Marketing of Unhealthy Foods, Beverages, and Alcohol: The Branding of Youth

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Marketing

Media Consumption Patterns over Time

- Media use has increased over the past 10 years
  - Television 4:29 hours, Music 2:31 hours, Computers 1:29 hours, Video games 1:13 hours, Print 0:38 hours, and Movies 0:25 hours

- Overall media exposure has also increased
  - 7:29 hours in 1999, 8:33 hours in 2004, and 10:45 hours in 2009
  - 20% of total time is spent on mobile devices

- Exposure likely even greater, given that youth encounter advertising in other venues (i.e., billboards, inside/outside stores, inside schools) which are not always measured

Marketing

- Marketers spend approximately $12 billion/year on youth

- Television is dominant channel
  - Youth view over 30,000 ads/year

- Analyses of other channels (movies, internet, billboards) shows similar exposure levels for youth

- Many new marketing strategies with newer forms of media
Marketing

- Changes in Marketing to Youth
  - Children seen as (and are) capable of making independent purchases
  - Increasing techniques and outlets used to promote products

- Spending Power of Youth
  - Personal spending increases with age
    - $19.1 billion annually (8-12 years)
    - $112.5 billion annually (12-17 years)
  - Youth influence $500 billion worth of family spending/year
Marketing and Youth

- Persuasive Advertising Approaches
  - Provide visual cues which represent brand attributes
  - Used to attract attention of youth to build awareness, generate recognition, establish loyalty
    - Create image of user
    - Animated Characters
    - Branded Logos
Youth Susceptibility to Marketing

- Adolescents more likely to experience heightened self-consciousness and social anxiety
  - Receptive to image advertising
  - Attracted to products seen as risky, that provide immediate gratification, and influence social status
  - Rely on products to improve self-esteem and look to images in ads to know how to look older and self-confident

- Heightened negative arousal contributes to poor decision making of adolescents
  - Adolescents experience more frequent and intense negative emotions, diminished positive emotions, and more ups and downs in emotion

- Overvalue rewards and underestimate risks
  - Advertised products/brands may fulfill need for immediate gratification and thrill seeking

Outdoor Alcohol Advertising and Youth Alcohol Use


Alcohol Use Common Among Youth

- Over 1/5 of US adolescents try alcohol before age 13

- 63% of 9th graders ever used alcohol and 15% engaged in binge drinking

- Drinking before 14 increases risk of
  - ever experiencing alcohol dependence
  - alcohol dependence within 10 years of first using alcohol
Early Alcohol Use Increases Risk

- Alcohol use in adolescence increases risk of:
  - Other drug use
  - Drinking and driving
  - Risky sexual behaviors
  - Violent or deviant behaviors
  - Alcohol abuse or dependence

in both adolescence and adulthood
Alcohol Advertising

- Alcohol advertising shapes knowledge, perceptions, and attitudes about alcohol use.

- Alcohol advertising has been associated with increased risk for alcohol use.
Research Questions

- How prevalent is outdoor alcohol advertising around schools?
- What is the content of outdoor alcohol advertising around schools?
- Does exposure to outdoor alcohol advertising influence alcohol behaviors and intentions?
Advertisement Data

- Data collected in April-May 2003

- Global Positioning System (GPS)
  - All freestanding advertisements and alcohol-related advertisements on store fronts, bars, restaurants, and liquor stores
    - 1500 foot radius around schools (about 1/3 mile)
    - Location using latitude and longitude
    - Number of ads at location
    - Brief description of ad
Alcohol Advertising Coding

- Two independent coders coded:
  - Content
  - Number and characteristics of models
    
    Adapted from Schooler, Basil, & Altman (1996)
  - Language
  - Presence of animals
  - Theme
Alcohol Advertising Themes

- Wealth/Affluence
- Achievement and Success
- Medicinal Benefits
- Self-Reward
- Information
- Foreign Setting
- Tradition or Heritage
- Quality
- Religious Symbolism
- Relaxation
- Special Occasions and Holiday Celebrations
- General Success
- Physical Activity
- Brand Name Only
- Culture

Youth-Oriented Themes

- Risk-taking/Rebellion
- Conformity
- Humor
- Friendship
- Camaraderie
- Sexual Connotations
- Impress Others
- Love and Romance
- Individuality
- Recreation
- Losing Weight/Weight

Adapted from Finn & Strickland, 1982; Strickland et al., 1982
Examples of Ads

- Miller High Life neon sign
- Miller MGD and Miller Lite advertisement
- Chicago Bulls and Chicago White Sox memorabilia
- Advertisement for $6.99 for a 12 pack of bottles
ABSOLUT VANILIA

Experience the purest natural vanilla blended with the finest vodka distilled from grain grown in the rich fields of southern Sweden. The distilling and flavoring of vodka is an age-old Swedish tradition dating back more than 400 years. Vodka has been sold under the name Absolut since 1879.

40% ALC./VOL. (80 PROOF) 1 LITER

IMPORTED

VANILLA FLAVORED VODKA PRODUCED AND BOTTLED IN MALMÖ, SWEDEN BY THE ABSOLUT COMPANY A DIVISION OF V&S VINSPIRIT AB
## Prevalence and Location of Alcohol Advertisements

- **931 Alcohol Advertisements**
  - Mean of 14.8 (24.5 SD) Ads per School
  - Range 0 – 109 Ads per School

### Alcohol Advertisements By Location

<table>
<thead>
<tr>
<th>Location</th>
<th>Total</th>
<th>% of Ads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquor Store</td>
<td>431</td>
<td>46.3%</td>
</tr>
<tr>
<td>Bar</td>
<td>300</td>
<td>32.2%</td>
</tr>
<tr>
<td>Other</td>
<td>101</td>
<td>10.8%</td>
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<tr>
<td>Convenience/Grocery Store</td>
<td>65</td>
<td>7.0%</td>
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<tr>
<td>Billboard</td>
<td>31</td>
<td>3.3%</td>
</tr>
<tr>
<td>Bus Stand/Bench</td>
<td>3</td>
<td>0.3%</td>
</tr>
</tbody>
</table>
### Alcohol Advertising Themes (n=931)

- **Brand Name Only**: 56.1%
- **Information**: 20.4%
- **Culture**: 16.2%
- **Sexual Connotations***: 2.5%
- **Tradition/Heritage**: 1.1%
- **All other themes**: < 1%

*Youth Oriented Theme*
### Youth-Oriented Alcohol Advertising Themes (n=41)

- **Sexual Connotations**: 56.1%
- **Camaraderie**: 19.5%
- **Conformity**: 17.1%
- **Recreation**: 12.2%
- **Friendship**: 9.8%
Advertising and Alcohol Use

- **Participants**
  - 2592 students had data for both end of 6th grade and end of 8th grade
  - Ethnically diverse
    - 37% Black
    - 33% Hispanic
    - 15% White
    - 8% Mixed ethnicity/Other ethnicity
    - 7% Asian
    - < 1% Native American
  - 50% Female
  - Average Age at end of 6th grade: 12.2 years
Measures: Student Survey

- Alcohol Behavior and Intentions
  - 9 items; Cronbach’s alpha = 0.85, 0.88
  - Ex. During the last 30 days, on how many occasions, or times, have you had alcohol beverages to drink?

- Alcohol Behavior
  - 5 items; Cronbach’s alpha = 0.84, 0.84
  - Ex. How many times in the last two weeks have you had five or more drinks in a row?

- Alcohol Intentions
  - 4 items; Cronbach’s alpha = 0.76, 0.84
  - Ex. Do you think you will be drinking alcohol in the next month?

For more information about the scales refer to Komro, et al., 2004
Measures: Student Survey

**Normative Estimates**
- 3 items; Cronbach’s alpha = 0.66, 0.71
- Ex. How many adults in your neighborhood drink alcohol?

**Normative Expectations**
- 3 items; Cronbach’s alpha = 0.63, 0.68
- Ex. How much do you agree or disagree with this statement, “kids who drink alcohol have more friends?”

**Outcome Expectancies**
- 6 items; Cronbach’s alpha = 0.72, 0.75
- Ex. How important is each reason not to use alcohol: your friends don’t use alcohol?

**Outcome Expectations**
- 5 items; Cronbach’s alpha = 0.72, 0.74
- Ex. If you were to drink alcohol, do you think you would get in trouble with your parent?

For more information about the scales refer to Komro, et al., 2004
Alcohol Advertisements and Youth Use

- **Mixed Effects Regression**
  - Overall number of alcohol advertisements in 6th grade and youth alcohol use in 8th grade (n= 2592)
    - Brand name/information only advertisements
    - Youth oriented advertisements
      - Controlled for baseline levels of alcohol use and SES
      - School nested random random effect

- **Moderation**
  - Between number of alcohol ads and alcohol use by both ethnicity and gender
## Alcohol Advertising Predicts Intentions and Outcome Expectancies

Total Number of Alcohol Ads and 8\textsuperscript{th} Grade Alcohol Use

<table>
<thead>
<tr>
<th>Scale</th>
<th>$\beta$</th>
<th>SE</th>
<th>p-value</th>
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<tr>
<td>Alcohol Behavior</td>
<td>.005</td>
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</table>
Influence Not Limited to Youth-Oriented Ads or Alcohol Users

- Youth-oriented ads increase intentions
- Brand-name/information only ads also increase intentions
- 6th Grade Non-users influenced by ads
  - Suggests not just users attending to ads
Implications

- Crucial to limit alcohol advertising seen by children, especially around schools

- Policies needed to limit all types of alcohol advertising, not just alcohol advertising targeted toward youth

- Further research to see if other types of outdoor advertising influences youth behaviors
Outdoor Unhealthy Food and Beverage Advertising Around Schools

Pasch, K. E. & Poulos, N. S. (in press). Outdoor Food and Beverage Advertising around Schools: A Saturated Environment. In J. D. Williams, K. E. Pasch, & C. Collins (Eds.), Advancing Communication Strategies to Prevent Childhood Obesity. Springer
Food and Beverage Advertising

- Food and Beverage Preferences
- Dietary Choices and Behaviors
- Overweight and Obesity
Study Purpose

To develop an electronic data collection tool to document and describe all outdoor food and beverage advertising and establishments around middle schools
Methods

- Create 800 meter radius maps around each school with driving directions
- Adapt protocol from existing protocol used with outdoor alcohol advertising
- Pilot data collection protocol
- Full data collection
- Adapt alcohol advertising coding system and code advertisements for content and theme
- Focus groups with youth
Data Collection Instruments

- **FileMaker®** was used to develop a custom data base file.
  - Each file included:
    - School and team specific information
    - Advertisement and establishment related data
      - Ad Number
      - GPS Coordinates
      - Ad Category, Type, & Subject
      - Photographs, Description & Notes

- **FileMakerGO®** is an application of FileMaker on an iPod Touch and was used to enable mobile data collection.

- **iPod® Touch** was used as the mobile device that contained FileMakerGO and the school specific database file.
iPod Touch and File Maker Go
Data Collection

- iPod Touch
- File Maker Go
- Data Collection

Advertisements:
- Number: 116
- Category
- Type
- Subject
- Longitude
- Latitude

- Free-Standing Advertisement
- Establishment Advertisement
- Establishment

Advertisements:
- Number: 1
- Category: Free-Standing Advertisement
- Type
- Subject: Alcohol
- Longitude: 30.36901
- Latitude: 97.72724

- Billboard
- Bus Stop/Bench
- Convenience Store/Gas Station
- Food Trailer

- School Address
- School ID
- Starting Longitude
- Starting Latitude

- Ad Description
- Wide Angle Photo
- Photo Zoom

- Burnet MS
- Date
- Start Time
- End Time
- Team
Pilot Data Collection

- September/October 2011

- 1600 meter radius (1 mile) maps and driving directions around 4 middle schools

- Documentation of:
  - All food-beverage related advertisements
  - All food establishments
  - All alcohol outlets
  - Line of sight from 360 degrees around school
Pilot Data

- Ads and Establishments ranged from 8 – 336
- Overall: 610 advertisements & establishments
  - Category:
    - 53% establishment advertisements
    - 30% establishments
    - 17% freestanding advertisements
  - Type:
    - 41% Convenience Store/ Gas Station
    - 21% General Restaurant
    - 12% Fast Food Restaurant
    - 8% Street-side
    - 6% Directory Boards
    - 4% Other (Food trailer, bus stop, etc.)
    - 4% Liquor
    - 2% Grocery Store
    - 1% Billboard
Full Data Collection

- February – May 2012
- 800 meter radius (1/2 mile) around schools
  - All food-beverage related advertisements
  - All food establishments
  - All alcohol outlets
  - Line of sight from 360 degrees around school
Full Data Collection

- 30 middle schools in Central Texas
  - Link to CATCH survey data
  - Sample of ~3000 eighth grade students, objectively measured BMI, food/beverage choices, other socio-demographic, psychosocial, and environmental variables
  - Link to in-school marketing environment data

- 4 additional middle schools in Austin Independent School District (AISD)

- All high schools in AISD (n=14)

- Nine hospitals in the Austin area
The MEDIA Study
(Measuring and Evaluating the Determinants and Influence of Advertising)

Pasch, K. E., Velazquez, C. E., Champlin, S. E. (in press). A Multi-Method Study to Understand how Youth Perceive and Process Food and Beverage Advertising In J. D. Williams, K. E. Pasch, & C. Collins (Eds.), Advancing Communication Strategies to Prevent Childhood Obesity. Springer
Study Purpose

- Through use of eye-tracking technology, document components of food and beverage advertisements that gained attention of youth, as well as pattern and duration of attention that youth paid to each element.

- Conduct focus groups and have youth write stories to determine how food and beverage advertising is perceived by youth, as well as, explore youth’s preferences for content of food and beverage advertising.
Methodology

- Participants
  - Convenience sample of 102 youth, aged 8-15 years
    - 56.4% Caucasian, 18.8% Hispanic, 16.8% Mixed, 6.9% Asian
    - 43.1% Female
    - Mean age: 11.6 years
    - 93.1% English as first language
    - 71.6% from two-parent family
    - 18.8% receive free/reduced price lunch
Methodology

- Study Design
  - Cross-sectional, observational study, using:
    - Quantitative Surveys
    - Eye-Tracking Technology
    - Written Stories
    - Focus Groups
Measures

- Total viewing time for all advertisements and unhealthy advertisements

- Total fixation time for animated characters, branded logos, unhealthy food and beverage items

- Total number of fixations for animated characters, branded logos, unhealthy food and beverage items
Food and Beverage Eye-Tracking
Food and Beverage Eye-Tracking
Measures

- Susceptibility Index
  - Exposure to Food and Beverage Advertising (2 items)
    - “During the last week, have you seen or heard advertisements for fast food (food from a restaurant where you order at the counter)?”
      - Responses: billboards, inside or outside of stores, at community events, in magazines, on television, on radio, and on computer or internet.
  - Do you own or collect anything that has the name of a fast food company (sugar-sweetened beverage) on it, like a t-shirt, hat, poster or water bottle?
    - Yes/No
  - Would you ever wear or use an item that has the name of a fast food company (sugar-sweetened beverage) on it, like a t-shirt, hat, poster or water bottle?
    - Yes/No
- Mean= 7.37 (SD=3.48); Range 0-18
Measures

- Unhealthy Food and Beverage Preferences (13 items)
  - Unhealthy Eating Preference Index measures preference of snack foods.
    - “Please circle next to whether you like, dislike or have never tasted the food items listed. Circle only one option for each item on the list.”
    - 13 Items; Mean= 10.0 (SD=2.1)

- Unhealthy Food and Beverage Choices
  - Consumption of snack foods and sugar-sweetened beverages.
    - “On a regular weekday, how often do you usually ... eat French fries or chips?”
      - I don’t usually eat this food to 5 or more times/day
      - 8 items; Mean 4.75 (SD=4.6)
# Pearson Correlations

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<td>9. Fixation Count on Characters</td>
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<td>Mean</td>
<td>7.37</td>
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<td>8.13</td>
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<td>50.44</td>
<td>20.97</td>
<td>8.80</td>
<td>2.10</td>
<td>4.58</td>
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</table>
Next Steps

- Focus group data
- Written stories
  - Link to eye-tracking and survey data
- Eye-tracking video data
The Alcohol MEDIA Study
Alcohol Use among College Youth

- 63.9% used alcohol in past month

- 43.5% binge drink
  - five or more drinks on same occasion on at least 1 day in past 30 days

- 16.0% heavy drinkers
  - five or more drinks on same occasion on each of 5 or more days in past 30 days
Study Purpose

- Determine how college age youth perceive and process alcohol advertisements
  - Traits of alcohol advertising that are most effective in getting students to consume alcoholic beverages

- Determine how exposure to advertisements may influence their alcohol use behaviors
  - Habits and beliefs students have about advertising and alcohol consumption
Methodology

- Participants
  - Convenience sample of 50 undergraduates
  - ~60% Caucasian
  - 50% Female
  - Mean age: 20.6 years
Methodology

- Study Design
  - Cross-sectional, observational study, using:
    - Quantitative Surveys
    - Eye-Tracking Technology
    - In-Depth Interviews
Alcohol Advertisement Eye-Tracking
Alcohol Advertisement Eye-Tracking
Preliminary Results

- **Overall**
  - Average time spent on advertisements for alcohol: 7.08 seconds
  - Average time spent on advertisements for non-alcohol: 6.63 seconds
    - \( p = 0.41 \).

- **Average time spent on alcohol advertisements by age:**
  - <21 Years of Age: 6.32 seconds
  - 21+ Years of Age: 8.05 seconds
    - \( p = .08 \)

- **Average time spent on alcohol advertisements by gender:**
  - Males: 7.59 seconds
  - Female: 6.52 seconds
    - \( p = .29 \)

- **Average time spent on alcohol advertisements by race/ethnicity:**
  - White: 7.49 seconds
  - Non-White: 6.19 seconds
    - \( p = .23 \)
Planned Analyses

- Eye-Tracking Data and Survey Data
- Qualitative Interviews
Future Directions

- Using eye-tracking technology to understand digital media
- Further qualitative exploration about the meaning of advertising to youth
What’s Next in Marketing to Youth?

Thank you!

**Collaborators**
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- Mary Hearst
- Kian Farbakhsh

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