Master's Thesis

"Do I like the product and you, because you have my size and color too?"

A study on the effect of similarity in skin color and body size on female consumer responses

Tamara Esmée Hartman

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Abstract

Aim. This study investigates whether similarity in body size and skin color between advertised models and consumers increases positive consumer responses by presenting similar and dissimilar models in mascara advertisements. This study is performed since academic research focusing on positive consumer responses, as a result of similarity between individuals, is lacking. Also, previous studies considering the similarity-attraction effect mainly focused on psychological traits and not physical characteristics. An investigation into consumer effects because of similarity is relevant for theory since the similarity-attraction effect is argued to be one of the best-proven effects in social psychology. From a practical point of view, this study has societal relevance since the effect of portraying diverse models is investigated. Also, results can be used as input for marketing campaigns.

Method. An experimental 2 [*Skin color:* similar vs. dissimilar] x 3 [*Body size:* dissimilar body size below average BMI vs. similar body size average BMI vs. dissimilar body size above BMI] between-subject design was conducted for the positive consumer outcomes, related to attitudes and purchase intention. Also, the moderating role of ethnic identity for skin color, and body satisfaction as moderator for body size was studied. In total, 157 women with an average BMI and white skin color participated in the online questionnaire.

Results. Analyses of respondents presented significant interaction effects for similarity in skin color and body size. The results indicated that presenting a similar body-sized model significantly increased the attitude towards the product and the model, but only when the skin color of the model was similar to the consumer, and thus white. Positive effects for the same variables were also found when presenting a dissimilar body-sized model with a BMI above average with white skin color. For body size, the moderator skin color significantly increased attitude towards the advertisement, but only for the medium body satisfied women. Also, ethnic identity was no moderator between skin color and positive consumer outcomes.

Conclusion. No main effects were found for skin color and body. However, the interaction effect indicated that a similar skin color is a prerequisite for similarity in body size to have a significant effect on attitudinal outcomes. Also, positive outcome effects were found when presenting dissimilar plus-size models with a similar skin color. Therefore, these two types of models are advised when advertising for white women with an average BMI.

Keywords: Similarity, Similarity-Attraction, Skin color, Body Size, Models, Ethnic Identity, Body Satisfaction, Attitudes, Purchase Intention.

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Introduction

Nowadays, more diverse models are displayed in advertisements compared to a few decades ago when skinny and white was 'the rule' (Baker, Sivyer & Towell, 1997). According to the Runway Diversity Report, the Fashion Week runways of fall 2019 were more racially diverse than ever with an average of 39% female models of color. Also, there is a substantial increase in the representation of plus-size models during fashion week, from 14 plus-size models in spring 2016 to 50 plus-size models in fall 2018 (Tai, 2019). Currently leading fashion and cosmetic brands such as ASOS, Dove, and Wehkamp also display models with different body sizes and of different colors in their marketing campaigns (Howland, 2018; Unilever, n.d.; Mirck, 2019).

Besides the mere desirability of portraying a more diverse, and thus representative reflection of the population, the diversity approach may also have a positive effect in terms of brand and product responses. Especially because more diversity means more similarity between the model and consumer for a larger group in society. In contrast, white and skinny people might not recognize themselves anymore in these diverse advertisements, and this might decrease consumer outcomes since literature states that similarity increases attraction (Montoya, Horton & Kirchner, 2008). However, investigations into consumer responses because of similarity in physical characteristics lack, and a gap is addressed in literature (Montoya et al., 2008; Stevens, Owens & Schaefer, 1990; Perrier, 2008).

The effect that similarity is found to increase attraction is derived from homophily, whereby connections happen more often between similar individuals than between dissimilar individuals (McPherson, Smith-Lovin & Cook, 2001). This effect is argued to be one of the best-proven effects found in social psychology (Ajzen, 1974; Byrne, 1971; Kaplan &, Anderson 1973; Layton & Insko, 1974; Montoya et al., 2008). Previous studies of the similarity-attraction effect mainly focused on psychological traits, with variables

such as attitudes and intelligence, and demographical characteristics such as age and education (McPherson et al., 2008).

The consumer effects of similarity in physical characteristics are both unexposed in the practical field and in literature. In the practical field, more and more diversity is presented, but it is unclear what the effects are and whether they have to do with a feeling of similarity between the advertised model and consumer. In theory, some explanations why skin color and body size might increase positive consumer responses exist, although solid social psychological investigations are lacking. For skin color, it is found that similar ethnicity is the most important factor for a connection between individuals when compared to age, religion, education, profession, and gender (McPherson et al., 2001). In particular, skin color can be seen as a physical characteristic of ethnicity, and therefore similarity in skin color might not only result in attraction but also have positive consumer outcomes (Gergen, 1967). Previous studies found an increase in positive consumer responses when similarity in skin color was detected, although positive results were mainly found among black participants (Appiah, 2001; Whittler & Spira, 2002). It remains unclear whether similarity in skin color has positive consumer effects on people with other skin colors.

In sociobiological studies, it is found that couples are more similar in body characteristics such as BMI (Silventoinen et al., 2003), length (Ginsburg, Livshits, Yakovenko & Kobyliansky, 1998), and obesity (Speakman, Djafarian, Stewart & Jackson, 2007) when compared to random individuals. However, in these studies, it is not investigated if this connection happens because people are more attracted to each other and thus, outcome effects of similarity in body size lack in social psychological literature (Perrier, 2008). Nevertheless, positive effects of portraying diverse body sizes are found in the practical field, especially for beauty and fashion brands such as Dove, ASOS and Wehkamp (Howland, 2018; Unilever, n.d.; Mirck, 2019).

To conclude, this study focusses on the positive consumer effects of similarity in body size and skin color, and the effects of similarity will be tested by randomly presenting both similar and dissimilar models in experimental advertisements. The theoretical goal of this study is to fill the existing gap in similarity research considering physical characteristics and consumer effects in a marketing context. Portraying diverse models can be socially relevant and interesting for marketing purposes, and therefore a practical goal is to give clarity considering the use of diversity and similarity as input for advertisements. Finally, an interaction effect between body size and skin color is investigated, which is entirely new in this field of study. For body size, the moderator body satisfaction is investigated, and for skin color, ethnic identity is studied as moderator. As a result of the previous explanations, the following research question is addressed:

> ***Research question:*** *"To what extent does similarity in body size and skin color between the model and consumer positively influence female consumer responses?"*

Theoretical framework

In this theoretical framework, the similarity-attraction effect and consumer responses are discussed. At first, an introduction to judging individuals is given by using the in-group and out-group theory. Second, the concept of homophily is discussed. Third, the similarity-attraction effect which has roots in homophily is explained, including the two main perspectives. After, a substantiation is given for the incorporation of the physical characteristics: skin color and body size. Furthermore, the consumer responses of similarity advertisement are deliberated, from a general point of view to a specification for skin color and body size. At the end of the chapter, the moderators and hypotheses are introduced.

Judging physical appearance

In order to create understanding, humans categorize information which can be seen as a form of judging (Giles & Coupland, 1991). In the process of judging, people generally evaluate whether another individual is part of their in-group or out-group (Sumner, 1906). The in-group formation divides individuals into two categories: individuals that are acknowledged similar, and those that are not. Nevertheless, this process of categorizing can differ from person and context (Allport, 1954). Initially, it was believed that individuals who had positive feelings towards the ingroup automatically also had negative feelings towards outgroups. However, it is found that positivity towards ingroup members is not related to negativity towards outgroup members (Allport, 1954; Brewer, 1999).

Furthermore, people are often judged based on their physical appearance since this is the first information that is directly available in a real-life interaction (Zebrowitz & Montepare, 2008). According to Gergen (1967), individuals categorize others based on their physical differences and give these categories specific connotative meanings. This

process is 'stereotyping' when it takes place on a denotative level (Gergen, 1967). It is found that the appearance of others can even directly influence an individual's behavior (Snyder, Tanke & Berscheid, 1977). Moreover, a favorable judgment towards another individual can elicit interpersonal attraction (Aron & Lewandowski, 2011). According to Goddard (2012), an interpersonal attraction is predicted by similarity, which means that because of similarity, interpersonal attraction can occur. For instance, it is found that couples with similar characteristics are attracted to each other (Goddard, 2012).

Homophily

In social psychology, the relationship between similarity and connection among individuals is called 'homophily' (McPherson et al., 2001). Homophily is an old concept that derives from the Ancient Greek 'homou philia'. Initially, homophily was studied in relation to psychological traits and demographic characteristics whereby the concept was divided into status homophily and value homophily (McPherson et al., 2001; Lazarsfeld and Merton, 1954). Status homophily includes sociodemographic characteristics, such as race, sex, and ethnicity, whereas value homophily consists of beliefs, values, and attributes. For example, it was found that similar values are essential for a vital relationship (Richardson, 1940). However, lacking in the explanation of Lazarsfeld and Merton (1954) is similarity-based on physical characteristics. In more recent homophily publications, attractions based on physical appearance is also not mentioned (McPherson et al., 2001).

Moreover, social psychologist Newcomb (1961), found in an experiment that individuals with similar attitudes and beliefs liked each other more than individuals with differing attitudes and beliefs. In particular, romantic relationships are often used as a context when studying homophily (Morry, 2007). Especially anthropological studies relate to the concept of 'homogamy,' which means homophily in marriage (Lazarsfeld & Merton, 1954). Academic studies considering homogamy have also not included the effect of

similar physical appearance. Nevertheless, from a sociobiological perspective, literature states that connections based on similar physical characteristics occur. This literature includes positive assortative mating, a pattern whereby individuals with similar characteristics (phenotypes), and cultural traits, connect more often with each other than individuals with dissimilar phenotypes (Domingue et al., 2014; Speakman et al., 2007). This concept contains genetic relatedness and concludes that individuals are genetically more related to spouses than to random individuals (Speakman et al., 2007). Although the concept is not often used for social-psychological studies, it gives a reason to believe that homophily does exist for physical characteristics.

The similarity-attraction effect and perspectives

The specific relationship between similarity and attraction can be explained as the similarity-attraction effect. Within this effect, which is derived from homophily, increased similarity towards a person is associated with an increased attraction (Montoya & Horton, 2012). The similarity-attraction effect is argued to be the best-proven relationship in behavioral science (Berger, 1973). A meta-analysis with more than 300 studies concludes that similarity produces a positive effect on attraction (Montoya, Horton & Kirchner, 2008). Moreover, the main explanations of the similarity-attraction effect are the reinforcement model and the information processing perspective.

Reinforcement model

According to the reinforcement model, people have a central need to view the world as coherent and logical (Byrne, Griffitt & Stefaniak, 1967). Within this view, a similar individual, for example, an individual who shares similar political views, is seen as reinforcing when compared to self. As a result, the person is evaluated positively, which leads to an attraction (Byrne et al., 1967). Furthermore, the reinforcements occur on an

unconscious level (Byrne, Rasche, & Kelley, 1974). Therefore, the model can be seen as an affective model. Although the similarity-attraction effect of this model is not fully proven in field studies (Montoya et al., 2008).

Information processing perspective

From the information processing perspective, attraction to another person is determined by the available positive information one has of another person (Ajzen, 1974; Kaplan & Anderson, 1973; Tesser, 1971). According to this perspective, attraction is a function of the valence and weight of information that is received about an individual based on (dis)similarity (Montoya et al., 2012). Compared to the reinforcement model, the information processing perspective is a more cognitive approach. First of all, information about an attribute is assigned valence, for example when a person is told that another person is similar to us, the person will instantly like the other more because the person will assume that the other has positive attributes. This effect will occur because people generally evaluate their own attributes positive (Ajzen, 1974).

Second, the information about another person is weighted, this means that the more information one receives about a specific attribute of the other, the more important that specific attribute will be in determining attraction. Therefore, more information about attributes will produce more polarized judgments than less information (Montoya et al., 2012). Third, the salience of information is a determinant whereby the more attention an attribute receives, the more the information will affect one's judgment (Montoya et al., 2012). Thus, according to the information processing perspective attraction based on similarity depends on the valence, weight, and salience of information.

Similarity and skin color

Generally, skin color is used as a characteristic of race or ethnicity when judging individuals (Gergen, 1967). For instance, skin pigmentation was found to be an extremely crucial factor in the favorability of black applicants in work environments (Harrison & Thomas, 2009). The result of this study showed that lighter black applicants were judged more positively than dark black applications and that skin color is more important for job hiring and recommendation than previous work experiences and educational accomplishments (Harrison & Thomas, 2009).

McPherson et al. (2001) found that a similar race and ethnicity are the most influential factors for a connection between individuals. For instance, in a study by Marsden (1987), individuals were asked to look back over the past six months and indicate whether they discussed important matters with individuals from other races. Only 8% of the individuals indicated to have done this (Marsden, 1987). In sociobiological studies, skin pigmentation on foreheads is associated with assortative mating, which means that couples are more alike in skin pigmentation than when compared to a random individual (Roberts & Kahlon, 1972). This finding indicates that individuals with similar skin color connect more often. However, positive assortative mating for skin color mainly depends on the cultural context (Parra, Kittles & Shrivers, 2004). Based on the similarity-attraction effect, it is likely to believe that similarity in skin color will cause attraction and lead to other positive outcome effects.

Similarity and body size

In the fashion industry, diversity in both skin color and body size were inconceivable until a few years ago (Tai, 2019). In advertisements, still mainly thin models are used to represent a product, and the reasoning behind this might be derived from the halo-effect,

which indicates 'what is beautiful is good.' Thin models were still seen as ideal and more beautiful compared to average and plus-size models in the western world in the year of 2004 (Halliwell & Ditmar, 2004). Nonetheless, thin models only represent a small group of the female population. Therefore, a similarity-attraction effect between consumer and models in advertisements might solitary be available for a relatively small group of thin women. Based on the reasoning of the similarity-attraction effect, a congruency in body size between the presented spokesperson, a person that presents the product or service in the advertisement, and the consumer will result in positive consumer responses (Montoya et al., 2008). Positive effects of similarity in body size are found before, for instance, an attraction based on similarity in body size is found to result in friendships (Crosnoe, Frank, & Strassman-Mueller, 2008). Nevertheless, literature considering this topic is in short supply, especially in social psychological studies.

Outcome effects of similarity in advertisements

Similarity between the viewer of an advertisement and the spokesperson can lead to positive outcomes. For instance, literature shows that congruence between the multicultural background of the spokesperson and consumer increased the effectiveness of advertisements (Deshields, Kara, De Los Santos, 1999). Perceived age similarity between models and consumers was to increase interpersonal attraction and source credibility (Steinhaus & Lapitsky, 1986). Also, older consumers found older models more attractive and were more likely to purchase the items that were promoted (Kozar & Damhorst, 2008).

Positive attitudes towards the advertisement and the presented product are described in similarity-attraction literature as an outcome effect of similarity (Aaker, Brumbaugh & Grier, 2000). According to the American Marketing Association, attitude can be defined as an overall evaluation of an impression (AMA, 1995). Specifically, a positive attitude towards a message source is believed to be necessary for the effectiveness

of communication (Steinhaus & Lapitsky, 1986). To conclude, an increase in purchase intention because of similarity in skin color, sex roles, body size, and age are also found as outcome effects in advertisements (Kozar & Damhorst, 2008; Perrier, 2008; Webster, 1994; Whittler & Spira, 2002; Woodside & Davenport, 1974). Purchase intention is the strongest predictor of behavior and can be seen as an indication of the preparedness to behave (Fishbein & Ajzen, 1975).

Skin color similarity advertisements

In advertising studies, the importance of similarity in skin color for positive consumer responses is addressed. Literature shows that black respondents perceive themselves more similar to, and identify more strongly with, black spokesmen in advertisements compared to white spokesmen (Appiah, 2001). This effect was stronger when individuals had a strong connection with their ethnic identity (Appiah, 2001). Considering outcome effects, Whittler and Spira (2002), concluded that product and overall advertisement evaluations were more favorable when black respondents were presented with black models. However, this was only the case when the respondents identified with black culture.

Moreover, Appiah (2001) argued that attitudes towards the spokesperson were more positive when both the presenter and respondent were black. Furthermore, an increase in purchase behavior was also found as a result of ethnic identification with the spokesperson in the advertisement (Webster, 1994; Whittler & Spira, 2002). The studies mentioned here found positive consumer responses, although these studies focused on a black study group. Since the outcome effects for people with other skin colors are unclear, the following hypotheses are proposed:

H1. *A higher similarity in skin color between the model and the consumer leads to a) a more positive attitude towards the ad in general, b) a more positive attitude towards the product in the ad, c) a more positive attitude towards the model in the ad, and d) a higher purchase intention for the product in the ad.*

The word 'spokesperson' is often used in literature when a model in an advertisement presents a specific product or service. Therefore the scale for the model in the ad, presented in *Appendix I,* is referred to as 'attitude towards the spokesperson.' The word 'model' is used for this study since spokesperson and model have the same intention, and the word is more suited in the context of this study.

Body size similarity advertisements

The specific relationship between similarity in body size and positive consumer responses is not extensively investigated in academic literature. Nevertheless, it is important to investigate similarity for body size, since the lack of research and need for information into this concept is addressed (Perrier, 2008; Montoya et al., 2008). Furthermore, marketing practices such as Dove's 'real beauty campaign' and ASOS current campaign-style suggests that marketers can use more realistic and socially responsible representations of female body images that match the appearance of the female population to increase positive consumer responses. For instance, Dove supports diversity by displaying multi-colored and plus-size models in their real-beauty campaigns (Unilever, n.d.). According to corporate publications, Dove is the largest soap brand worldwide, with a higher turnover than all competitor soap brands together (Unilever, n.d.). Since the launch of the real beauty campaign sales increased from 2.5 billion in 2004 to 4 billion in 2014 (Neff, 2014).

Moreover, online fashion store ASOS promotes fashion on models that differ in color, size, length, and weight (Howland, 2018). After the adoption of this approach,

placed orders increased by 30% compared to the period of the previous year, according to a self-published report (Howland, 2018). Also, consumers responded very positively towards the new approach of the brand on social media (Howland, 2018). In January 2018, ASOS was the e-commerce leader in the United States, with 27% more sales than competitors (WGSN, 2018). The representation of different sized models means that more body sizes and figures of women are represented in advertisements. This assumingly leads to a similarity-attraction effect for a larger group of females than before. However, it is uncertain that the presentation of different sized models, and possibly a better similarity-attraction effect, is solely responsible for the successes of Dove and ASOS. As a result of the positive findings of the similarity-attraction effect, the general positive consumer responses to similarity mentioned at the beginning of this chapter, such as the increase of source credibility (Steinhaus & Lapitsky, 1986), and the practical examples of Dove and ASOS, the following hypotheses for body size are proposed:

H2. *A higher similarity in body size between the model and the consumer leads to a) a more positive attitude towards the ad in general, b) a more positive attitude towards the product in the ad, c) a more positive attitude towards the model in the ad, and d) a higher purchase intention for the product in the ad.*

Interaction effect body size and skin color

As described in hypotheses 1 and 2, main effects for body size and skin color are expected. Moreover, an interaction effect between skin color and body size for the dependent variables is also expected. Similarity in skin color, as a physical element of ethnic identity, is found to be extremely important to increase the attraction between individuals (McPherson et al., 2001). Since skin color is an important element in order to find attraction, it is assumed that a similar skin color with the model is needed for body size to

have a stronger effect, and thus more positive consumer outcomes. As a result, the following hypotheses are stated:

H3. *Interaction between body size and skin color exists and leads to a) a more positive attitude towards the ad in general, b) a more positive attitude towards the product in the ad, c) a more positive attitude towards the model in the ad, and d) a higher purchase intention for the product in the ad.*

Ethnic identification as moderator for skin color

Ethnic identity can be defined as an individual's membership in a specific social group combined with the value and affective elements given to that membership (Phinney, 1992). In similarity studies considering skin color, ethnic identification, also explained by cultural identification or ingroup orientation, was in some cases found to be a moderator between similarity in skin color and consumer outcomes that increased outcome effects (Appiah, 2001; Avery, 2003). For example, it is found that black applicants with low out-group orientations, and a high ethnic identity connection, experienced a positive effect of black spokesman in the advertisement. In contrast, black people with higher out-group orientations, and lower connection to ethnic identity experienced the ads with only diversity content as negative (Avery, 2003). For white applicants, ad diversity attracts some white respondents while deterring others (Avery, 2003). Since previous studies found contradicting results among white people, ethnic identification is hypothesized as a moderator. As a result, the following moderator is proposed:

H4. *A stronger connection to ethnic identity leads to a) a more positive attitude towards the ad in general, b) a more positive attitude towards the product in the ad, c) a more positive attitude towards the model in the ad, and d) a higher purchase intention for the product in the ad, when compared to a weak connection to ethnic identity.*

Subquestion: Moderator body satisfaction for body size

In previous literature, the concept of body satisfaction, defined as a stable personality characteristic, is found to be a moderator of vulnerability towards images in the media (Posavac, Posavac & Posavac, 1998). Moreover, individuals who are satisfied with their bodies are more favorable towards more substantial sizes, compared to body-dissatisfied people (Willinge, Touyz & Charles, 2006). Based on the outcome that body-satisfied people are more open to larger sizes, it might be that the similarity-attraction effect is weaker among women with higher body satisfaction. Although, it is not entirely clear whether body satisfaction is a moderator here since literature in this field is lacking. Therefore, the following subquestion is proposed:

> **Subquestion:** *"To what extent is body image satisfaction a moderator between body size and positive consumer responses ?"*

To summarize, the theoretical framework provided the theoretical background for similarity found in academic studies. The similarity-attraction effect is explained, including the roots of the theory and the two main perspectives. Also, the importance of the physical characteristics in relation to similarity is presented, and the aim for investigating body size and skin color as important elements is addressed. Precious investigations of consumer effects as a result of similarity in advertisements are discussed, and both theoretical and practical findings are used as input for the hypotheses.

Methods

Within this method section, the research design, stimulus material, pre-test design, pre-test results, the operationalization of the main experiment and procedure are described.

Research Design

An experimental between-subject design is used for this investigation. The experiment tests whether participants who are presented with a similar model in body size and/or skin color will report higher outcomes compared participants presented with a dissimilar model in body size and/or skin color. Solely women are examined for this study since this is more practical for methodology purposes. A specific group of women with an average BMI and white skin color is studied in this experiment to measure possible effects in a reliable and valid manner. As a result, similar conditions will consist of 'average BMI' for body size and 'white' for skin color. Furthermore, the moderator's ethnic identity for skin color and body satisfaction for body size are included in the model. The research design is presented in Figure 1.

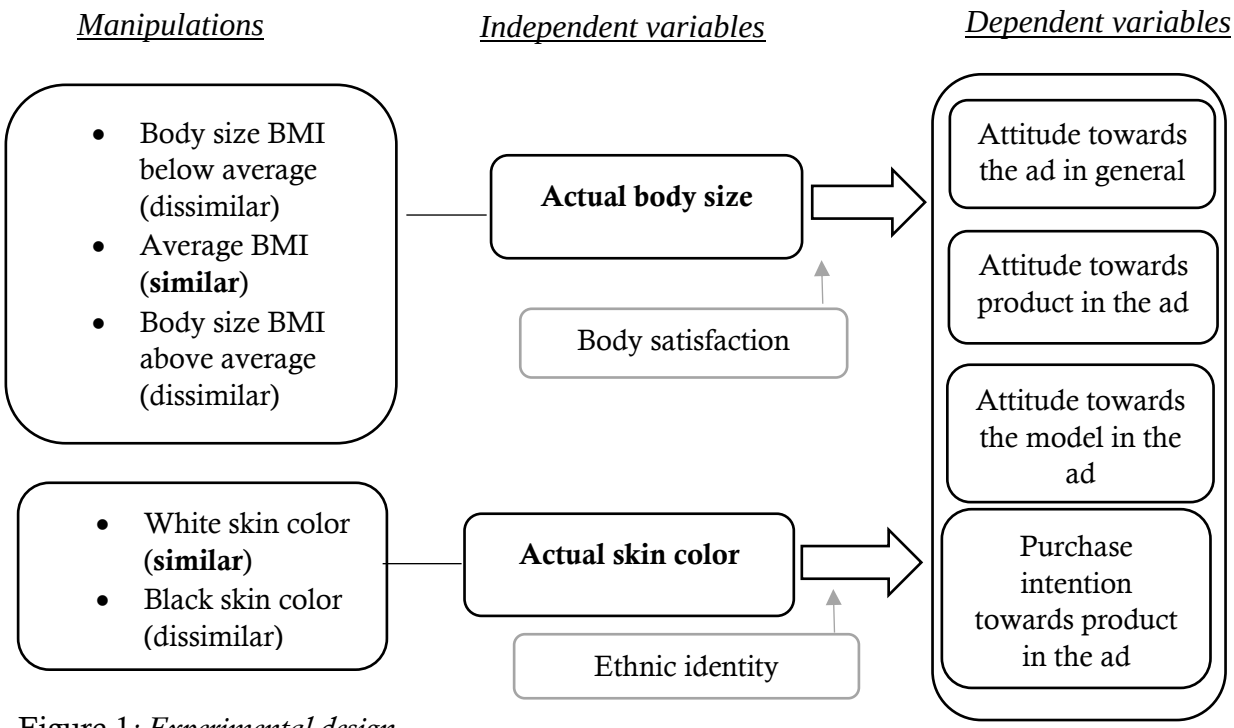

Figure 1*: Experimental design*

Stimulus material

In total, six manipulations are created combining the two conditions of skin color: white (similar) and black (dissimilar), and the three conditions of body sizes related to a BMI, with body size below the average 18,5 (dissimilar), body size with an average BMI between 18,5 and 24,9 (similar), and body size with a BMI above average of >25 (dissimilar). In order to be more confident that the effects will not dependent on the clothing and pose, the models in the advertisements are similar in clothes and modeling position.

Based on existing literature and findings in the media, a specific promotion product is chosen for the advertisement. First of all, a product is chosen instead of a service because consumer perceives more risk in buying a service than a product (Murray and Schlacter, 1990). Since hedonic products might result in affective reactions, they are preferred to the utilitarian product in this study, since affective reactions are needed in order to measure attraction (Chang, Chen & Tang, 2009). Product types that have a connection to body sizes or skin colors, such as a foundation or food, cannot be used in this study since these products are not applicable to all models.

A product that fulfills the needs of low-risk, hedonic, and universal in use is mascara. In the United States, 65% of the female respondents indicated to use mascara in 2018 (NHCS, n.d.). Furthermore, mascara is the most popular beauty article among Dutch women. Results of a study showed that 74% of the Dutch females used mascara (Nu.nl, 2010). Moreover, color preference is also not a problem with this product since mascara is generally black. As a result, the final advertisements consist of a total body picture of the model in order to measure the effects, and a picture of the face that focuses on the eyes is also shown since this is customary in mascara advertisements. To conclude, the final designs of the advertisements are presented in Figure 2, larger versions of the advertisements can be found in *Appendix II.*

Figure 2: *Design of advertisements*

Pre-test design

Before the relationship between the variables can be investigated, it is essential to be sure that all manipulations are understood correctly. For this reason, a manipulation check in the pre-test is performed to test whether respondents understood the body size and skin color of the models correctly. Moreover, the attractiveness and credibility of the model were also measured as an extra element. All questions were measured on a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7).

A pre-test was created in Qualtrics with the six manipulations and four subjects related to questions about the body size of the model (BMI above average vs. BMI below average), the skin color of the model (black skin color vs. white skin color) the attractiveness of the model (attractive in general, the face is attractive and the body is attractive) and the credibility of the model (is the model credible). The same questions were asked for every advertisement. The advertisements were shown randomly so that the order of the advertisement differed per person.

Results pre-test

In total, 21 women filled in the pre-test. At first, the respondents were asked if they knew the model. One respondent knew one of the models, and therefore, this respondent is removed from the analysis. As a result, 20 respondents are used for the pre-test analysis. The main goal was to investigate whether respondents indicated the correct BMI and skin color for the model. The used scale for all questions was a seven-point Likert scale ranging from (1) strongly disagree to (7) strongly agree. The results of the pre-test are presented in Table 1, and an extensive explanation of the results per manipulation can be found in *Appendix III.*

Table 1: *Mean scores and standard deviations manipulations pre-test*

	Body size				**Skin color**			
	Slimmer than average [a)]		Heavier than average [a)]		White [a)]		Black [a)]	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Manipulation I *Black model with BMI above average*	1.65	.67	5.85	.87	1.50	.51	6.55	.51
Manipulation II *Black model with an average BMI*	4.05	1.82	2.10	.91	1.60	.94	6.40	.68
Manipulation III *Black model with BMI below average*	6.45	.51	1.20	.41	2.00	1.21	5.95	.69
Manipulation IV *White model with BMI above average*	1.95	.69	5.30	1.41	6.40	1.35	1.35	.49
Manipulation V *White model with an average BMI*	3.15	1.27	2.60	.96	6.35	.49	1.55	.51
Manipulation VI *White model with BMI below average*	6.70	.47	1.15	.37	6.10	1.65	1.50	1.15

a) *All statements are measured on a 7-point Likert scale (1=strongly disagree / / 7=strongly agree)*

Conclusion pre-test

Overall, the results in Table 1 and *Appendix III* indicated that the models with a BMI below average are seen to have a slimmer body size than average, the models with an average BMI are not seen as slimmer than average nor heavier than average, and the models with a BMI above average are seen as heavier than average. Moreover, the black models were seen to have a dark skin color, and the white models were seen to have a white skin color. Therefore, all manipulations are understood correctly and can be used as advertisements. For both black and white models, the attractiveness of body was highest with the manipulation that had an average body size. Moreover, for black models, the credibility was lowest for the model with a BMI above average, while for white models, the credibility was lowest for the model with a BMI below average.

Procedure experiment

The gathering of the data is completed via a survey in Qualtrics. At first, in the online survey, participants were given the option to fill in the survey in Dutch or English. Also, the introduction explicitly stated that only responses of women were needed. Further, it was explained that the participates were going to see an advertisement and had to answer questions related to the advertisement to measure consumer responses. The goal of the study was stated, and the approximate duration time of the survey was given. Moreover, the option to leave the survey at any given time is presented, and the possibility to win a gift card is mentioned. The first question in the survey is a gender question. For male respondents, the survey ends since only females are used in this study. The women that continue are asked to pay close attention to the ad before the advertisement is shown. However, it is possible for the respondent to go back to the advertisement and have an extra look. After that, randomly, one of the six conditions is presented to the participant.

Next, the participant is asked if she uses mascara and which mascara brand she prefers to use. Furthermore, questions related to the dependent variables are asked. First, the attitude towards overall advertisement is measured, followed by the attitude towards the product in the advertisement and the model that presents the product. Purchase intention is the final measured dependent variable, and four questions measure the perceived similarity with the model. After these questions, participants are asked to give their weight in kilo's and length in centimeters. This question is essential since BMI-score can be calculated via these measures. Also, the question is asked whether the respondent has a white or black skin color. In this state of the survey, all respondents continue the survey, independent of their body size and skin color.

The reason why body size is asked in the end is that it is assumed that the bounce rate with a sensitive question is lower when respondents have almost finished a survey, compared to when they start with the survey. For the same reason, the moderator's body satisfaction and ethnic identity are asked at the end of the survey. To finalize the data collection questions about the demographics, age, and education level are asked. Also, in the end, respondents can leave their e-mail address if they want to win the gift card or receive the results of the study.

Operationalization and measures experiment

The operationalization and measures for the variables in the main experiment are described in this part of the method section.

Body size

A formula to measure weight is the W/H^2 ratio of Quetelet, nowadays called the Body Mass Index (Keys, Fidanza, Karvonen, Kimura & Taylor, 1972). Body Mass Index (BMI), can be calculated with the mathematical formula: Kg/m^2. BMI covers more elements than,

for example, waist circumference and is suitable for self-measurement (Hartstichting, 2018 April 20th). In this study, BMI is used to indicate the respondent's body size. Solely respondents with average body size are useful for the experiment. The scale defines a BMI below 18,5 underweight, between 18,5 and 24,9 average and above 25 obese (Hartstichting 2018 April 20th). In *Appendix I,* the items to indicate the body size of the respondents can be found.

Skin color

At the beginning of the survey, a question checks whether the participants have a white or black skin color. The specific question related to skin color can be found in *Appendix I.*

Attitude towards the ad in general

The scale 'attitude towards the ad' exists of six items measured on a seven-point Likert scale from strongly disagree to strongly agree, and measures a person's reaction towards an ad (De Pelsmacker, Geuens & Anckaerts, 2002). *An example item is 'I got a very positive impression.'* The item 'exaggerated' is left out since the item does not fit in the context. Moreover, the Cronbach's alpha found for this construct is relatively high, with a score of .89. In *Appendix I,* all five scale items can be found.

Attitude towards the product in the ad

The scale 'attitude towards the product in the ad' exists of four items. A seven-point Likert scale from strongly disagree to strongly agree is used for this study since this is in line with the other dependent variables. The scale assesses the person's attitude about the product featured in the advertisement. *An example is an item 'The product in the ad is attractive'* (Lepkowska-White, Brashear & Weinberger, 2003). The Cronbach's alpha for the four-item construct is high with a score of .91. The scale can be found in *Appendix I.*

Attitude towards the spokesperson (model)

The scale 'attitude towards the spokesperson (likeability)' evaluates a person's opinion of the model featured in the ad focusing on the spokesperson favorability. In this study, the spokesperson is referred to as the model in the advertisement. The scale developed by Whittler and Dimeo (1991) exists of four bi-polar adjectives measured via a seven-point semantic differential scale. *An example bi-polar adjective is likeable/unlikeable.* The item attractive/unattractive is added to the scale. A Cronbach's alpha of .88 indicates high reliability for this scale. In *Appendix I,* the items of the scale can be found.

Purchase intention towards the product in the ad

This scale measures the likelihood of a person buying the product featured in the ad with three statements measured via a five-point Likert-scale. However, a seven-point Likert scale is used. *An example statement is: 'If I were looking for this type of product, my likelihood of purchasing the product in the ad would be high.*' The scale developed by Lepkowska-White, Brashear, and Weinberger (2003) is more specific than a general purchase intention scale. A Cronbach's alpha .91 is found for the construct, which indicates high reliability. Also, all the items of the construct can be found in *Appendix I.*

Perceived similarity with the spokesperson

The perceived similarity between the participant and the model can be controlled with items from the scale 'attitude towards the spokesperson similarity' (McKiran, Smith & Hamayan, 1983). *An example item of this scale is: 'How similar are you to the model pictured in the ad on appearance.'* Solitary the items that focus on the physical characteristics of the spokesperson are used for this study. Therefore, items appearance and cultural background are derived from the scale and measured on a seven-point Likert scale from (1) not at all similar to (7) very similar. Moreover, two self-created items: 'perceived similarity in body

size' and 'perceived similarity in skin color' are added in order to measure the perceived similarity. As a result, a Cronbach's alpha .79 is found, which indicates a reliable construct. In *Appendix I,* the composed scale can be found.

The moderator ethnic identification

The scale ethnic identification measures with five, seven-point Likert-type, statements the degree to which a person expresses a certain attachment to a specific ethnic group and have a positive feeling towards it. The scale used is developed by Appiah (2001) and is based on the multigroup ethnic identity measure (Phinney, 1992). *An example item of ethnic identity is: 'I feel a strong attachment to my ethnic group.'* Furthermore, a Cronbach's alpha of .87 is found, which indicates high reliability. In *Appendix, I,* the items for the scale can be found.

The moderator body satisfaction

The body areas satisfaction scale (BASS) is a subscale of the multidimensional body-self relations questionnaire and is frequently used to asses the evaluation of individuals' body image (Giovannelli, Cash, Henson & Engle, 2008). The body satisfaction scale consists of 9 items asked via a five-point Likert scale from very dissatisfied to very satisfied, but a seven-point Likert scale is used in this study (Giovannelli et al., 2008). *An example item of this scale is*: '*Body satisfaction towards weight.'* A Cronbach's alpha of .84 is found for the construct. The specifications of the torso items are explained in a study by Hrabosky et al., (2009). In *Appendix I,* the scale items are presented.

Participants

In total, 348 female respondents participated in the experiment. However, 65 respondents were removed from the dataset since the answers were incomplete. Still, 283 women filled in the survey correctly. After removing 3 respondents that recognized the presented models, 280 women remained. Since the study focusses on white women with an average BMI, 32 black women and 65 women with a BMI below or above average were removed from the analyses, resulting in 183 remaining women for the analyses. Moreover, 25 women were excluded from the analyses because these women indicated not to wear mascara. As a result, the remaining 158 mascara-using women with white skin color and average BMI are investigated for the assumptions of the study.

Since differences between groups will be investigated for multiple dependent variables, factorial ANOVA analyses are performed. In order to check for the assumptions of normality and outliers, standardized residuals for all dependent variables and moderators are checked. Multivariate outliers below -3 or above +3 indicate that something unusual is happening and therefore, these items have to be removed (Rossi, 2010). With a score of 3.15, one outlier was removed, for the dependent variable purchase intention. As a result, 157 respondents were used for the ANOVA analyses. In Table 2, the distribution of the participants per condition is presented.

Table 2: *Distribution of participant per condition*

Conditions		*N*
1. Dissimilar skin color and dissimilar body size with BMI above average		30
2. Dissimilar skin color and similar body size with average BMI		33
3. Dissimilar skin color and dissimilar body size with BMI below average		28
4. Similar skin color and dissimilar body size with BMI above average		25
5. Similar skin color and similar body size with average BMI		21
6. Similar skin color and dissimilar body size with BMI below average		20
	Total	157

Descriptive statistics

In total, 157 respondents, consisting of mascara-using women with an average BMI and white skin color, were used for the data analyses. Considering the descriptive statistics, both age and education level are questioned in the survey and can be found in Table 3.

Table 3: *Characteristics of respondents*

		M	*SD*	*N*	%
Age		25.5	7.3	157	100%
Education level category*					
	Low education level			15	10%
	Medium education level			21	13%
	High education level			121	77%

**The education level categories are explained in Appendix IV*

The randomization of education per condition is tested with a chi-square test, and the results indicate that the percentage of participants within the conditions did not differ by education level χ^2 (10, N = 157) = 6.70, p = .75. The percentage per conditions is presented in Table 4.

Table 4: *Randomization of education per condition*

	Level of education			
Condition				
	Low education	Medium education	High education	Total %
Condition 1	13.3%	6.7%	80%	100%
Condition 2	9.1%	9.1%	81.8%	100%
Condition 3	14.2%	17.9%	67.9%	100%
Condition 4	8%	12%	80%	100%
Condition 5	4.8%	14.2%	81%	100%
Condition 6	5%	25%	70%	100%

The randomization of age per condition is tested with a chi-square test, whereby age is divided into two categories based on the median score of 24. The results indicate that the percentage of participants within the conditions did not differ significantly by age category χ^2 (5, N = 157) = 4.70, p = .45. The percentage per conditions is presented in Table 5.

Table 5: *Randomization of age category per condition*

	Age		
Condition			
	Age category below 24	Age category above 24	Total %
Condition 1	73.3%	26.7%	100%
Condition 2	66.7%	33.3%	100%
Condition 3	64.3%	35.7%	100%
Condition 4	60%	40%	100%
Condition 5	57.1%	42.9%	100%
Condition 6	45%	55%	100%

Results

Hypothesis testing

In order to compare the main effects of the groups used in this study, multiple full-factorial ANOVA's are conducted. First, the main effects of actual similarity in skin color were analyzed. Second, the main effects of body size were explored, and third possible interaction effects were tested. At the end of this chapter, the moderator ethnic identity for skin color and the moderator body satisfaction for body size were explored as fixed factors in ANOVA analyses.

Hypothesis 1: The effect of similarity in skin color

The actual similarity in skin color contains two levels: a similar condition (white skin color) and a dissimilar condition (black skin color). In total, 66 respondents were confronted with a similar colored model, and 91 respondents were confronted with a dissimilar colored model. The effects of similarity in skin color are tested for:

H1a: Attitude towards the advertisement in general;

H1b: Attitude towards the product in the advertisement;

H1c: Attitude towards the model in the advertisement;

H1d: Purchase intention for the product in the advertisement.

The outcomes are presented per dependent variable.

The main effect of **attitudes towards the advertisement** in general for actual similarity in skin color yielded an F-ratio of $F(1,155) = .42$, $p = .52$, indicating no significant differences between the groups who had seen a model with a similar skin color ($M = 3.13$, $SD = 1.12$) and a dissimilar skin color ($M = 3.25$, $SD = 1.26$).

The main effect of **attitude towards the product in the advertisement** for actual similarity in skin color yielded an F-ratio of $F(1,155) = .16$, $p = .69$, indicating no significant differences between the groups with a similar skin-colored model ($M = 3.54$, $SD = 1.05$) and a dissimilar skin-colored model ($M = 3.62$, $SD = 1.26$).

The main effect of **attitude towards the model in the advertisement** for actual similarity in skin color yielded an F-ratio of $F(1,155) = 1.16$, $p = .21$, again indicating no significant between the groups who had seen a model with a similar skin color ($M = 4.26$, $SD = 1.09$) and a model with a dissimilar skin color ($M = 4.51$, $SD = 1.30$).

The main effect of **purchase intention for the product in the advertisement** for actual similarity in skin color presented an F-ratio of $F(1,155) = .12$, $p = .73$, indicating no significant differences between the groups who had seen a similar skin-colored model ($M = 2.83$, $SD = 1.14$) and a dissimilar skin-colored model ($M = 2.90$, $SD = 1.39$).

As a result of the outcomes, hypothesis 1a,1b,1c, and 1d are rejected. The overview of the rejected statistics can be found in Table 6.

Table 6: *Summary of statistics skin color similarity*

Independent Variable	**Dependent Variable**	*F*	*p*
Skin color	Overall score	.64	.42
	Attitude towards the ad in general	.42	.52
	Attitude towards the product in the ad	.16	.69
	Attitude towards the model in the ad	1.16	.21
	Purchase intention	.12	.73

Hypothesis 2: The effect of similarity in body size

The body size condition is divided between the similar body-sized model and the dissimilar body-sized model. However, the dissimilar body size model exists of two categories: the dissimilar model with a below-average BMI, and the dissimilar model above-average BMI. The dissimilar conditions cannot be combined since the outcomes for the conditions are different. Considering the distribution, 48 participants judged an advertisement with a dissimilar model with a BMI below average, 55 participants judged an advertisement with a dissimilar model with a BMI above average, and 54 participants saw a model with a similar body size existing of an average BMI. Moreover, ANOVA analyses are performed for the 3 categories of body size and the dependent variables.

The main effect of **attitudes towards the advertisement in general** for actual similarity in body size yielded an F-ratio of $F(2,154) = 1.83$, $p = .16$, indicating no significant differences between the groups who had seen a dissimilar body-sized model with a BMI below average ($M = 2.93$, $SD = 1.27$), a similar body-sized model ($M = 3.33$, $SD = 1.08$), and a dissimilar body-sized model with a BMI above average ($M = 3.32$, $SD = 1.23$).

The main effect of **attitudes towards the product in the ad** for actual similarity in body size yielded an F-ratio of $F(2,154) = 1.20$, $p = .30$, also indicating no significant differences between the groups who had seen a dissimilar body-sized model with a BMI below average ($M = 3,39$, $SD = 1.31$), a similar body-sized model ($M = 3.59$, $SD = 1.02$), and the dissimilar body-sized model with a BMI above average ($M = 3.75$, $SD = 1.19$).

The main effect of **attitudes towards the model in the ad** for actual similarity in body size yielded an F-ratio of $F(2,154) = .59$, $p = .55$, again indicating no significant differences between the groups who had seen a dissimilar body-sized model with a BMI below average

(*M* = 4.25, *SD* = 1.32), a similar body-sized model (*M* = 4.49, *SD* = 1.01), and a dissimilar body-sized model with a BMI above average (*M*= 4.46, *SD* = 1.31).

The main effect of **purchase intention for the product in the ad** considering actual similarity in body size yielded an F-ratio of *F*(2,154) = 1.34, *p* = .26, indicating no significant differences between the groups who had seen a dissimilar body-sized model with a BMI below average (*M* = 2.61, *SD* = 1.29), a similar body-sized model (*M* = 3.04, *SD* = 1.24), and a dissimilar body-sized model with a BMI above average (*M*= 2.91, *SD* = 1.32).

As a result of the outcomes presented in Table 7, hypotheses 2a, 2b, 2c, and 2d are rejected.

Table 7: *Summary of statistics body size similarity*

Independent Variable	**Dependent Variable**	*F*	*p*
Body size	Overall score	1.61	.20
	Attitude towards the ad in general	1.83	.16
	Attitude towards the product in the ad	1.20	.30
	Attitude towards the model in the ad	.59	.55
	Purchase intention	1.34	.26

Hypothesis 3: Interaction effect between skin color and body size

The third hypothesis states that there is an interaction between similar skin color and similar body size, via skin color that increases the positive effects on the dependent variables. Therefore, both skin color and body size are combined in ANOVA-analyses. Results indicated significant findings for some of the dependent variables.

Interaction effect attitude towards the ad in general

An ANOVA-analysis with the interaction between body size and skin color, for the dependent variable attitude towards the ad in general, presented an F-score of $F(5,151) = 1.52$, $p = .22$, indicating no significant differences. In contrast to what was expected, no significant differences are found, and therefore, H3a is rejected.

Interaction effect attitude towards the product in the ad

An F-score of $F(5,151) = 2.98$, $p = .05$ indicated a significant interaction effect for attitude towards the product in the ad, combining skin color and body size. Moreover, the univariate outcomes explained that a significant difference only existed within the similar skin-colored conditions with an F-score of $F(2,503) = 3.71$, $p = .03$. With a pairwise comparison, a significant difference was found between the condition with a dissimilar body size with a BMI below average ($M = 2.96$, $SD = .91$) and the similar body size condition ($M = 3.81$, $SD = .87$) at $p = .02$. Also, a significant difference was found between the dissimilar condition with a BMI below average ($M = 2.96$, $SD = .91$) and the dissimilar body size with a BMI above average ($M = 3.80$, $SD = 1.14$) at $p = .02$. As a result, H3b is accepted for the conditions described above. The plot can be found in Figure 3.

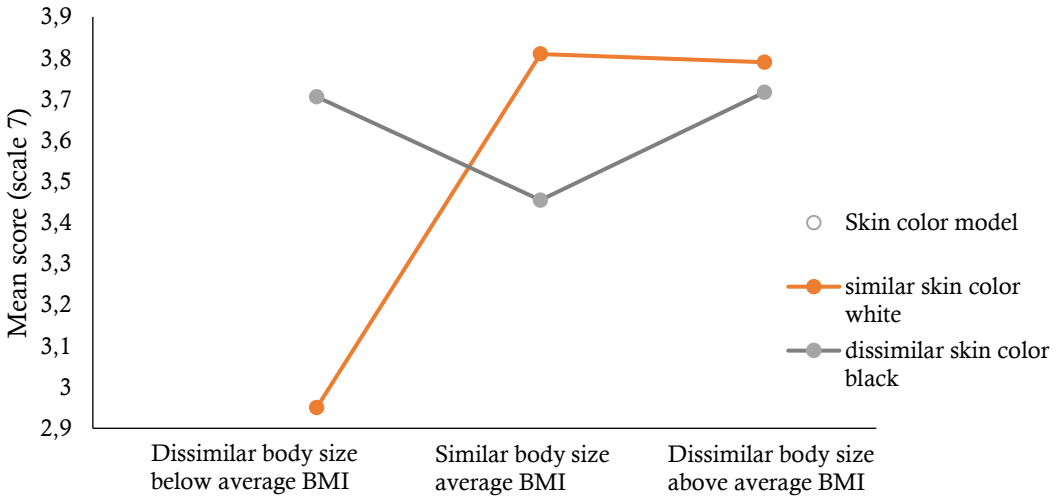

Figure 3: *Interaction effect of body size and skin color on attitude towards the product*

Interaction effect attitude towards the model in the ad

A significant interaction effect was found for attitude towards the model in the ad, combining skin color and body size with an F-score of $F(5,151) = 4.87$, $p = .01$. Moreover, the univariate outcomes explained that a significant difference only exists within the similar skin-colored conditions with an F-score of $F(2,665) = 4.70$, $p = .01$. Specifically, a significant difference is found between the dissimilar body size condition with a BMI below average ($M = 3.64$, $SD = .94$) and the similar body size condition with the average BMI ($M = 4.77$, $SD = .88$) at a p-value of .00.

Also, a significant difference was found between the dissimilar body size condition with a BMI above average ($M = 4.33$, $SD = 1.15$) and the dissimilar condition with a BMI below average ($M = 3.64$, $SD = .94$) at a p-value of .06. As a result of the significant findings, H3c is accepted for the significant differences within the similar skin-colored category between the conditions described above. The plot of the interaction effect can be found in Figure 4.

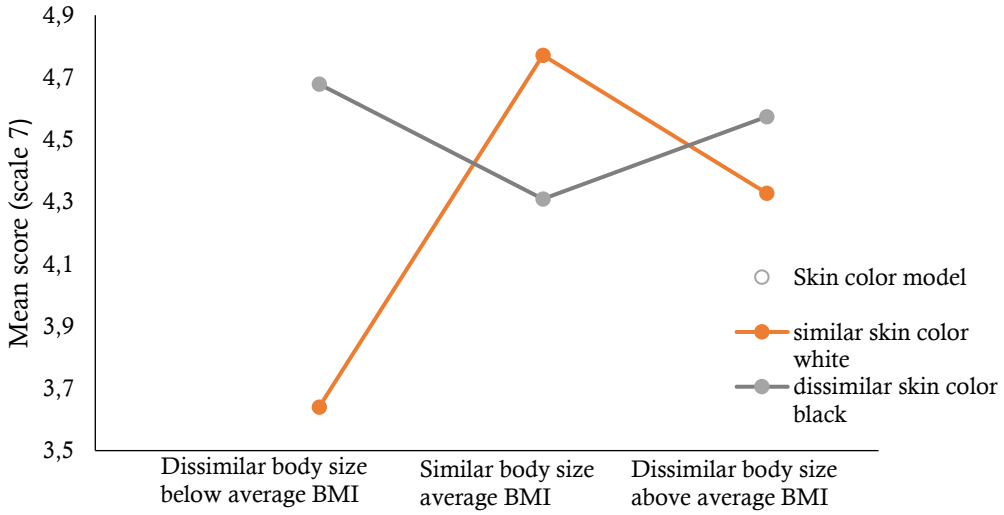

Figure 4: *Interaction effect of body size and skin color on attitude towards the model in the ad*

Interaction effect purchase intention

An ANOVA-analysis with the interaction between body size and skin color, for the dependent variable purchase intention, presented an F-score of $F(5,151) = .58$ $p = .56$, indicating no significant findings. In contrast to what was expected, no significant differences are found, and therefore, H3d is rejected. In Table 8, a summary of the statistics regarding the interaction effect can be found.

In conclusion to the hypotheses related to the interaction effects between skin color and body size: H3a is rejected, H3b is partly accepted, H3c is partly accepted, and H4d is rejected.

Table 8: *Summary of statistics interaction effects*

Independent Variable	**Dependent Variable**	*F*	*p*
Body size * Skin color	Overall score	2.92	.06
	Attitude towards the ad in general	1.52	.22
	Attitude towards the product in the ad	2.98	.05
	Attitude towards the model in the ad	4.87	.01
	Purchase intention	.58	.56

Hypothesis 4: moderator ethnic identity for skin color

Ethnic identity is investigated in this study as a possible moderator between skin color and the dependent variables. An ANOVA-analysis was performed, with skin color and ethnic identity as fixed factors, to find possible significant findings. For this analysis, ethnic identity was recoded from a 7-point Likert scale into three groups. These three groups are equally divided into three categories (group 1 = 47 respondents, group 2 = 55 respondents, and group 3 = 55 respondents):

1. Weak connection with ethnic identity (score 1.00 – 4.00);
2. Medium connection with ethnic identity (score 4.01 – 5.00);
3. Strong connection with ethnic identity (score 5.01 – 7.00).

A medium split is chosen to investigate this moderator since it is found that medium splits are perfectly acceptable in social science, and suitable for ANOVA analyses (Iacobucci, Posavac, Kardes, Scheinder and Popovich, 2015).

Since there was not found to be a significant effect, or even a trend, for similarity in skin color in the previous analyses, the results are split in SPSS and discussed separately for dissimilar skin color and the similar skin color.

Moderator ethnic identity for attitude towards the ad in general

An ANOVA-analysis with ethnic identity and similar skin color as the fixed factors for attitude towards the ad, in general, yielded an F-score of $F(2,018) = .01$, $p = .99$, indicating no significant differences between the groups. Also, no significant differences were found for the dissimilar skin color and ethnic identity with an F-score of $F(2,121) = .08$, $p = .93$. Therefore, ethnic identity is not found to be interacting or moderating with skin color for the dependent variable attitude towards the ad in general.

Moderator ethnic identity for attitude towards the product in the ad

An ANOVA-analysis with ethnic identity and the similar skin color as fixed factors and attitude towards the product in the ad as dependent variable yielded an F-score of $F(2,097) = .09$, $p = .92$, presenting no significant differences. Furthermore, no significant differences were found for the dissimilar skin color and ethnic identity based on an F-score of $F(2,159) = 1.00$, $p = .91$. Therefore, ethnic identity is not found to be interacting or moderating with skin color for attitude towards the product in the ad.

Moderator ethnic identity for attitude towards the model in the ad

For attitude towards the model in the ad, an ANOVA-analysis with ethnic identity as and the similar skin color as fixed factors resulted in an F-score of $F(2,250) = 2.18$, $p = .12$, indicating no significant differences. Also, no significant differences were found for the dissimilar skin-colored conditions and ethnic identity according to the F-score of $F(2,198) = 1.18$, $p = .31$. As a result, ethnic identity is not found to be interacting and moderating between skin color and attitude towards the model in the ad.

Moderator ethnic identity for purchase intention

Finally, purchase intention was tested in an ANOVA-analysis with ethnic identity as and the similar skin color as fixed factors. Again no significant differences were found with an F-score of $F(2,102) = .78$, $p = .46$. Also, the dissimilar skin color presented no significant differences for ethnic identity with an F-score of $F(2,181) = .93$, $p = .40$. As a result, ethnic identity is not found to be interacting or moderating variable between skin color and purchase intention. The statistics are presented in Table 9.

Table 9*: Summary of statistics interaction ethnic identity and skin color*

Variables	**Skin color**	**Dependent Variable**	*F*	*p*
Ethnic identity * Skin Color	Similar	Attitude towards the ad in general	.01	.99
	Dissimilar	Attitude towards the ad in general	.08	.93
	Similar	Attitude towards the product in the ad	.09	.92
	Dissimilar	Attitude towards the product in the ad	1.00	.91
	Similar	Attitude towards the model in the ad	2.18	.12
	Dissimilar	Attitude towards the model in the ad	1.18	.31
	Similar	Purchase intention	.78	.46
	Dissimilar	Purchase intention	.93	.40

Subquestion: The moderator body satisfaction for body size

A possible moderating effect of body satisfaction was questioned for the relationship between body size and all four dependent variables. An ANOVA-analysis was performed, with body satisfaction as a fixed factor, to find possible significant findings. Before the execution of the analysis, body satisfaction was recoded into three groups from a 7-point Likert score. The three groups are divided equally (group 1 = 53 respondents, group 2 = 51 respondents, and group 3 = 53 respondents) and are as follows:

1. Low body satisfaction (score 1.78 – 4.56);
2. Medium body satisfaction (score 4.57 – 5.44);
3. High body satisfaction (score 5.45 – 7.00).

Moderator body satisfaction for attitude towards the ad

An ANOVA-analysis with body satisfaction interacting with body size yielded an F-score of $F(8,148) = 2.09$ $p = .08$, indicating a marginally significant effect. The univariate test for the **medium body satisfaction group** presented an F-score of $F(2,47) = 3.34$ $p = .04$. Specifically, a pairwise comparison showed a significant difference between the dissimilar models with a BMI below average ($M = 2.59$, $SD = .31$) and the similar models with an average BMI ($M = 3.60$, $SD = .27$), at a p-value of .01. This result indicates that the attitude towards the ad in general increases significantly for the model with a similar body size compared to a dissimilar body size below average BMI, but only for the medium body-satisfied group.

Moreover, a marginally significant difference of $p = .10$ was found within the medium body satisfied group between the dissimilar models with a BMI above average ($M = 2.92$, $SD = .30$) and the similar body-sized models ($M = 3.60$, $SD = .27$). This outcome shows that that the attitude towards the ad in general increases significantly when a model with a dissimilar body size above average is presented, compared to when a model with dissimilar body size with a BMI below average is presented. Again, this result is only significant for the medium body satisfied group. To conclude, the similar body-sized model received significantly higher scores than both dissimilar models. In Figure 5, the significant effect for attitude towards the ad in general combining body size and body satisfaction is presented.

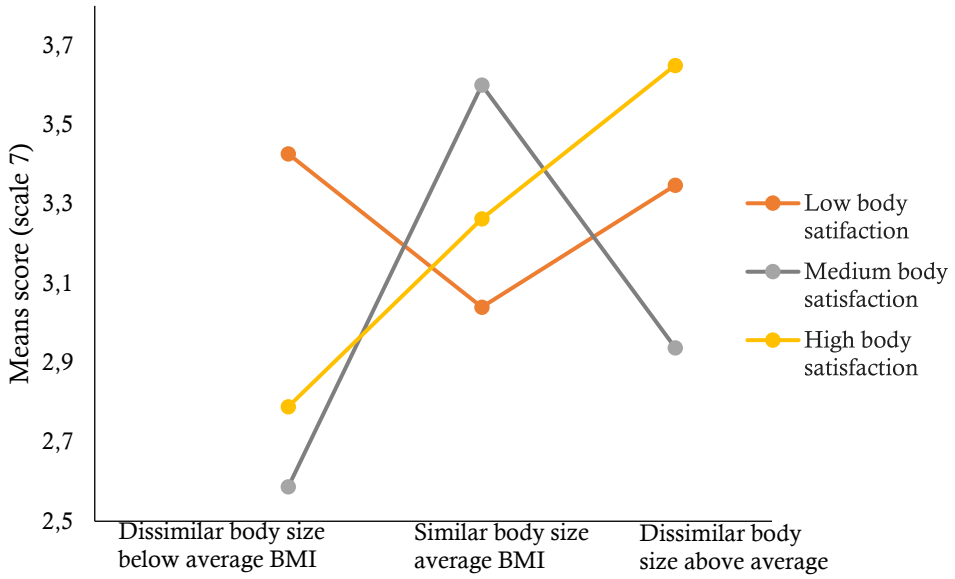

Figure 5: *Moderator body satisfaction of body size for attitude towards the ad*

Body satisfaction for attitude towards the product, model and purchase intention

Body satisfaction and body size are not found to have a significant interaction effect for attitude towards the product in the ad based on the F-score of $F(8,148) = 1.63$, $p = .17$. Moreover, the interaction effect of body size and body satisfaction is not found to be significant with an F-score of $F(8,148) = 1.95$, $p = .11$. Finally, no interaction effect was found between body size and body satisfaction with an F-score of $F(8,148) = .14$, $p = .97$.

In conclusion, it can be stated that interaction effects were found for attitude towards the ad in general, but only between two categories in the medium body satisfied group. This interaction effect can be seen as a moderating effect. However, these results do not indicate body satisfaction to be a moderator for the rest of the dependent variables in this study. A summary of the interacting statistics: body satisfaction and body size can be found in Table 10.

It can be concluded that body satisfaction is not a moderator between body size and the dependent variables, although an exception must be made for the moderate body satisfied group in attitude towards the ad in general.

Table 10*: Summary of interacting statistics body satisfaction and body size*

Variables	**Dependent Variable**	*F*	*p*
Body satisfaction *	Attitude towards the ad in general	2.09	.08
Body size	Attitude towards the product in the ad	1.63	.17
	Attitude towards the model in the ad	1.95	.11
	Purchase intention	.14	.97

Discussion

This study examined whether actual similarity in skin color and body size resulted in significantly more positive consumer outcomes related to attitudes and purchase intention by presenting similar and dissimilar models in mascara advertisements. Existing literature focussing on the similarity-attraction effect in relation to positive consumer outcomes is very limited, especially considering physical characteristics. The results of this study are deliberated in this final discussion.

First of all, significant interaction effects were found for body size and skin color considering attitudes, but only within the similar skin-colored conditions. In particular, results indicated that similar body-sized models significantly increased the attitude towards the product in the ad and the attitude towards the model in the ad. Although, similarity in skin color was found to be a prerequisite for the body size to have a significant effect. Moreover, the dissimilar body-sized models with a BMI above average did not result in adverse consumer outcomes. Instead, the outcomes for this type of model were also positive. Nevertheless, the dissimilar body-sized model with the BMI below average had significantly more negative outcomes compared to the similar and plus-size condition.

These interaction results indicate that presenting a model with similar body size is relevant for the increase of attitude towards the product and the model in the ad, but only when the skin color of the model is white. Previous studies have not investigated an interaction effect that is similar to the one in this study, and therefore a solid explanation for the found interaction effect is difficult to substantiate. Nonetheless, these results show the importance of a similar skin color, which was also found in previous studies where ethnicity was found to be the most crucial factor for a connection when compared with age, religion, gender and other psychological traits (McPherson et al., 2001). Also, skin color can be seen as much more than just 'a skin color.' In some cases, skin color also

reveals cultural background, roots, and because of that, skin color might indirectly indicate whether someone has more or less similarities in psychological traits. In previous studies, more similarities in psychologies traits are often found to increase attraction (Lazarsfeld & Merton, 1954; McPherson et al., 2001; Montoya & Horton, 2012).

Moreover, similar skin-colored models alone did not significantly increase attitudes and purchase intentions when compared to dissimilar skin-colored models. These results are in contradiction to what was expected. Surprisingly, for most of the consumer outcomes, the dissimilar skin-colored models received higher mean scores compared to the similar skin color models. One possible reason for this outcome might be related to the included limitation 'racism as a reaction' since some respondents asked after completing the survey whether the study investigated racism. It might be that participants were influenced by this thought during the survey. Another reason for the missing similarity effect can be derived from previous studies, whereby positive consumer responses for similarity in skin color between the respondent and model were mainly found among black, and not white, respondents and under the precondition of ethnic identity (Appiah, 2001; Whittler & Spira, 2002). More specifically, the fact that ethnic identity was not found to be a moderator in this study might explain the missing outcome effects for skin color since positive consumer outcomes because of skin color similarity are mainly found because of a strong connection to ethnic identity.

Following ethnic identity, the variable was not found to be a moderator for skin color among the white participants in this study. Therefore outcome effects did not differ when someone had a weak or strong connection to ethnic identity. This outcome contradicts the findings of Avery (2003), whereby ethnic identity was a moderator among white respondents when presented with similar colored models. In previous studies, positive product evaluations, as an effect of the moderator ethnic identity for skin color,

were mainly found among black participants (Whittler & Spira, 2002; Appiah, 2001). Since contradicting results exists in literature, future studies should focus on investigating and comparing ethnic identity among different skin-colored participants within one study.

Furthermore, similarity in body size between the model and the respondent did not significantly increase the hypothesized attitudes and purchase intention. Nevertheless, the data suggest that models with a similar average body size received the highest mean scores for attitude towards the ad in general, attitude towards the model in the ad, and purchase intention. Although findings are not significant, a trend is visible for preferring similarity in body size among the researched group. Interestingly, dissimilar models with an above-average BMI also received relatively high scores compared to models with a BMI below average. For now, the mean scores indicate that both similar body-sized models and models with a BMI above average are preferred for the ad, model, and purchase intention. The positive results for the models with a BMI above average are in line with a trend in society whereby plus-size models are more accepted in fashion and media these days. Another explanation might be that the participants are primed because of a viral television item during the time of the execution of the survey, whereby a Dutch TV-host 'fat-shamed' plus-size people. This item is elaborated in the limitations of this study.

The moderator body satisfaction showed significant results for attitude towards the ad in general. However, this result is only found among the medium body satisfied group. This outcome means that when women of the sample group are medium satisfied with their body, they prefer a similar body-sized model or a plus-size model to a model with a BMI below average. Moreover, no moderating effects of body satisfaction were found for the other dependent variables or groups. For the low body satisfaction group, a similar model might not be necessary since they are already dissatisfied, and a similar model will not change that, because a similar model might also be dissatisfying. For the body satisfied

group literature states that the high body satisfied group is positive towards plus-size models; therefore a similar body-sized model might not be necessary for this group to give positive responses (Touyz & Charles, 2006).

Practical implications

This study has found some significant interaction effects that can be applied in the practical field. Specifically for marketers, the results are interesting since they can be used for real-life advertisements. A positive attitude towards the product and model in the ad were found when the model had a similar body size, but only when the model was also white. These results should be taken into account when designing an advertisement for white women with an average BMI. Since models with a BMI above-average also received high attitudinal scores, and significant scores when combined with the white skin color, both white models with an average BMI and white plus-size models can be used in advertisements for the studied women.

Since reactions towards models with a BMI below average were not high, skinny models should not be used when advertising for this group of women. Furthermore, the main findings for skin color presented higher scores for the dissimilar black models than for the similar white models. However, it is not realistic to present a model without also presenting the body size of the model, and therefore it is still recommended to use white models in the ad for this target group since the combined effect of the similar white skin color, and the similar body size is even more positive.

Limitations and future research

Generalization

This research is not without limitations, and the first limitation that needs to be addressed is the sample group of women that is investigated. The study was focused on a sample group of white female respondents with an average BMI, and thus, the outcomes do not say anything about other groups of women, such as black skin-colored women and women with a BMI below or above average. As a result, the generalizability of the study is limited. Future research should focus on including other skin-colored and body-sized individuals, all together in one study. Also, forthcoming studies should investigate males in relation to the similarity-attraction effect.

Stimulus material

Moreover, the stimulus material used in this study contains some limitations. One of the limitations within the stimulus materials were the female models used for the advertisements. Since editing the same model into different skin color and body size would not look realistic, six different women were used for the advertisements. Despite the fact that all models were dressed in similar black outfits and their poses were similar, it could be that some of the models were found more attractive than others, dependent of skin color and body size, and therefore received higher scores.

Another limitation that can be argued within the stimulus material is the brand that was used. The brand 'Lola Lashes' is made up for this study and is chosen because it was found to be more neutral than an existing brand. However, the unknown brand could have also had a negative effect on the participants since it does not have positive connotations. In the future, a similar study design can be used, including a familiar brand in order to indicate possible differences.

Finally, a few participants indicated not to see the effect of the mascara and had, therefore, difficulties judging the product in the advertisement. For future studies, it is crucial to make the product in the advertisement as visible as possible, for instance, by presenting a close-up of the product on the model.

Racism as a reaction

The results of skin color indicated that, in general, no preference was given to a similar skin-colored model, and even some outcomes showed that a black model was preferred instead of a similar-colored white model. Questions were received after the survey, whereby participants asked whether the study had to do with racism. Possibly for some of the respondents, this idea played a role and influenced their answers resulting in (more) positive ratings for black models. For future studies, it is not recommended to introduce the topic of the study since this can influence outcomes. However, it is recommended to state that the study is not about specific sensitive topics such as racism. Furthermore, it is essential to mention that the data is anonymous if the study is indeed anonymous.

Primed by the fat shaming scandal

On 10 June 2019, the launch of Nike sports collection for plus-size women was discussed in the daily television show RTL Boulevard. During the show, presenter Olcay Gulsen stated that Nike's mannequins were too fat, and the target group for the collection would not even be fit enough to go to the gym (Borgdoff, 2019). The statement of Olcay Gulsen was criticized by a lot of people on social media and national television since the statement was related to fat shaming (Klaver, 2019). As a consequence of the statement by Olcay, fashion blogger Hermina de Vries introduced the hashtag '#wenermaaraan' (Dutch for 'get used to it') whereby the blogger aimed at normalizing plus-size women. The hashtag went viral on Twitter as an opposing force to presenter Olcay (Rallis & Werkhoven, 2019).

After all the media attention, Gulsen apologized and claimed not to be a fat shamer. Since this incident was on the same date as the release of the questionnaire, participants can be primed with the idea that fat shaming is detrimental. As a result of this idea, the participants could have responded more positively towards the plus-size models in the advertisements of the study. Future studies considering the same topic might indicate whether this effect played a role.

Body satisfaction as moderator for one group

The fact that body satisfaction was found to be a moderator for the medium satisfied group of this study was surprising. The finding was surprising since the effect was not expected, and the literature does not give a clear explanation. For now, it is not entirely clear why body satisfaction is not a moderator for low and high body satisfied women. Only speculations can be made, as presented in the discussion. Future studies should investigate the body satisfaction as a moderator between body size and positive consumer outcomes in more detail. This can, for example, be done by also focussing on the factors that influence body satisfaction among low, medium, and high body satisfied women.

Conclusion

This study aimed to identify whether similarity in skin color and body size between the advertised model and the consumer increased attitudes towards the ad, product in the ad and model in the ad and, whether it increased purchase intention. Therefore this study contributed to fill the existing gap of similarity research in a marketing context. Based on quantitative analyses of the mascara advertisements, displaying similar and dissimilar models, it can be concluded that when a model is similar in body size, the attitude towards the product in the ad and the model in the ad significantly increases. However, this is only the case when the model is also similar in skin color. Positive consumer outcomes were also found for plus-size models and outcomes were even higher when the plus-size models had a similar skin color. Furthermore, ethnic identity was not found to be a moderator for skin color, and the proposed moderator body satisfaction for body size only had specific significant results for the medium body-satisfied group. The sample group only existed of white women with an average BMI, and therefore, the results are not generalizable.

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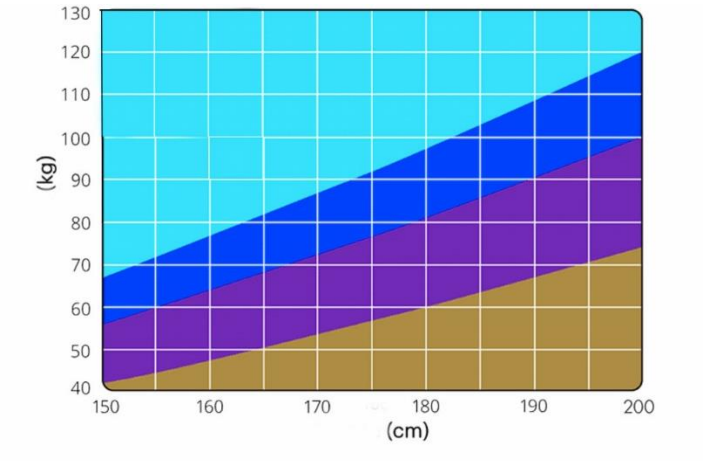
Appendix I

Items experimental survey

Body size

1. What is your current weight in kilograms?
2. What is your current length in centimeters?
3. Are you within the **purple** area of the picture below? > yes than continue



Skin color

1. Do you consider your skin color to be more white than black?

Perceived similarity with the spokesman

McKiran, Smith and Hamayan (1983)

Cronbach's alpha: from .72 to .91

Scale items (only the following two items are included:

1. How similar are you to the model pictured in the ad on cultural background?
2. How similar are you to the model pictured in the ad on appearance?

(1) Not at all similar – (7) very similar

Self-created items:

3. How similar are you to the model pictured in the ad on body size?
4. How similar are you to the model pictured in the ad on skin color?

Attitude towards the ad (general) scale

De Pelsmacker, Geuens and Anckaerts (2002)

Cronbach's alpha: .9098

"While watching/looking at this commercial/advertisement…"

Scale items:

1. I got a very postive impression
2. I found it really something for me
3. I found it interesting
4. I found it credible
5. I found it attractive

Attitude towards product in the ad scale

Lepkowska-white, Brashear and Weinberger (2003).

Cronbach's alpha: .75

"How do you feel about the product in the ad"

Scale items:

1. The product in this ad is attractive
2. It is a good product
3. I like this product
4. It is a satisfactory product

Attitude towards the spokesman (likeability) **scale**

Whittler and Dimeo (1991)

Cronbach's alpha: .87 and .94

"I find the model in the ad.."

Scale items:

1. Warm/cold
2. Likeable/unlikeable
3. Sincere/insincere
4. Friendly/unfriendly
5. Attractive/unattractive

Purchase intention towards the product in the ad scale

Lepkowska-White, Brashear and Weinberger (2003)

Cronbach's alpha: .90

Scale items:

1. "If I were looking for this type of product my likelihood of purchasing the product in the ad would be high"
2. "If I were to buy this type of product, the probability that I would consider buying the product in the ad would be high"
3. "If I had to buy this type of product, my willingness to buy the product in the ad would be high"

Ethnic identification (affirmation and belonging) scale

Appiah (2001)

Cronbach's alpha: .87

Scale items:

1. I am happy that I am a member of the ethnic group I belong to
2. I have a strong sense of belonging to my own ethnic group
3. I have a lot of pride in my ethnic group and its accomplishment
4. I feel a strong attachment to my ethnic group
5. I feel good about my cultural or ethnic background

Body areas satisfaction scale

Giovannelli, Cash, Henson & Engle (2008)

Cronbach's alpha: .83

Scale items:

Satisfaction 1 (very dissatisfied) t/m 7 (very satisfied)

1.Overall appearance

2. Hair

3. Face

4. Upper torso (breasts, shoulders)

5. Mid torso (waist, stomach)

6. Lower torso (buttocks, hips, thighs)

7. Muscle tone

8. Height

9. Weight

Appendix II

Manipulation I

Manipulation II

Manipulation III

Manipulation IV

Manipulation V

Manipulation VI

Appendix III

Manipulation I: A black model with a BMI above average

For the body size of the model in manipulation I, it was essential to know whether the respondents noticed the model was black and heavier than average since the model has a BMI of 27,5. Based on the mean scores, respondents agreed that the model was heavier than average ($M = 5.85$, $SD = 0.87$). Also, the model was found to have a dark skin color, since respondents agreed to strongly agreed with this ($M = 6.55$, $SD = 0.51$). As expected, the model can be used as manipulation for the condition with a high BMI and dark skin color. Furthermore, the respondents somewhat agreed that the face of the model was attractive ($M = 5.0$, $SD = 1.56$), while the attractiveness of the body received a mean score that was a somewhat lower ($M = 4.15$, $SD = 1.73$). Finally, respondents somewhat agreed that the model from the advertisement was credible ($M=4.85$, $SD=1.42$).

Manipulation II: A black model with an average BMI

The model from the manipulation II has a black skin color and a BMI of 22,5; this can be seen as an average BMI. Respondents disagreed with the statement that the model in was heavier than average ($M = 2.10$, $SD = 0.91$). However, the respondents neither disagreed nor agreed that the model was slimmer than average ($M = 4.05$, $SD = 1.82$). As these results do not indicate extreme outcomes for heavier than average or skinnier than average, it can be stated that the model is seen to have an average body size. Moreover, respondents agreed that the model has a dark skin color ($M = 6.40$, $SD = 0.68$). As a result, the model from advertisement II is suitable for this study as a model with dark skin color and average body size. Furthermore, the body of the model was rated more attractive ($M = 4.80$, $SD = 1.58$) compared to her face ($M = 4.10$, $SD = 1.33$). Finally, the respondents somewhat agreed that the model was credible ($M = 4.90$, $SD = 1.55$).

Manipulation III: A black model with a BMI below average

The model in manipulation III has a black skin color, and a BMI of 17,5, which is a BMI below average and was found to be slimmer than average since respondents agreed on this (M = 6.45, SD = 0.51). Moreover, the skin color of the model was found to be black (M = 5.95, SD = 0.69) and disagreed that the model was white (M = 2.00, SD = 1.21). Therefore, this model is suitable for the advertisement of a black woman with a BMI below average. Furthermore, the face of the model was seen as more attractive (M = 5.70, SD = 0.81) compared to her body (M = 4.20, SD = 1.61). Additionally, the respondents somewhat agreed that the model was credible (M = 5.05, SD = 1.50).

Manipulation IV: A white model with BMI above average

The model in manipulation IV has a white skin color and BMI of 27,9, which is above average. Respondents (somewhat) agreed that the model was heavier than average (M = 5.30, SD = 1.41) and disagreed the model to be slimmer than average (M = 1.95, SD = 0.69). These results indicate that the body size of the model was seen to be heavier than average. Also, the model was found to have a white skin color (M = 6.40, SD = 1.35). Together, these results confirm that the model can be used for the experiment as a model with white skin color and a heavier body size than average. Further, the attractiveness of the face (M = 4.80, SD = 1.58) was higher compared to the attractiveness of the body (M = 4.20, SD = 1.80), and the credibility of the model was slightly agreed on (M = 4.85, SD = 1.60).

Manipulation V: White model with an average BMI

The model in manipulation V has an average BMI of 22,7 and white skin color. Fortunately, the body size of the model was not found to be slimmer than average (M = 3.15, SD = 1.27) or heavier than average (M = 2.60, SD = 0.96). This indicates that the

model is found to have an average body size. Furthermore, the skin color of the model was found to be white (M = 6.35, SD = 0.49). Therefore, the model is suitable for this specific condition. Although high scores were received for the attractiveness, the attractiveness of the model's body was rated lower (M = 5.95, SD = 0.76) compared to her face attractiveness (M = 6.25, SD = 0.64). Finally, the respondents agreed that the model from the advertisement was credible (M = 6.05, SD = 0.83).

Manipulation VI: A white model with a BMI below average

The skin color of the model in manipulation VI is white, and the BMI is 17, which is below average. The respondents strongly agreed that the model was slimmer than average (M = 6.70, SD = 0.47). Also, the model was found to have a white skin color (M = 6.10, SD = 1.65). These results indicate that the model is suitable for the experiment as a white model with a BMI below average. Moreover, the face of the model was found to be more attractive (M = 4.10, SD = 1.83) compared to the body (M = 3.05, SD = 1.61) Finally, the credibility of the model from the advertisement was between neither agree/disagree and somewhat agree (M=4.50, SD=1.61).

Appendix IV

Education level category for Chi-square

Based on the education levels in Table 11 categories are created in order to execute a chi-square test. The category **low education** includes: 'Less than high school' and 'High school degree', the category **medium education** includes 'Intermediate vocational education' and 'Associate degree' and category **high education** includes 'Bachelor's degree', 'Master's degree' and 'Doctorate or higher'.

Table 11: *Education level*

Education level			
	Less than high school	1	1%
	High school degree	14	9%
	Intermediate vocational education	10	6%
	Associate degree	11	7%
	Bachelor's degree	78	50%
	Master's degree	36	23%
	Doctorate or higher	7	4%