



A content analysis of appeals in food advertisements for children on online tv streaming

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ABSTRACT

The increasing number of obese children has doubled over the past two decades and represents a major public health problem everywhere in the world. This problem is escalated with easy Internet access, where online TV programming with unrestrained food advertisements are easily available to children. Recognising the increasing purchasing power of children, food marketers are now focusing on this cohort as a profitable target group. While previous studies have examined food advertisements that target children and how these affect their food choices, this study goes one step further by identifying major forms of persuasive appeals utilised by the food marketers in such advertisements. Using content analysis to study advertisements targeting children on Internet TV streaming via children's channels, this study identified 21 emotional appeals and 15 rational appeals employed by food marketers in their advertisements. The findings of this study show that children are more susceptible to the emotional contents of the advertisements, (where it appeals to the children's emotional desires) rather than the rational quality of the advertisements (where the logic of health and nutrition claims are not salient concerns).

Keywords: ***emotional appeals, rational appeals, food advertisements, children obesity, Internet TV programmes***

INTRODUCTION

The increasing number of obese and overweight children has doubled over the past two decades which represents a major public health problem in many countries (WHO, 2006). Kosti & Panagiotakos reported in 2006 that over 22 million infants and children globally under the age of 5 are severely overweight. In 2014, the World Health Organization (WHO) (WHO, 2014) reported that this number has increased to 42 million, which implies that every 4 in 10 children are overweight worldwide. Thus, if current trends continue, this number will increase to 70 million by 2025 (WHO, 2014).

There are many causes of childhood obesity but food marketing is seen as a major contributor. A WHO report (2006) speculates that the heavy advertising of energy-dense, micronutrient-poor food and beverages is a major factor in childhood obesity and has been cited as a target for future interventions. While many previous research and studies on food marketing have focused mainly on television advertising (Barr-Anderson, Larson, Nelson, Neumark-Sztainer & Story, 2009; Warren, Wicks, Wicks, Fosu & Chung, 2008), it is important to note that the use of non-broadcast media is becoming more common where children are exposed to a high volume of advertising messages from increasingly sophisticated and integrated marketing techniques (Connell, Brucks, & Nielsen, 2014; Botha & Fentonmiller, 2012; Brady, Farrell, Wong, & Mendelson, 2008; Weber, Story, & Harnack, 2006; Dontson & Hyatt, 2005).

The integration of advertising messages into all aspects of a child's environment normalises promoted foods to the child, thus misleading the child into thinking that the advertising message is appropriate (Hoek & Gendall, 2006) and this includes elements of a larger marketing design such as product packaging, product placement on store shelves, movies and television programmes, in-store displays, cross-promotions and Internet marketing (Centre for Science in the Public Interest, 2003). The Internet, where most of these advertising messages are found rampantly with no control and restrictions, is rapidly becoming more accessible to children as more of them are spending an increasing amount of time surfing the Internet. This has proven to be a serious problem as globally, more than 13 million children between the age of 2 and 11 use the Internet, and the percentage of Internet usage among these age groups has increased by 35% in the same time period between 2004 and 2005 (Moore, 2006). It was found that two-thirds of children aged 4 to 6 live in homes with computers that have Internet access and 56% of them are able to use the computer by themselves. Malaysia is no exception — its average household broadband penetration has grown from 2.5 million in 2006 to 24.5 million in 2017, a growth of 880%, whereby 5.8% or 1.8 million users were children under the age of 18 (The Borneo Post, 2017).

This is very much owing to the emergence of the Internet over the past decade which has seen a shift in children's viewing habits from television to this small screen (Matsushida, Yoshiike, Kaneda, Yoshita, & Takimoto, 2004). Today's children are growing up in the hub of an exploding digital media culture. The millennials are the defining users of this new culture, passionately accepting an ever-increasing array of interactive Internet TV, websites and digital devices, and quickly moving on to become the main consumers and decision makers of the household using this medium. Most of the major companies that advertise and market to children have created their own websites, designed as 'branded environments' for children, offering entertaining, animated and interactive components as persuasive appeals. Taking cognisance of this, marketers are very interested in reaching out to children as they represent a powerful economic and demographic segment which the companies can interact and connect with (including their friends) online. Through this relationship, marketers get to carefully track the children online, through conversations via social media, as well as collect data to record and develop personalised behavioural profiles (Brady et al., 2008).

Thus, based on the outlined current technology scenario where food advertisements on the Internet is unregulated, this research is designed to investigate the persuasive elements that food advertisers employ to engage the attention of children and the effect of those messages and elements on their food consumption. This study used content analysis to identify the extent of persuasive advertising involving emotional and rational appeals that are employed to target children. Content analysis is the best technique for this study to assess the degree to which these elements are utilised and the nature of their usage in online television programmes.

Children and Food Advertising

The children's division is a growing potential market, especially in terms of buying decisions and market influence. Children today are seen to have specific needs, coupled with the spending power to sustain those needs and satisfy them. These factors affect many kinds of purchases as they are some of the biggest market influencers. In fact, the significance of the children's segment is so massive that this division holds three separate markets: (i) the primary market—they have their own money, needs and wants, as well as the ability and willingness to spend on the items that satisfy them and make them happy; (ii) the influence market — they can directly and indirectly influence others, primarily their parents in deciding what to buy; (iii) the future market — if captured as consumers during childhood, retailers hope to retain that brand loyalty as children grow up (De Cruz, Philips, Visch & Saunders, 2006).

Children now have their own savings for future spending, the freedom to spend on anything they want and are a huge influencer in the family's decision making. Thus, in terms of sales, it proves to be highly lucrative when these marketers establish a two-way relationship with children as it builds brand loyalty (Connell et al., 2014; Harrison & Marske, 2005). Although the overall spending sum by children may not look significant to most marketers, the possible lifetime impact of spending can be quite considerable (Connell et al., 2014; Anderson & Butcher, 2006). Thus, the most effective marketing strategy aimed at children is utilising screen and online advertising, where most food advertising is found.

In addition, the trend in advertising food and beverages to children online has profound implications for several reasons. First, the digital medium offers marketers new opportunities to reach children. For example, children's television channels in the USA are now required by the Federal Communications Commission to limit commercials to no more than 12 minutes each hour (Federal Trade Commission, 2012), while in Malaysia, there is a ban on fast food advertisements during children's prime time (Ng, et al., 2014). This limitation has led advertisers to shift to online because advertisements here are not regulated (Moore, 2006). This is a smart move by the advertiser because statistics show that children are going online in greater numbers and for longer periods of time. For example, 16 million children in the age range of 2–11 years who are consistently online comprise 9.5% of the active US Internet population (NielsenWire, 2009). Of American adolescents, 84% have Internet access at home, and young people between 8 and 18 years of age spend on average 89 minutes using computers for entertainment purposes such as gaming, surfing, social networking daily (Rideout & Moore, 2007). Meanwhile, De Cruz et al. (2006) reported that 86% of 8–18 year olds in Malaysia have a personal computer in their home, with the average amount of time spent on computer activities amounting to 5 hours a day. Furthermore, empowered by the availability of high-speed broadband Internet access, food and beverage manufacturers are freed from the 30-second format of television commercials and can design websites to encourage interactive, extended and playful interactions with their brands that include a variety of multimedia features (Ribisi, 2003).

Online advertising also provides marketers the chance to accrue information about children in ways impossible through television marketing. For example, marketers collect data using cookies or electronic files placed on users' computers that track their online behaviour (Adroll, 2010). Information is also collected through registration forms in which children offer their email addresses, preferences and/or other personal information (Hallerman, 2008). Viral marketing encouraging children to email their friends an invitation to the site, broadens data gathering to include the child's extension of social networks as well (Botha & Fentonmiller, 2012). Because the techniques are integrated throughout the website when compared to traditional measured media, online food and beverage advertisers present a "greater challenge to children up to and including the age of 12 years to perceive the presence and intent of commercial messages" (Brady et al., 2008, p.6).

Having understood the impacts of food marketing, it is imperative to note that the aggressive advertising and marketing of high-calorie food products to children is now being seen as a causal effect in the childhood obesity epidemic (WHO, 2006). The food advertised on television programming in the UK, USA and many other countries is inconsistent with healthy eating recommendations for children (International Association of Consumer Food Organisations, 2003). Commercials nowadays actively and overwhelmingly promote food products that are high in sugar, fat and sodium (HFSS) while neglect healthy foods that are high in fibre, vitamins and minerals such as fruits or vegetables (Harrison & Marske, 2005). The causes of childhood obesity may prove to be very important because obesity at an early age is directly linked to chronic health problems that follow obese children into adulthood. This has raised an issue about the direct influence of food advertising on children. Due to this, the Malaysian government has imposed several health regulations and policies for children, among which a ban on fast food ads on children prime time as reported by MOH (2013).

Recent calls for investigations into food marketing's influence on children's diets have intensified a debate where academic studies and media reports have pointed to the growing exposure of children to television food advertising as one of the most influential factors affecting children's eating habits and causing children to become obese (Brennan, Czarnecka, Dahl, Eagle, & Mourouti, 2008; Burros, 2005; Henderson & Kelly, 2005; Boynton-Jarrett, Thomas, Peterson, Wiecha, Sobol & Gortmaker, 2003; Lvovich, 2003; Young, 2003). Likewise, the use of persuasive techniques in television food advertising has been shown to also affect an emotional response from the children, thus directly affecting their food consumption (Andrews, Burton, & Netemeyer, 2000). This finding supports the assertion that the link between TV viewing and obesity is not due to the TV viewing being a sedentary activity, and instead confirms that it is the persuasive appeals used in television advertising that is associated with obesity (Boyland, Harrold, Kirkham & Halford, 2012).

The Concept of Food Advertising Appeals

Advertising is often studied within a framework that identifies advertising appeals as rational and emotional (Solomon, 2004). Rational advertising stems from traditional information processing models emphasising that a consumer is believed to make logical and rational decisions about products, primarily by showing product benefits such as product quality, value or performance (Albers-Miller & Stafford, 1999). Advertisements praising the characteristics of a food product such as taste or flavour, for instance, chocolate, fruity, sweet, or texture, for instance, crunchy or crispy, are examples of rational appeals. These appeals are also referred to as informational, utilitarian or product quality appeals. On the other hand, emotional appeals are those appearing to generate either a positive or negative feeling to create a positive emotional association with a product (Albers-Miller & Stafford, 1999). Emotional appeals generate a likeable or friendly brand in the mind of a consumer and

often associate foods with happiness and fun (Connor, 2006; Folta, Goldberg, Economos, Bell, & Meltzer, 2006; Buijzen & Valkenburg, 2002). For example, child actors or animated characters portrayed in food and beverage commercials are depicted as having fun with their peers showing happy moments when consuming the advertised food product (Centre for Science in the Public Interest, 2003). Other emotional appeals which have been observed in televised advertisements are feelings of being a grown up, power, peer popularity, humour, sports or action–adventure (Kunkel & Gantz, 1992).

The advertising appeals used in children's food advertising have been found consistent across the studies. Kunkel & Gantz (1992) found that emotional appeals were more frequently used in food advertisements, even those for healthy foods. Fun and happiness were the most frequently used appeal for child-targeted foods (Folta et al., 2006; Buijzen & Valkenburg, 2002; Kotz & Story, 1994; Kunkel & Gantz, 1992), followed by the offer of a premium with a product purchase. The premium offer, which is a common appeal technique in children's food marketing, is usually centrally featured in the advertisement (Kunkel & Gantz, 1992). When the fun and happiness appeal is combined with the presence of spokes-characters such as Tony the Tiger, Captain Crunch or Ronald McDonald, the net effect of this technique is to draw attention away from the product itself, its qualities and its content (Clarke, 2004). Those persuasive messages were also found to be most common in fast food and cereal advertising. The result of this shows a positive correlation between ad recall and product preference of children. It is an established fact that sensory appeal (taste/smell/texture) and emotional appeal (mood alteration) are the appeals most frequently emphasised in food ads directed to children. Televisual techniques utilised online can accentuate and enhance the mood and excitement of children (Arnas, 2006). Food and beverage ads make prominent use of close-ups, low-angle shots, action, musical jingles, fast-framing and other related techniques. Accompanying the food close-ups are verbal references to the product's sweetness, chocolatey-ness, honey taste, cookie flavour, and in several instances, the product names themselves, such as Pringles, Sugar-Frosted Flakes, Cocoa Puffs, Cookie Crisp, Double Decker Chicken Crisp among many others, which highlight and reinforce these sweet, dessert-like or salty, savoury qualities as a part of a balanced breakfast or a good healthy snack. Flavour and taste are the predominant appeals in most food advertisements while snacks and drinks feature fun, friendship and excitement (Kelly, Smith, King, Flood, & Bauman, 2007).

Food advertisements are doing a good job of making it appealing for children to request a purchase from their parents. The most widely used appeals are fun and action (Bartholomew & O'Donohue, 2003). The fun appeal featured laughing, smiling, giggling, or playing children, in the company of a licensed character. The action appeal featured excitement and high energy, for example, children running, jumping, playing sports such as rock climbing, skateboarding, or biking. Nickelodeon had more food products advertised that used a taste appeal (Donkin, Neale, & Tilston, 1993). The same research showed that 43% of Nickelodeon's food advertisements used the taste appeal which promoted the product's sweetness. Snack food advertisements focus on the coolness or novelty of the food's shape, colour or flavour. Fast food advertisements focus on toys and fun. For example, at McDonald's, children are encouraged to buy Happy Meals to collect toys. The fast food advertisements presented in the study promote equating these foods with good taste, fun and happiness, but in actuality, they represent foods high in calories, fat, sugar, and/or sodium (Elliott, 2010).

Health and nutritious claims in food advertising can also be highly influential in consumers' dietary knowledge and subsequent behaviour (Byrd-Bredbenner, Finckenor, & Grasso, 2003). Studies found foods with nutrients which claimed to ease or solve specific health-related problems have been influential in facilitating consumption (Kosti &

Panagiotakos, 2006). However, consumers have the tendency to misinterpret or overgeneralize nutritional health claims (Andrews et al., 2000). Due to claims in advertising and a lack in awareness, most consumers appear to focus primarily on fat content levels on labels, ignoring other factors such as sodium that may have health implications. For example, the term ‘healthy’ has been shown to create the expectation that products displaying the term will be low in fat, sodium, cholesterol, and calories as well as a good source of fibre (Byrd-Bredbenner et al., 2003). Thus, high-fat or high-sugar foods can still make nutrient claims, such as zero grams of trans fat in fried chicken or potato chips, fried in olive oil, oven-baked, vitamin C in candies or carbonated soft drinks.

In the early 1990s, the US FDA specified the approved use and terminology for a limited number of nutrient content claims on all food packaging (WHO, 2006). Nutrient content claims such as ‘low fat’, ‘reduced sodium’, and ‘high in fibre’ have become quite prevalent in advertising and are often extended to synonyms of such terms, examples being ‘without all the fat’, ‘a lot less sodium’, ‘loaded with fibre’ and others. However, as the regulator of all national food advertising, the Federal Trade Commission (FTC) expressed concern that consumers may sometimes draw misleading conclusions from such claims (Federal Trade Commission, 2012), and some type of disclosure about the related negative nutrient is needed, such as the presence of fat, saturated fat, cholesterol, sodium and others. The FTC also expressed concern with the use of comparative nutrient content claims, such as ‘1/3 less salt’, or ‘healthier’, especially when the basis for comparison is not clear.

Information about food and their nutritional value appearing on the labelling and used for presentation, marketing and advertising should be clear, accurate and significant (Byrd-Bredbenner et al., 2003). Some consumer organisations in the European Union, such as the Consumers Association and Independent Dietician, advocate that products that do not have a ‘desirable’ nutritional profile, such as candies or high-salt and high-fat snacks, should not be allowed to bear nutrition content claims (WHO, 2006). For example, a ‘low-fat’ claim should only be allowed if the product does not contain high quantities of sugar or salt, or a ‘high-calcium’ claim should not be used on a product with a high-fat content. When food products with high sugar, salt or fat become more attractive because of the way they are labelled and advertised, many consumers who are currently eating them in moderation would consume them in greater quantities. Many consumer groups argue that this would have a more immediate negative effect on the dietary habits of certain particularly vulnerable groups of the population, such as children and adolescents (Brown & Laundry-Meyer, 2007).

Finally, it is believed that advertisers are increasingly using the Internet to persuade consumers of the positive attributes and value of their product including promoting their web address on television advertisement (Gantz, Schwartz, Angelini, & Rideout, 2007). It has been noted that the majority of food brands that are heavily advertised to children on television are also promoted through websites; thus growing website promotion for television food advertisements as the Internet becomes more established. It was found that 20% of food advertisements aimed at children and adolescents promoted their website including 59% of advertisements for dine-in and delivery restaurants and 46% of prepared food advertisements, such as for soups, pasta and sandwich spreads (Gantz et al, 2007; Moore, 2006). Once the targeted audience ie children visit the site, it directs them and even encourages them, using promotions, to participate in ‘advergaming’ — a game that features the advertised product (Weber et al., 2006). This marketing strategy uses brand immersion technique as a key objective (Rideout & Moore, 2007).

Given the potential impact of these advertising appeals on children’s dietary behaviour, it is important to examine the types of health-related claims and nutrient content disclosure provided in food advertisements, particularly on websites aimed at children, and their influence on children’s food choices. Recognising the influence such advertisements

exert on the food preferences of the young, the following research question is explored: *‘what are the emotional and rational product appeals that are used in the advertising messages online that influence children behaviour towards consuming a product?’*

THEORETICAL FRAMEWORK

The Social Learning Theory by Bandura (1962) was engaged as the theoretical foundation for this study as the study looked at the attention and retention of the message in an advertisement, even though children may not be paying close attention to them. This theory basically posits that people can learn through observation, whereby if they pay attention, they can recall it later and then have the motivation and ability to imitate what they saw. It has been shown that the ‘symbolic’ environment of the media also provides information for the vicarious learning of social behaviours and attitudes. Common characteristics of children’s food advertising, including positive emotions, rewards for consumption and usage, attractive models and popular characters and celebrities, all effectively encourage observational learning. In a study involving food and children, Bandura (1962) found that candy consumption increased exponentially, especially after Saturday morning candy commercials. During these commercials, models were portrayed happily eating a variety of candies, often with the additional reinforcement of tacit adult approval. Therefore, extensive exposure to these modelling stimuli may suggest to the child that excessive candy eating is acceptable behaviour. Bandura believed that commercials may cause a reduced level of personal guilt or fear of social disapproval for excessive consumption of candy, regardless of the brand and the frequency of advertisements on screen.

RESEARCH METHOD

Conceptualization of Food Advertising Appeals

A literature review was conducted to identify and generate a list of product appeals used in advertising food to children which was then expanded and refined by observing several food advertisements, based on the work by Barr-Anderson et al. (2009), and Buijzen & Valkenburg (2002). A total of 21 emotional and 15 rational appeals were identified as shown in Table 1. These appeals were taken and adapted from the work done by Page and Brewster (2007). According to Page and Brewster (2007), emotional appeals is a construct that relates to a child’s psychological and/or social need for consuming or acquiring a product as they appeal to a child’s emotional desires such as friendship and having fun, rather than logic, economy or utility. Meanwhile, rational appeals are a construct that explains those utilitarian and informational needs, where it aims to appease the child’s guilty consciousness in proving to their parents that the product is healthy and good for them. Thus, most health and nutritional claims can be found in this section.

Table 1. Conceptualisation of Emotional & Rational Appeals

No	Appeal Variable (Emotional)	Conceptualisation
1	Fun/Happiness	Non-verbal display of happiness is clear and distinct, with or without the words 'fun', 'happiness' or similar terms
2	Play	Shows play as the main idea, or the word 'play' or similar terms
3	Fantasy/Imagination	Imaginary characters, circumstances, or happenings, with or without the words 'fantasy', 'imagination', or similar terms
4	Adventure	Shows adventurous actions or contains overt talk of adventurous activity
5	Sports/Physical performance	Shows characters partaking in sports or exercise or positions that the product increases sports performance, strength, power, speed, stamina, and any of the kind.
6	Energy	Demonstrates or claims that the product gives energy
7	Hunger/Thirst satisfaction	Demonstrates or claims hunger or thirst relief from the use of the product
8	Independence/Grown-up	Demonstrates children acting 'grown-up' or refers to being 'grown-up' or a 'big kid'
9	In control/Personal freedom	Demonstrates that the product brings personal control or freedom or uses terms such as 'in control' or personal freedom
10	Self-esteem enhancement	Demonstrates that the use or possession of the product enhances self-esteem
11	Achievement/Accomplishment	Demonstrates an accomplishment or achievement is connected to the product or uses words depicting achievement, accomplishment or reaching goals
12	Social enhancement/ Peer acceptance	Demonstrates children in groups or friends or other children with the themes of friendship, peer acceptance, or popularity
13	Novelty/Trendy	Demonstrates the product as a trendy item or in fashion; new or different; or uses similar terms such as 'latest', 'new', 'different'.
14	Physical attractiveness/Beauty	Demonstrates physical attractiveness as the main idea, that the product enhances or is connected to beauty, looks or physical attractiveness or uses similar terms
15	Romance	Demonstrates romance, or romantic affection as the main idea, that the product enhances or is connected to romance, or uses similar terms.
16	Sexuality	Behaviour, outlook, body language or dress of characters are sexy or provocative or in similar terms
17	Coolness/Hipness	Demonstrates 'cool' characters using the product or acting 'cool', or uses similar terms depicting 'cool' or 'hip'
18	Superiority	Characters with the products are demonstrated to appear better than others, or with expressions that portray them as being better than others
19	Uniqueness/Individuality	Demonstrates that a product makes consumers unique or that it caters to a diverse sense of individuality and independence
20	Triumph/Hero	Has a main subject of triumph or becoming a hero
21	Parental pleasing	Shows parents (or other adults) pleased because a child or character is consuming that product; displays parental satisfaction

No	Appeal Variable (Rational)	Conceptualisation
1	Taste/Flavour	Provides explanation of taste and flavour
2	Healthy/Nutritious	Implies that the product is healthy or nutritious
3	Fruit appeal/Association	Implies that the product has fruits or fruity element
4	Value for money	Provides extra benefits at minimal cost
5	Novelty/New claims	Claims that the product is new in the market, with new ingredients/elements/nutrients
6	Convenience	Claims of easiness to obtain the product
7	Product superiority	Implies that the product is better than all the other products
8	Food product shown or displayed	Showing the food product or displaying it in the advertisement
9	Packaging shown or displayed	Showing the packaging or displaying it in the advertisement
10	Logo shown or displayed	Showing the logo or displaying it in the advertisement
11	Other physical characteristics	Implications or suggestions of product shape, logo, characters, colours
12	Candy appeal	Suggestions that the product tastes as good and sweet as candy
13	'Super-charged'	High energy, power-packed claims that lead to alertness and increase of brain power
14	Comparative claims	The product is shown to be as good as, or even better than another product, or healthy food item
15	Food as a toy	Food product is depicted as fun

Sample

The sampling units for this study were 132 distinct food commercials (n=132) that appeared in 112 hours of Internet TV streamed via children's channels found on Malaysia's satellite TV (subscribed by Malaysians, Singaporeans, Indonesians and Bruneians) such as Nickelodeon, Disney Junior, Disney Channel & Cartoon Network over two weeks. Table 2 lists the advertisements used in the content analysis by food category. The ages of the children in this study are operationalised as between 2–17, as specified by the four channels as toddler, pre-schooler, tween and teen segments.

Table 2. Advertisements included in the content analysis by food category

No	Food Category
1	Candy/confectionary/ice cream
2	Retail food outlets
3	Processed foods
4	Dairy products
5	Potato chips/crisps
6	Cultured milk/yoghurt drink
7	Rice/noodles/pasta/bread
8	Infant formula
9	Breakfast cereals
10	Soft drinks (carbonated and non-carbonated)/juice
11	Biscuits/crackers/cookies
12	Malted drinks (e.g. Milo, Horlicks, Vico)

Coding

A total of 112 hours of Internet television programmes were recorded over two weeks. Eighty (80) hours of weekday programmes and thirty-two (32) hours of weekend programmes were recorded during the two weeks, with a 4-hour block (8 am – 12 noon) in the mornings, and another 4-hour block (4 pm – 8 pm) in the evenings. These blocks were chosen based on Page and Brewster's study (2007) that showed children tend to have more screen time in the mornings and evenings, whether on television, computer, tablet or mobile phone. Afternoons were usually designated as 'quiet time' or nap time.

It was found that a total of 1,150 food advertisements were aired during the 112 hours of programming, and of these advertisements, 132 were unique and distinct advertisements. The coding categories used were based on several studies focusing on children's advertising, particularly in food marketing (Warren et al., 2008; Maher, Hu & Kolbe, 2006; Blass et al., 2006; Henderson & Kelly, 2005; Noor Hasmini & Ghani, 2004; Byrd-Bredbenner et al., 2003; Parker, 2003; Coon & Tucker, 2002; Andrews et al., 2000; Lewis & Hill, 1998; Muehling & Kolbe, 1998). The advertisements were coded into 12 categories of food, that is, candy/confectionary; retail food outlets; processed foods (nuggets, meatballs, instant noodles); dairy product; potato chips/crisps; cultured milk drink/yogurt drink; rice/noodles/pasta/bread; infant formula; breakfast cereal; soft drinks (carbonated and non-carbonated)/juice; biscuits/crackers/cookies; malted drinks (e.g. Milo, Horlicks, Vico). Each food or drink item was assigned to one of three groups: (1) core; (2) non-core; or (3) miscellaneous items. Core food items were foods and drinks that are required daily to meet nutrient requirements (such as rice, noodles, fruit and vegetables); non-core items were foods and drinks that provide nutrients and/or energy more than daily requirements (such as fast food and high-sugar/low fibre breakfast cereals); and all other items were classified as miscellaneous (e.g. tea, coffee, snacks, cookies) (Halford et al., 2010; Boyland et al., 2012).

The series of coding continued with the ads being divided into emotional and rational appeals, with either an explicit or implicit nature. 'Explicit' is defined as 'stated clearly and in detail, leaving no room for confusion or doubt' (clear, plain, straightforward) while 'implicit' is defined as 'implied, not plainly expressed' (hinted at, suggested, and insinuated). This included the use of promotional characters (licensed characters or brand equity characters), and celebrity endorsements. Each food advert was also coded for the primary persuasive appeal used (fun, taste, and price), the use of premium offers (such as giveaways, competitions, contests and vouchers), and the appearance or mention of a website address (Gantz et al., 2007; Kelly et al., 2007). The most apparent appeals were coded, resulting in the majority of the advertisements having more than one appeal.

The unit of measurement used was '1' for 'yes' (or presence of the said appeal) while '0' was used for 'no' (the absence of the said appeal). Figure 1 represents the process chart explaining the development of the content analysis factors.

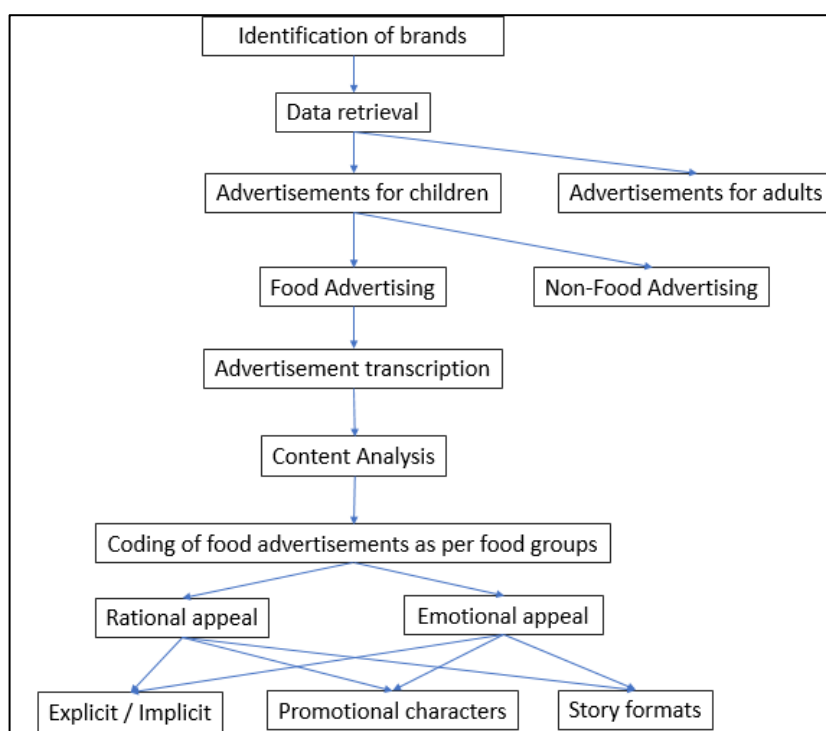


Figure 1. Process chart of developing the online food and beverage advertisement database

Inter-coder reliability

The programmes were viewed by a primary observer (the researcher of this study), and all non-programme content (advertisements) screened were identified and analysed. Only advertisements with the intent of selling were included in the analysis. Station and channel promotions (non-programme segments that promote upcoming programmes of the station or other stations), station recruitments (non-programme segments that recruit contestants for upcoming station programmes or contests) and newsbreaks were excluded. Sponsorships for programmes were included in the analysis if they contained explicit messages that indicated the programmes were sponsored by a particular company or product (e.g. ‘proudly brought to you by...’ or ‘sponsored by ...’), or just the display of a logo or a link to the main company or product website or Facebook page.

To avoid bias or prejudice towards the results, a second observer (of no relation nor connection to the primary observer) was given the same coding form and instructions to code a 10% sample of the total duration of recordings. Intra-coder reliability was also assessed with the primary coder recoding 10% of the total duration of recordings. Inter- and intra-coder reliability were calculated using the following formula (Zuppa, Morton & Mehta, 2003):

$$\frac{\text{Number of Agreements} \times 100}{\text{Number of Agreements} + \text{Number of Disagreements}}$$

Inter-coder reliability was found to be 90%, while intra-coder reliability was 95%.

RESULTS

A story format was present in almost all of the advertisements studied (95.1%), although some of the story plots were very simple and brief. According to Rajecki et al. (1994), advertisements presented in a story format make them familiar and friendly to children, easier to follow, more enjoyable and able to increase emotional response as children will be able to relate to them.

Table 3. Number of food advertisements screened on the four (4) children's Internet television programmes

Channel	No. of Ads	%
Cartoon Network	45	34.09
Disney Channel	38	28.79
Nickelodeon	27	20.45
Disney Junior	22	16.67
Total	132	100

Cartoon Network screened the highest number of food advertisements among the four children's channels (as presented in Table 3) with 34.09% (n=45) during the data collection period. The channel primarily caters to children and teenagers between the ages of 7–16, and also older teens and adults with some mature programmes. During programming, there were constant highlights of its official website. Checks on the website showed online games with adventure games, supported by brands and products with elements of immersion.

The second highest number of food advertisements was Disney Channel with 28.79% (n=38) during the data collection week. The basic cable and satellite television channel has programmes that are aimed at pre-teens and adolescents aged 10–16, while its sister channel, Disney Junior is targeted at younger children aged 3–9, although certain programmes are suitable for audiences of all ages. As with Cartoon Network, there were links to Disney Channel's website, as well as to the younger Disney Junior website. A check on both Disney Channel's and Disney Junior's websites showed links to a common media website that had collaborations with Subway as well as Dutch Lady, with links to their websites and more contests featuring the two brands.

Also, measured from the advertisements were the use of promotional characters, celebrity endorsers, premium offers and website promotions (Table 4). All of the advertisements had website links as well as displays of logo. All channels studied featured either a promotional character (inclusive of both brand equity and licensed characters) or a celebrity endorser (63.64% and 73.48% respectively). Significantly, more food advertisements highlighted characters compared to celebrity endorsers. One could assume that celebrities generally do not want to be associated with unhealthy foods.

Table 4. Percentages of types of food advertisements with additional appeal features

	%	Core	Non-core	Miscellaneous
<i>% of food advertisements featuring</i>				
Promotional characters	63.64	5.30	21.21	37.12
Celebrity endorsers	73.48	31.06	21.97	20.45
Premium offers	60.61	29.55	19.70	11.36
Website promotion	100.00	32.58	24.24	43.18

Food Categories

There were significantly more food advertisements screened on weekends compared to weekdays. Weekends accounted for 63.64% (n=84) of the total food advertisements screened during data collection (n=132), an average of 2.63 food advertisements per hour. Weekdays, on the other hand, accounted for 36.36% (n=48) of the total food advertisements; an average of 0.6 food advertisements per hour. There was also a higher percentage of miscellaneous food products advertised during the data collection hours, with 43.18% (n=57) (Table 5). Miscellaneous food items consisted of items that did not fit into the core food category, which were foods and drinks that are required to meet nutrient requirements (bread, noodles, dairy products, vegetables and fruits) or the non-core food category, which were foods and drinks that provide nutrients and/or energy more than daily requirements (fast food, high-sugar/low-fibre breakfast cereals). These foods usually consist of empty calories and provide the feel-good factor such as candy, confectionary, ice cream, soft drinks, potato chips and others. The most advertised item category was from the potato chips/crisps category (15%, n=21), with brand items such as Twisties, Pringles, Mr Potato, and Jack and Jill. Core products represented in the food advertisements during data collection period were mainly from the infant formula category and the dairy products category, with milk (Dutch Lady) being the most advertised. Meanwhile, in the non-core food category (24.24%, n=32), items such as processed foods were ranked the highest. It was interesting to note that most of these brands do not advertise on television but do so at a high rate online, both on Internet television as well as social media.

Table 5. Types of food represented in the food advertisements

	Core	Non-core	Miscellaneous	Total
Type of food	43	32	57	132
Percentage %	32.58	24.24	43.18	100

An evaluation of food groups as components of food advertisements (Table 6) showed that potato chips/crisps to be the most advertised food group (15.91%, n=21). This was followed by candy/confectionary/ice cream (12.12%, n=16), soft drinks & juice (11.36%, n=15), retail food outlets (10.61%, n=14), dairy products (9.85%, n=13), processed foods, and breakfast cereals (both at 9.09%, n=12), infant formula (8.33%, n=11), rice/noodles/pasta/bread and biscuits/crackers/cookies (both food groups at 3.79%, n=5), and finally, cultured milk drink/yogurt drink and malted drinks, both at 3.03% (n=4). These were foods, which children are likely to identify as a food item ready for consumption, easy on the price, and therefore, likely to influence choice as well as informed opinion. It is also alarming to note that the first three categories of food that have the highest frequency of screen time were foods such as instant noodles, biscuits, potato chips and confectionary that have the greatest energy density with 449 to 497 per 100 g (WHO, 2006). The fat content of these foods was comparable with

about 20 g of fat each per 100 g, and also the highest in the advertised foods category. Instant noodles, with 1600 mg of sodium, contained the greatest amount of sodium per 100 g, while snacks such as potato chips like Pringles were found to contain 620 mg of sodium. Therefore, it is alarming to note that these unhealthy foods used many different forms of persuasive appeals, both emotional and rational, to target children to purchase or influence the purchases of these food products.

Table 6. Frequency and percentage of food advertisements screened during 112 hours of children's Internet TV programmes

Food Category	Frequency of food advertisement	%
Candy/confectionary/ice cream	16	12.12
Retail food outlets	14	10.61
Processed foods (nuggets, meatballs, instant noodles)	12	9.09
Dairy products (milk/cheese)	13	9.85
Potato chips/crisps	21	15.91
Cultured milk drink/yoghurt drink	4	3.03
Rice/noodles/pasta/bread	5	3.79
Infant formula	11	8.33
Breakfast cereal	12	9.09
Soft drinks (carbonated/non-carbonated)/Juice	15	11.36
Biscuits/crackers/cookies	5	3.79
Malted drinks	4	3.03
Total	132	100

Emotional Appeals

This study found fun/happiness to be the most prominent emotional appeal used by food marketers with 64.39% (n=85) while play was the second most used (54.55%, n=72) (See Table 7). The results were found to be consistent with other studies (Boyland et al., 2012; Barr-Anderson et al., 2009; Brady et al., 2008; Page & Brewster, 2007; Folta et al., 2006). In fact, 62.88% (n=83) of the advertisements studied were more explicit than implicit (1.52%, n=2) in portraying or associating the advertised food product with fun or happiness. The play appeal was also more explicit at 52.27% (n=69), rather than implicit (2.27%, n=3). Kunkel and Gantz (1992) commented that the fun, happiness and play themes were so dominant in children's advertisements that they elude any significant description of the product itself but instead simply associate positive effects with product consumption. In addition to this, marketing techniques that encourage children to enjoy and engage with the advertisements are likely to have a high persuasive power (Hastings, et al., 2003). Kunkel and Gantz also noted that the fun and/or happiness themes appeared to be more prevalent in the 1990s food commercials compared to those in the 1970s. The present findings are also validated and verified by studies conducted in the 2000s, such as Boyland et al. (2012), Botha & Fentonmiller (2012), Page and Brewster (2007), Folta et al., (2006) and Buijzen & Valkenburg (2002).

Table 7. Frequency of emotional appeals (n = 132 advertisements)

	Total (f)	%	Explicit (f)	%	Implicit (f)	%
Fun/happiness	85	64.39	83	62.88	2	1.52
Play	72	54.55	69	52.27	3	2.27
Fantasy/imagination	50	37.88	50	37.88	0	0.00
Adventure	61	46.21	58	43.94	3	2.27
Sports/physical performance	30	22.73	28	21.21	2	1.52
Energy	32	24.24	19	14.39	13	9.85
Hunger/thirst satisfaction	10	7.58	7	5.30	3	2.27
Independence/grown-up	15	11.36	5	3.79	10	7.58
In control/personal freedom	8	6.06	4	3.03	4	3.03
Self-esteem enhancement	55	41.67	24	18.18	31	23.48
Achievement/accomplishment	60	45.45	48	36.36	12	9.09
Social enhancement/peer acceptance	51	38.64	49	37.12	2	1.52
Novelty/trendy	13	9.85	8	6.06	5	3.79
Physical attractiveness/beauty	5	3.79	1	0.76	4	3.03
Romance	0	0.00	0	0.00	0	0.00
Sexuality	0	0.00	0	0.00	0	0.00
Coolness/hipness	18	13.64	10	7.58	8	6.06
Superiority	20	15.15	12	9.09	8	6.06
Uniqueness/individuality	23	17.42	15	11.36	8	6.06
Triumph/hero	9	6.82	5	3.79	4	3.03
Parental pleasing	5	3.79	1	0.76	4	3.03

The findings also indicate the possibility that advertisers today may be more explicit in connecting their food products with fun or happiness and play compared to advertisements from more than a decade ago. In a study of advertisements monitored in 1991 and 1992, Kotz and Story (1994) found that only 16.7% contained explicit while 29.1% contained implicit fun appeals, as compared to the present findings which showed more explicit appeals than implicit ones.

It is also interesting to note that emotional appeals such as self-esteem enhancement and achievement/accomplishment were quite prominent as well, with 41.67% (n=55) and 45.45% (n=60) respectively. These findings suggest that today's food advertisers and marketers appear to exploit the desires of children to feel popular, accepted and included by peers. High-sugar beverages such as Coca-Cola, Pepsi and Mountain Dew, and most high-sodium snacks such as Twisties and Chachos are more likely to include social enhancement or peer acceptance and self-esteem enhancement appeals, as compared to those advertisements by retail food outlets and dairy products which concentrate more on family togetherness and energy enhancement. However, it is thought-provoking to see that the self-esteem enhancement appeal was displayed in the advertisements in an implied (implicit) or subtle manner (23.48%, n=31), rather than in an explicit way (18.18%, n=24). This is distinctly different from the representation of the fun or happiness, play, fantasy and adventure appeals which were expressed in more overt and obvious ways (explicit).

Rational Appeals

The rational or product quality claim that was most prominently highlighted in the advertisements studied was taste or flavour at 72.73% (n=96) (See Table 8). This result is consistent with other research that examined product appeals, such as Kotz and Story (1994) and Boyland et al. (2012). Most of the messages commending a product's good taste or flavour were generally explicit representations containing descriptive words or visual illustrations. More than one-third (42.42%, n=56) of all the advertisements used a fruit appeal or association to promote the food product, possibly signifying that the incorporation of the flavour, taste and/or colour of the fruits (as well as product design and packaging) is an excellent way to capture children's attention. Examples of products that largely exploited this appeal were Marigold Peel Fresh Juices, Dutch Lady's yoghurts as well as several sweet candies such as Sugus, Mentos and Lot100 gummy chewies. However, while this may seem in line with the idea that the candy appeal is eagerly sought after by the children, the result shown is contradictory, which is only 13.64% (n=18). This may be due to the fact that using fruits as an appeal may show that the product is assumed to be healthy and nutritious, as compared to using candy as an appeal for the product, which will identify the product as being unhealthy and not nutritious.

Despite mounting concerns about the unhealthy nature of foods that are heavily advertised to children (Zuppa et al., 2003), statements or depictions that a product is healthy or nutritious were not prominent in the advertisements examined. Results showed that only 15.91% (n=21) of the advertisements represented the product as something healthy or nutritious. Some examples of these were Kenny Rogers Roasters that depicted a healthy and nutritious balanced meal, as well as products by Nestle which included high-sugar breakfast cereals such as Kellogg's Corn Flakes, Sugar-Coated Corn Flakes, Koko Krunch and Honey Stars. The low frequency of advertisements with a healthy or nutritious appeal or claim suggests that health and nutrition do not seem to be salient concerns among children, and because of this, they may not be a strong selling point to children.

Table 8. Frequency of rational appeals (n = 132 advertisements)

	Total (f)	%	Explicit (f)	%	Implicit (f)	%
Taste/flavour	96	72.73	49	37.12	47	35.61
Healthy/nutritious	21	15.91	11	8.33	10	7.58
Fruit appeal/association	56	42.42	39	29.55	17	12.88
Value for money	3	2.27	1	0.76	2	1.52
Novelty/new claims	42	31.82	19	14.39	23	17.42
Convenience	11	8.33	4	3.03	7	5.30
Product superiority	2	1.52	0	0.00	2	1.52
Food product shown/displayed	132	100.00	132	100.00	0	0.00
Packaging shown/displayed	96	72.73	90	68.18	6	4.55
Logo shown/displayed	132	100.00	132	100.00	0	0.00
Other physical characteristics	27	20.45	12	9.09	15	11.36
Candy appeal	18	13.64	12	9.09	6	4.55
'Super-charged'	34	25.76	29	21.97	5	3.79
Comparative claims	1	0.76	0	0.00	1	0.76
Food as a toy	31	23.48	15	11.36	16	12.12

The rational appeals with lowest percentages were value for money (2.27%, n=3), product superiority (1.52%, n=2) and comparative claims (0.76%, n=1). These appeals are used frequently in advertising for adults as these are what adults mainly look for first in purchase decision. However, these appeals are not considered as good marketing strategies to target children.

From the advertisements analysed, all food marketers showed their food products as well as their logo, and most displayed their packaging (72.73%, n=96). The advertisements that did not display their packaging were mainly from retail food outlets such as Kentucky Fried Chicken (KFC), Pizza Hut and McDonalds among others. The presentation of product or brand logos in advertising is a strategy that advertisers use to build product recognition and brand awareness in young children (Solomon, 2004).

DISCUSSION

One important issue in marketing food to children is understanding how children are persuaded by both rational and emotional appeals in advertisements in order to achieve purchase and upkeep brand loyalty. Often, the messages given in advertisements are a point of debate as it can be construed as exploiting children in order to convince their parents to purchase products. This is because the use of persuasive techniques in food advertising, especially those on screens, such as TV and Internet, is associated with greater attention and a greater likelihood of gaining an emotional response from children (Lewis & Hill, 1998). Thus, understanding how advertisers market foods to children is essential in identifying beneficial outcomes such as how to favourably influence dietary choices (Hastings et al., 2003). However, appeals directed at the social needs and desires of children is an area of investigation that has been largely overlooked by previous content analysis studies of children's food advertisements that mainly focused on unhealthy messages portrayed by brands. Thus, the present study attempts to fill this gap.

The overall purpose of this study was to examine the potential rational and emotional appeals in a sample of food advertisements from children's programming blocks on four different Internet television channels. In this manner, this study identified the most prominent potential emotional appeals, which were fun/happiness and play, followed by fantasy/imagination, social enhancement/peer acceptance, and coolness/hipness. Meanwhile, the most prominent rational appeal or product quality claim identified was good taste or good flavour with healthy ingredients.

Therefore, with Bandura's Social Learning Theory as the theoretical base for this study, it is proven that by utilising both emotional and rational appeals in food advertisements, which also include positive emotions (via escapism from reality), rewards for consumption and usage (through online games, downloads and others), attractive models and popular characters and celebrities (whom children identify with and idolise), marketers are effectively encouraging observational learning, as well as creating a bond and relationship with children and reinforcing the need of implied adult approval.

The study found that fun/happiness and play were the appeals that are constantly used in advertising messages online to influence children towards consuming a product. This finding, consistent with similar studies previously cited, also implies that based on the Social Learning Theory, the majority of children believe what they see and hear i.e. they believe that the food products advertised provide the benefits and pleasures that the product promises, and as a result, desire that product to fulfil their wishes.

In addition to this, research has shown that children who had a positive recollection of a brand can develop beliefs about it that may remain relevant to them for many years to come

(Connell et al., 2014). This positive belief about brands will develop into brand loyalty and biases that will carry over into their adult lives and are often difficult to change (Palmer & Carpenter, 2006). As shown in this study, fun and happiness are usually the most commonly used appeals in advertising to children; therefore, advertisers are constantly injecting positive messages about their products to children. Because of this, children do not have the discretion needed to manage advertising messages as they do not have the understanding of advertising knowledge. However, John (1999) contended that children slowly develop advertising knowledge as they grow and age. Most children will approach adult-like levels of suspicion and knowledge of advertising tactics at adolescence or at the age of 13. Once they do, they will develop the necessary scepticism in the plausibility of the advertising messages. Therefore, advertisers rush to build a brand relationship with the children by creating a product with messages that evoke happy and pleasant memories.

In addition to this, most parents work full-time and do not have time to spend with their children. Thus, when both parents and children watch advertisements which show children laughing and enjoying themselves (sometimes with their parents) while consuming a product, there is a sense of guilt, envy and hope to feel the same way. The advertisers exploit these feelings as they want the viewers to feel that by buying the advertised products, they too can have fun together and these products will make them happy. Also, the music chosen in the advertisements evokes happiness because the songs are generally upbeat and carefree. Thus, there is a hidden message in most advertisements that in order to make a child happy, the parent should buy them the products, and because all parents want their children to be happy, they will eventually buy them the products.

The most prominent rational product appeal used in advertising messages is the taste and flavour appeal. In fact, most of the advertisements that highlight taste and flavour mainly use sweetness as its primary flavour while snack food advertisements focus on the novelty of the food's shape, colour and good taste. It is also interesting to note that while most of the food advertisement presented in the study equated their products with good taste and flavour, most of them, in actuality, were foods high in calories, fat, sugar, and/or sodium. Candy, confectionary, ice cream, potato chips, processed foods and soft drinks accounted for more than half (64%) of the total food advertisements studied. This finding concurs with previous content analyses of food advertisements such as those by Boyland et al. (2012), Zuppa et al. (2003), and Young (2003). This study also found that there were no food advertisements promoting fruit and vegetables, which was again similar to the studies cited previously.

Rational appeals are generally used less in children's advertisements as they rely on the children to actively process the information presented in the advertisements (Botha & Fentonmiller, 2012). The children must pay attention to the advertisement, comprehend the message and compare the message to knowledge embedded in a cognitive map. Messages consistent with the current concepts in the cognitive map will strengthen the map, as well as strengthen key linkages. New informative messages will help the child to form cognitive beliefs about the brand and establish a new linkage from his or her current map to the new product. Conventional advertising wisdom states that rational appeals are well-suited for high involvement and complex products (Andrews et al., 2000). High-involvement decisions require considerable cognitive activity, and consumers spend more time evaluating the attributes of the individual brands. Therefore, a rational appeal is the best approach to reach children and very effective if they have a high level of involvement and are willing to pay attention to the advertisements. However, due to the nature of children who have short attention spans, and do not have the capability to digest utilitarian information, advertisers utilise celebrity endorsers, brand equity characters or licensed characters to promote how good the product is for them. All three persuasive elements have been shown to be effective at increasing product liking and selection (Roberto, Baik, Harris, & Brownell, 2010;

Garretson & Burton, 2005). These studies also found that when both children and adults like these characters, they will show trust and respect for them, resulting in creating favourable attitudes towards products and increasing sales (particularly when the characters are well established and recognisable). Therefore, character-based marketing is considered a good strategy, particularly when targeting younger children who respond positively to, and bond with, age-appropriate characters (Hastings et al., 2003).

There are many ways to integrate the use of integrated marketing communications into food advertisements targeted at children in order to make them more susceptible to healthy food messages. As pointed out by the Bandura's Social Learning Theory, children learn through the process of observational learning. Thus, by observing the behaviour of televised models and characters, children will come to learn which attitudes and behaviours are accepted and rewarded, and which are punished, and will be motivated to imitate media models whose behaviour is rewarded.

CONCLUSION

Health educators can use some of the persuasive techniques identified in this study to work with marketers to formulate messages for nutritious foods targeted at school-age children. For example, health educators can team up with marketers to find ways to promote healthful food such as vegetables and encourage children to associate these vegetables with fun and happiness, and imply that it tastes good. Well-designed interventions to test whether these techniques will work to increase consumption of more desirable foods are warranted. Educators can also use this information to help design media literacy training for children. For example, such training could help children become aware that food is often associated with fun and happiness in order to make it seem more desirable. Older children essentially do have the ability to critically evaluate these types of associations once they are aware of them. As such, it is also very important for the authorities to consider how to create appropriate programmes to help educate children in media literacy as well as to bring healthy food messages to them by emphasising features such as "one sight, one sound, one concept" (Schultz & Schultz, 2004) being spanned across various channels. This is the dominant form of IMC function which integrates the same message into various activities so that the audience remembers it better and can be further persuaded by the objective of the message. This concept also ensures that communication remains consistent and achieves maximum clarity. Such campaigns would likely be more effective than the usual highlighting and focusing on the same old channels and mediums. It is believed, and hoped, that once the messages are received, the media would be able to have a more positive role in the children's lives.

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