

The influence of source attractiveness on self-perception and advertising effectiveness for 6- to 7-year-old children

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Abstract

The objective of this article is to examine the effects of using attractive peer models in advertising for 6-7 year old children. This age is important in children's development, as children of that age are not yet fully aware of the persuasive intent of advertising, are more focused on perceptual than on cognitive information in ads and are more focused on irrelevant rather than relevant ad information. More insights are therefore needed about whether attractive advertising models influence self-perception and advertising effectiveness of children this young, in order to help policy makers, parents and advertisers understand these effects. Two experimental studies are presented in which children are exposed to ads with peer models. Results show that when children of 6- to 7-year-old rate advertising models as being more attractive, advertising effectiveness raises, but children's perceived self-worth and children's perceived physical attractiveness are unaffected. We conclude that 6- to 7- year-old children use model attractiveness as a perceptual cue to rate ads but are not yet using comparisons with these models to evaluate themselves.

Keywords

Advertising effectiveness, children's consumer behaviour, attractive peer models, development, self-worth, physical appearance.

Introduction

Marketers have always been keen on targeting children as consumers. They are after all not only an interesting primary market but also request products to their parents and can form an important future market (McNeal, 1992, Valkenburg and Cantor, 2001, Preston, 2004). For that reason, children are targeted by a massive amount of media on a daily basis, where they can be exposed to 25 child-targeted commercials per hour on commercial television (Valkenburg and Cantor, 2000).

To stimulate advertising effectiveness, marketers use a wide range of advertising techniques; one of which is the incorporation of attractive models in their campaigns. At the age of 6-7 years old, two important cognitive tools relevant for the effect of attractive advertising models in ads on children are only developing. First, children have not yet developed the necessary skills to act as fully informed consumers, possibly enhancing the effectiveness of the use of attractive models in ads. Second, children of that age are also not yet using social comparisons to re-evaluate their own attractiveness. This makes attractive models in ads perhaps less harmful than they are for adults and older children.

Attractive models in advertising

From a very early age on, children evaluate others on a number of factors, for example on physical features such as appearance and attractiveness (Terry and Stockton, 1993). These physical features are used to make inferences and evaluations about others (Terry and Stockton, 1993) which results in, for example, the inclination to evaluate attractive people more positively. The positive evaluation and preference for people with attractive physical features is even present in infants. New-born children look longer at attractive faces (Dion et al., 1972) and 6-month-old infants have visual (e.g. longer looking time) and behavioural (e.g. more play involvement, less withdrawal) preferences for attractive compared to unattractive faces (Langlois et al., 1990).

The preference for physical attractiveness has also been used in advertising. In nearly 25% of commercials, some form of attractiveness is present (Downs and Harrison, 1985), for example using attractive models to appraise the product. Attractive models generate positive product associations, due to the common stereotype that attractive people also possess other positive characteristics (Dion et al., 1972, Baker and Churchill, 1977, Parekh and Kanekar, 1994), which can spill-over to the advertised product. This technique seems to be highly

effective, resulting in higher advertising effectiveness (Baker and Churchill, 1977, Kozar, 2010).

The influence of children's cognitive development on processing advertising

The ability to create knowledge about brands, become ad literate, understand the selling intention of advertising, and so forth increases with age (John, 1999, Rozendaal et al., 2009, Rozendaal et al., 2014). Although young children are frequently targeted by advertisers, children's knowledge about advertising and their capabilities of critically evaluating advertising content is not completely developed (Rozendaal et al., 2009). Generally, one of the aspects that must be met before someone can develop a mature view on advertising is that one needs to be able to understand that advertising has a persuasive goal (John, 1999, Wilcox et al., 2004, Livingstone and Helsper, 2006). Children go through a series of developmental stages and by doing so, they learn how to react to advertising and learn skills to be able to grasp the selling and persuasive intent of commercials (Ward, 1974, Moschis and Churchill, 1978, John, 1999, Rozendaal et al., 2009, Rozendaal et al., 2014).

The capability to understand advertising generally develops alongside with cognitive development stages. Very young children are limited processors and generally unable to correctly differentiate between media content and advertising, nor understand the persuasive intent of advertising (Valkenburg and Cantor, 2001, Wilcox et al., 2004). They use limited information during decision making (John, 1999) and are less able to discriminate relevant from irrelevant information (Davidson, 1991, John, 1999, Wilcox et al., 2004). They are called 'perceptually dependent', making them focused on the perceptual elements of stimuli and on how something looks, independent of whether the visual information is relevant or not. This also has consequences for advertising, as children specifically focus on perceptual stimuli, such as the use of celebrity endorsers, the use of colours, music, and so forth (Ross et al., 1984, Hoffner and Cantor, 1985, John, 1999, Moore and Lutz, 2000, Wilcox et al., 2004, Livingstone and Helsper, 2006).

The age of 7 years is a tipping point for children's cognitive development. At this age, they generally will begin to exhibit more and more cognitive instead of perceptual preferences. This is closely related to their defences to advertising (John, 1999, Pecheux and Derbaix, 2002, Preston, 2004, D'Alessio et al., 2009). From this age on, children are generally beginning to have knowledge about the persuasive and selling intent of advertising (John, 1999, Wilcox et al., 2004). According to John (1999), 7- to 8-year-old children are in an analytical stage of cognitive development, providing the possibility to recognize that

advertising's primary goal is to sell people certain goods. However, 7- to 8-year olds are still in a beginning phase of becoming sceptical towards ads and understanding that advertising is sometimes biased and not telling the whole truth. Children above 11-year old have generally adopted the cognitive capacities that enable them to process advertising as adults would (John, 1999).

Effect of using attractive models in advertising to children on advertising effectiveness

As mentioned before, attractive models are often used in advertising (Parekh and Kanekar, 1994). As people agree more often with the opinion of attractive people and attribute other positive characteristics to beautiful people, attractive people generate more compliance (Debevec et al., 1986), so advertisers use the technique to also generate goodwill for their products. Studies have shown that advertisements that target adults are more effective when they use attractive (vs. less attractive) models in terms of product evaluations, mostly because these advertising models are also liked more (Joseph, 1982). This technique seems to be successful for adult targets, resulting in higher advertising effectiveness (Baker and Churchill, 1977, Kozar, 2010), such as for example higher purchase intentions (Petroshius and Crocker, 1989, DeShields et al., 1996), attitudes towards the ad (Petroshius and Crocker, 1989) and affective ad reactions (Baker and Churchill, 1977). The effect of attractive models on advertising effectiveness seems to hold better when there is a fit between the attractiveness of the model and the product being advertised for. For adults, when attractive models are used as a marketing argument, the advertised product must have some relation to beauty or must be a product used to enhance one's attractiveness before the use of an attractive model generates advertising effectiveness (Parekh and Kanekar, 1994).

The technique is also used in advertisements to children (Pringle, 2004), but the effects are less often examined. One way in which results might be different for children is the relevancy of the match-up between the model and the product. The literature overview suggests that children of 6- to 7-year old are probably still in the stage described as 'perceptually dependent'. They cannot yet discern between relevant and irrelevant advertising cues and are naturally biased toward perceptual cues (Ruggeri and Katsikopoulos, 2013). They most likely focus on perceptual information to evaluate advertisements. Perceptions about the model's attractiveness can be used to make inferences about the advertised product, as attractive models in advertising can be seen as perceptual information included in the ad (Moore and Lutz, 2000, Wilcox et al., 2004). Since children below 7-year old are not yet capable of discriminating relevant from irrelevant information, we argue that they will assess model

attractiveness as a relevant cue to form attitude towards the ad, affective reactions towards the ad and purchase intentions for the product even for non-beauty products, and will do so regardless of the fit between model and product (which was necessary for advertisements to be effective in adults).

Because the development of a sceptical attitude towards advertising develops with age, and as limited knowledge about the persuasive intent of advertising leads to cognitive and affective responses towards the ad (Wilcox et al., 2004, Livingstone and Helsper, 2006), we expect strong advertising effects, such as for example higher attitudes towards the ad, higher affective ad reactions and higher purchase intentions after exposure to attractive models in non-beauty product advertisements (Roedder et al., 1983, Martin and Gentry, 1997):

H1: Children of 6-7 years old have higher attitudes towards the ad, affective reactions towards the ad and purchase intentions for an advertised non-beauty product, when an attractive vs. less attractive same-sex peer advertising model is included in the ad.

Effect of using attractive models in advertising on children's self-perception

The use of attractive models in advertising might also have consequences for children's self-evaluations. A lot of research shows the detrimental effect of exposure to idealized advertising models on adults' (and especially women's) self-ratings of attractiveness, self-esteem, body satisfaction and mood (Thornton and Moore, 1993, Hatoum and Belle, 2004, Bessenoff, 2006, Little and Mannion, 2006, Tiggemann et al., 2009). People compare themselves with models in advertisements and often reconsider evaluations of themselves and others after being exposed to idealized models (Irving, 1990, Thornton and Moore, 1993). As a result, for adults, exposure to attractive models is often related to reduced self-worth, feelings of inadequacy, frustration etc. because it generates social comparison (Bower and Landreth, 2001, Tiggemann et al., 2009).

For children, research shows inconsistent results. Detrimental effects of looking at attractive models are found for children of eight years or older, but only when they are asked to evaluate themselves by comparison with the model in the ad but not when they are asked to engage in self-improvement by comparing themselves with the person in the ad (Martin and Kennedy, 1993, Martin and Gentry, 1997). The detrimental effect of attractive models on self-perceptions and self-esteem of females has been found in some samples researching children of nine and older (Martin and Gentry, 1997) but another sample found a positive relationship between the presence of moderately attractive models and 8- to 9-year-old girls' satisfaction

with their own physical appearance, and a negative relationship between the presence of moderately attractive models and 8- to 9-year-old boys' general self-worth (Vermeir and Van de Sompel, 2014).

According to the social comparison theory of Festinger (1954), people have a drive to engage in self-evaluation by for example, comparisons with others. Research suggests that children also compare themselves with others from an early age on, but do not use this information for self-evaluation purposes until they reach the age of about 7- to 8-year old (Ruble et al., 1976, Ruble et al., 1980). When children reach that age, they start to integrate comparisons with others and feedback from others to form their own self-perception (Robins and Trzesniewski, 2005). We propose following hypothesis:

H2: For children of 6-7 years old, self-worth and perceived physical attractiveness does not differ when being exposed to an attractive vs. less attractive same-sex peer advertising model in an advertisement for a non-beauty product.

Methodology

Two studies test the effect of exposure to attractive vs. less attractive advertising models on self-perception and advertising effectiveness. For both studies, Belgian schools were contacted and all children within the selected age range were invited to participate. Informed consent was obtained of the schools, teachers, children and parents before starting each study. As the interviewed children were only starting to read and write, the interviewer read all questions aloud and assisted the children in registering their responses. To reduce cognitive load and avoid fatigue, shortened versions of scales were used where possible, for example using one-item measures.

Study 1

Stimuli

Respondents saw an advertisement for a new animated children's movie DVD named 'Wreck It Ralph'. To avoid experience with the product – which could affect children's attitudes²we selected a new movie, not aired or advertised in the country at that time. The advertisement is a picture of the DVD and the model appraising the movie by giving it a thumbs up. The picture also incorporated a text balloon in which the model said 'great' and the text 'in theatres now'. Four ads were created for this DVD, which contained either an attractive girl model, an unattractive girl model, an attractive boy model or an unattractive boy model. The

same boy and girl were used in the attractive and less attractive advertisements. Facial characteristics of the models were altered, as previous research shows that the assessment of overall attractiveness strongly correlates to the assessment of facial attractiveness (Mueser et al., 1984). To manipulate the attractiveness of the model, we changed the hairstyle and added glasses to make the children less attractive. This latter adjustment was based on the ‘glasses stereotype’, that states that people who wear glasses are evaluated as being smarter, yet less attractive. Evidence for this stereotype is also found in children samples (Terry and Stockton, 1993).

Pre-test

A pre-test was set up, using a within-subjects design in which 18 first-grade children evaluated all four ads in a randomised order. A repeated measures ANOVA ($N = 18$, 44% girls, $M_{age} = 6.61$, $SD_{age} = 0.98$) showed that the “attractive” and “less attractive” models were identified as such. The female attractive model ($M = 3.44$, $SD = 0.31$) was more attractive ($F(1,17) = 8.50$, $p = .01$) than the female less attractive model ($M = 2.78$, $SD = 0.32$). The male attractive model ($M = 2.83$, $SD = 0.34$) was more attractive ($F(1,17) = 5.05$, $p < .05$) than the male less attractive model ($M = 2.11$, $SD = 0.29$).

Method

Sixty first-grade children participated in the actual study (50% girls, $M_{age} = 6.74$, $SD_{age} = 0.44$). None of these children participated in the pre-test. Respondents were randomly assigned to seeing either an advertisement using an attractive or less attractive same-sex/age child model. We used same-sex/age models because previous research indicates that children prefer peers of their own sex (Terry and Stockton, 1993) and people prefer advertising models of similar age (Kozar, 2010).

Measures

Items were completed on a five-point-scale and had verbal and non-verbal anchor points. Emoticons (non-verbal) indicated respectively (1) a very sad face, (2) a sad face, (3) a neutral face, (4) a happy face and (5) a very happy face. Verbal anchor points corresponded with the emoticons and indicated respectively (1) “NO!!!”, (2) “no”, (3) “In between”, (4) “yes” and (5) “YES!!!”.

Children reported their age and gender before completing one item from the “general self-worth” subscale, namely “Are you happy with who you are? ($M = 4.65$, $SD = 0.86$)” and

one item from the “physical appearance” subscale, namely “Are you happy with the way you look? ($M = 4.34, SD = 1.21$)” of the Dutch version (Treffers et al., 2002) of Harter’s Self-Perception Profile for Children (Harter, 1985). Consistent with previous studies, we transformed the original bipolar items of the scale to a unipolar one (Wichström, 1995). The statements were transformed into questions, because children can respond to questions more easily (Buijzen and Valkenburg, 2003).

After seeing the ad, children filled out an attitude towards the ad scale containing three items, viz. “Do you like this ad?”, “Do you think this ad is stupid” (reverse coded) and “Do you want to see this ad again?” ($\alpha = .69, M = 3.46, SD = 1.21$), based on previous research (Pecheux and Derbaix, 1999, Pecheux and Derbaix, 2002). Next, children completed a two item scale regarding their positive affective reaction towards the ad, adapted from Derbaix and Bree (1997), viz. “Did you feel joyful while looking at the advertisement?” and “Did you feel happy while looking at the advertisement?” ($\alpha = .80, M = 3.75, SD = 1.35$), and a scale with four items measuring purchase and request intention (a composition of items used in Derbaix and Bree (1997) and Mallinckrodt and Mizerski (2007)), e.g. “Would you want to buy this DVD” and “If you could choose one item in a store, would you choose this DVD?” of which the latter item was deleted to improve reliability ($\alpha = .66$ to $\alpha = .88, M = 3.46, SD = 1.46$).

Children also completed a one item measure on general liking of the product category (“Do you like watching movie DVDs?”; $M = 4.53, SD = 0.95$) and previous experience with the product (“Did you know the movie before you saw this ad?”; $M = 1.67, SD = 1.20$). No gender differences were found for general liking of watching DVD’s ($t(58) = 1.37, p = .18$) or previous product knowledge ($t(58) = .64, p = .52$). Children also evaluated the attractiveness of the model on a five-point scale (“Do you think the child in the ad is pretty?”; $M = 3.09, SD = 1.53$). Finally, they again completed the items about their own perceived self-worth ($M = 4.50, SD = 0.98$) and perceived physical appearance ($M = 4.48, SD = 0.89$).

Results

Manipulation check

To check the manipulation, ANOVA analysis examined the effect of gender and model attractiveness (attractive vs. less attractive) on attractiveness ratings of the model and showed a significant interaction effect ($F(1,54) = 4.38, p < .05$). The female attractive model was rated as more attractive ($M = 4.43, SD = 0.94$) than the less attractive model ($M = 2.40, SD =$

1.21; $F(1,54) = 16.86, p < .01$). For the male model, no attractiveness differences were found between the attractive ($M = 3.07, SD = 1.49$) and less attractive model ($M = 2.50, SD = 1.65$; $F(1,54) = 1.32, p = .26$). This finding is consistent with a previous study of Vermeir and Van de Sompel (2014), where boys indicate attractiveness differences in within-subjects designs (such as our pre-test), but failed to differentiate between them in between-subjects designs. Consequently, the attractiveness rating, in which children rated how attractive they believed the child was (“Do you think the child in the ad is pretty?”) was used in further analyses as independent variable instead of the manipulations.

Effect of model attractiveness on perceived self-worth and physical appearance

Linear regression shows no significant main effect of gender ($b = -.36, t(54) = -1.35, p = .18$) and the attractiveness rating of the model ($b = .10, t(54) = 1.17, p = .25$; $R^2 = .07$, Adjusted $R^2 = .02$) on self-worth after seeing the ad, while controlling for general self-worth before seeing the ad. There was also no interaction effect found ($b = .19, t(53) = 1.08, p = .29$; $R^2 = .09$, Adjusted $R^2 = .02$) when adding the interaction term gender x model attractiveness as second step to the regression model.

Consistent with these results, there were also no main effects of gender ($b = -.38, t(53) = -1.54, p = .13$) and the model attractiveness rating ($b = -.05, t(53) = -.57, p = .57$) on perceived physical appearance after seeing the ad, while controlling for perceived physical appearance before seeing the ad ($R^2 = .05$, Adjusted $R^2 = -.01$). There was also no interaction effect found ($b = .18, t(52) = 1.10, p = .28$; $R^2 = .07$, Adjusted $R^2 = .00$).

Effect of model attractiveness on advertising effectiveness

A linear regression model with previous experience with the product and liking of the product category as covariates shows that attitudes towards the ad were higher when advertising models were perceived as more attractive ($b = .27, t(47) = 2.58, p < .05$) and were also higher for boys – representing a marginally significant main effect of gender ($b = .55, t(47) = 1.73, p = .09$; $R^2 = .23$, Adjusted $R^2 = .16$).

Similarly, model attractiveness was positively related to affective ad reactions ($b = .19, t(50) = 1.71, p = .09, R^2 = .31$, Adjusted $R^2 = .25$) and purchase intentions ($b = .23, t(50) = 1.99, p = .05, R^2 = .33$, Adjusted $R^2 = .27$). A significant main effect of gender was also found for purchase intentions ($b = .84, t(50) = 2.40, p < .05$), but not for affective ad reactions ($b = .45, t(50) = 1.35, p = .18$).

No interaction effects between gender and perceived model attractiveness were found for the advertising effectiveness measures (attitude toward the ad: $b = .08$, $t(46) = .34$, $p = .73$; $R^2 = .23$, Adjusted $R^2 = .14$; affective ad reactions: $b = .05$, $t(49) = .19$, $p = .85$; $R^2 = .31$, Adjusted $R^2 = .24$ and purchase intentions: $b = -.15$, $t(49) = -.62$, $p = .54$; $R^2 = .33$, Adjusted $R^2 = .27$). Linear regression without covariates yield similar main effects for model attractiveness, although all main effects of gender disappeared.

Discussion

Study 1 shows that model attractiveness has no influence on general self-worth and perceived physical appearance of boys and girls of 6- to 7-year old. Children did display higher attitudes, higher purchase intentions and higher affective reactions toward the ad when they perceived the model as being more attractive.

Boys also had higher purchase intentions and ad attitudes than girls did but only after controlling for previous experience with the product and liking of the product category. Although boys and girls did not significantly differ in previous experience and liking of the product category, means for girls were non-significantly higher than for boys for both previous experience with the product and liking of the product category.

A second study was set up to replicate our findings. To rule out possible gender differences in product liking, we reran the first study with a different product, i.e. a Wii game, since previous research indicated that videogames are rather gender neutral (Vermeir and Van de Sompel, 2014). As the model attractiveness manipulation failed for boys, and pretesting indicated that the male models were rated slightly lower in attractiveness than the female models, two other models are selected and another technique is used to manipulate attractiveness in the second study, namely facial symmetry and balance. Finally, since young children of 6–7 years are on a tipping point of advertising knowledge, a measurement of advertising literacy and media influence on self-image is included because these constructs relate to the extent to which children are susceptible to advertising.

Study 2

Stimuli

The advertised product in study 2 was a non-existing Wii game, i.e. ‘Wii Around the world’ (Vermeir and Van de Sompel, 2014). Again, four ads were created for this product, which

contained either an attractive girl model, an unattractive girl model, an attractive boy model or an unattractive boy model. To manipulate model attractiveness, we adapted a picture of a model (either a boy or a girl), promoting the Wii game, by changing two facial characteristics, namely symmetry and averageness. Symmetry is associated with attractiveness (Kowner, 1996) and an average face is also seen as more attractive because it is more balanced (Langlois and Roggman, 1990). The attractive model was depicted using an original picture of the models.

Pre-test

Pre-testing with a within-subjects design in which 31 first-grade respondents evaluated all four ads in a randomised order was again performed prior to the study. Repeated measures ANOVA ($N = 31$, 48% girls, $M_{age} = 6.56$, $SD_{age} = 0.86$) showed that the "attractive" and "less attractive" models were identified as such. The female attractive model ($M = 4.34$, $SD = 1.01$) was more attractive ($F(1,28) = 17.75$, $p < .01$) than the female less attractive model ($M = 3.45$, $SD = 1.35$). The male attractive model ($M = 2.86$; $SD = 1.38$) was more attractive ($F(1,28) = 28.23$, $p < .01$) than the male less attractive model ($M = 2.41$, $SD = 1.32$).

Method

For the actual study, 87 first grade children participated (44% girls, $M_{age} = 6.70$, $SD_{age} = 0.68$). None of these children participated in the pre-test. Consistent with study 1, children were randomly confronted with an ad using an attractive or less attractive same-sex model of their own age.

Measures

All items were measured on five-point scales using verbal as well as non-verbal anchors, as in study 1. First, gender, age, perceived self-worth before being exposed to the ad ($M = 4.75$, $SD = 0.58$) and perceived physical appearance before being exposed to the ad ($M = 4.48$, $SD = 0.89$) were recorded.

Next, advertising literacy was measured by means of an advertising literacy measure composed with items used by Tutaj and van Reijmersdal (2012) and Rozendaal et al. (2014). One item was selected for each of the two factors Tutaj and van Reijmersdal (2012) used: (1) understanding the selling intent: "Does advertising wants you to buy stuff?" ($M = 3.86$, $SD = 1.50$) and (2) understanding the persuasive intent: "Does advertising want to draw you attention, so you say 'hmmm... this is new, can I have it?'" ($M = 3.69$, $SD = 1.41$). The third factor Tutaj and van Reijmersdal (2012) used as a control, was also added: (3) understanding

the informative intent: “Does advertising want to show what has been invented, what is new?” ($M = 4.13$, $SD = 1.10$). Because these items had low internal reliability ($\alpha < .30$), they were used as separate items in the analysis.

Next, children saw the ad and filled out the same measures as the ones used in study 1 for attitude towards the ad ($\alpha = .65$; $M = 3.89$, $SD = 1.11$), positive affective reaction towards the ad ($\alpha = .73$, $M = 3.68$, $SD = 1.23$) and purchase intention ($\alpha = .81$; $M = 3.99$, $SD = 1.15$).

Also, Thompson et al. (2004)‘s Sociocultural Attitudes Towards Appearance Scale was used to measure media influence on self-image. Four items were selected, one for each of the four subscales: (1) information subscale: “do advertising pictures tell you who is attractive and what is in fashion?” ($M = 3.22$, $SD = 1.55$), (2) pressure subscale: “do television and advertising want you to be thin and beautiful?” ($M = 2.44$, $SD = 1.49$), (3) internalization-general subscale: “do you compare yourself with movie stars and television stars?” ($M = 2.66$, $SD = 1.55$) and (4) internalization-athlete subscale: “do you compare yourself with athletes?” ($M = 3.20$, $SD = 1.62$). Because these items had low internal reliability ($\alpha < .50$), they were used as separate items in the analysis.

Children again completed measures on model attractiveness ($M = 3.32$, $SD = 1.45$), previous product knowledge ($M = 2.15$, $SD = 1.60$) and general liking of the product category ($M = 4.59$, $SD = 0.72$). No gender differences were found for general liking of Wii games ($t(85) = -.68$, $p = .50$) or previous product knowledge ($t(85) = .45$, $p = .66$).

Finally, self-worth ($M = 4.69$, $SD = 0.69$) and perceived physical appearance after being exposed to the ad ($M = 4.55$, $SD = 0.85$) were recorded.

Results

Manipulation check

Manipulation checks with ANOVA analysis showed no interaction effect between gender and model attractiveness ($F(1,83) = 0.04$, $p = .84$). Girls rated the attractive model ($M = 3.89$, $SD = 1.45$) equally attractive than the less attractive ($M = 3.60$, $SD = 1.27$) model ($F(1,83) = .39$, $p = .53$). As in study 1, boys did not perceive the attractive model as more attractive ($M = 3.08$, $SD = 1.50$) than the less attractive ($M = 2.92$, $SD = 1.44$) model ($F(1,83) = .16$, $p = .69$). Consistent with study 1, the attractiveness rating, in which children rated how attractive they believed the child was (“Do you think the child in the ad is pretty?”) was used in further analyses as independent variable instead of the manipulations.

Effect of model attractiveness on self-worth and physical appearance

No significant main effect was found of gender ($b = -.11, t(83) = -.68, p = .50$) and the model attractiveness rating ($b = -.01, t(83) = -.24, p = .81; R^2 = .03, \text{Adjusted } R^2 = -.01$), nor was there an interaction effect between gender and the attractiveness rating ($b = .08, t(82) = .76, p = .45; R^2 = .04, \text{Adjusted } R^2 = -.01$) on self-worth after seeing the ad, while controlling for general self-worth before seeing the ad.

Gender ($b = -.07, t(83) = -.39, p = .70$) and the model attractiveness rating ($b = .03, t(83) = .54, p = .59; R^2 = .19, \text{Adjusted } R^2 = .16$) did not affect children's perceived physical appearance after seeing the ad, while controlling for satisfaction with physical appearance before seeing the ad. There was again no interaction effect found for this result ($b = .12, t(82) = .95, p = .35; R^2 = .20, \text{Adjusted } R^2 = .16$) when adding the interaction term gender x model attractiveness as second step to the model. Controlling for "incorporating influence of media on self-image" did not change these results.

Effect of model attractiveness on advertising effectiveness

Linear regression with previous experience and product category liking as covariates shows that when an advertising model was perceived as more attractive, attitude towards the ad also increased ($b = .21, t(81) = 2.47, p < .05$). Gender had no effect on attitude towards the ad ($b = .12, t(81) = .49, p = .63; R^2 = .09, \text{Adjusted } R^2 = .05$), nor was there an interaction effect ($b = -.03, t(80) = -.17, p = .87; R^2 = .10, \text{Adjusted } R^2 = .04$).

Regression analysis also reveals that perceived model attractiveness was positively related to children's affective reactions towards the ad ($b = .33, t(82) = 3.91, p < .01$). Gender again had no effect on affective ad reactions ($b = .02, t(82) = .07, p = .95; R^2 = .25, \text{Adjusted } R^2 = .21$), nor was there an interaction effect ($b = .26, t(81) = 1.49, p = .14; R^2 = .27, \text{Adjusted } R^2 = .23$).

Perceived model attractiveness has no significant effect on 6-7 year old children's purchase intention of the advertised game ($b = .13, t(82) = 1.53, p = .13$). Gender again had no effect on purchase intentions ($b = -.09, t(82) = -.37, p = .71; R^2 = .14, \text{Adjusted } R^2 = .09$), nor was there an interaction effect ($b = .25, t(81) = 1.46, p = .15; R^2 = .16, \text{Adjusted } R^2 = .11$).

Analyses without covariates show similar effects, except for purchase intention. There is a significant main effect of model attractiveness ($b = .16, t(84) = 1.85, p = .07$), yet gender again had no effect on purchase intentions ($b = -.03, t(82) = -.12, p = .91; R^2 = .04, \text{Adjusted } R^2 = .02$). There was also a marginally significant interaction effect of gender and perceived attractiveness of the model on purchase intention ($b = .31, t(83) = 1.77, p = .08; R^2 = .08$,

Adjusted $R^2 = .04$), where for girls, there was no relation between model attractiveness and purchase intention of the game ($b = -.03, t(83) = -.19, p = .85$), while for boys, there was a positive relation ($b = .29, t(83) = 2.57, p < .05$). Controlling for advertising literacy did not significantly change the results.

Discussion

Children's self-worth and physical appearance after exposure to the model was not affected by differences in perceived attractiveness of advertising models. Consistently with study 1, advertising effectiveness does improve when children perceive an advertising model as being attractive. However, purchase intention was only affected when previous product experience and product category liking were not taken into account.

General discussion

The current studies show that higher evaluations of the attractiveness of advertising models do not affect 6- to 7-year-old children's self-evaluation, but are related to higher attitude towards the ad and affective reactions towards an ad for nonbeauty products (where attractiveness of a model is not relevant for the product). Children under the age of 7–8 focus more on irrelevant vs. relevant and more on perceptual vs. verbal information (Ruggeri and Katsikopoulos, 2013), making the use of attractive models in advertising possibly very effective. Both studies also show that purchase intentions are dependent upon previous liking and knowledge of the product.

This article also shows that positive evaluations of attractiveness of a peer advertising model did not relate to negative effects on self-worth and perceived physical attractiveness. Children are only starting to use comparisons with others as a means to self-evaluate when they are about 7- to 8-year old. However, marketers should not interpret these results to suggest that this advertising technique cannot be harmful for children at all. They might have effects later on in a child's life, as media and advertising are strong socialisation agents, also teaching children certain cultural norms, stereotypes etc. (John, 1999).

Some limitations can be reported for both studies. For example, some of the scales had low internal reliability and corresponding alphas were sometimes lower than 0.70. Future studies are needed to replicate our results and an in-depth look into the scale formats would be advisable to improve reliability. Additionally, despite pretesting, manipulation checks were unsuccessful. Possibly, as pre-tests were within-subject designs, comparisons were easier for children. The differences in manipulations were very subtle, to be able to avoid that children

saw that the pictures of the unattractive model were manipulated. Children generally scored all models high on attractiveness, which might for example indicate that they are simply not consciously evaluating people as being less attractive. This also means that advertisers should keep in mind that beauty is in fact in the eye of the beholder. Although attractive models might be a useful advertising technique, it might be hard to assess what exactly is attractiveness for children. Future studies could consider manipulating attractiveness by exposing children to a series of models, instead of using only one model and could also consider using different products, as we saw that product preference and previous product knowledge did have effects on the effectiveness of using attractive advertising models with regard to purchase intention.

In sum, this article draws on theories about children's cognitive development to argue that since young children have less cognitive defence mechanisms, they are very susceptible to advertising claims. Although attractive advertising models have no effects on self-evaluation, they do influence advertising effectiveness.

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