

# Food marketing from preschool to teens - and the limits of advertising literacy

Dr. Mimi Tatlow-Golden

Senior Lecturer, Developmental Psychology and Childhood  
Co-Director, Centre for Children and Young People's Wellbeing





There is **unequivocal evidence** that the marketing of unhealthy foods and sugar-sweetened beverages is related to childhood obesity.  
WHO, 2016

JAMA Pediatrics | Original Investigation

## Association of Food and Nonalcoholic Beverage Marketing With Children and Adolescents' Eating Behaviors and Health A Systematic Review and Meta-analysis

Emma Boyland, PhD; Lauren McGale, PhD; Michelle Maden, PhD; Juliet Hounsome, PhD; Angela Boland, PhD; Kathryn Angus; Andrew Jones, PhD

Food and beverage marketing increased **intake, choice, preference, and purchase requests** in children and adolescents.

Boyland et al JAMA Pediatrics 2022

# Preschool

When do children know their food brands?  
Which brands do they recognise?

## 172 children, 3-5 y

Island of Ireland

100 parents

Mixed SES

11 education settings



## Food marketing and the preschool child



1. TV food ads:  
Exposure?



2. Learning from ads  
YouTube/TV?

3. Food knowledge  
Healthy or not?



4. Food brand knowledge?

5

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**Appetite**

journal homepage: [www.elsevier.com/locate/appet](http://www.elsevier.com/locate/appet)

Research report

**'Big, strong and healthy'. Young children's identification of food and drink that contribute to healthy growth<sup>a,\*</sup>**

Mimi Tatlow-Golden<sup>a</sup>, Eilis Hennessy<sup>a,b</sup>, Moira Dean<sup>b</sup>, Lynsey Hollywood<sup>b,c</sup>

<sup>a</sup> School of Psychology, University College Dublin, Belfield, Dublin 4, Ireland  
<sup>b</sup> Institute for Global Food Security, Queen's University Belfast, David Keir Building, Stranmillis Road, Belfast BT9 5AQ, Northern Ireland, UK  
<sup>c</sup> Department of Paediatrics and Adolescent Medicine, University of Ulster, Coleraine campus, Coleraine Road, Coleraine, Co. Londonderry BT52 1SA, Northern Ireland, UK

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ABSTRACT

Growing children's food brand knowledge is a function of television viewing and parent's diet. This study examined the food brand knowledge of 4-year-old children and their parents. The study found that children's food brand knowledge was related to television viewing and parent's diet. The study also found that children's food brand knowledge was related to television viewing and parent's diet.

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**Young children's food brand knowledge. Early development and associations with television viewing and parent's diet<sup>a,\*</sup>**

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<sup>c</sup> Department of Paediatrics and Adolescent Medicine, University of Ulster, Coleraine campus, Coleraine Road, Coleraine, Co. Londonderry BT52 1SA, Northern Ireland, UK

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 Parents  
 Television advertising

ABSTRACT

Brand knowledge is a process of learning about a product or service. It is a function of television viewing and parent's diet. This study examined the food brand knowledge of 4-year-old children and their parents. The study found that children's food brand knowledge was related to television viewing and parent's diet. The study also found that children's food brand knowledge was related to television viewing and parent's diet.

**Children 'know  
their food brands  
before they know  
their ABCs'**

**Unhealthy > healthy  
brand logo recognition  
(similar advertising rates)**

**Brands before  
food literacy**

**>1000 unhealthy  
TV f&b ads a year  
Not including digital...**

*The Irish Journal of Psychology*, 2016  
<http://dx.doi.org/10.1080/03033910.2016.1191770>



**'Creating good feelings about unhealthy food: children's televised  
'advertised diet' on the island of Ireland, in a climate of regulation**

Mimi Tatlow-Golden<sup>a,\*</sup>, Celine Murrin<sup>b</sup>, Rebecca Bergin<sup>b</sup>, Maeve Kerr<sup>c</sup>,  
 Sínead O'Brien<sup>b</sup> and Barbara Livingstone<sup>a</sup>

<sup>a</sup> School of Psychology, University College Dublin, Belfield, Dublin 4, Ireland; <sup>b</sup> School of Public Health, Physiotherapy and Population Science, University College Dublin, Belfield, Dublin 4, Ireland; <sup>c</sup> Northern Ireland Centre for Food and Health, School of Biomedical Sciences, Ulster University, Coleraine BT52 1SA, UK

(Received 4 September 2015; accepted 24 May 2016)

Childhood eating habits and associations with advertising persist through life. Obesity is high in Ireland, and is increasing worldwide. Links between food promotion and children's diets are well-established, and the World Health Organization has called for reduced marketing of foods high in fat, sugar and salt (HFSS) to children. In Ireland and the UK, statutory regulation restricts



# Teens

What ads do teens respond to?  
Unhealthy, healthy, or non-food?  
And in what way?



Article

# See, Like, Share, Remember: Adolescents' Responses to Unhealthy-, Healthy- and Non-Food Advertising in Social Media

Gráinne Murphy <sup>1,†</sup>, Ciara Corcoran <sup>1,†</sup>, Mimi Tatlow-Golden <sup>2,\*</sup>, Emma Boyland <sup>3</sup> and Brendan Rooney <sup>1,†</sup>

<sup>1</sup> Media and Entertainment Lab, School of Psychology, University College Dublin, Belfield, 4 Dublin, Ireland; grainne.murphy.3@ucdconnect.ie (G.M.); ciara.corcoran@hotmail.com (C.C.); brendan.rooney@ucd.ie (B.R.)

<sup>2</sup> Faculty of Wellbeing, Education and Language Studies, The Open University, Milton Keynes MK7 6AA, UK

<sup>3</sup> Institute of Psychology, Health and Society, University of Liverpool, Liverpool L69 7ZA, UK; E.boyland@liverpool.ac.uk

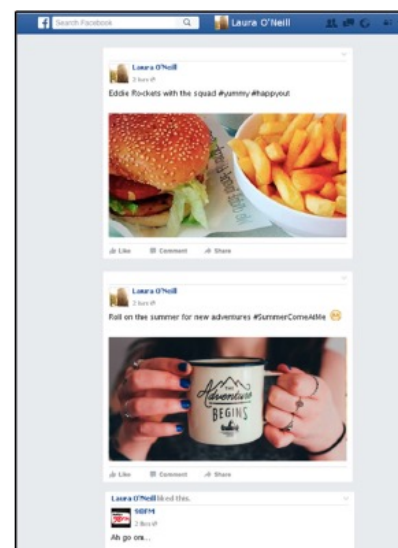
\* Correspondence: mimi.tatlow-golden@open.ac.uk; Tel.: +44-1908-652684

† Co-first authors who contributed equally to the work.

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**Abstract:** Media-saturated digital environments seek to influence social media users' behaviour, including through marketing. The World Health Organization has identified food marketing, including advertising for unhealthy items, as detrimental to health, and in many countries, regulation restricts such marketing and advertising to younger children. Yet regulation rarely addresses adolescents and few studies have examined their responses to social media advertising. In two studies, we examined adolescents' attention, memory and social responses to advertising posts, including interactions between product types and source of posts. We hypothesized adolescents would respond more positively to unhealthy food advertising compared to healthy food or non-food advertising, and more positively to ads shared by peers or celebrities than to ads shared by a brand. Outcomes measured were (1a) *social responses* (likelihood to 'share', attitude to peer); (1b) *brand memory* (recall, recognition) and (2) *attention* (eye-tracking fixation duration and count). Participants were 151 adolescent social media users (Study 1:  $n = 72$ ; 13–14 years;  $M = 13.56$  years,  $SD = 0.5$ ; Study 2:  $n = 79$ , 13–17 years,  $M = 15.37$  years,  $SD = 1.351$ ). They viewed 36 fictitious Facebook profile feeds created to show age-typical content. In a  $3 \times 3$  factorial design, each contained an advertising post that varied by content (healthy/unhealthy/non-food) and source (peer/celebrity/company). Generalised linear mixed models showed that advertisements for unhealthy food evoked significantly more positive responses, compared to non-food and healthy food, on 5 of 6 measures: adolescents were more likely to wish to 'share' unhealthy posts; rated peers more positively when they had unhealthy posts in their feeds; recalled and recognised a greater number of unhealthy food brands; and viewed unhealthy advertising posts for longer. Interactions with sources (peers, celebrities and companies) were more complex but also favoured unhealthy food advertising. Implications are that regulation of unhealthy food advertising should address adolescents and digital media.



13-17y  
N=151  
Ennis/Dublin, Ireland

Viewed content of  
fictitious peers

<https://www.mdpi.com/1660-4601/17/7/2181>

# See

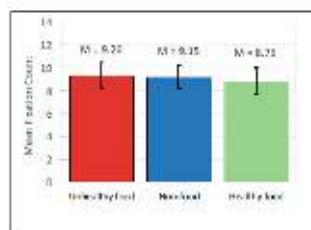
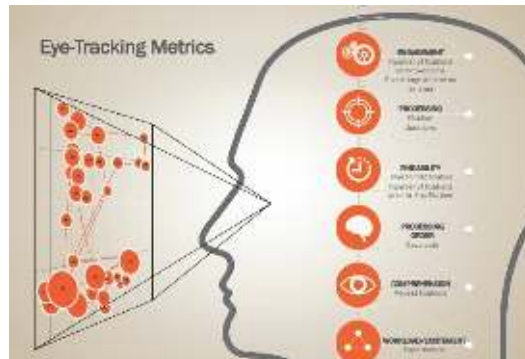


Figure 10. Fixation count: Mean scores.

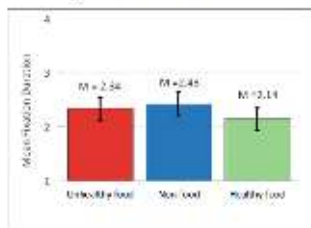


Figure 11. Fixation duration: Mean scores.

# Like, Share

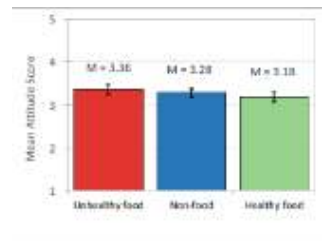
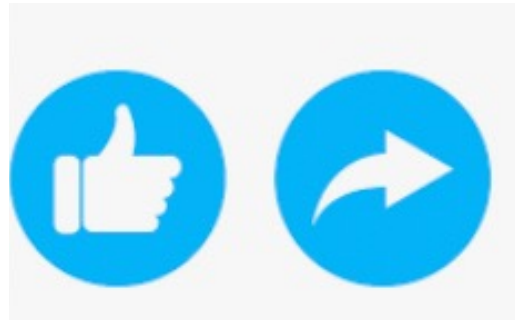


Figure 2. Attitude to peer: Mean scores.

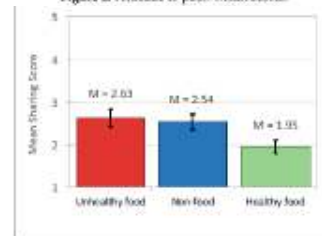


Figure 4. Likelihood to share: Mean scores.

# Remember

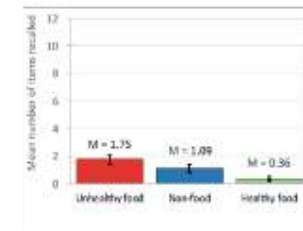


Figure 6. Free brand recall: Mean scores.

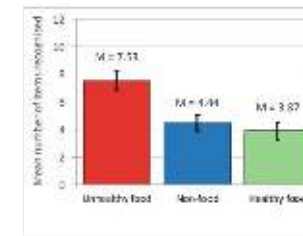


Figure 8. Prompted brand recognition: Mean scores.

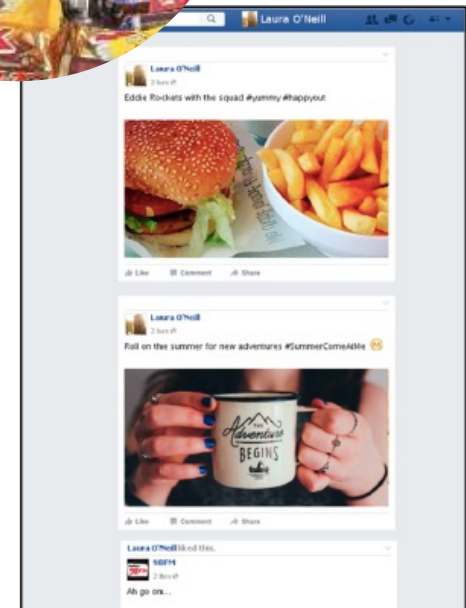




- **See:** Fixation frequency/ duration
- **Like:** Peer evaluation
- **Share:** Likelihood to share
- **Remember:** Recall/ prompted recognition

All:

Unhealthy > healthy



# Limits of advertising literacy

## Unhealthy food ads: A universe of meaning - emotion and identity-building through taste, friends, love, joy, fun



## “EMPATHY AT SCALE”

Mondelez uses creative with data and personalization to target consumers

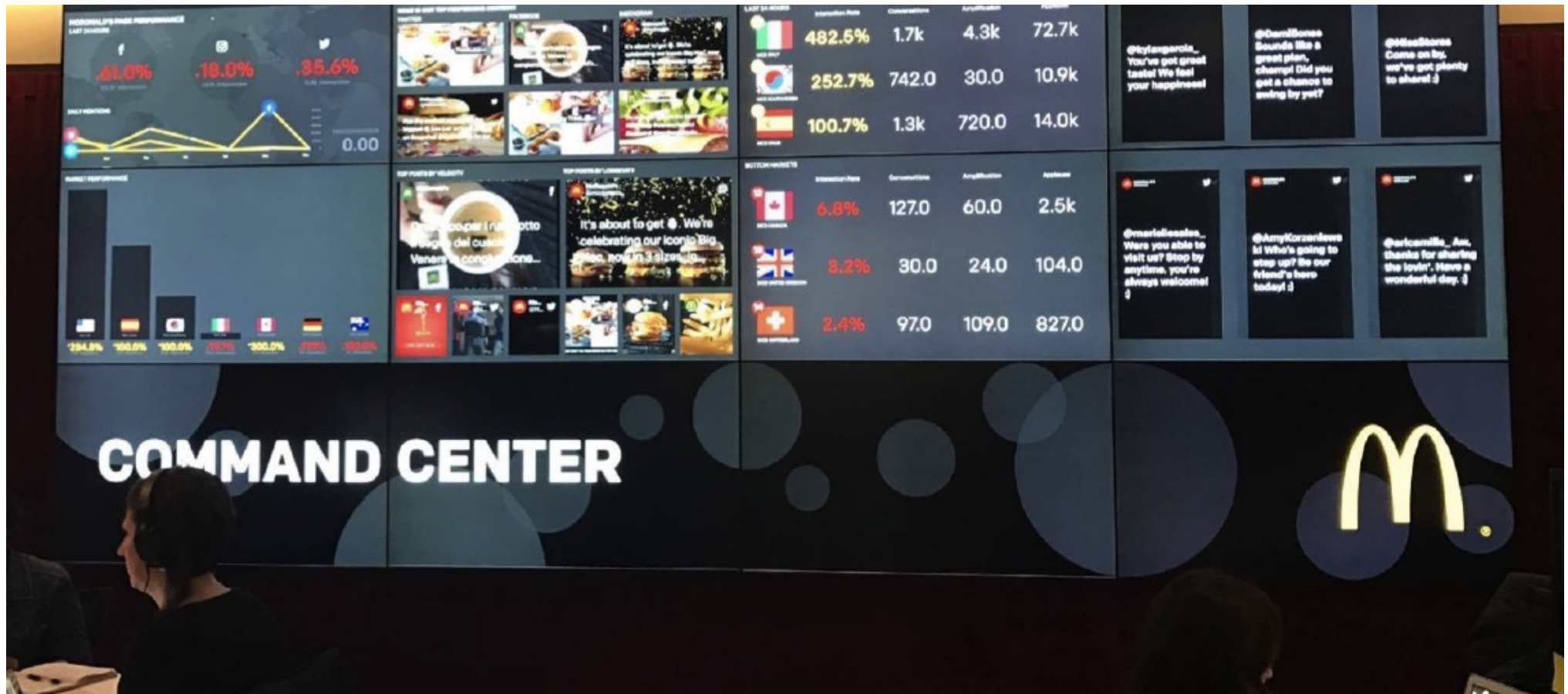
Oreos:

A campaign with Lady Gaga, for instance, featured a limited-edition line of cookies and a website to create musical “Oreograms”, while special-edition cookies for Pokemon fans encouraged consumers to “catch ‘em all.”

“a 2X increase in Oreo’s ROI on Google platforms and a jump in brand health metrics”



[https://www.thinkwithgoogle.com/intl/en-apac/future-of-marketing/digital-transformation/customer-centric-marketing-mondelez-international/?utm\\_medium=email&utm\\_source=d-content-alert-visual&utm\\_team=twg-apac&utm\\_campaign=TwG-APAC-CAV-2022-06-21-APAC-Mondelez-Knak&utm\\_content=cta-btn&mkt\\_tok=MTcyLUdPUC04MTEAAAGFlvkwNEUxB8TMY-Ouf0u9h0v8jQqvNKO6J23GXkeysUpz8ZhMvDP6ST2JHATYVf\\_LFz4-y\\_Bxv6lxG5uH49ale84WnaaeWDbfcAvgOSfkA5yMN3Q](https://www.thinkwithgoogle.com/intl/en-apac/future-of-marketing/digital-transformation/customer-centric-marketing-mondelez-international/?utm_medium=email&utm_source=d-content-alert-visual&utm_team=twg-apac&utm_campaign=TwG-APAC-CAV-2022-06-21-APAC-Mondelez-Knak&utm_content=cta-btn&mkt_tok=MTcyLUdPUC04MTEAAAGFlvkwNEUxB8TMY-Ouf0u9h0v8jQqvNKO6J23GXkeysUpz8ZhMvDP6ST2JHATYVf_LFz4-y_Bxv6lxG5uH49ale84WnaaeWDbfcAvgOSfkA5yMN3Q)



McDonald's purchase of AI company Dynamic Yield:  
"AI is rapidly going to change the stories and frameworks we have used  
to define the human experience ..." (Gale, 2019, Forbes Insights)



Just out!

All emotional ads affect child preferences – not just ‘child-directed’



Mediano et al., 2022

Children aged 11-12 y (N=546) in Chile

Randomly exposed to 1 of 4 :

- Child-directed emotional
- Universal emotional
- Non-targeted appeal
- No ad

Children's exposure to universal emotional appeals

**increased preference for sodas** (over water)

-> attitude to ad -> attitude to product



# Advertising literacy: does it reduce food marketing effects?

## Informational approach – little evidence of effects

Rozendaal et al, 2011, *Media Psychology*, 14: 333-354.

See also: Banerjee & Kubey, 2013 (SR)

Bergsma & Carney, 2008 (SR)

Greene et al, 2015

Jeong et al, 2012 (MR)

Liao et al 2016

Martens, 2010 (SR)

## ? Possible : Social justice, autonomy from adult control ('adolescent values')

Bryan et al., 2019, *Nature Human Behaviour* 3, 596-603

See also; Neufeld et al., 2021, *Lancet*, 399, 185-197

## Individual solutions “a mistake”

### The i-Frame and the s-Frame: How Focusing on Individual-Level Solutions Has Led Behavioral Public Policy Astray

41 Pages • Posted: 11 Mar 2022 • Last revised: 30 Mar 2022

Nick Chater

University of Warwick - Warwick Business School

George Loewenstein

Carnegie Mellon University - Department of Social and Decision Sciences

Date Written: March 1, 2022

#### Abstract

An influential line of thinking in behavioral science, to which the two authors have long subscribed, is that many of society's most pressing problems can be addressed cheaply and effectively at the level of the individual, without modifying the system in which individuals operate. Along with, we suspect, many colleagues in both academic and policy communities, we now believe this was a mistake. Results from such interventions have been disappointingly modest. But more importantly, they have guided many (though by no means all) behavioral scientists to frame policy problems in individual, not systemic, terms: to adopt what we call the “i-frame,” rather than the “s-frame.” The difference may be more consequential than those who have operated within the i-frame have understood, in deflecting attention and support away from s-frame policies. Indeed, highlighting the i-frame is a long-established objective of corporate opponents of concerted systemic action such as regulation and taxation. We illustrate our argument, in depth, with the examples of climate change, obesity, savings for retirement, and pollution from plastic waste, and more briefly for six other policy problems. We argue that behavioral and social scientists who focus on i-level change should consider the secondary effects that their research can have on s-level changes. In addition, more social and behavioral scientists should use their skills and insights to develop and implement value-creating system-level change.

**Keywords:** Behavioral public policy, behavioral economics, framing, nudge, climate change, obesity, addiction, behavior change



“...we now believe this was a mistake”

- small or null effects
- reduce support for more effective systemic actions (regulation, taxation)

“...unwittingly helped promote interests of corporations who oppose systemic change”

## TAKE-HOME:

- Children consistently prefer 'unhealthy' ads from preschool onward
- Advertising is designed to activate emotion
- Advertisers acquiring powerful systemic targeting and design methods
- Children show increased preference for products via any ads featuring emotional appeals, not just 'child-targeted' or 'child-appealing' ads
- Resistance requires conscious awareness and motivation
- Informational ad literacy is poorly supported by evidence
- Individualised solutions are not working
- Systemic regulatory solutions are required

# THANK YOU

[mimi.tatlow-golden@open.ac.uk](mailto:mimi.tatlow-golden@open.ac.uk)

