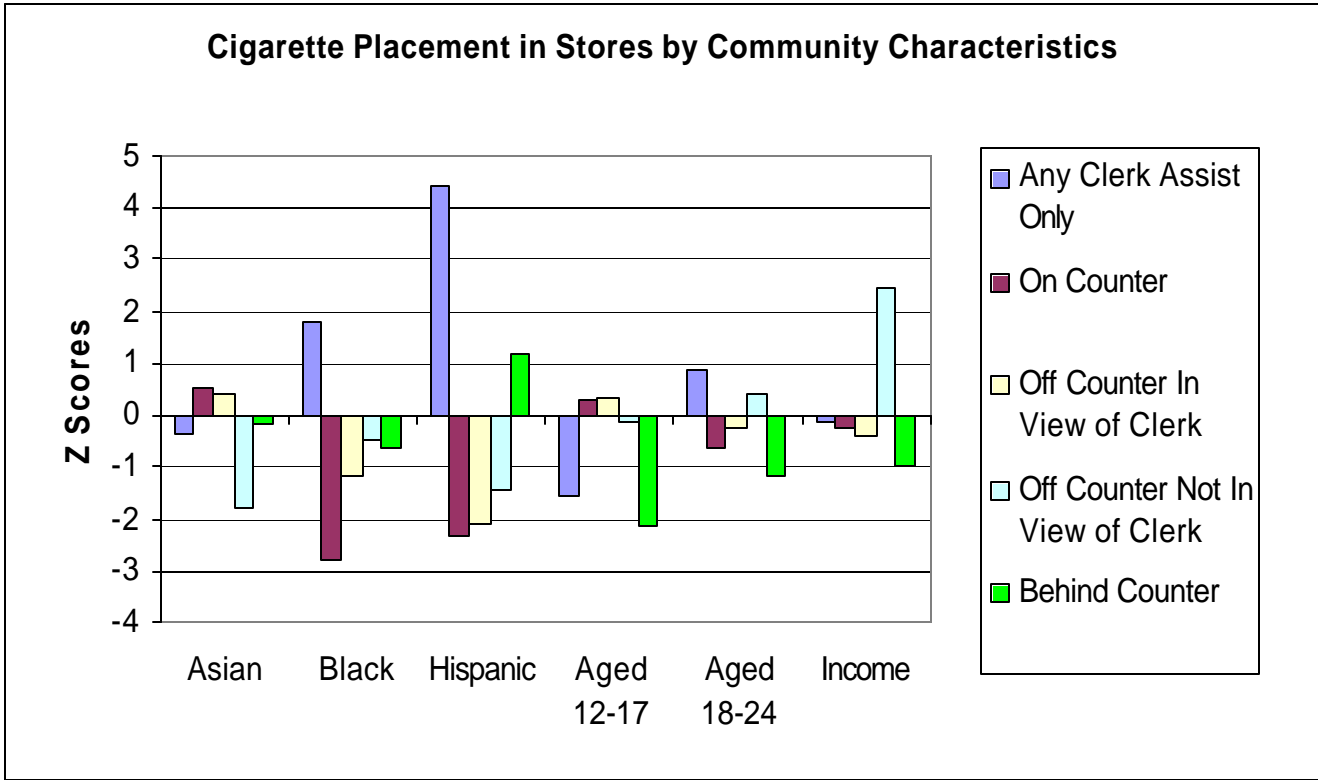
**TABLE 1
CONSTRUCTION OF SOCIO-ECONOMIC VARIABLES**

Variable	Sample Mean		National Average	
Percent Caucasian Above National Average	1999	64.50	1999	82.37
	2000	66.48	2000	82.20
Percent African-American Above National Average	1999	29.31	1999	12.78
	2000	27.15	2000	12.80
Percent Asian Above National Average	1999	22.24	1999	3.97
	2000	23.65	2000	4.10
Percent Hispanic Above National Average	1999	27.39	1999	11.49
	2000	26.02	2000	11.90
Percent Age 12 to 17 Above National Average	1999	42.97	1999	8.96
	2000	46.83	2000	8.62
Percent Age 18 to 24 Above National Average	1999	31.63	1999	9.54
	2000	28.69	2000	9.69
Median Household Income	1999	39,076.23	1999	40,816
	2000	40,039.99	2000	40,816

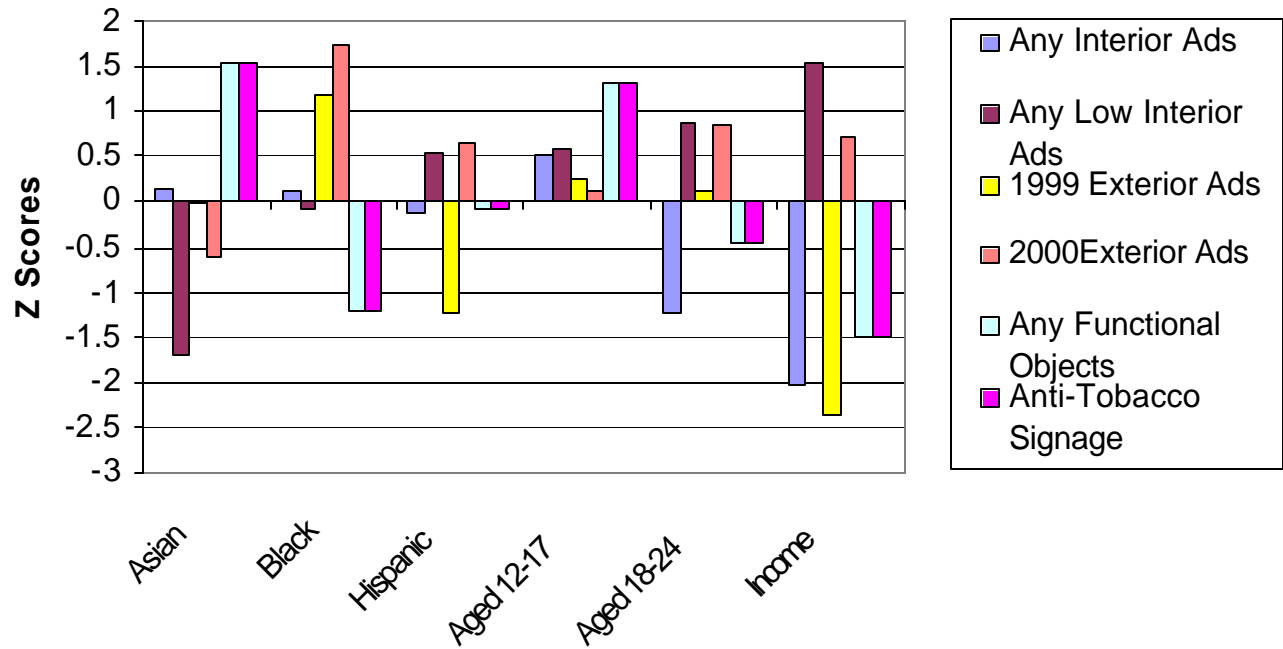
*Using U.S. census data, computed percent of census blocks that contained proportion of population above the national average.

Price Differences Based on Community Characteristics

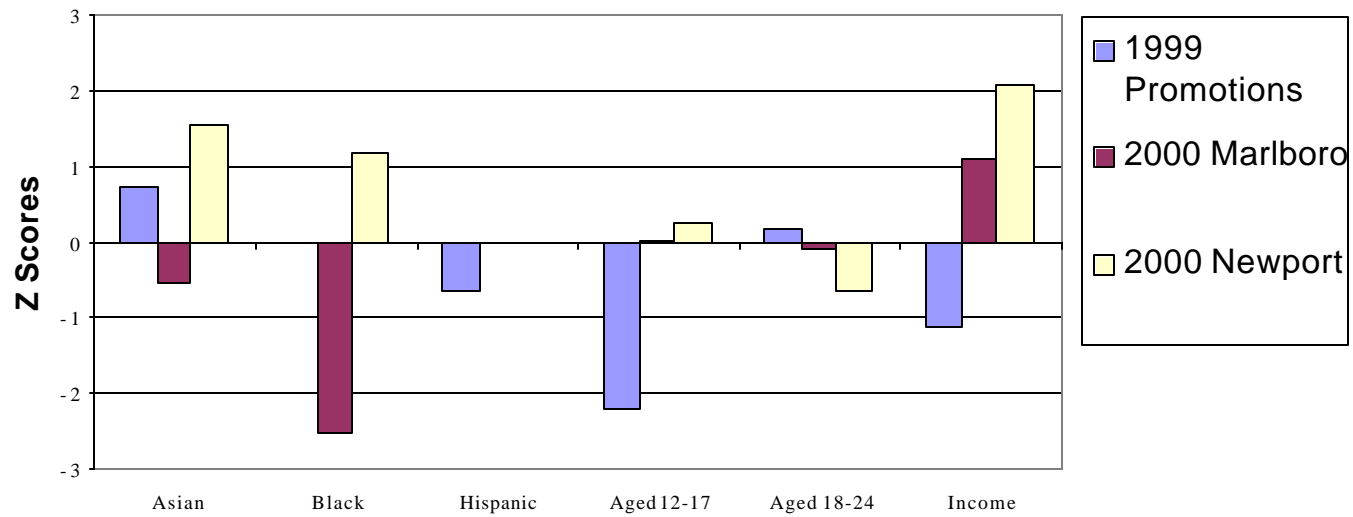




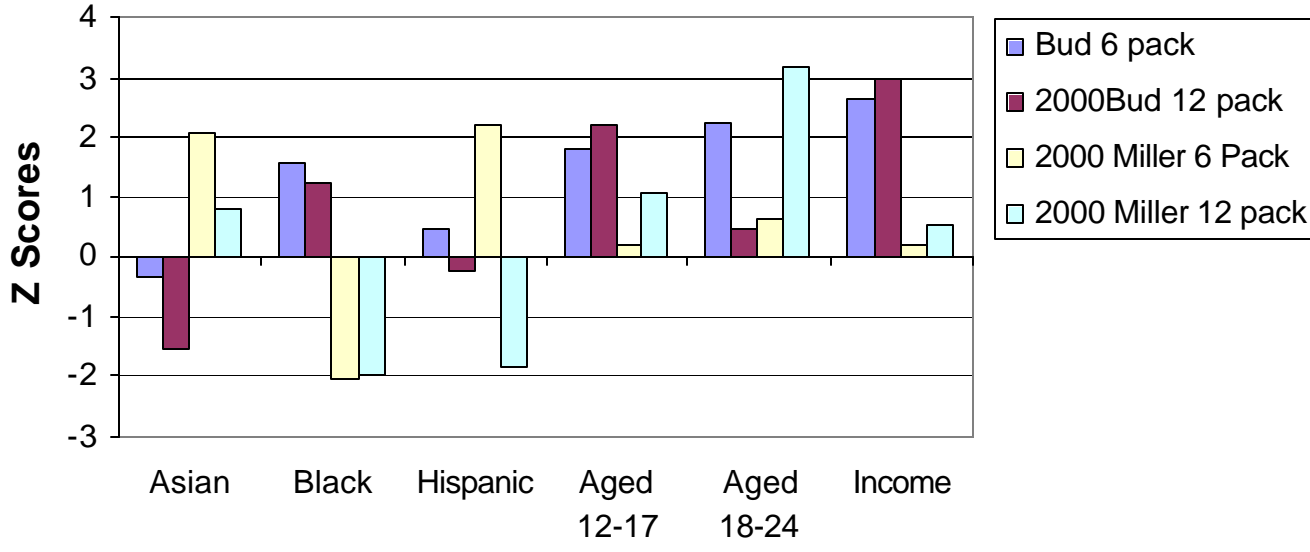
Store Advertising by Community Characteristics



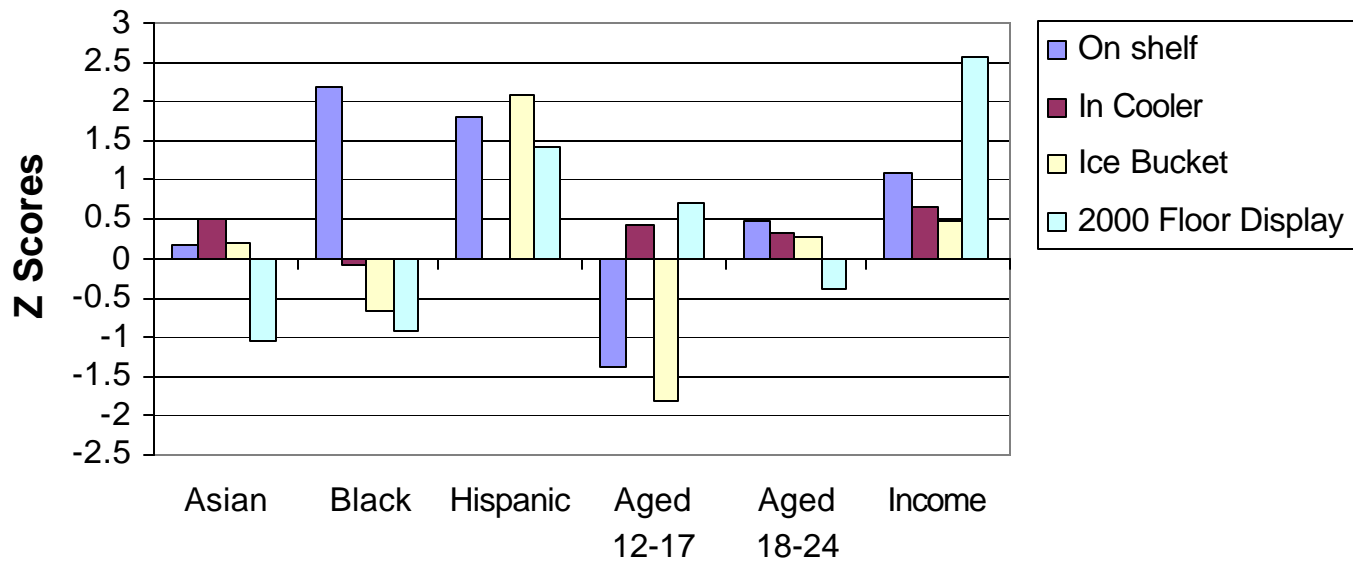
Cigarette Promotions in Stores by Community Characteristics



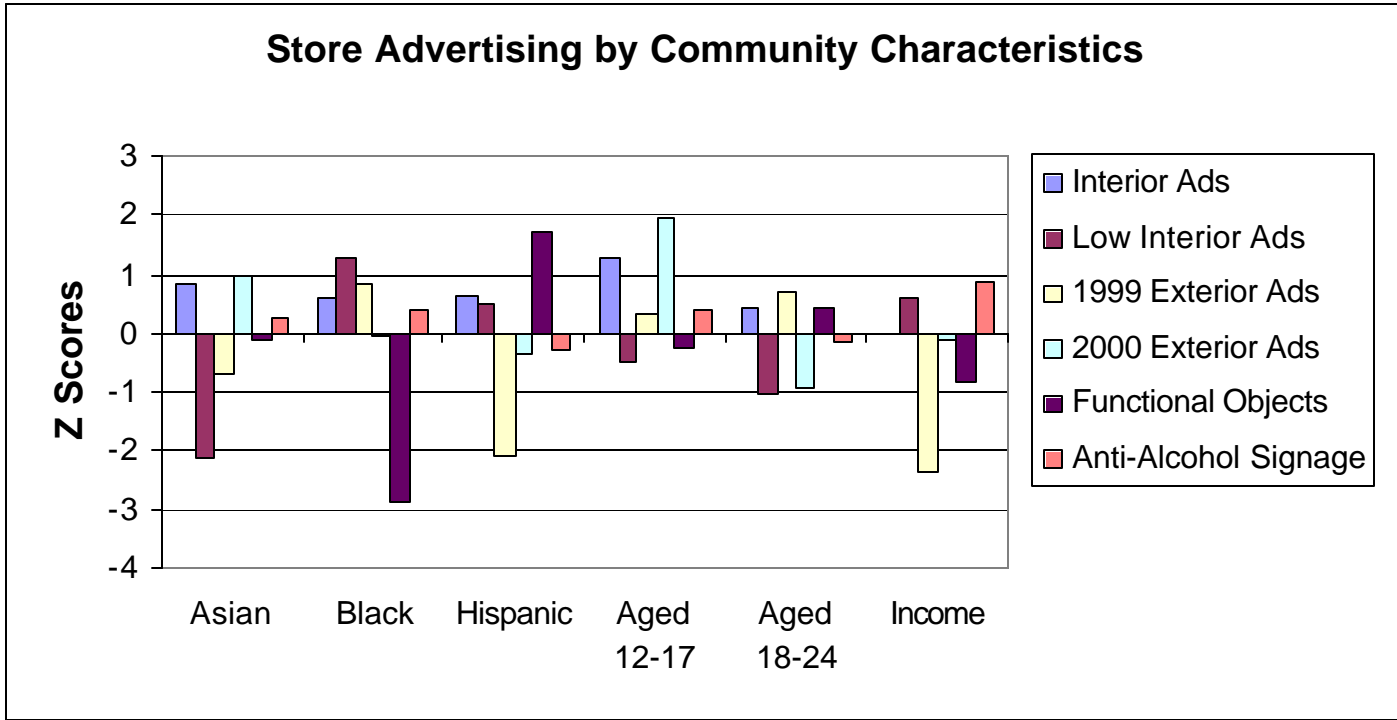
Beer Prices by Community Characteristics



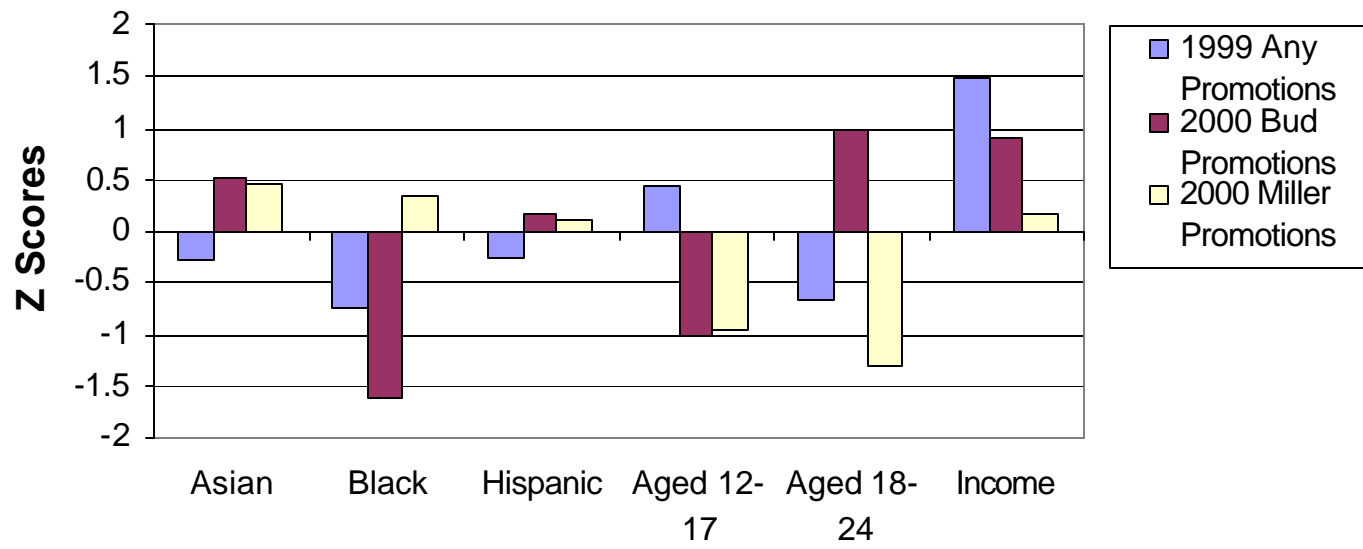
Beer Placement by Community Characteristics



Store Advertising by Community Characteristics



Beer Promotions by Community Characteristics



CONCLUSIONS

Results suggest there are differences in tobacco and alcohol pricing, promotions, and advertising based on a neighborhood's predominant ethnic representation, income level and age of its residents.

Specifically:

- Cigarettes are cheaper and more accessible in neighborhoods with a higher percentage of youth aged 12-17.
- Cigarettes are cheaper in neighborhoods with a higher percentage of Hispanics and young adults aged 18-24.
- Cigarettes are more expensive and promotions are less likely in neighborhoods with a higher percentage of African Americans.
- Cigarettes are less accessible in neighborhoods with a higher percentage of Hispanics and African Americans.
- Cigarettes are more accessible and promotions more likely in higher income neighborhoods.
- There is more advertising in lower income neighborhoods.



*A Policy Research Partnership
to Reduce Youth Substance Use*



Supported by
The Robert Wood Johnson Foundation

CONCLUSIONS (Continued)

- Miller Beer is cheaper in lower income neighborhoods and those with higher percentage of African Americans. Budweiser is cheaper in lower income neighborhoods and those with a higher percentage of Caucasians.
- Beer is more expensive in neighborhoods with a higher percentage of youth aged 12-17 and and young adults aged 18-24.
- Functional objects are less likely in neighborhoods with a higher percentage of African Americans.
- Beer sold individually (ice bucket) is less likely in neighborhoods with a higher percentage of youth aged 12-17.
 - Beer sold individually (ice bucket) is more accessible in neighborhoods with a higher percentage of Hispanics.
 - There is less exterior advertising in in higher income neighborhoods and those with a higher percentage of Hispanics.
 - There is more exterior advertising in neighborhoods with youth aged 12-17.