

Detailed Study Notes



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Introduction to this Episode

What does the current evidence tell us about the exact effect of marketing on food choices? And beyond that, what strategies are likely to yield the best results in terms of mitigating the harms of food marketing on eating behavior, particularly in children and adolescents?

Prof. Emma Boyland was on the podcast to discuss what is currently known. Dr. Emma Boyland is a Senior Lecturer in appetite and obesity at the Institute of Population Health, University of Liverpool.

Dr. Boyland's key research interest focuses on the way foods and beverages are marketed and how this impacts eating behaviors, particularly in children. Specifically, her work explores the effects of food promotion on children's food preferences, choices, and ingestive behavior.

Boyland aims to quantify the extent and nature of food advertising via television, new media and other sources (e.g., outdoor advertising) and elucidate the effects of branding activity (e.g., use of promotional characters) on children's responses to advertising.



Connection to Previous Episodes

1. [#428: Food Environments](#)
 - a. The term “food environment” is used to describe the physical, economic, political and socio-cultural contexts in which choices are made about acquiring, preparing and consuming food. The Sigma team discussed it in this episode.
2. [#404: Prof. Marion Hetherington – Psychology and Development of Food Preference & Eating Behaviour](#)
 - a. Of relevance here, in episode 404 the concept of the development of food preferences in infancy was discussed.
3. [#363: Public Health Policy vs. Personal Responsibility: Evidence vs. Ideology](#)
 - a. In this episode we discussed some aspects of putting policies in place, as well as the difference between mandatory regulation and industry self-regulation.
4. [#380: Prof. Barry Popkin – The Nutrition Transition & Using Policy Actions to Create Healthier Diets](#)
 - a. Among other things, this episode touched on the increasing control of the food supply by large corporations and the implications for policy.
5. [#339: Prof. Corinna Hawkes – Food Policy, Food Systems & Public Health](#)
 - a. In this episode we discussed the forces that dictate the appearance of poor quality food in the food supply and the process of making policy change happen.

How Do Food Environments Impact Diet Choices?

[Episode 428](#) of the podcast was specifically on 'Food Environments'.

From [The Lancet series on Obesity \(2015\)](#):

Modern food environments “exploit people’s biological, psychological, social, and economic vulnerability, making it easier for them to eat unhealthy foods”

[Bite Back 2030](#) is a UK registered charity and a group campaigning for redesigning the food system to make it healthier for future generations. Some of their campaigns relate to advocating for free school meals in the UK and fighting against the current food advertising situation.

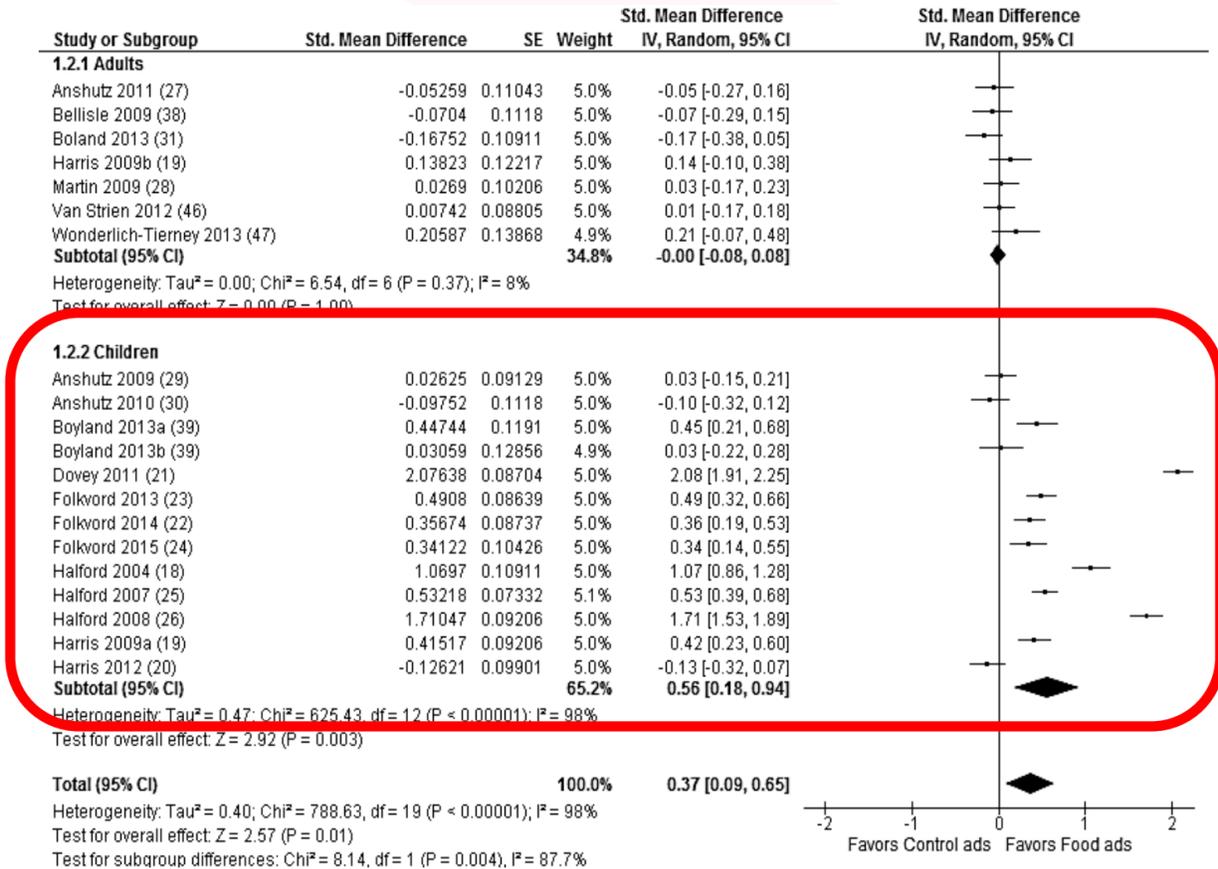
In the podcast episode we referenced [this 2-minute video](#), which was an illustrative ‘social experiment’ aimed at showing the impact of food marketing on our “free choice”. In the video, young people were exposed to various marketing tactics in the lead up to arriving at a restaurant, where they were allowed to pick whatever they wanted from the menu. A sealed envelope given to them before choosing, revealed that ahead of time we could predict what they’d choose.

How Does Marketing Affect Children's Eating?

Marketing can affect children’s diets in a few ways:

1. Primes consumption

- a. Food advertising on TV or the Internet increases children’s immediate food consumption.



From: [Boyland et al., Am Jour Clin Nutr, Vol 103, Iss 2, Feb 2016, Pg 519–533](#)

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2. Creates product expectancies

- a. E.g. Children preferred the **taste** of items if:
 - i. they thought they were from McDonalds ([Robinson et al., 2007](#))
 - ii. they had a cartoon character on the pack ([McGale et al., 2016](#))

3. Affects norms

- a. Social and cultural norms also play a role in preference learning ([Sobral et al.](#))

Studies on Marketing Exposure & Intake

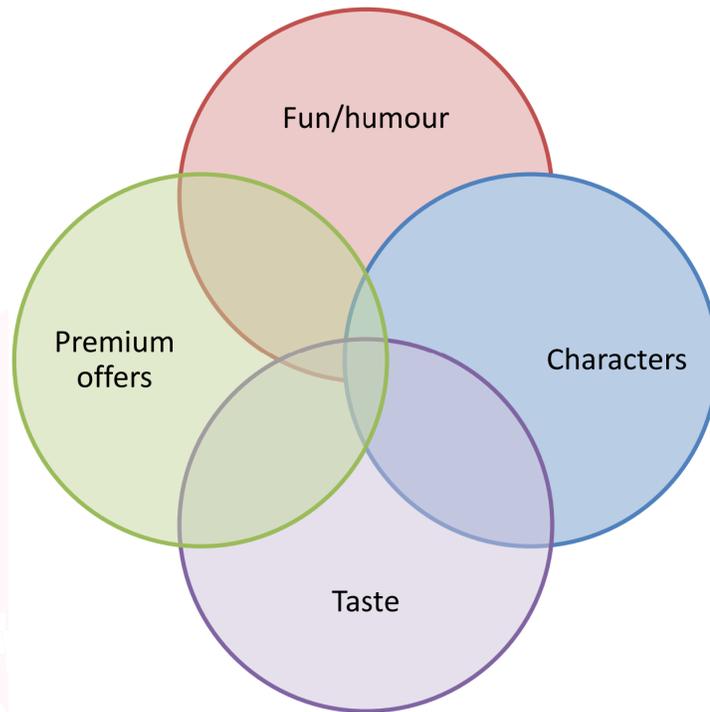
Prof. Boyland mentioned a type of study design that has often been used to look at impact of exposure on kids:

- You expose children to some food advertising (e.g TV ads), and then they watch a cartoon or expose them to say an Instagram influencer with some food marketing in that content.
- Then they're offered a selection of snack foods.
- You repeat that process with non-food advertising or no advertising at all.
- There is a really consistent effect that children will consume more calories and that they'll be more driven towards unhealthy snacks in particular.
- Largely these sorts of studies are run in children between the ages of 6 and 13.
- And there's evidence from epidemiological research that children only need to be consuming an extra 60-70 calories a day above their requirements to gain weight over time.
- And we're seeing differences with food advertising of 50 kcal/d (e.g. RCT by [Norman et al., 2018](#))
- That's just one element of how food advertising works.

Targeting of Children With Food Marketing

- Children are *preferentially* targeted by marketers. Due to:
 - They are independent spenders (will buy food with pocket money, etc.)
 - They have an influence over family spending (requests, preferences, etc.)
 - They are a future adult consumer. Food preferences established early can persist long-term.
 - See [episode 404](#) with Prof. Marion Hetherington for more on this.
- The home environment has been shown to be particularly important in the influencing of preferences for energy-dense foods ([Fildes et al., 2014](#))
- Advertising has a direct effect on preferences by creating familiar and positive associations ([Cairns et al., 2013](#))
- Estimated that children and adolescents see food marketing 30 and 189 times on average per week on social media apps, respectively ([Potvin Kent et al., 2018](#))
- In line with much of the other food preference research, childhood is a critical time for this food preference development.

Mass media marketing uses themes of appeal to children ([Boyland et al., 2012](#)):

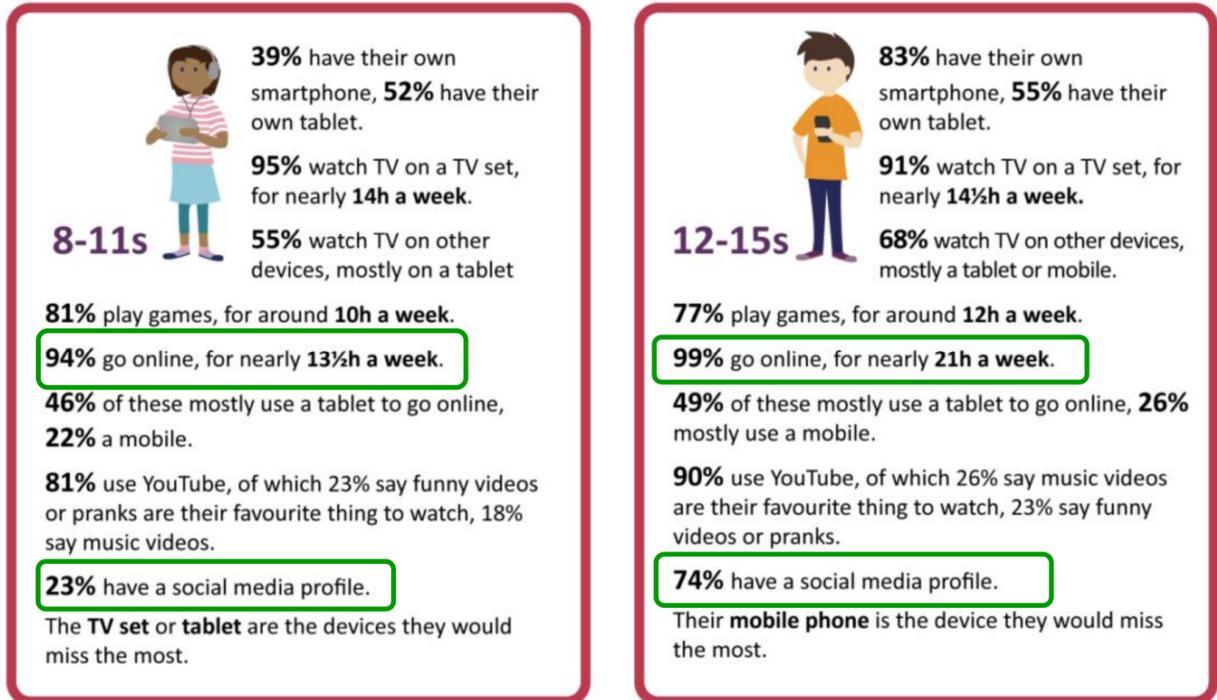


Also influences **parents**:

- Normative influences affect parents' beliefs about feeding their children ([Harris et al., 2009](#)):
 - Messaging that gets internalized
 - E.g. “One way to show your love for your children is to take them to McDonalds/give them Oreo cookies with milk”
 - Creates a distinction between “children’s food” and “adult food”
 - Affects social norms for consumption e.g. exposure to promotions predicts increased belief that others often eat fast food and approve of eating it

The Role of Digital Media

- A [2017 Ofcom report](#) examined children's media literacy.
- It provided evidence on media use, attitudes and understanding among children and young people aged 5-15.



Taken from: [Ofcom 2017 Children and Parents: Media Use and Attitudes Report](#)

A higher frequency of consumption of unhealthy foods and drinks was associated with ([Baldwin et al., 2018](#)):

- Watching food brand video content on YouTube
- Purchasing food online
- Seeing favorite food brands advertised online

Social media influencers - [Coates et al., 2019](#)

- Compared with children who viewed influencers with non-food products, *children who viewed influencers with unhealthy snacks* had:
 - significantly increased overall intake (~ 450 kcals)
 - significantly increased intake of unhealthy snacks specifically (~ 390 kcals).
- Viewing influencers with healthy snacks did not significantly affect intake.

Policies That Could Help

Prof. Boyland published a review of the evidence for the World Health Organization (WHO).

Based on current evidence it seems ([Boyland et al., 2021](#)):

- That it's absolutely possible to reduce the exposure of children to unhealthy food marketing.
- *But...* the policies that are **mandatory and government-led** are far more likely to show positive results in that regard than self-regulatory policies.

From this episode, Prof. Boyland states: *“Time and time again, it's been demonstrated that self-regulation doesn't have a meaningful impact.”*

Self-regulation by industry thus far seems to be ineffective. It has failed to meaningfully reduce:

1. children's exposure to unhealthy food marketing ([Galbraith-Emami & Lobstein, 2013](#))
2. sales of unhealthy food ([Kovic et al., 2018](#))

Effective "policy design elements":

1. The mandatory government-led approach is the better than industry self-regulation.
2. Using a government-led nutrient profile model was a feature of policies that tended to be more likely to be effective.
 - a. E.g. UK nutrient profile model balances the unhealthy nutrients against the healthy ones and comes up with a score
3. Policies that were aiming to restrict marketing to children to the full age range of children; so children above 12 years as well, were more likely to be effective than those that were very specifically focused on trying to protect children under 12 only.

Future Research

Gaps in the current research:

Research gaps to be addressed in future studies.

Additional Marketing Techniques	Additional Methodology
Contemporary marketing techniques and vehicles of marketing: <ul style="list-style-type: none"> - Social media - Internet advertising - Advertising in online games (i.e., pop-up advertisements) - Other new media 	Explicit and implicit techniques. These may involve: <ul style="list-style-type: none"> - Qualitative methods - Child-centred methods - Physiological methods <hr/> Stimuli <ul style="list-style-type: none"> - Stimuli informed by participants - Unfamiliar stimuli <hr/> Exposure duration <ul style="list-style-type: none"> - Accumulative exposures

From: [Smith et al., Nutrients. 2019 Apr; 11\(4\): 875.](#)

Conclusions

1. Food marketing strongly impacts children’s eating behavior.
 - a. Marketing influences food purchase requests, purchases, and preferences.
2. The relationship between food marketing exposure and obesity has evidence that “*meets epidemiological criteria for causality*” ([Boyland et al., 2022](#)).
3. The impact of food marketing is a function of both exposure to the marketing message and its persuasive power.
4. “Evidence to date shows that acute exposure to food advertising increases food intake in children but not in adults.” - [Boyland et al., 2016](#)
5. Self-regulation by industry thus far seems to be ineffective. It has failed to meaningfully reduce:
 - a. children’s exposure to unhealthy food marketing ([Galbraith-Emami & Lobstein, 2013](#))
 - b. sales of unhealthy food ([Kovic et al., 2018](#))
6. Mandatory policies put in place by governments are more likely to be effective than self-regulation.