



An Eye-Tracking Study: Do Gender and Ethnicity of Consumers Affect Their Visual Attention to Fashion Models in Advertisements?

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Background and Purpose: Fashion retailers were always fascinated to understand and predict consumers' visual attention to their campaigns and advertisements (e.g., Mo et al., 2021). Before their advertisements and product displays are available to the public, studying viewers' attention can provide feedback to polish or rework. In return, studying viewers' attention can enhance the effectiveness of the advertisements (Tiggemann et al., 2019). However, though it is essential in its practical usage in fashion marketing, there is a deficit in academic research. Previous studies included using a saliency modeling-based approach to predict consumers' visual attention to fashion advertisements (Lee et al., 2021). The study confirmed that consumers' visual attention can be predicted and revealed gender differences in visual attention. An eye-tracking study conducted by Sargezeh et al. (2019) also indicated men's attention is more focused while women's attention is more likely to spread out in pictures. Another eye-tracking study conducted by Ju and Johnson (2010) in fashion investigated young women's eye movements and their social comparison when viewing fashion advertisements and confirmed the importance of models used in fashion advertisements had a great potential to influence the viewer. However, how consumers would prefer seeing models (e.g., in different genders, ethnicities, body sizes, etc.) was understudied. Therefore, *the purpose of this research* is to explore how consumers of different ethnicities and genders prefer to see models in fashion advertisements. The following hypotheses were proposed: **H1a-c:** Consumers of different ethnicities differ in preference of a) seeing models of their own ethnicity, b) seeing models in their similar skin tone, c) and seeing models who reflected their own body type. **H2a-c:** Men and women differ in preference of a) seeing models of their own ethnicity, b) seeing models with similar skin tone, c) and seeing models who reflected their own body type. **H3a-d:** Men and women differ in preference of how fashion retailers should a) use models of different body types in advertisements, b) use models of different ethnicities to showcase the same product, c) use models of different ethnicities to showcase the same product in different colors, d) use models of different ethnicities to increase the diversity of their advertisements.

Method: This study was conducted in a lab at a university in the US in 2023. To provide an in-depth comparison, an eye-tracking experiment with a self-report survey was designed in the study. Participants included college students and non-traditional students from the university. They were asked to view 20 collages (collected from online advertisements posted by fashion retailers on their official websites) with each taking 10 seconds and answer a survey. While viewing the collages, their attention and eye movement was recorded by the eye-tracker (Tobii Pro Nano). The survey asked participants to evaluate their experience of using the eye-tracker, recall their attention in terms of product display (worn by a model, worn by a model but without showing the model's face, etc.), and choose their preferences of models (of different ethnicities, skin tones, and body sizes). All items were accompanied by 5-point scales. Tobii Pro Lab was used to analyze and visualize participants' attention; SPSS was used to analyze the survey results. ANOVA analysis was conducted to compare participants of various groups in terms of their preferences and the results were further compared with the eye-tracking results. After a 5-days data collection period, 120 participants were recruited in the study. Among all the participants, 78.3% were **Women** and 21.7% were **Men**. The age range for the participants was from 18 to 55 (Median=21), with 73.9% equal to or younger than 22 years old. Participants' ethnicity included **Caucasian** (33.33%), **Hispanic/Latino** (37.5%), **Asian/Asian American** (11.67%), **African/African American** (9.17%), **Native American** (1.67%), **mixed** (4.17%), and **prefer not to say** (2.5%).

Results: ANOVA revealed participants of different ethnicities differed in preference of seeing models of their own ethnicity ($M^{Afr}=3.82$; $M^{Asi}=4.00$; $M^C=2.45$; $M^{His}=2.84$; $M^N=3.00$), seeing models with similar skin tone ($M^{Afr}=4.64$; $M^{Asi}=4.07$; $M^C=3.15$; $M^{His}=3.78$; $M^N=5.00$), and seeing models who reflected their own body type ($M^{Afr}=4.73$; $M^{Asi}=4.29$; $M^C=3.83$; $M^{His}=3.69$; $M^N=2.50$). ANOVA also revealed men and women differed in preference of seeing models with similar skin tones ($M^M=3.19$; $M^W=3.80$), retailers use models of different body types in advertisements ($M^M=4.23$; $M^W=4.77$), retailers use models of different ethnicities to showcase the same product ($M^M=4.38$; $M^W=4.74$), retailers use models of different ethnicities to showcase the same product in different colors ($M^M=4.00$; $M^W=4.55$), retailers to use models of different ethnicities to increase the diversity of their advertisements ($M^M=4.19$; $M^W=4.76$). Therefore, H1a-c, H2b, and H3a-d were supported. The further comparison of ANOVA results with heatmaps and gaze plots also revealed the preferences of different groups of participants. Men's attention turned to be more focused (on the product and/or face of the model) of the image while women's attention turned to be more spread out. African/African Americans' and Asian/Asian Americans' attention are easier to be attracted by models of their own ethnicity and skin tone similar to theirs. Figure 1 provided selected results of comparison of heatmap results.

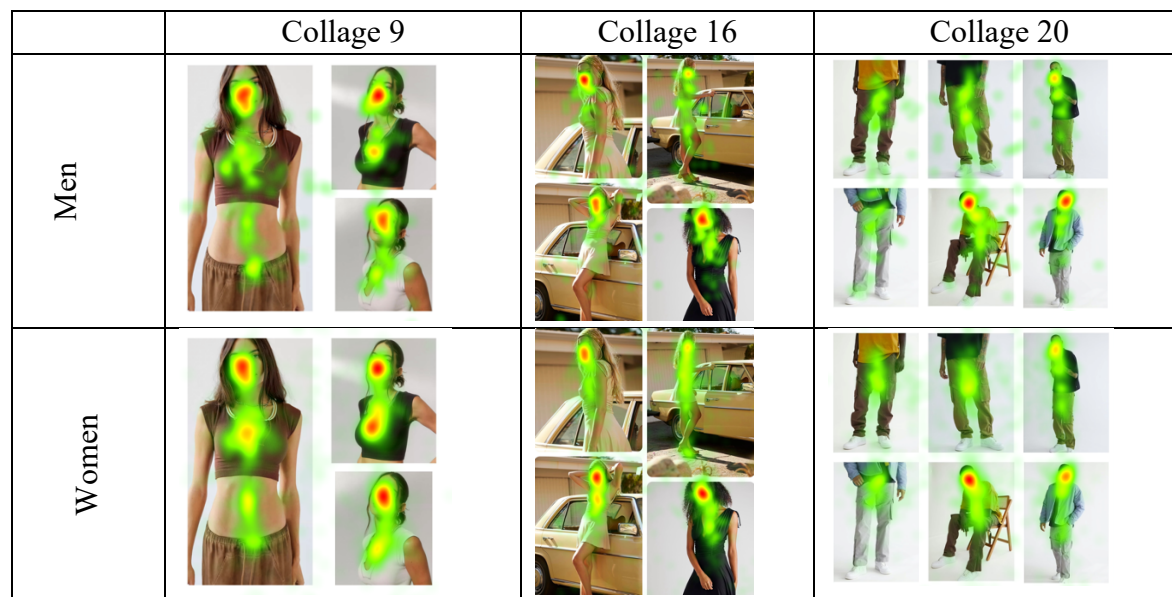


Figure 1. Heatmap Results of Different Participants' Attention (selected results)

Discussion and Implications: The model's face played a critical role in expressing information from the advertisements. Though women paid higher attention to the advertised clothing than men, all participants focused mostly on the model's face. Therefore, fashion retailers may consider using models of different ethnicities (especially by adding Asian models and African American models in their advertisements) to attract consumers (of different skin tones and body types) and to enhance diversity. Moreover, women preferred seeing models with similar skin tones. Retailers could consider using models of different skin tones to showcase the same product. Comparatively, women expressed their preference for seeing more differences in product displays and colors. The findings provide valuable insights that can help fashion retailers develop advertisement strategies tailored to their target customers.

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