Institution:
UNIVERSITY OF LIVERPOOL

Unit of Assessment:
UOA4 - Psychology, Psychiatry and Neuroscience

Title of case study:
Advertising Obesity? TV Marketing, Food Promotion, Diet and Body Weight in Children.

1. Summary of the impact

Research conducted by the University of Liverpool (UoL) has convincingly shown that there are strong links between the exposure of children to food advertising, brand recognition and being overweight or obese. This work consistently informs the policies of regulators and health agencies, nationally and internationally. In this specific example, work by Halford and Boyland to characterize the effects of food advertising on children's diet, food preferences, intake and body weight has had a direct effect on UK and overseas policy development. Notably this includes informing WHO guidelines to national governments on introducing effective regulatory frameworks and for monitoring their effectiveness.

2. Underpinning research

The impact of television viewing and food advertising on children's diet and health is an increasingly concerning, but controversial, issue for health agencies worldwide. There is a growing realisation that advertising contributes significantly to the increased prevalence of obesity and early onset diabetes – evidenced principally by a body of University of Liverpool (UoL) research begun in 2003 by Halford (Lecturer, Department of Psychological Sciences). Governments and health systems express concerns about this issue and mobilise resources and legislation to address it. However, their actions meet considerable opposition from the food and advertising industries. This research programme has definitively demonstrated that the relationship between TV viewing and childhood obesity cannot simply be attributed to a sedentary lifestyle and specifically implicates food advertising as a cause of overconsumption and obesity.

Initially in 2003, Halford et al. examined the ability of lean, overweight and obese children (aged 9-11) to recognize food and non-food adverts, and how advert viewing influenced their subsequent snack consumption. Obese children recognized more food adverts than lean children, and recognition level correlated significantly with the amount of food eaten (especially sweet, high fat snacks). However, while clearly indicating heightened alertness to food-related cues in obese children, the study showed that acute exposure to food adverts can increase food intake in all children [1]. The immediate reception of this work within academia, policy circles, and international media stimulated a series of UoL follow up studies with larger cohorts and age ranges that have consolidated and expanded those findings; confirming by 2008 the critical contribution of advertising to children's dietary choices, energy intake and body weight [2,3].

Research by Halford and Boyland at UoL from 2006 showed that in 5-7 year old children, food advert exposure markedly increased food intake in all children, and that recognition of food adverts is directly related to body mass index (BMI). Exposure to food advertisements thus promotes over-consumption in younger children generally, but a particular awareness in overweight/obese children of unhealthy snack food brands suggests that obese and overweight children are more responsive to food promotions, and so at greater risk of negative health consequences [2]. Indeed, a further study demonstrated that obese and overweight children show a greater preference for branded foods than do normal weight children [3]. Further, children with higher habitual levels of television viewing were more responsive to food promotion messages, displaying a greater magnitude of preference shift towards branded foods after viewing food commercials [4].

The UoL research went on to show that despite the 2009 Ofcom regulations on advertising to children, children in the UK are exposed to more TV advertising for unhealthy than healthy food items - even at peak children's viewing times, with advertisers targeting programming popular with children and adults alike, and directing children to celebrity-endorsed websites where current regulations do not apply [5]. UoL's involvement in an international collaboration to examine the impact of the regulatory environments of different countries on TV food advertising to children showed a similar pattern worldwide [6].

3. References to the research

1. **Halford JCG**, **Gillespie J, Brown V, Pontin EE, Dovey TM** (2004) The effect of television (TV) food advertisements / commercials on food consumption in children. Appetite, 42 (2): 221-225. doi:10.1016/j.appet.2003.11.006. Citations: 145 Impact Factor: 2.541

2. **Halford JCG**, **Boyland E**, **Hughes G, Stacey L, McKean S, Dovey TM**. (2008) Beyond-brand effect of television food advertisements on food choice in children: the effects of weight status. Public Health Nutrition. **11** (9); **897-904** DOI: **10.1017/S1368980007001231.** Citations: 47 Impact Factor: 2.250

3. **Halford JCG**, **Boyland E**, **Cooper GD, Dovey TM, Smith CJ, Williams N**, Lawton CL, Blundell JE (2008). Children's preferences: Effects of weight status and television food advertisements (commercials). International J. Paediatric Obesity. 3; 31-38. DOI: **10.1080/17477160701645152.** Citations: 21 Impact Factor: 2.276

4. **Boyland EJ**, **Harrold JA**, **Kirkham TC**, **Dovey TM**, Lawton CL, Blundell JE, **Halford JCG** (2011). Television food advertisements (commercials) increase preference for energy-dense foods, particularly in high TV viewing children. Pediatrics 128 (1) E93-E100 - doi:10.1542/peds.2010-1859. Citations: Impact Factor: 5.119

5. **Boyland EJ**, **Harrold JA**, **Kirkham TC**, **Halford JCG**. (2011). The extent of food advertising to children on UK television in 2008. International Journal of Pediatric Obesity 6 (5-6) 455-461 doi:10.3109/17477166.2011.608801. Citations: 16 Impact Factor: 2.276

6. Kelly B, **Halford JCG**, **Boyland EJ**, Chapman K, Bauitisa-Castaño, Berg C, Carolu M, Cook B, Coutinho JG, Effertz T, Grammatikaki E, Keller K, Leung R, Manios Y, Monterio R, Pedley C, Prell H, Raine K, Recine E, Serra-Majem L, Singh S, Summerbell C. (2010). Television food advertising to children: a global perspective. American Journal of Public Health. 100 (9); 1730-1736. doi: **10.2105/AJPH.2009.179267.** Citations: 38 Impact Factor: 3.930

4. Details of the impact

The World Health Organisation estimated that in 2010 42m children under the age of 5 years were obese, of which nearly 35m were living in developing countries. They describe childhood obesity as one of the most serious public health challenges. A majority of obese children become obese adults, and obesity leads to 30,000 premature deaths per year in the UK alone and a cost of £1b to the NHS.

The UoL research into the impact of advertising on the food preferences and intake of children is extensively used as an evidence base and source of recommendations by regulators and policymakers throughout the world as they grapple with the adverse consequences of increased childhood obesity and associated childhood and life-long diseases such as diabetes. The research also informs the public directly, enabling them to act and apply political pressure. The following impacts have occurred since 2008 and stem from the UoL research.

The UoL research, particularly that pre-dating current regulation on advertising to children, definitively demonstrated links between branded advertisements and increased preference for, and intake of, unhealthy, obesity-inducing foods – especially amongst overweight and obese children and those exposed to the most television. Consequently, the UoL has pro-actively engaged in a programme of outreach to communicate these findings to policymakers, health organisations and the general public in the UK and internationally through interviews with UK and international broadcast and print media with the objective of influencing policy debates [7].

The research has strongly influenced **policymakers** internationally. Since 2008, the UoL studies have been widely used by key agencies to substantiate and promote their policy positions, including the International Obesity Taskforce of the International Association for the Study of

Obesity, the British Heart Forum and US Institute of Medicine, as well as the European strata of the World Health Organisation.

In 2008, the UoL was invited by the Department of Health to bring together key policy stakeholders to report on the impact of new media on the marketing of food and beverages to children. The initial UoL studies were presented to the WHO via the European Network for the Reduction of Marketing to Children, an organisation of European Health Ministries constituted to coordinate national contributions to the formulation and implementation of WHO recommendations on the marketing of foods and non-alcoholic beverages to children. Two extensive, systematic literature reviews formed the basis for the WHO recommendations, with the UoL body of work informing the key report on the extent, nature and effects of food promotion to children [8, 9]. In 2011, due to the strength of UoL research and the body of evidence built up, the WHO (represented by Dr Joao Breda, Programme Manager, Nutrition, Physical Activity and Obesity) entered into an agreement with the UoL to develop a European WHO-collaborating centre examining the marketing of food and non-alcoholic beverages to children [10]. The UoL has contributed directly to WHO reviews and policy documents; the UoL's Halford and Boyland were the sole academic consultants in the preparation of the WHO report, *Marketing of foods high in fat, salt and sugar to children* [11].

The public dissemination programme driven by the UoL research and its citation by others generated political pressure to act. In 2009, Ofcom fully implemented regulations on the promotion of high fat, salt and sugar (HFSS) foods to children on television and in 2010 they reported that there was a ~37% reduction in such advertising. **Regulators** have benefited from being able to act on sound evidence and the **general public** have benefited from increased understanding [7] .The UK example of regulation was not the first, but it is often cited internationally so other regulators are taking a keen interest in the impact of the UoL research when formulating their policies.

Broadcast media are only a part of the advertising problem; there is increasing use of internet and mobile telephone applications to direct marketing at children, so it is now recognised that broader action has to be taken. In this context, the UoL's recognized expertise and research on advertising has informed the UK Department of Health (2008-), the European Network on Reducing Marketing Pressure on Children (2010-) [12], the EU-funded StanMark project for improved marketing standards (2010-11) [13], and WHO (European region) [9,10,11,14] as they seek to tackle all avenues of food advertising.

These findings on the failure to control food promotion to children along with more recent experimental data on advert exposure on children's food preferences are regularly presented to WHO, European and international health agencies, where they continue to inform the development of recommendations for regulatory regimes.

5. Sources to corroborate the impact

Each source listed below provides evidence for the corresponding numbered claim made in section 4 (details of the impact).

7. Boyland interview on Radio 4's 'All in the Mind' programme (broadcast 8th June 2011) http://www.bbc.co.uk/programmes/b011p6yv

8. Cairns G, Angus K, Hastings G. *The extent, nature and effects of food promotion to children: a review of the evidence to December 2008*. Geneva, WHO, 2009 (http://www.who.int/dietphysicalactivity/Evidence_Update_2009.pdf

9. WHO (2010) Set of recommendations on the marketing of foods and non-alcoholic beverages to children. http://www.who.int/dietphysicalactivity/publications/recsmarketing/en/index.html

10. Letter: Nutrition, Physical Activity and Obesity, WHO Europe. (Able to corroborate UoL's international standing in the field of food marketing research, contribution to WHO policy

documents (as authors and the inclusion of UoL research findings as key evidence) and our progression towards achieving WHO Collaborating Centre status for the Department of Psychological Sciences.)

11. WHO 2013. Marketing of foods high in fat, salt and sugar to children: update 2012–2013. ISBN 978 92 890 009 3. http://www.euro.who.int/__data/assets/pdf_file/0019/191125/e96859.pdf

12. European Marketing Network on reducing marketing pressure on children – report from the 7th meeting (Copenhagen 2012). http://www.helsedirektoratet.no/english/topics/food-marketing-children/Documents/Final%20report%20seventh%20meeting%20in%20European%20Network.pdf

13. IASO (2012) The 2012 report of the StanMark project on standards for marketing food and beverages to children in Europe. http://www.iaso.org/site_media/uploads/A_Junk-free_Childhood_2012.pdf

14. WHO (2012) A framework for implementing the set of recommendations on the marketing of foods and non-alcoholic beverages to children (2012). http://www.who.int/dietphysicalactivity/framework_marketing_food_to_children/en/