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**Food Commercials and Kids:
Characterizing Advertising Content of Children's Online
Television Programs**

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Introduction

- Obesity among children ages 6-11 has tripled from 6.5% in 1980 to 19.6% in 2008 (Ogden et al., 2010).
- The Institute of Medicine found that food marketing during children's television significantly affects children's (ages 2-11) food preferences, requests and short-term eating habits.
- Some have studied the food marketing such as banner advertisements on popular children's websites
- No research has studied food marketing during online children's television programs.

Objective

- Our purpose is to sample and ascertain the composition of commercials during popular children's television programming available on the internet
- We also document the characteristics of the episodes to determine if related factors predict the percentage of food advertising

Data Collection Method

• 3 episodes were randomly selected from each network per recording period from a pre-determined list of shows that had evidence of popularity and with full-episodes available online across 4 networks.

- Cartoon Network
- Nickelodeon
- Disney
- 4Kids



- Before each recording session, computers were cleared of personal information via Ccleaner. Episodes were recorded with AtubeCatcher
- Recording took place in mid-March to early April 2011
- Recording sessions occurred from 3-5pm or 7-9pm to reflect popular viewing times among children
- Inter-rater reliability was unnecessary since all advertising was coded collectively after recording

Sample Summary

Total of 81.57 hours of programs and advertising

- 77.51 hours of programming (95.29%)
- 3.83 hours of commercials (4.71%)

The equivalent of 206 half hour episodes were recorded with an average length of 22 min 35 sec

- 49 from Cartoon Network
- 55 from Nickelodeon
- 54 from Disney
- 48 from 4Kids

Composition of Episodes:

- 49% & 51% were recorded in the afternoon (3-5pm) & evening (7-9pm), respectively
- Parental Ratings: 13.9% were TV-Y7, 30.8% were TV-Y7-FV, 38.5% were TV-G and 16.8% were TV-PG
- 46.2% were recorded during the weekend
- 63% were cartoons, 37% were Live-Action
- 23.6% of episodes were from programs that appear on Nielsen's top 50 episodes among children 6-11 years old
- Prior investigation showed no evidence that episode release date dictated the amount of advertising

Advertising Content	n=208
Food	33%
Console Video Games	17%
Other TV Programming	15.6%
Other	14.5%
Online Video Games	9.6%
Movies & Music	7.8%
Toys	2.5%
Episodes with >1 commercial	84.6%
Episodes with >1 commercial that repeated commercials	63.9%
% of repeated commercials from food products	22.1%

- Food advertising only makes up 33% of total advertising, commensurate to recent studies and much lower than historical averages of at least 50% (Powell, Szczypka, Chaloupka, 2010)
- Two-thirds of programs containing food ads showed the same ad more than once

Model

In order to predict the amount of food advertising as a percentage of total commercial advertising we model:

%Food Advertising= f(cartoon, evening, weekend, Nick, Disney, 4kids, NielsenTop50)

Variable	Definition: Characteristics of the Episode
Food Percent	The percentage of food commercials advertising food products or food companies (e.g. fast food, cereal, etc)
Intercept	Includes the omitted network, Cartoon Network
Cartoon	0, if Live Action; 1, if Animation
Evening	0, if recorded from 3-5pm; 1, if recorded from 7-9pm
Weekend	0, if recorded Monday-Friday afternoon; 1, if recorded from Friday evening-Sunday
Nickelodeon	1, if recorded from nick.com
Disney	1, if recorded from Disneychannel.com
4Kids	1, if recorded from 4kids.tv
Nielsen Top 50	1, if the program appears on Nielsen's most watched cable episodes among children 6-11 years old (this precludes 4Kids, a broadcast channel)

Preliminary Tobit Model

Variable	Parameter Est.	Std Error
Intercept	-5.11	7.78
Cartoon	7.88	5.89
Evening	3.19	4.19
Weekend	-2.34	4.2
Nickelodeon	14.65**	6.84
Disney	64.55**	6.77
4Kids	9.00	6.03
Nielsen Top 50	6.07	6.35

** represent p-value < .05

- Network affiliation significantly affects the amount of food advertising presented during the episode.
- Food advertising is independent of the time of the week and the evening versus the afternoon
- The format (ie live-action or cartoon) and popularity of the show do not affect the percentage of food advertising
- Note: The viewer of each episode did not significantly affect the amount of food advertising

Conclusion

Commercials as a whole are significantly less frequent during online children's programming compared to advertising on television.

- Previous study found commercial advertising made up 9 min 56 sec per hour of television (Powell, Szczypka & Chaloupka, 2007)
- Our sample showed 2 min 49 sec per hour of online episode viewing (excludes bumpers & transition time)
- Like television, food makes up the largest portion of commercial advertising during online kids' programming
- The amount of food advertising is closely linked to the program's affiliated network

Children will see the least amount of commercial food advertising by watching an episode online in fullscreen mode.

- Future Directions research should consider the nutritional value of visible foods and the banner ads that are visible while watching an episode and additional children's programs outlets

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