

Young Women's Visual Processing of Fashion Advertisements Using Eye Tracking

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Introduction

Women's fashion magazines such as Cosmopolitan, Vogue, and Glamour frequently feature idealized versions of life accompanied by idealized presentations of individuals (Richins, 1991). For women, there are unintended consequences associated with viewing advertisements that present these idealized female images (Martin & Kennedy, 1993; Richins, 1991). For example, exposure to this idealized image facilitates social comparison, generates doubt about self-esteem (Smeesters & Mandel, 2006), doubt about perceived attractiveness (Martin & Kennedy, 1993; Richins, 1991), and contributes to body dissatisfaction (Richins, 1991).

Numerous researchers have documented that exposure to idealized images of women in advertisements has a negative effect on women's body satisfaction (Richins, 1991) and self-esteem (Martin & Kennedy, 1993) as well as been linked to disordered eating (Pinhas, Toner, Ali, Garfinkel, & Stuckless, 1999). A few researchers have documented that it is through the process of social comparison that self-perceptions are altered (e.g., Richins, 1991; Tiggemann & McGill, 2004). Social comparison involves looking at others in order to evaluate one's own attributes and abilities.

Purpose of the study

The measure of social comparison that has been utilized often consists of self-reports which is a subjective method (Martin & Kennedy, 1993; Richins, 1991). Investigating how fashion advertisements are visually processed provides the opportunity to not only objectively measure how advertisements are processed but also begin to answer questions about how fashion advertisements influence self-perceptions of women. The purpose of this research was to investigate 1) how young women process a fashion advertisement by measuring their eye movements, 2) whether self-reports of social comparison are related to eye movements, and 3) whether differences in eye movements and self-reports of social comparison exist based on personal characteristics including internalization of the thin ideal, tendency for appearance comparison, and self-esteem.

Literature Review

Durkin, Paxton, and Sorbello (2007) found women and adolescent girls who internalized the thin ideal were impacted by media images. Martin and Kennedy (1993) found adolescent girls who had low self-esteem reported making more comparisons to a model than individuals who were high in self-esteem. Similarly, Tiggemann and McGill (2004) found adolescent girls were likely to make social comparisons to models if they also had a tendency to make appearance comparisons.

Gaze duration and eye fixations are usually measured to analyze participants' visual attention. Previous researchers have documented that consumers focus more on the pictorial aspects of an advertisement rather than brand or text information (Wedel & Pieters, 2000). Consumers who show longer eye duration or eye fixations tend to recall more products in advertisements than those who show shorter eye durations or eye fixations (Rosbergen, Pieters, & Wedel (1997). Patterns of visual processing of advertisements also vary based on product involvement, brand attitude, and product motivation (Rosbergen et al., 1997).

Research Hypotheses

Hypothesis 1: Duration of time spent looking at the model and eye fixations on the model are significantly correlated with self-reports of comparison to the model in the advertisement.

Hypothesis 2: Comparison to the model in the advertisement will be influenced by participants' a. internalization of the thin ideal, b. tendency for appearance comparison, c. and/or self-esteem.

Hypothesis 3: Duration of time spent looking at the model will be influenced by participants' a. internalization of the thin ideal, b. tendency for appearance comparison, c. and/or self-esteem.

Hypothesis 4: Eye fixations on the model will be influenced by participants' a. internalization of the thin ideal, b. tendency for appearance comparison, c. and/or (c) self-esteem.

Method

After receiving permission for use of human subjects in research (#0308P28602), three advertisements with female model were selected through a pilot test. In addition, four other fashion

advertisements with no models were included as stimuli. This was done so that participants would process several advertisements as they might when looking at a fashion magazine and would become comfortable with having their eye movements measured. Two of the filler advertisements contained a model because it was assumed that a single advertisement with a model would appear novel or unique in the context of looking at several fashion advertisements and thus, participants might process the "model" advertisement differently. The target advertisement appeared as either the second advertisement in the series or the sixth. Because brand information has been shown to influence the visual processing of a fashion advertisement, all brand information was removed.

College women were recruited from two retail courses offered by a large Midwestern university. The research process consisted of two-parts. In the first part, individuals who volunteered to participate in the study were given a consent form, asked to read and sign it, and then, asked to complete the first questionnaire. The first questionnaire included established measures of self-esteem, internalization of the thin ideal, and tendency for appearance comparison. Then, for the second part, participants were scheduled to come to the eye tracking laboratory. In the laboratory they were seated in front of a computer monitor. Participants' eyes were calibrated to assess whether their eye movements could be measured. If measurements were possible, participants were asked to process the set of advertisements including the target advertisement at their own pace. Next, participants completed the second questionnaire including a self-report measure of social comparison to the model and demographic information.

Findings

A total of 80 college women participated. Participants' ages ranged from 18 to 30 ($m = 20.48$). The majority of them (55%) were majors in either retail merchandising or clothing design. The majority of participants were Euro American (71.3%). Most (71.3%) read fashion magazines on a regular basis. Almost all (97.5%) reported that they looked at the advertisements contained in the magazines they read.

Descriptive statistics showed that on average participants spent 7.4 seconds looking at the target advertisement. All participants placed their eyes on the model at least once. On average, participants spent 2.72 seconds on looking at the model, 1.40 seconds on looking at the headline, and .41 second on looking at the product. Eye fixations were 9.76 on the model, 6.08 on the headline, and 1.58 on the product. Average fixation duration on the model was .279 seconds, .241 seconds for the headline, and .265 seconds for the product. More than half of the participants (58.8%) looked at the model first when they processed the target advertisement followed by something in the background of the advertisement (31.3%), and headline (8.8%). Time to first fixation on the model was .58 seconds, followed by 2.00 seconds for the headline and 3.69 seconds for the product. As compared to other aspects of the advertisement, the model was looked at faster, longer, and more often.

Pearson's correlation revealed a significant positive correlation ($r = .426, p < .01$) between comparison to the model and gaze duration on the model and a positive correlation ($r = .413, p < .01$) between comparison to the model and eye fixations on the model. Therefore, hypothesis 1 was supported.

Multiple regression analysis was used to test Hypotheses 2, 3, and 4. Multiple regression analysis revealed that only internalization of the thin ideal was associated with time spent looking at the model ($\beta = .36, p < .01, R^2 = .126, F(4, 72) = 2.61, p < .05$, eye fixations on the model ($\beta = .41, p < .01, R^2 = .166, F(4, 74) = 3.69, p < .01$, and self-reports of social comparison to the model ($\beta = .51, p < .01, R^2 = .289, F(3, 76) = 10.31, p < .01$). Therefore, hypothesis 2a, 3a, and 4a were supported but not 2b, 2c, 3b, 3c, 4b, and 4c. Figure 1 and 2 show a diagram reflecting how long individuals who were low in internalization as well as high in internalization looked at particular points by overlaying areas of color (e.g., yellow, orange, red). These areas of color are referred to as hot spots. The redder the color, the more attention paid to that point or location.

Conclusions

The finding suggests that of the advertising elements investigated, the model had the greatest potential to be an influence on the viewer and provides concrete evidence of the emphasis these



Figure 1. Example of hot spot results for participants who were low in internalization.



Figure 2. Example of hot spot results for participants who were high in internalization.

participants gave to the model in their visual processing of the advertisement. In addition, the findings suggest that both gaze duration and eye fixations as measured by eye tracking technology could possibly serve as objective measures of social comparison to models in advertising.

References

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