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Abstract

This paper investigates endorsers’ effectiveness in advertisements of foods. More specifically, it tests whether endorsers’ body image in print advertisements influences consumers’ attitudes and purchase intention toward healthy foods. An online study was conducted during which endorsers’ body image (normal weight vs. overweight) and food type (healthy vs. unhealthy) were experimentally manipulated in print advertisements. Results show that normal weight endorsers are more effective than overweight ones irrespective of whether the food is healthy or not. However, when controlling for participants’ body weight (obese vs. normal weight), overweight endorsers were found to be more effective than normal weight ones among obese consumers across both food types.

Introduction

Obesity has often been characterised as the epidemic of the modern world, while its prevalence is still on the increase (Branca, Nikogosian, & Lobstein, 2007). Among its main contributors is said to be consumers’ change of lifestyle and, more specifically, change of eating habits toward less healthier food choices (Chrysochou, Askegaard, Grunert, & Kristensen, 2010). Therefore, actions to improve consumers’ healthy food choices are often called for. Interventions employed have followed two avenues traditionally. The first avenue has focused on creating awareness and understanding of what constitutes as healthy eating practices (e.g. to eat a varied diet, more fruit, vegetables and fish and less fatty and sugary food, calories and salt; Eurobarometer, 2006). The second avenue has focused on attempts to make foods healthier (e.g. functional foods, foods in low fat content).

Healthy foods are said to be targeted within the health-conscious segment (Prasad, Strijnev, & Zhang, 2008). Although there is no empirical evidence on whether the profile of consumers who buy healthy foods differs, it is believed to show greater appeal within the health-conscious segment. In other words, healthy foods fail to reach the non-health-conscious segment (i.e. consumers who have greater chances to suffer from a dietary-related disease, such as being obese). A reason to such failure can be attributed to the communication strategy employed for healthy foods. One of the most common communication strategy, and the one that this paper focuses on, is the use of endorsers (Erdogan, 1999; Ohanian, 1991). The factors affecting the right choice of an endorser has been among the primary issues in the extant literature (Amos, Holmes, & Strutton, 2008; Till & Busler, 2000). Among the common accepted theories proposed is the match-up hypothesis, which suggests an endorser to be more effective when there is a fit between him/herself and the endorsed product (Kamins, 1990; Till & Busler, 2000). Translated in the case of endorsing a healthy food, endorsers perceived as healthier (e.g. slim models, athletes, trainers) will be more effective. On the other hand,
less healthy endorsers may be more effective when promoting foods that are perceived as less healthy.

From a consumer’s perspective, consumers are said to be influenced by exposure to endorsers, which in turn may have an effect on their food choices (McFerran, Dahl, Fitzsimons, & Morales, 2010; Smeesters & Mandel, 2006; Smeesters, Mussweiler, & Mandel, 2010). Among theories explaining this phenomenon is the social comparison theory that suggests that people have a natural drive to evaluate their own attributes and abilities by comparing themselves with others (Festinger, 1954). For example, individuals who compare themselves with a highly attractive model in an ad may show negative feelings driven by jealousy and subconsciously degrade the source of the threat (Bower & Landreth, 2001). In an ad exposure context, the result of such a reaction was to have a negative impact on product attitudes and purchase intentions (Bower & Landreth, 2001). Translated in the case of healthy foods endorsed by slim models (i.e. health-perceived ones), consumers of similar weight (i.e. normal weight) will have more positive attitudes and purchase intentions toward healthy foods than obese consumers. Therefore, it is questionable whether a slim endorser is effective among obese consumers, who should be the main target group for healthy foods.

This paper investigates endorsers’ effectiveness in advertisements of healthy foods. The aim is to provide a better understanding on which of these two afore-mentioned theories (i.e. match up hypothesis and social comparison) can explain the phenomenon and apply in practice. More specifically, the primary objective is to explore whether overweight endorsers could become a more effective communication element for healthy foods among obese consumers.

**Research Method**

The experiment manipulated three independent variables treated in a mixed within-between subjects design. Endorsers’ body image (normal weight vs. overweight) and food type (healthy vs. unhealthy) were treated as within-subjects factors (see Figure 1), which resulted into four different combinations that were presented to each participant in the form of printed ads. To facilitate endorsers’ body image, a picture of a female model was edited in Photoshop creating the overweight image of the same model. The decision to use the same model was based on the intention to keep constant any confounding effects that the use of a different model could cause (e.g. differences in facial attractiveness). To facilitate food type, a milk brand was used as the healthy alternative whereas sausages as the unhealthy one. The selection of foods was based on previous findings related to their perceived healthiness (Chrysochou, 2010; Roininen, Lähteenmäki, & Tuorila, 2000). Moreover, attention was given so that consumers were familiar enough with both food types and to avoid any effect of prior experiences with the brand fictitious brand names were generated for each separate ad. Finally, body weight groups based on their Body Mass Index (BMI) was treated as a between-subjects factor.

The questionnaire was organized as follows. First, a screening test assessing the perceived healthiness of both foods was employed (1 = not healthy at all; 7 = very healthy). Participants who rated either milk as very unhealthy or sausages as very healthy were excluded from further analysis. This part also included a question measuring the intention to buy the two foods considering they were available in the supermarket shelves (1 = not likely at all; 7 = very likely). In the next part, the four generated stimuli were presented in random order and participants were asked to rate them in relation to perceived healthiness (1 = not healthy at all; 7 = very healthy), liking (1 = not at all; 7 = very much) and intention to purchase the brand (1=...
not likely at all; 7 = very likely). The following part consisted of the manipulation check testing perceived healthiness (1= not healthy at all; 7= very healthy) and observed body weight (1= underweight; 7 = overweight) of each endorser. The last part included questions related to participants’ socio-demographic background and questions about their height and weight. The survey was conducted online and data were collected based on a convenience sample in Denmark during February 2011.

Figure 1 The normal weight model endorsing the less healthy brand (on left) and the overweight model endorsing the health brand (right)

Results

In total, 313 participants participated in the survey. From those, 38 (12%) were excluded as they failed the screening check. From the remaining 275 participants, 57.8% were females with an average age of 28 year old. In relation to their body mass index (BMI), 68.0% were of normal weight (BMI< 25), 20.4% were overweight (BMI 25.0-29.9) and 11.6% were obese (BMI ≥ 30).

The manipulation checks were successful for the purposes of this study. Between the two types of food a significant difference was found on the perceived healthiness for the healthy (Mhealth=3.95; sd=1.38) and the unhealthy (Mhealth=3.58; sd=1.28) food; t(274)=3.43, p < 0.05, whereas a non-significant difference was found in the purchase intention for the healthy (Mint=2.46; sd=1.51) and the unhealthy ( Mint=2.52; sd=1.39) food; t(274)=-0.50, p = n.s. Between the two types of models, a significant difference was found in the observed body weight for the normal weight (Mnw=3.36; sd=0.78) and the overweight (Mow=5.36; sd=0.95) model; t(274)=-28.24, p < 0.05, as well as the perceived healthiness for the normal weight (Mnw=5.52; sd=1.17) and the overweight (Mow=2.88; sd=1.18) model; t(274)=24.29, p < 0.05.

One-way repeated measures ANOVAs were conducted to compare the effect of endorsers’ body image and food type on each dependent measure (Table 1). Post hoc comparisons using the Bonferroni test indicated that the mean score for normal weight endorser was significantly higher than the overweight endorser across all dependent measures.
Similarly, the post hoc test indicated that the mean score for the healthy food was significantly higher than the unhealthy for perceived healthiness and liking, whereas there was no significant difference for purchase intention. Finally, there was a significant interaction effect on liking, indicating that the effect of food type was greater for the normal weight endorser than the overweight one.

Table 1 Effects on perceived healthiness, liking and purchase intention

<table>
<thead>
<tr>
<th>Sources of Variation</th>
<th>Perceived Healthiness</th>
<th></th>
<th>Liking</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>df</td>
<td>Eta²</td>
<td>F</td>
</tr>
<tr>
<td><strong>Main effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body image (BI)</td>
<td>330.74*</td>
<td>(1, 274)</td>
<td>0.55</td>
<td>220.66*</td>
</tr>
<tr>
<td>Food type (FT)</td>
<td>73.19*</td>
<td>(1, 274)</td>
<td>0.21</td>
<td>48.69*</td>
</tr>
<tr>
<td><strong>Two-way interactions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BI x FT</td>
<td>0.02</td>
<td>(1, 274)</td>
<td>0.00</td>
<td>5.46*</td>
</tr>
</tbody>
</table>

| Sources of Variation | Purchase Intention | |
|----------------------|--------------------|
|                      | F        | df | Eta² |
| **Main effects**     |          |    |       |
| Body image (BI)      | 151.49*  | (1, 274) | 0.36 |
| Food type (FT)       | 3.82     | (1, 274) | 0.01 |
| **Two-way interactions** |          |    |       |
| BI x FT              | 0.70     | (1, 274) | 0.00 |

* p ≤ 0.05

A mixed design one-way ANOVA was conducted using the BMI consumer groups as between-subjects factor. The aim was to test the three-way interaction effects (BMI group x Body image x Food type) on each dependent measure. A significant three-way interaction effect was found for perceived healthiness, $F(2,272)=3.33$, $p<0.05$, as well as for liking, $F(2.272)$, $p<0.05$, whereas for purchase intention it was not found significant. Figure 2 depicts the mean scores for both significant three-way interaction effects. For stimuli displaying an overweight model, the perceived healthiness and liking was greater among obese consumers in comparison to overweight and normal weight consumers. This effect was greater irrespective of the type of food.

Figure 2 Mean perceived healthiness and liking scores across each BMI group
Discussion

This paper investigates endorsers’ effectiveness in advertisements of foods. The findings postulate that endorsers’ body image does influence consumer beliefs toward foods. More specifically, normal weight endorsers were found more effective than overweight ones, irrespective of whether a food is perceived as healthy or not. With an exception of a small effect toward overall liking, endorsers’ body image did not moderate the perceived healthiness and purchase intention of foods. This suggests that the match up hypothesis is not confirmed, contrary to previous similar studies (Westover & Randle, 2009).

In relation to endorsers’ effectiveness toward consumer groups of different body mass index, the results show that endorsers of normal weight are generally more effective across all consumer groups. However, for foods endorsed by an overweight model, the beliefs about both types of foods were greater among obese consumers; although still lower than for foods endorsed by normal weight endorsers. This suggests that there is a positive change in attitudes toward healthy foods, which can be attributed to social comparison theory. Moreover, combined with the fact that the match up hypothesis does not hold, it creates the potential for overweight models to promote healthy foods apart from just unhealthy ones that the match up hypothesis would suggest.

A possible explanation of the partial fail of the match up hypothesis is that advertising of foods is prevailed by the use of normal weight endorsers, which has created a stereotype difficult to break. The challenge is whether such a stereotype could be possibly broken and whether it will be an effective strategy. Considering that similar successful cases in the beauty care category, such as the Dove’s Real Beauty Campaign, it could be similar for healthy foods with overweight models. Our study shows that the effects driven by the social comparison theory could potentially overcome those of the match up hypothesis.

These results lead to managerial and public policy implications. The strategy of choosing an overweight endorser involves high risks, which may not be a desirable one for managers considering that communication effectiveness will be lower. Nevertheless, breaking down a stereotype involves time in order consumers to get familiar with the change and start having more favorable attitudes. From a public policy perspective, such a strategy may be more effective toward obese consumers, which may contribute in the fight toward obesity and change of food preferences of obese consumers; consumers who are in need of following such choices.

Our study has limitations that draw to recommendations for future research. First, the study design was conducted within subjects. A between subjects design would eliminate any learning effects from the repeated exposure of the same stimuli to participants. Second, the manipulations of the body image involved only two levels. More levels of body image should be included since the effectiveness is not expected to be linearly related to body image (e.g. an extremely obese model will have an inverse effect, since it becomes less attractive). This also leads to the need to include additional measures of endorsers’ characteristics, such as attractiveness and credibility (Bower & Landreth, 2001; Ohanian, 1991). Finally, real brands should also be tested as this would provide a more realistic approach.
References


