

The Review of Childhood Obesity as a Result of Advertising Child Oriented Unhealthy Food & Beverages

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Abstract

The rise of childhood obesity is one of the public health concerns in worldwide. It can be said as the sign of crisis because it is harmful to children. Therefore, this report has covered a total of 25 journal articles. Articles reviewed are regarding on the intention of food marketers to formulate a healthier child oriented food, the strategies applied to promote their food such as advergaming and product packaging, the volume of food advertisements to children as well as how these strategies have changed the mindset of children. In conclusion, most of the television commercials are unhealthy food by using fantasies and positive atmosphere to attract children's attention. Unhealthy food marketers would tend to design the food packaging with cartoon characters and bright colors as those catches the children's attention more efficiently. Children would even visit the website delivered from television commercials and product packaging which often include advergaming for them to play and increase brand recognition. Children's perspective on children food has changed dramatically due to the influence of advertisement delivered by food marketers. Most of the food marketers tend not to produce a healthier food to children. Therefore government in different country should set a rule to limit the unhealthy food advertisements delivered to children since it does play a major role in childhood obesity.

Index terms— child-oriented food, advertisement, advergaming, packaging.

1 Introduction

The rise of childhood obesity has led to public health concern in many countries. One of the factors were due to the increase of child oriented food and beverages by food marketers. Child oriented food and beverages are identified by any package that applied promotional characters, sports references, premium offers or children's television/movie tie-ins ??Chacon, Paola, Joaquin;. Thus, another contributor to childhood obesity is food advertising (Ramirez-Ley et al., 2009). Due to technology advancement, children are now overexposed to mass media such as television, internet and video games (Lee, Choi, Quilliam and Cole, 2009). With such advantage, businesses attempt to promote their unhealthy foods to attract children through advergaming in Internet. However, the banning of advertising child oriented food may not be useful if food marketers do not intend to reformulate their products positively. Other than advertising, food packaging and cheap prices of unhealthy food can still attract children to buy the products. However, these are only theories. The effect of the volume of food advertisement delivered to children and food packaging is still unclear. This paper will focus on how children perspective on children food being shaped by food advertisement; increase brand recognition from advergaming; attracted by food packaging and the intention of reformulating products positively by food marketers.

2 II.

The Intention of Improving Unhealthy Child Oriented Food and Beverages Nutrition Content by Food Marketers

3 III. TELEVISION COMMERCIALS, THE FAMOUS

In the analysis conducted by Hawkes & Harris (2011), the potential of reducing harmful effects in child oriented food and beverages were examined through investigating pledges agreed by the 52 food industries worldwide. 13 pledges of child oriented food marketing were developed between 2005 and 2009. There were only three pledges were specifically for soft drink and fast food industries. On the same hand, only ten of the pledges are international; companies are required to publish individual commitments. Most of the commitments have somehow met the minimum criteria of the pledges. By reviewing the pledges, only some of them were similar. In addition, permitted companies have to set food criteria that are not within the restrictions. Even though pledges were established, the companies are only meeting the criteria, or just to play with the law. The help of the pledges might not be helpful but at least there is a minimum criterion to avoid further childhood obesity.

Among the food products of child oriented, Adelaide, a supermarket in Metropolitan was surveyed by Savio, Mehta, Udell and Coveney (2013). There were only 33 % of the products investigated did not change the nutrient content since 2009. Among the rest, only sodium has no similarity for the ratio of positive and negative reformulated products. From the result of assessed percentage change in each product, 53 products out of 120 products had reformulated moderately; 18 products have reformulated both positive and negatively; 42 products have reformulated substantially. The result of the use of nutrient criteria showed only 5 products were either reformulated positively or did not reformulated negatively. The observation of the study revealed the lack of positive reformulated child oriented food products. In addition, the development of benchmarks for reformulation should be developed with standard criteria to prevent reformulation of negative nutrition content to child oriented food.

3 III. Television Commercials, the Famous

Advertising Medium of Unhealthy Child Oriented Food 18 percent of the 65,462 advertisements across many countries being analyzed by Kelly and her group (2010) were food, the second most frequently advertised product. In an overall result, 5 food advertisements were broadcasted per hour, per channel. Greece has accounted the most and Brazil was the lowest rate in food advertising, only 2 food advertisements per hour per channel (Kelly et al., 2010). In addition, most of the advertisements are unhealthy foods, which accounted 67 percent. Among the unhealthy food category, fast food accounted the most, 12 percent especially in the United States, Canada, Sweden, and Australia. However, Germany, Italy and China advertised chocolate & confectionary the most. The most frequent advertised food in Brazil is supermarkets, which considered as miscellaneous. Spain and United Kingdom were the country for the most advertised product of low-fat dairy foods.

Television advertisement is a major strategy used by the Australian food marketers to promote child oriented food. Child oriented food and beverages have more advertisements in free to air television than popular subscription channels (Hebden, King, Chau & Kelly, 2011). In addition, most of the advertisements are not healthy to children. These results were obtained by recording 6 popular subscription television channels among children for 4 days in February of 2009. Although non healthy food accounted for 72% of the food advertisement, it contained lesser persuasive techniques than healthy and other foods. In addition, unhealthy child oriented advertisement often include persuasive marketing techniques such as promotional characters and premium offers to increase brand recognition and to attract children (Kelly, Hattersley, King, & Flood, 2008). On the same hand, although the amount of food advertising had decreased from 7 in 2006 to 5 in 2008, the overall unhealthy food advertisement remained stable (Kelly, Chapman, King& Hebden, 2010). The highest peak of television time resulted children to be attracted by the unhealthy food easier. In Australia, persuasive marketing techniques were mostly used in the advertisement to be broadcasted during the peak viewing times for a better effect.

Simultaneously, the reason for childhood obesity in Germany was due to the overexposure of attractive food commercial delivered by television to children (Effertz & Wilcke, 2011). This result then revealed that the declared purposes from the voluntary agreement of industry along with the European Union (EU) Pledge's announcement have failed. In order to compare the effect of EU pledge towards the advertisement pattern, commercials were compared from 2007 to 2010. From the year between 2007 and 2008, food products have accounted 19.9 percent of television commercials in 3 children's widely viewed channels in Germany. Within this percentage, 73 percent of them are non healthy food. In the television commercials, promotional characters and premiums are included to attract children. By comparing the results with 2010, the percentage of 18.5 were food products commercials; 98.2 were non healthy food.

In Mexico, children have exposed to advertisements of high energy dense foods than adults (Ramirez-Ley et al., 2009). The result was collected by recording 7 days of 5 local and national channels. There were 22 percent of 8299 registered advertisements were food. Average of 4 food related advertisement was delivered per half an hour during children's television time. Among the advertisements, half of them were snacks with high calories.

On the other hand, the study done by Powell, Schermbek, Szczypka, Chaloupka and Braunschweig (2011) revealed that between 2003 and 2009, children in United States have decrease in watching unhealthy food product advertisement. Yet, exposure of fast food advertising has increased 21.1 percent for age group of 2 to 5 years old children. In addition, the nutritional food content that were being advertised did not improve positively.

4 IV.

5 Other Food Advertisement Strategies

Among the 83 interviewed children at the age from 7 to 13, only few of them know about the advertisement delivered in Internet rather than only television commercials. In addition, the website was visited by more than one third of children based on the address delivered on Television or printed on product package (Brady, Farrell, Wong, & Mendelson, 2008). Other than website address delivered through television and product package, it can also be shared with their friends. By the use of only websites, food marketers use different marketing features to promote their products (Kelly, Bochynska, Kornman, & Chapman, 2008). The branded education was an applied technique used by many food websites, then competitions, promotional characters, downloads, games and children's section.

With such convenient media given to the food marketers, children are now being exposed to unhealthier child oriented food advertisements through different media, uncontrollable.

Other than delivering website address through television commercial and product package to extend the shelf life of advertisement, another strategy used in television commercials are emotional and rational product appeals (Page & Brewster, 2007). A total of 147 commercials broadcasted on United States were analyzed. Many product advertisements include positive adjectives to attract the children and made them believe such products are able to bring happiness to them. Emotional appeals applied in the analyzed advertisements are such as 'fun', fantasy, more socialize and the opportunity of being cool. In addition, Maher, Lord, Hughner and Childs (2006) stated there were 85% of the television commercials included consumer related primary appeal while only 10% of television commercials applied general health appeals between 2000 and 2005. Another study done by Rose, Merchant and Bakir (2012) has also strengthened the evident that fantasy appeals with positive atmospheres are often included in food advertising. However, most of the products were simultaneously unhealthy and are high caloric food. Based on the understanding by 8 to 9 years old children, they do somehow understand the purpose of advertisement, to sell products. They also have the intention to know the fact of advertisements they have watched. Yet, they are still attracted by the strategies used mainly because they were unable to apply their knowledge.

According to Castonguay, McKinley and Kunkel (2012), 'health' messages were included in more than half of the child oriented food advertisements. The contents that were being analyzed in the study were 'health' messages and nutritional content. Health messages are such as 'whole grain', 'reduced fat' and 'heart healthy' or nutrition from fruit was included into the recipe. Result showed that most of the products are high in calorie, such as sweetened cereals and fast foods. This result was obtained after analyzing of 534 of food advertisements in television shows for children. The advertisements were collected by recording 3 months of channels for children between 7a.m. to 10p.m. The strategy of using 'health' messages had blurred the line between healthy and non healthy food, especially by the children.

For fast food companies, they have no target customers simply because their products are acceptable by everyone. Yet, they tend to increase sales by promoting their products through social media or school marketing (Soba & Aydin, 2011). Other than those two strategies, Fast Food Company would also try to increase their brand recognition and good will to keep the old customers, attract new customers and use as a tool to promote their company's new and existed product. Even though the market of fast food companies are big, they have to make sure they have met customer satisfactory. The criteria set by customers are good service, apply legal procedures of companies, provide proper help to customer, the fact of the product and provide empathy while doing business (Soba & Aydin, 2011).

In Guatemala, selling the cheap unhealthy snacks near the school environment is the main strategy of food industry through various marketing techniques in order to promote to children (Chacon, Letona, & Barnoya, 2013). The results were collected by purchasing child oriented snack in stores within 200 square meters of 4 urban community schools. 106 packages in 55 stores were purchased as reference for the study and products were classified by the use of United Kingdom's Nutritional Profiling Model. Promotional character on the package is the most heavily used strategy by food marketers. In addition, US dollar of 0.19 is the median price of the snacks. By selling unhealthy child oriented food, it allows most of the students to purchase unhealthy food since they are affordable. The result has also revealed that 97.1 percent of the products are less healthy even though 41% has nutritional related health claim.

6 a) Advergaming

According to Lee, Choi, Quilliam and Cole (2009), children often play games that use of unhealthy foods as an element, such as candies. From the games they have analyzed, there were less than 3 percent were serve as the purpose of educating children regarding issues of nutrition's and health. There were 3 steps taken by this group of study in order to obtain these results. Firstly, to search for food products that was promoted to children by food marketers. Secondly, to analyze the advergaming's content targeted to children through websites of top food marketers. Lastly, to identify food products' nutritional content in advergaming by selecting randomly. The overall study revealed that the top selling food marketers' website contains a lot of games, especially for children. The advergaming mainly contain brand logo, product package, food item and brand 'spokescharacter' to increase

popularity. Most of the food that was promoted falls into the category of such as baked goods, snakes, poultry and dairy products which are high in sugar level.

Another similar study was done by Paek and the group (2013). The first step of the study was the only different step taken, the identification of audiences' characteristics. The results of this study revealed the Children's Food and Beverage Advertising Initiative (CFBAI) has sponsored 119 advergames from a total of 143 advergames investigated; 79.5% of 44 advergames has reached children. There was about 87% of the advergames has no age limit. On the other hand, advertisement breaks and the information of healthy lifestyle were found in 71% of advergames. The study had also revealed that brand integration of the food marketers had increased due to advergames. The food content of the advergames was simultaneously mostly unhealthy. Lastly, the children identify the food products from the knowledge of advertisement breaks and brand identifiers.

The limitation of both studies, unable to identify the effect of advergames was however covered by the study done by Dias and Agante (2011). Dias and Agante (2011) stated that only food that was advertised through games was chosen by children. Children participated in the study were first assigned to either play healthy or less healthy advergames. Children were then assigned to answer the post treatment picture questionnaire regarding the choice of immediate food, nutritional knowledge and favorite food. Even though two groups of children chose the food according to the game they have played, they share the similar knowledge about nutrition of food. Children chose the food according to the game they played because they were not able to employ the nutritional knowledge during the selection of food. b) Product packaging strategies and their effect From the collection of child oriented food and beverages in a major supermarket of Adelaide, South Australia, there were 157 products were child oriented and mostly non healthy food, high fats and sugar (Mehta, Phillips, Ward, Coveney, Handsley, & Carter, 2012). In order to promote the unhealthy child oriented foods, more than 16 marketing techniques were applied. The most used techniques are graphics, cartoons and celebrities. More ridiculously, 55.5 percent of non healthy foods claimed for nutrition and health such as low sugar.

Through the analysis of food package contents, the result showed that food packaging has lead children in India to overexpose towards food promotions (Pavleen, 2013). Other than that, children in India often prefer to consume beverages, confectionary, baked products, snacks, ready to cook products and ice creams (Pavleen, 2013). The target of the study is parents of children at the age of six to seven living at Amritsar city. Two steps were taken for this study, firstly to collect information on what brand of food would be bought for the respondents' children then analyze the marketing tactics used for food packaging. During the content analysis of product packaging, it was found out packages often includes package semiotics, cross promotions, novelty packaging, premium promotions and price promotions (Pavleen, 2013). However, the most used tactics product packaging by Indian companies is bright colors and price promotions when compared to Multinational Companies. The rest of the promotional elements have emerged in Indian market, such as nutrition claims.

Throughout review of strategies used by many food marketers in advertising unhealthy child oriented foods, the study about the effect of the strategies were the limitations. However, this area of study was conducted by Elliott (2009). The focus group for this study is from grade 1 to 6, separated by gender and age groups. The result revealed that younger children prefer or attracted by the cross merchandize but the older children attracted by the colors, design and image of the package. In addition, children often prefer package with special characteristics such as unusual color or feature. The reason of it is children thought it would be fun to eat. Gender also affects the choices, girls emphasize on nutritional content; boys focus on interactivity of food. Boys would pick the product with packaging that allows them to play along such as to squeeze it. According to the study, the perspectives of healthy food by children are only fruits and vegetables. Other than that, the focus group would say package with words they do not understand refer to healthy food. Children at young age also do not read the nutritional content printed on the package but to look for logo such as 'fat free'. From this study, it showed that children are easily attracted by nutrition claim food and unique design as they have no solid knowledge of nutrition at such young age.

Pires and Agante (2011) on the other hand studied the effect of food packaging towards children by transferring the unhealthy food package visual appearance content to the healthy food packages. Other than that, the comments of junk food by children are attractive, packaged in a better way and well promoted. In this study, areas of focus are children's package evaluation; the package attitude toward the product; perceived healthiness; purchase intention (Pires & Agante, 2011). 10 to 14 years old of 408 Portuguese children were selected to complete the questionnaire distributed. This age group was chosen as they have the proper nutrition knowledge to aware healthy food. During the study, children preferred product with bright colors and promotional characters even though both are the same products, sliced apple. The reason from the focus group is as simple as those elements caught their attention easily. Therefore the study showed that product packaging does help in influencing attitudes of children and the intention to purchase the product. By referring to the result, it gave the opportunity to food marketers who tend to improve their products positively and increase sales simultaneously by modifying the product packaging.

V.

7 Children's Perspective on Kids' Food

Stated by Elliott (2011), banning unhealthy child oriented products advertisement only contribute little solution to childhood obesity. Therefore, this study focuses on how children determine food that belongs to them while

choosing from variety choices. Despite of age, location and sex, children categorized junk food, sweetened products and baked products as foods for children. When ask for child oriented foods through packaging, package with cartoon characters has attracted their attention; cartoon characters design categorized the products for children indirectly. The third perspective of junk food is the concrete dimensions, such as shape, color and small size of the food. Overall in children perspective, the processed, high sugar and low nutrients are the food specially produced for them. According to children, these concrete dimensions has developed 'fun' food concept mainly for children. In contrast, adult foods categorized by children are the unprocessed foods which are fruits, vegetables and meat.

8 VI.

9 Discussion

There were only 3 pledges were specifically for soft drinks and fast food industries (Hawkes & Harris, 2011). Simultaneously, most of the food marketers only pay the best effort to at least meet the minimum criteria of the pledges. In addition, only some of the company commitments are similar to the pledges. By investigating the percentage of reformulating the nutrition content of each product, only some products were reformulated positively or not yet being reformulated. This shows that food marketers are only responsible to reformulate food according to the minimum criteria set in the pledges. Therefore government may be able to increase the force of reformulating food positively by standardize the pledges. Pledges are only useful when it has high standard that bring pressure to food marketers. This idea may increase pressure to most of the food marketers; it is still a better move in order to save the younger generations. Food marketers should have business ethics as well instead of to only produce what they want and ignore the public concern, childhood obesity. The limitation of this area of study is unable to identify the criteria of each pledges set. If content and criteria of pledges were identified, suggestion of improvement about the pledges can be made and enhance the possibility of reformulating food positively by food marketers.

Television commercials are to be considered as the most used medium by food marketers to promote their products. Children are exposed to food advertisement during the advertisement breaks. Throughout the analysis of content in television commercials, fantasies and positive atmosphere are the important element to be added. Children are simple minded, they learn what they saw from the television because it just caught their attention. Unfortunately, those advertisements do not belong to healthy food. More advertisements were broadcasted during the were not useful in Germany. The simple step can be taken by the government would be to ban the amount of advertisement to be broadcasted in free to air television. Rules can also be given to the broadcast company to only accept a fix number of unhealthy advertisement or only advertise healthy food to children. However, throughout this area of study, the effect of elements used in television commercials to children was not investigated. It is advisable to examine on how children were attracted by fantasies and positive atmosphere, the part of television commercials.

Other than television commercials, there are also other strategies applied by food marketers to increase their sales. Websites addresses are viewed by children are able to be shared among their friends. It will increase the area of advertisement due to the use of social networks now days. Television commercials often include positive elements to convince audiences that such product can bring positive energy to them. Good will and brand recognition are also considered as a strategy since it helps to retain existed customers and attract new customers. Food marketers would also increase sales by lowering the price and use of promotional characters to catch children's attention. However, the opinion and reflection from children were not recorded. If the reason of choosing to believe the source of advertisement were recorded, the relationship between advertisement and childhood obesity would be firm. Opinion can be collected while children were purchasing the product, the feeling and the reason of purchase then can be recorded precisely.

Advergame was one of the strategies of advertising food. Advergames are usually designed for children, and graphics usually include the company's food products. Children were targeted by the use of advergames because advergames help the company to increase brand recognition. In addition, those games are mostly non educational. If these games were at least educational, use of games to advertise can still be tolerant. On the other hand, it will not be useful if food marketers promoting healthy food to children as it will only decrease their sales. No limitations were found in this area of study. However, more study should be done to strengthen the fact on advergames are the tool to gain brand recognition.

Due to the influence by media and advertisements delivered by the food marketers, children believed that product packaging with bright colors and promotional characters are meant for them. Food cut into fun shape made them interested and therefore chose the product from a variety of choices. Children have limited knowledge about nutritional content therefore they are unable to employ the nutritional knowledge. Therefore healthy food marketers can use the strategies mentioned above to promote their products. Children believe what they saw before including food. Yet, the limitation of this study is too few of the similar study were conducted and the theory just developed may seem to be non-credible.

10 VII.

11 Conclusion

From this study, it is clear that food marketers are willing to pay or invest for anything to increase their sales. Unhealthy child oriented food is the most advertised food in television commercials. Advergates were even sponsored for children to play, mainly for brand recognition. Website addresses were delivered through television commercials as well as product packaging, which is easier to share among the children group through internet. Cheaper price was one of the strategies as well to increase customers, the primary students. Product packaging of unhealthy child oriented food include everything that is positive to attract children, such as nutrition claim, bright colors and cartoon characters. Unhealthy food mostly contain high sugar and fats because children just like junk foods, the well processed food that make children think it is more fun to be eaten. Most of the food marketers only met the minimum criteria, simply because the intention to earn money and behave well. Advertisements are being delivered everywhere through any medium, which has also shaped the children's thought on how children food should look like. Due to these strategies applied by food marketers, a lot of moves should be made in order to reduce the rate of childhood obesity. However, the first move by the government is to first reduce the advertisement delivered through different medium by the food marketers since it attract children easily and children are convincible. Therefore in conclusion, advertising unhealthy child oriented food does play a major role in childhood obesity.¹

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