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Seeing Oneself in the Feed: Racialized Targeting in Food Marketing and Its Impact on Adolescents' Visual Interest and Unhealthy Food Preferences

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Abstract

What psychological mechanisms make the marketing of unhealthy foods to racial and ethnic minority adolescents persuasive? We proposed that social media promoters who share adolescents' racial or ethnic identity are more interesting to look at than incongruent promoters especially to minority adolescents, and that social modeling of these visually interesting promoters increases susceptibility to choosing unhealthy foods. In two experiments (total n=1408), we tested the impact of visual interest in mock Instagram posts that featured promoters who did or did not share the same race/ethnicity as participants and who were depicted as endorsing unhealthy food or non-food products on adolescents' food choices. In Study 1, Black, but not non-Hispanic White, adolescents reported that racially congruent promoters were more visually interesting than incongruent promoters. In Study 2, minority adolescents who identified as Black, Hispanic, or East Asian reported that congruent promoters were more visually interesting than incongruent promoters. Non-Hispanic White adolescents did not report more interest in congruent, White promoters than incongruent promoters. In both studies, increased visual interest predicted an increase in unhealthy snack selections, but only when the posts endorsed unhealthy foods. We also found that visual interest predicted higher engagement with posts, reflected in stronger likelihood of "liking," commenting, or sharing the post. These findings reveal visual interest as a key attentional mechanism linking identity congruence to persuasion, advancing theories of motivated attention and informing strategies to counteract the influence of racially targeted food marketing.

Keywords

visual interest; social media; targeted marketing; adolescents; modeling; race

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Declaration of interests

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U.S. adolescents are a prime target for unhealthy food companies because of their significant spending power, influence over household purchases, and potential to shape lifelong consumer habits (Story & French, 2004). Total adolescent spending in the U.S. is estimated at $67 billion, with about one-quarter devoted to food (Piper Sandler, 2025). Adolescence is also a developmental period critical for forming long-term dietary patterns and brand preferences (Sinai et al., 2021), making adolescents a lucrative audience for marketers aiming to secure lifelong customers. This targeting takes place within a massive and growing economic sector; the unhealthy food industry is valued at $166 billion in the U.S. alone (VFM, 2024), with annual retail sales on the rise (Euromonitor International, 2025). Ultra-processed foods, a variant of unhealthy foods, now account for more than half of all dietary energy consumed in the U.S. (Baraldi et al., 2018), and unhealthy food alone comprises 13% of household expenditures—rivaling spending on education, clothing, and healthcare combined (Sweitzer & Davidenko, 2024). These patterns are not accidental but the result of strategic marketing efforts that have normalized unhealthy food consumption as part of American culture (Nestle, 2013).

To capitalize on the adolescent consumer demographic, unhealthy food companies have increasingly directed their efforts toward social media marketing (Mc Carthy et al., 2022), which dominate the daily lives of U.S. adolescents (Pew Research Center, 2022). Social media affords marketers unique opportunities for personalized engagement, rapid message dissemination, and interactive content formats that traditional advertising channels cannot replicate (Eg et al., 2023). Consequently, social media marketing has become a critical battleground for shaping adolescent food choices in the United States.

Central to social media marketing are product promoters—individuals who occupy hybrid roles as both content creators and brand ambassadors (Jin, Muqaddam, & Ryu, 2019). For adolescents, promoters often blur the line between personal relationships and commercial persuasion tools, fostering parasocial connections that can undermine advertising literacy, awareness of marketing goals, and resistance to marketing tactics (Abidin, 2016; Boerman & Van Reijmersdal, 2020; Hoffner & Bond, 2022). When they are famous only inside their social media presence, these promoters are perceived as more authentic, sincere, and credible than traditional celebrities (Lee & Eastin, 2021; Liu, & Zheng, 2024). They can render commercial endorsements challenging to distinguish from personal recommendations, thereby increasing their effectiveness in promoting unhealthy food products to adolescents. Indeed, children who viewed a mock Instagram feed including promoters endorsing unhealthy snacks consumed more calories from unhealthy foods compared to children who viewed feeds with promoters endorsing non-food products (Coates et al., 2019).

Yet, the influence of social media promoters on adolescents is stratified along racial and ethnic lines. Emerging research suggests that the racial identity of promoters and their audiences may interact to shape marketing effectiveness (Appiah, 2001; Forbes-Bell, Bardey, & Fagan, 2020). We propose a social identity perspective; the *match* between the race of participant and promoter—or their racial congruity—confers social similarity that structures social interactions (Tajfel & Turner, 1979), particularly among minoritized youth

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when identity is especially salient and central (Phinney, 2013). Seeing a racial or ethnic minority promoter who shares one's identity serves as a powerful driver of behavioral influence. While White individuals may consider White promoters to be identity-relevant (e.g. Knowles & Peng, 2005), we expect that promoter-participant racial or ethnic congruity effects are asymmetrically stronger for minority participants. For historically marginalized audiences, encountering identity-congruent representation carries heightened psychological, social significance, and salience.

We argue that this salience is in part the result of greater visual interest of minority promoters particularly among minority audiences. We conceptualize visual interest as an early stage of information processing that determines what is selected, prioritized, and encoded (Broadbent, 1958)—a consequential mechanism in dynamic, social media contexts where users engage only briefly with dense streams of content (e.g. Gausby, 2015). Under such attentional constraints, persuasion hinges on what salient visual cues capture attention in the moment (Lang, 2000) particularly in the context of consumer decision making (Peschel, Orquin, & Loose, 2019). Before individuals can evaluate a message's relevance, parse the promoters' intentions, or assess source trust, they must first *attend* to it (Fiske & Neuberg, 1990). Ingroup cues shape this initial selection process, biasing which content is seen, how long it is viewed, and which features are encoded, thereby constraining the input into downstream evaluative judgments (e.g. Hugenberg et al., 2013; Kawakami et al., 2018). By isolating visual interest, we identify what content gains an early advantage in processing and how. Accordingly, we test whether identity-congruent promoters elicit greater visual interest among racial and ethnic minority adolescents and whether this, in turn, translates into greater influence on behavioral choices. Focusing on visual attention provides additional insight into processes that leverage identity to predict behavioral intentions.

Visual Interest as a Mechanism of Ingroup Influence

People show greater visual interest in social ingroup members. Across multiple social categories, individuals find members of their ingroup more visually engaging than their outgroup (e.g., Lovén et al., 2012; Todorov, 2012; Van Bavel & Cunningham, 2012; see also Kawakami et al., 2018). For example, **eye-tracking** studies show preferential visual attention directed at racially congruent individuals (Kawakami, et. al, 2018). Even minimal categorization of an individual as "one of us" is sufficient to bias attentional allocation toward ingroup faces (Ratner & Amodio, 2013; Van Bavel & Cunningham, 2012). These differences reflect multiple, converging mechanisms. Developmentally, greater exposure to ingroup members fosters perceptual expertise with those faces (Kelly et al., 2007; Wheeler et al., 2011). Motivationally, perceivers are more inclined to perceptually individuate ingroup members (Hugenberg et al., 2013; Kawakami et al., 2018). Consistent with this, ingroup status enhances depth of processing; racially-congruent faces elicit greater holistic processing and improved recognition (Hugenberg & Corneille, 2009), likely because they are appraised as more socially relevant and thus warrant greater investment of cognitive and perceptual resources (Fiske & Neuberg, 1990).

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Such ingroup bias in visual interest may be especially pronounced for people with racially minoritized identities compared to those who identify with the White racial majority, due to stronger pressures for cultural alignment. Cultural alignment reflects the extent to which an individual's attitudes, behaviors, preferences, and self-presentation match the norms and expectations of a cultural group with which they identify (Goffman, 1959; Markus & Kitayama, 1991). Prevailing findings suggest that motives for cultural alignment are stronger among racial and ethnic minority than majority individuals because ingroup interdependence is more consequential for belonging, identity validation, and navigating marginalization (Brown, 2008; Denner et al., 2001; Hooker et al., 2025; Tseng, 2004). These pressures likely increase the diagnosticity of ingroup-relevant visual and behavioral cues. For racially minoritized adolescents, race-congruent promoters signal culturally relevant norms and expectations (Tajfel & Turner, 1979), making them more informative and attention-worthy. Anticipated social costs of misalignment further heighten vigilance to ingroup cues (e.g. Liu, Morris, Talhelm, & Yang, 2019), promoting faster orienting and sustained visual engagement. Moreover, when people internalize the idea that their own life circumstances are innately linked to the circumstances of their broader racial ingroup, as has been shown among Black and African American people (Monk, 2020; Simien, 2005) and members of other racially minoritized groups (Kiang et al., 2022), ingroup exemplars carry greater personal relevance, amplifying attentional prioritization.

We posit that visual interest predicts behavioral modeling, such that adolescents are more likely to adopt the behaviors of promoters who capture and sustain their attention. While overall adolescents model behaviors they see enacted by peers in general, (Bandura, 2001; Ragelienė & Grønhøj, 2020), they do so to a stronger degree when they consider those actors to be identity-relevant. For example, adolescents more readily incorporate the beliefs and model the behaviors endorsed by ingroup rather than outgroup members (Escalas & Bettman, 2005; McGuire, 1985; Ohanian, 1990; Tajfel & Turner, 1979). This is particularly true among those from minority racial and ethnic groups, who are not only more likely to attend to ingroup exemplars but also to translate that attention into behavioral alignment (e.g. Shiyanbola, et al., 2022). For example, 56% of Black consumers prefer to buy based on ads that show up in culturally relevant content compared to 35% overall (Nielsen, 2025). Stronger psychological appraisals of linked fates and interdependence, in addition to cultural alignment pressures, render racially-congruent ingroup members influential for minority individuals and as guides for socially valuable behavior (Dawson, 1994; Sanchez & Masuoka, 2010). Moreover, anticipated risks of peer invalidation further motivate minority adolescents to adopt the preferences and behaviors modeled by these promoters (Durkee et al., 2019; Ogbu, 2004). In contrast, White adolescents face fewer or weaker group-based constraints, including weaker racial identification, than do racial and ethnic minority adolescents (Phinney, 1992), weakening the link between attention and behavioral alignment. Taken together, we propose that visual interest amplifies social modeling, such that adolescents are likely to align their own behaviors with those of the promoters they find visually interesting and identity-relevant, particularly among teens with racially minoritized identities.

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Overview

We report two experimental studies probing adolescents' visual interest in mock Instagram food posts that feature promoters that share the same race or ethnicity as participants (racially congruent) or promoters that do not share the same race or ethnicity as participants (racially incongruent). Moreover, we examine the impact of visual interest on adolescents' preferences for unhealthy snacks. We compare White adolescents' judgments of posts and preferences for unhealthy food against those of racial/ethnic minority adolescents (Study 1: Black; Study 2: Black, Hispanic, and East Asian). Posts included either White promoters or racial/ethnic minority promoters who were racially congruent for minority participants. Because White individuals dominate popular media, Black, Hispanic, and East Asian people appear less frequently. For analytic clarity, we therefore group these populations together under the category of *racial/ethnic minority group members*. We acknowledge, however, that this statistical necessity risks masking nuanced, group-specific experiences. We hypothesized that the extent to which racial/ethnic identity congruence in posts predicted visual interest would be stronger for racial or ethnic minority adolescents compared to White adolescents. Moreover, we predicted that greater visual interest in the posts would increase the rate at which adolescents preferred unhealthy compared to healthy snacks when those promoters endorsed unhealthy foods. In an exploratory manner, we also probed factors that predict engagement with the posts, as indicated by adolescents' reports that they would "like," comment on, or share the post they viewed.

Open Science Practices.

We report all sample size determinations, data exclusions (if any), manipulations, and measures for the studies either in the main text or Supplemental Material. We follow journal article reporting standards (Kazak, 2018). All materials, data, and analysis code are available on OSF (https://osf.io/75q2w/overview?view_only=927856271f0e4f2b81958f47215d0d39). Data were analyzed using SPSS. The study designs and analyses were not pre-registered. The university IRB reviewed and approved all protocols.

Data Integrity.

Across studies, the vast majority of data were collected in person (Study 1: 76%, Study 2: 70%). When we supplemented with online recruitment to ensure sufficient statistical power, we used Prolific which has been shown to have high-quality data (see Douglas et al. 2023; Stagnaro et al., 2024). We limited recruitment to only identified U.S. residents to enhance data integrity (Kennedy et al., 2020). We also used two CAPTCHA questions which mitigates the impact of survey bots (Hardesty, et al., 2024). Finally, we recruited our samples prior to the release of ChatGPT (data collection for Study 2 completed in June 2021).

Study 1

Methods

Participants: We recruited adolescents (n=539, $range_{age}$=13–19; M_{age}=16.1, SD=1.75) through two available methods from April 28, 2020 to December 15, 2020. Most (n=408) were recruited within their classes from two participating high schools and completed the

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survey without compensation. These participants were living in the U.S. and completed the survey at home so they could obtain the required parental consent. If parents provided consent, the survey directed respondents through a child assent process. In this way, all responses could remain anonymous and no identifying information about parent, guardian, or child was collected, as required by the governing IRB. While all students who were interested in taking the survey during a 1-month period of time were allowed to complete it as required by participating schools, we considered students who identified as Black or non-Hispanic White as our target population and generated stimuli *a priori* around this predetermined inclusion criteria. Data from participants who identified as members of other racial demographic groups were excluded from analyses in Study 1.

To ensure we recruited a sufficient sample of Black participants, we recruited participants (n=131) from Prolific, an online survey site. We set as qualifications that participants must be living in the U.S., 18 or 19 years of age (required minimum age to provide their own consent) and identify as Black or non-Hispanic White; they received $3.00 for completing the survey. We set this online sample size before analyzing data and given maximum funding constraints. Participants reported their gender (n_{female}=363, n_{male}=176) and race (n_{Black}=160, n_{White}=379) at the end of the survey.

Stimuli

Instagram Posts. We created sets of 8 images that appeared similar to typical Instagram posts (see Figure 1). All images depicted a single adolescent or young adult promoter endorsing a product. Using Photoshop, we manipulated the race of the promoter and the product included but kept other details identical, so that across sets, the general look and feel of the image and surrounding details remained as similar as possible. Two sets included Black promoters and two sets included White promoters. Additionally, 8 images within the Black promoter set and 8 images in the White promoter set depicted promoters endorsing unhealthy food (McDonald's burger, McDonald's fries, bucket of Kentucky Fried Chicken, Oreo Thins, can of Red Bull or Pepsi, bottle of Coke); 8 images within the Black promoter set and 8 images in the White promoter set depicted promoters endorsing a non-food product (business card, bouquet of flowers, soccer ball, book, smartphone, binoculars, microphone, wallet). We made 3 versions of every post wherein we varied the post captions; participants were randomly assigned to view only 1 version of any post.

Snack Selection. We created 20 pairs of snacks that appeared on the screen side by side. Each pair consisted of a less healthy, non-nutritious snack and a healthier snack. To create pairings, we selected foods that matched on visual features like color, shape, and size. For instance, we paired a green popsicle with a cucumber; we paired a cup of ice cream with a cup of yogurt (See Figure 2). We counterbalanced across pairings whether the less healthy food appeared on the left or right side of the screen. We note that stimuli varied in the presence of branding (4 unhealthier and 2 healthier options were branded). While we sought to match stimuli on low-level visual features, branding was not fully equated, though the vast majority of all food options were unbranded. This variation reflects, in part, the ecological structure of real-world food environments, in which unhealthy options are more

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frequently packaged and branded than healthier alternatives. No product was labeled for the general or specific type of food it was (e.g. carrots, smoothie, chocolates).

Procedure: Participants recruited from schools were invited to participate in their classes via word of mouth from peers in the same school or by email from teachers to complete the survey on their own time. We randomly assigned Black and White participants to 1 of 4 between-subject conditions in the 2 (Promoter Race Congruity: congruent, incongruent) x 2 (Endorsed Product: Unhealthy Food, Non-food) design. Sets of posts were considered racially congruent when participants viewed images that included promoters that matched their same racial identification (Black participants with Black promoter, n=78; White participant with White promoter, n=192), and racially incongruent when participants viewed images that included promoters that did not share their racial identification (Black participant with a White promoter, n=82; White participant with Black promoter, n=187).

Measuring Visual Interest. We created an index of visual interest by assessing perceptions of coolness and attentional capture. To assess coolness, participants responded to one item that asked how cool, attractive, and interesting the person in the post was using a 5-point Likert scale (1= not at all, 5= a great deal). Using the same scale, they also responded to a second item that asked how cool, trendy, and interesting the post itself was. To assess attentional capture, participants indicated how much the person in the post grabbed their attention or caught their eye, using the same 5-point Likert scale. We created averages across stimuli to each question separately. To create an average measure of visual interest, we created a grand mean of average responses to these 3 questions (α=.93).

Engagement. We assessed social media engagement by asking participants the likelihood they would "like," comment on, or share the post, using a 5-point Likert scale (1= not at all, 5= a great deal). We averaged responses to all posts to create a single measure of engagement.

Snack Selection. Participants viewed pairs of snacks and reported which one they would like to eat right now by selecting one of two options within each pair of choices. The foods from which participants selected varied with respect to whether they were branded or unbranded products. Snacks were matched for general color, shape, and visual size. We computed the percentage of less healthy foods chosen as an index of intentions to eat less healthy foods after viewing sets of posts.

Participants also reported demographics including race, age, gender, weight, and height.

Additional Measures. We collected additional measures assessing hunger, dietary habits, health behaviors, and weight-management goals that we did not include in analyses but report in the Supplement for transparent disclosure. We also note that participants reported how rare or common it was to encounter posts like this on social media (1 = extremely rare, 5 = extremely common) in response to every post. A factor analysis indicated that this item did not load onto the primary component of visual interest (eigenvalue = .21), whereas all other visual interest items did (eigenvalues > .90). Consistent with this, including the item in the composite substantially reduced internal consistency (α = .78, again compared to .93

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with its exclusion), suggesting the inclusion of the rarity item in the composite of visual interest was not psychometrically sound. As a result, we exclude it from analyses moving forward.

Results

Predicting Visual Interest

Analytic Approach. We used multiple regression to test whether Black adolescents found racially-congruent promoters more visually interesting than White adolescents, and if visual interest shaped food choices if the interesting posts endorse unhealthy food, as depicted in Figure 3. We regressed each outcome measures (visual interest and food selections) on effect coded racial congruence, participant race, product type, and each of their interactions. We decomposed interactions with dummy codes to report simple effects.

The two-way interaction between participant race and participant-promoter racial congruence on visual interest was central to our interest. A sensitivity analysis conducted using the pwr package in R (Champely, 2020) indicated that, given the sample size (N = 540), $\alpha = .05$, and three predictors in the model, the analysis had 80% power to detect an interaction effect as small as $f^2 = .015$. When transformed, this corresponded to an unstandardized regression coefficient of $b = .303$ for the interaction term in the current model.

Food Choice: First, we tested the c-path effect of participant race (−.5=White, .5=Black) on the percent of foods they chose that were less healthy. We found that Black participants selected the less healthy food in each pair more often than did White participants, b=.07, SE=.02, $t(537)$=4.44, p<.001, 95% CIs [.04, .11].

Visual Interest: Next, we tested the a-path effects of promoter racial congruence (−.5=incongruent, .5=congruent) on visual interest as moderated by participant race (−.5=White, .5=Black). The main effect of participant race on visual interest did not reach significance, b=.12, SE=.07, $t(535)$=1.79, p=.074, 95% CIs [−.01, .25]. The effect of promoter racial congruity on visual interest was significant, b=.14, SE=.07, $t(535)$=2.07, p=.039, 95% CIs [.01, .26], such that adolescents found posts that including racially congruent promoters more interesting than ones which included incongruent promoters. As predicted, a significant interaction between racial congruity and participant race qualified the previous main effect, b=.49, SE=.13, $t(535)$=3.79, p<.001, 95% CIs [.24, .75] (Supplement Table S2 reports results when including participant recruitment source as a factor, which did not moderate effects). Racial congruence increased reports of visual interest among Black participants, b=.38, SE=.11, $t(535)$=3.49, p<.001, 95% CI [.17, .60], but not among White participants, b=−.11, SE=.07, $t(535)$=−1.58, p=.12, 95% CI [0.25, 0.03] (see Figure 4).

Food Choice: We next modeled the b-path effects, testing the effect of visual interest (centered) on the percent of unhealthy food chosen as moderated by the type of product endorsed in the post (−.5=non-food, .5=food). There was no main effects of product type on the percent of unhealthy food selected, b=.02, SE=.02 $t(535)$=1.30, p=.19, 95% CIs [−.01, .05], nor a main effect of visual interest, b=.02, SE=.01 $t(535)$=1.46, p=.15, 95%

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CIs [−.01, .04]. However, the interaction between visual interest and product type was significant, b=.05, SE=.02, t(535)=2.41, p=.016, 95% CIs [.01, .10]. When posts included unhealthy foods, greater visual interest predicted an increase in unhealthy foods chosen, b=.04, SE=.02, t(535)=2.92, p=.004, 95% CI [.01, .07]. However, when posts included non-food products, visual interest did not predict unhealthy food choices, b=−.01, SE=.02, t(535)=−0.63, p=.53, 95% CI [−.04, .02] (See Figure 5).

Consequences of Visual Interest on Food Choice: Next, we tested whether visual interest predicted the proportion of unhealthy foods Black and White participants selected through a bootstrapping strategy for testing mediation that directly estimated indirect effects based on an observed distribution (Hayes, 2022). We did not build out our mediation model based on the significance of individual pathways in the model, often referred to as the "causal steps approach" (e.g., Baron & Kenny, 1986). That approach has been criticized on the basis that it can impair theory development, place unnecessary constraints on relevant statistical tests, and contribute to misleading or false conclusions (Rucker et al., 2011). Instead, we used PROCESS (Hayes, 2022; Model 21, 10,000 bootstraps samples) to execute a full moderated mediation model based on theoretically derived relationships among variables as specified in the conceptual model (See Figure 3). This approach allowed us to examine whether promoters who share adolescents' racial identity appear more visually interesting, particularly to Black compared to White adolescents, and if adolescents' visual interest in posts that feature unhealthy food rather than non-food products increases the likelihood that they chose unhealthy foods as snacks.

We adopted this approach to test our theoretically-derived model because manipulating the mediator of visual interest independently of other key post features (e.g., promoter attractiveness, color, gesture) was not feasible. While the model incorporates relevant contextual factors such as product type, additional moderators or mediators—particularly those tied to identity-based food motivations—may also contribute to the process underlying identity-based food marketing. These notes are in recognition of the increasing need for transparency, empirical modesty, and justification when drawing conclusions from mediation models (Fiedler et al., 2018; Spencer et al., 2005).

Indirect Effects. Using the same effect coding noted above, the index of moderated mediation indicated that visual interest (centered) mediated the effect of racial congruence on unhealthy food chosen, conditional on participants' race and the type of product the posts contained b_{indirect} = .03, BootSE = .01, 95% CI = [0.003, .056]. This analysis revealed that for Black (but not White) participants, seeing a racially congruent (compared to incongruent) promoter strengthened visual interest in the post which increased the likelihood of choosing unhealthy food when that promoter endorsed unhealthy food, but not non-food products (see Table 1 for indirect effects). In other words, Black but not White adolescents found racially congruent promoters to be more visually interesting in endorsement posts, which increased the percent of unhealthy foods adolescents chose but only when the presented posts contained unhealthy food products.

Engagement with the Posts: Next, we explored the effects of visual interest on engaging with the posts by "liking," commenting on, or sharing them. We tested the

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c-path effect of participant race (−.5=White, .5=Black) on engagement. We found no overall difference between Black participants and White participants with respect to engagement with posts, b=−.02, SE=.07, t(537)=−0.33, p=.74, 95% CIs [−.16, .11].

As a-path effects remain unchanged, we report b-path effects, testing the effect of visual interest (centered) on engagement as moderated by the type of product endorsed in the post (−.5=non-food, .5=unhealthy food). Visual interest predicted engagement, b=.53, SE=.04, t(535)=14.13, p<.001, 95% CIs [.46, .60], such that participants reported stronger engagement with posts as visual interest grew stronger. Product type also predicted engagement, b=−.18, SE=.05 t(535)=−3.37, p<.001, 95% CIs [−.28, −.07], such that adolescents engaged with non-food product posts more than unhealthy food posts. The interaction between visual interest and product type was also significant, b=−.26, SE=.08, t(535)=−3.50, p<.001, 95% CIs [−.41, −.12]. Visual interest increased engagement when posts included unhealthy food, b=.40, SE=.05, t(535)=8.02, p<.003, 95% CI [.30, .50], and when posts included non-food products, b=.66, SE=.06, t(535)=−11.78, p<.001, 95% CI [.55, .77], though visual interest had a stronger effect of engagement when posts included non-food products, see Figure 6.

We used the same PROCESS-based moderated moderated mediation model (Hayes, 2022; Model 21, 10,000 bootstrap samples) to explore effects on engagement with the posts. This analysis suggested that Black but not White adolescents were more likely to engage with posts that they found visually interesting, regardless of the type of product endorsed. Among Black participants, seeing a racially congruent compared to incongruent promoter strengthened visual interest in the post which increased the likelihood of engaging with the post when that promoter endorsed either unhealthy food and or non-food products (see Table 2). Among White participants, engagement was not a function of visual interest and racial congruency of the promoter. Because visual interest increased engagement with posts differentially for Black and White adolescents, the index of moderated moderated mediation was significant, $b$indirect = −.13 BootSE = .05, 95% CI = [−0.24, −0.04]. This analysis suggests that Black but not White adolescents may be non-discriminately amplifying the reach of content that catches their attention regardless of whether doing so supports the dissemination of unhealthy food ads or other product types.

Study 2

While Study 1 demonstrated the unique effect of Black promoters on Black adolescents' food choices, other racial and ethnic minority groups are similarly underrepresented in traditional and digital media (Nielsen Diverse Intelligence Series, 2020) while also being disproportionately targeted as consumers of unhealthy food products (e.g., Fischer, Duffy, & Michos, 2021). We therefore expanded Study 2 to examine whether the effects observed among Black adolescents reflect a broader process whereby race-congruent promoters become especially salient for racially minoritized youth. We propose that ingroup cues carry heightened attentional and social significance among racial and ethnic minority adolescents because pressures for cultural alignment and identity validation are often stronger when navigating marginalization and belonging concerns (Brown, 2008; Denner et al., 2001; Hooker et al., 2025; Tseng, 2004). These dynamics likely increase the salience

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and diagnosticity of race-congruent promoters for multiple historically excluded minority groups, rendering racially congruent promoters more visually compelling, culturally informative, and behaviorally influential. As such, we expected other minority groups would respond to the minoritized identities of social media promoters in ways similar to Black adolescents. Study 2, then, replicated Study 1's design and expanded the minority participant demographics to include Black, Hispanic, and East Asian groups, allowing for **a broader understanding of how promoters' identities operate across minoritized groups.**

Methods

Participants: We recruited adolescents (n=869) in the same way as Study 1, from April 27, 2021 to June 9, 2021; most (n=606) were recruited within their classes from 3 participating high schools during a 1-month period of time during the academic year and completed the survey without compensation. All were living in the U.S. Again, at the requirement of participating schools, all students who were interested in completing the survey were allowed to complete it. After gaining insight into the demographics of students who responded to the request for participation in Study 1 (as well as available information about school demographics), we expanded the stimuli sets so that we could present racially congruent promoters to other racial/ethnic minority participants. In Study 2, we created additional stimuli sets that led us to be able to consider our target population as adolescents who identified as Black, East Asian, Hispanic, or non-Hispanic White; data from all participants who identified as members of other racial demographic groups were excluded from analyses. As in Study 1, given a priori concerns about our ability to recruit sufficient numbers of non-White participants, we simultaneously recruited additional participants (n=263) from Prolific, such that only participants that lived in the United States, were 18 or 19 years of age (required minimum age to provide their own consent), and identified as a member of the targeted racial or ethnic groups qualified for participation; they received $3.00 for completing the survey. We set this sampling approach before analysis, based on funding constraints and the time frame available to conduct the study. Participants reported their gender (n_{female}=533, n_{male}=315, $n_{non\text{-}binary\ or\ other\ term}$=21). They also reported their race and ethnicity (n_{East_Asian}=251, n_{Black}=125, $n_{Hispanic}$=97, n_{White}=396) at the end of the survey. We categorized White participants as racial majority, and we categorized East Asian, Black, and Hispanic participants as *racial/ethnic* minority for analyses given their individual and collective relative underrepresentation in traditional and social media (total $n_{minority}$=473).

Stimuli

Instagram Posts. Using Photoshop, we created 2 additional sets of 8 images that appeared similar to posts typical on Instagram following the same procedures as described in Study 1. We added sets that included East Asian and Hispanic male and female promoters endorsing the same unhealthy food or non-food products as in Study 1, while retaining the posts with Black and White promoters used previously (see Figure 7).

Procedure: We recruited participants via word of mouth in schools and through teacher emails to complete the survey at home, on their own time and undergo the same consent and assent process for the online survey as described in Study 1. We randomly assigned

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participants to 1 of 4 between-subjects conditions in the 2 (Promoter Race/Ethnicity Congruity: congruent, incongruent) x 2 (Endorsed Product: Unhealthy Food, Non-food) design. All participants saw one set of posts. Among minority participants, the promoters either matched participants' racial-ethnic identity (e.g., Hispanic participants saw Hispanic promoters) or were White; for White majority participants, the promoters were either congruent with participants' racial identity in that they were White, or were one of the 3 minority groups. We collapsed across the specific racial or ethnic minority group to which promoters belonged among White participants. Random assignment yielded the following racial distribution of participants across the congruent and incongruent conditions: Asian participant with congruent promoter = 122, Asian participant with incongruent promoter = 129, Black participant with congruent promoter = 61, Black participant with incongruent promoter = 64, Hispanic participant with congruent promoter = 41, Hispanic participant with incongruent promoter = 56, White participant with congruent promoter = 200, White participant with incongruent promoter = 196.

Measuring Visual Interest and Engagement. We measured visual interest using the same items as in Study 1. We created an aggregate index of visual interest averaging the same 3 questions in response to each stimulus as we did in Study 1 (α=.93). In addition, we measured engagement with the post as in Study 1 and averaged responses to this item provided in response to all stimuli.

Snack Selection. Participants viewed 20 pairs of snacks and reported which one they would like to eat right now. The pairings we created for Study 2 differed from those in Study 1 in that we visually depicted only single serving sizes (see Figure 2). Stimuli varied in the presence of branding (17 unhealthier and 6 healthier options were branded). We computed the percentage of less healthy foods chosen as an index of intentions to eat less healthy foods after viewing sets of posts.

At the end of the survey, participants reported demographics including race, gender, and high school and its location. Unfortunately, due to a technical error, age, weight, and height was not asked.

Additional Measures. Though not central to our predictions, we gathered additional measures assessing calorie knowledge and recognition memory for ads that we report in the Supplement for transparency, see Figure S1 for example stimulus set. As in Study 1, responses to the rarity question did not load on the same factor as the 3 items assessing visual interest (eigenvalue=.13) whereas responses to how cool is the post, how cool is the person in the post, and how attention capturing is the person in the post all loaded highly on the single factor (eigenvalues > .91). Because it appears to index a conceptually distinct outcome, including rarity in the composite substantially lowered the reliability of the index of visual interest (to α=.76). As such, we excluded rarity from all analyses moving forward, replicating the approach used in Study 1.

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Results

Analytic Approach

Using multiple regression, we tested group differences on the index of visual interest based on participants' race (White, minority), promoter race congruity (congruent, incongruent) and type of product endorsed (food, non-food). Again, we regressed each outcome measures on effect coded racial congruence, participant race, product type, and each of their interactions. We decomposed interaction effects with dummy coded variables to report simple effects. Besides the difference in how we operationalized participant race, the theoretical model we tested was equivalent to Study 1.

The two-way interaction between participant race and participant-promoter racial congruence on visual interest was central to our interest. A sensitivity analysis conducted using the pwr package in R (Champely, 2020) indicated that, given the sample size (N = 869), $\alpha = .05$, and three predictors in the model, the analysis had 80% power to detect an interaction effect as small as $f^2 = .009$. When transformed, this corresponded to an unstandardized regression coefficient of $b = .213$ for the interaction term in the current model.

Participants Race Predicts Food Choice

Participant race predicted the percent of unhealthy foods adolescents chose, b=.04, SE=.01, t(867)=2.98, p=.003, 95% CIs [.01, .07]. Racial and ethnic minority participants selected more unhealthy foods than did White participants.

Visual Interest

Next, we tested the a-path effects of promoter racial congruence (−.5=incongruent, .5=congruent) on visual interest as moderated by participant race (−.5=White, .5=minority). The main effect of participant race was not significant, b=.07, SE=.05, t(865)=1.47, p=.14, 95% CIs [−.02, .16], nor was the main effect of promoter racial congruity, b=.07, SE=.05, t(865)=1.60, p=.11, 95% CIs [−.02, .17]. However, as expected, the interaction between promoter racial congruence and participant race on visual interest was significant, b=.37, SE=.09, t(865)=4.04, p<.001, 95% CIs [.19, .56] (Supplement Table S4 reports results when including participant recruitment source as a factor, which does not moderate effects). We found that racial congruence increased reports of visual interest among non-White participants, b=.26, SE=.06, t(865)=4.18, p<.001, 95% CI [0.14, 0.38), but had no significant effect among White participants, b=−.11, SE=.07, t(865)=−1.65, p=.10, 95% CI [−0.25, 0.02]), see Figure 9. This effect of promoter racial congruity on *racial/ethnic* minority and White adolescents' visual interest was mirrored when probing effects on recognition accuracy for peripheral changes to the posts (see Supplement for analyses).

Visual Interest Predicts Food Choice

We next modeled the b-path effects, testing the effect of visual interest (centered) on the percent of unhealthy food chosen as moderated by the type of product endorsed in the post (−.5=non-food, .5=food). There was a main effect of product type on the percent of unhealthy food selected, b=.04, SE=.01, t(865)=2.82, p=.005, 95% CIs [.01, .06].

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Similarly, there was a main effect of visual interest, b=.03, SE=.01, t(865)=2.85, p=.004, 95% CIs [.01, .05]. Importantly, the interaction between product type and visual interest was significant, b=.06, SE=.02, t(865)=2.87, p=.004, 95% CIs [.02, .09]. When the posts featured unhealthy food, increasing visual interest increased the percent of unhealthy foods chosen, b=.06, SE=.01, t(865)=4.27, p<.001, 95% CI [0.03, 0.08]), but when posts featured non-food products, visual interest did not relate to unhealthy foods chosen, b<.001, SE=.01, t(865)=−0.01, p=.99, 95% CI [−0.03, 0.03], see Figure 10.

Consequences of Visual Interest on Food Choice

We used the same PROCESS-based mediation approach as Study 1 to test the consequences of visual interest as a mediator of the effect on the percent of unhealthy foods participants selected. Again, we modelled a moderated (moderated) mediation, which included an a-path moderator of participant race (White, minority) on the effect of racial congruence on visual interest. It also featured a b-path moderator of product type on the effect of visual interest on percent of unhealthy foods chosen (Hayes, 2022; Model 21, 10,000 bootstrap samples).

Indirect Effects. The index of moderated mediation indicated visual interest (centered) served as a mediator of the effect of promoter racial congruence on unhealthy food chosen, conditional on participants' race and the type of product the posts contained, $b$indirect = .02, BootSE = .01, 95% CI = [0.005, 0.042]. This analysis revealed that for *racial/ethnic* minority participants, seeing a racially congruent promoter strengthened visual interest in the post which increased the likelihood of choosing unhealthy food when that promoter endorsed unhealthy food, but not non-food products (see Table 3 for indirect effects). Alternatively, among White participants, seeing a racially incongruent promoter strengthened visual interest in the post which increased the likelihood of choosing unhealthy food when that promoter endorsed unhealthy food, but not non-food products. *Racial/ethnic* minority but not White adolescents found racially congruent promoters to be more visually interesting in endorsement posts, which increased the percent of unhealthy foods adolescents chose but only when those posts contained unhealthy food products.

Engagement with the Posts

Next, we explored the effects of visual interest on engaging with the posts by "liking," commenting on, or sharing them. We tested the c-path effect of participant race (−.5=White, .5=Black) on engagement. Overall racial and ethnic minority participants engaged with the posts more than did White participants, b=.13, SE=.05, t(537)=2.59, p=.010, 95% CIs [.03, .23].

As a-path effects remain unchanged, we report b-path effects, testing the effect of visual interest (centered) on engagement as moderated by the type of product endorsed in the post (−.5=non-food, .5=food). Visual interest predicted engagement, b=.72, SE=.03, t(865)=25.61, p<.001, 95% CI [.66, .77]; participants reported stronger engagement as posts were judged as more visually interesting. Product type did not predict engagement, b=−.06, SE=.04, t(865)=−1.68, p=.09, 95% CI [−.14, .01]. The interaction was not significant, b=.03, SE=.06, t(865)=0.50, p=.62, 95% CI [−.08, .14], see Figure 11.

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We used the same PROCESS-based moderated moderation mediation model (Hayes, 2022; Model 21, 10,000 bootstrap samples) to explore effects on engagement with the posts. Though the previous analysis identified that the effect of visual interest on engagement was not moderated by product type, we maintained the same analytic approach and same model parameters for this moderated moderated mediation analysis as we have in all analyses for consistency. This analysis suggests that White and *racial/ethnic* minority adolescents were more likely to like, share, and engage with posts that they found visually interesting, regardless of the type of product endorsed. Among *racial/ethnic* minority participants, seeing a racially congruent compared to incongruent promoter strengthened visual interest in the post which increased the likelihood of engaging with the post, by liking or sharing it when that promoter endorsed either unhealthy food and non-food products (see Table 4). Among White participants, seeing a racially incongruent promoter strengthened visual interest which increased the likelihood of engaging with the post, regardless of whether the promoter endorsed unhealthy food or non-food products. Because visual interest increased engagement when posts contained both product types, the index of moderated moderated mediation was not significant, *b*indirect = .01, BootSE = .03, 95% CI = [−0.04, 0.06]. This analysis suggests that adolescents may be non-discriminately amplifying the reach of content that catches their attention regardless of whether doing so supports the dissemination of unhealthy unhealthy food ads or other product types.

General Discussion

Over 40% of youth are overweight, obese, or severely obese in America (Fryar, et al., 2021). One driver is exposure to unhealthy food advertisements (Smith et al, 2019), particularly on social media. We experimentally tested the psychological mechanisms by which differential exposure to social media marketing of unhealthy food products impacts racially underrepresented adolescents relative to White adolescents. We found that racially targeted food marketing shaped visual interest among racial or ethnic minority adolescents more than among non-Hispanic White adolescents. Minority adolescents rated posts featuring racially congruent (vs incongruent) promoters as more visually engaging, while White adolescents showed no such preference. Crucially, visual interest related to unhealthy food choices; as visual interest in the posts that promoted unhealthy foods (vs non-food products) increased, minority adolescents more often selected unhealthy food over healthier options (Studies 1, 2). These findings provide the strongest evidence to date that increased visual interest in identity-congruent promoters, combined with social modeling, drives disproportionate susceptibility to unhealthy food marketing among racial and ethnic minority youth—contributing to dietary disparities not seen in White adolescents.

Contributing to Virality of Promoter Content

Visual interest reliably predicted adolescents' likelihood of engaging with posts in ways that spread their impact on social media. Regardless of what the post was advertising, visually engaging content increased adolescents' inclinations to engage with it. In other words, adolescents appeared motivated by the appeal of the image rather than by the nature of the product. Because they indicated a willingness to amplify unhealthy-food promotions and posts featuring non-food products, so long as the post captured their attention visually, they

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may be non-discriminatorily contributing to the viral spread of content that could ultimately undermine health.

Ironically, other research finds that adolescents report believing that they are highly competent at judging the credibility of online information. They feel confident that they can simply ignore, delete, or block content they do not want to spread (Selnes, 2024). Yet it is possible that adolescents fail to recognize that promoter posts promoting unhealthy food operate as persuasive propaganda, much like the deceptive tactics of online fake news outlets, and may therefore require similar protective, disengagement mechanisms to curb their spread.

Visual Interest as Identity-Guided Attentional Tuning

Our findings suggest that visual interest is not merely a surface-level reaction to social media content, but may reflect deeper, identity-guided attentional processes that shape adolescent decision-making. Specifically, racially congruent promoters may trigger a form of attentional tuning rooted in identity relevance, directing cognitive resources toward stimuli that feel personally meaningful. This aligns with motivated perception frameworks (e.g., Balcetis & Dunning, 2006), which demonstrate that what individuals see—and how they see it—is shaped not only by physical features of a stimulus but also by psychological and motivational significance. People are more likely to attend to individuals with whom they share a social identity (Kawakami et al., 2021) and to content that reflects their self-concept (Coleman & Williams, 2015). This type of **value-based attentional tuning** governs what is noticed, but also alters neural processing in visual and attentional systems, increasing the likelihood that identity-relevant cues are encoded and acted upon (Anderson, 2019). In this context, heightened visual interest in racially congruent promoters may signal more than aesthetic preference—it may serve as a proxy for engagement mechanisms that influence memory, judgments, and ultimately, health-related behavior.

Implications for Health Communications

Prior work in health communication and marketing underscores the importance of ingroup processes in shaping persuasion. People form ties and engage with those they share social identities with (Tajfel & Turner, 1979), resulting in highly homogeneous networks that shape attitudes and behavior (McPherson et al., 2001). Ingroup members are appraised as more credible, relevant and trustworthy, increasing the likelihood that their messages are adopted (e.g., Wang, 2002; Escalas & Bettman, 2005; Ohanian, 1990).

Our findings extend this literature by identifying a proximal mechanism through which these effects arise. Rather than challenging accounts that emphasize credibility and relevance (e.g. Kreuter & Wray, 2003), we situate them downstream in the process and highlight the role of visual interest capture in shaping which information is selected and encoded in the first place (Balcetis, 2008). Ingroup-congruent sources are more likely to capture and sustain attention (e.g., Kawakami et al., 2018), thereby increasing exposure to and encoding of their messages. Thus, ingroup influence, particularly among minoritized individuals, operates not only because rare, ingroup relevant sources are judged more favorably, but because they

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are more likely than outgroup individuals to grab attention in early stages of information processing.

Implications for Identity and Representation

It is possible that when youth see promoters who share their racial identity, they are not merely reacting to the persuasive appeals promoters are endorsing; instead, youth may be engaging in **identity-based meaning-making**. Adolescent social media engagement, including commenting or sharing content, is more strongly linked to their identity development than simply time spent online alone (Avci et al., 2024). If visual interest in the post and the people in it promotes engagement with the content, then exposure to racially congruent ads for minority youth may not only impact the behavioral choices they make but also their generalized **sense of self** and their identity (Morita, Griffioen, & Granic, 2022). Exposure to identity-congruent content endorsing unhealthy products may signal what is normative or desirable for "people like me." In this way, food marketing on social media not only shapes consumer behavior but may also entrench health disparities by embedding unhealthy norms into particularly *racial/ethnic* minority adolescents' identity development.

To be clear, we believe there should be greater representation of racial minorities within the space of content creation, product promotion, and social media influence. Diversity in digital spaces affords dignity and opportunity to members of underrepresented and under resourced social groups. However, when non-White promoters are often presented as endorsers of unhealthy products, existing disparities can worsen, in part, through the mechanisms we identified in this work. Instead, we implore advertisers and nutritionists to pair strategies for recognizing disproportionate distribution of unhealthy food marketing with efforts to pursue a more equitable distribution of representation in healthy food marketing campaigns. Strategically shifting towards including non-White promoters in the promotion of health food options may shift interest in and engagement with marketing content that pairs health with minority groups. However, we caution that, of course, simply pairing racial and ethnic minority promoters with healthy foods may not override all forces that contribute to racial disparities in healthy diets (see also Coates, Hardman, Halford, Christiansen, & Boyland, 2019). Ultra-processed foods dominate social media marketing (Lafontaine, Hanson, & Wild, 2025), are highly branded (Monteiro, Cannon, Levy, et al., 2019), and are embedded in identity signaling mechanisms (Moodie et al., 2021), making them salient, familiar, and normatively expected in influencer content. Such factors create a strong baseline persuasive infrastructure that identity-congruent promoters can amplify. In contrast, healthy foods are less frequently marketed (World Health Organization, 2022), less consistently branded (Monteiro, Cannon, Levy, et al., 2019), and less tied to identity expression (Harris, Reed, Maksi, Ananthan, Chenault, Story, & Lott, 2024), reducing both their visual interest and their capacity to benefit from identity-based amplification. Moreover, adolescents' preferences for junk foods are driven by hedonic reward (Rego, et al., 2023), peer norms (Chung, et al., 2021), and social bonding—factors closely aligned with identity (Neufeld, et al., 2022)—whereas healthy food choices are more instrumental and externally regulated (Neufeld, et al., 2022; Wang & Fielding-Singh, 2018). As such, researchers should treat identity-congruent promotion of healthy foods as a distinct theoretical problem, not a simple extension of the effects we observed here. This means designing studies that directly test

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how to *build* the missing persuasive infrastructure around healthy foods—by increasing their visual interest, branding, and identity relevance, and by examining how these factors interact with attention and social influence processes. For marketers, these findings suggest that simply featuring minority promoters is unlikely to be sufficient. To be effective, healthy food campaigns must be designed to compete within the same attention economy as ultra-processed foods—by investing in strong branding, repeated exposure, and embedding products within identity-relevant, socially meaningful contexts. This includes linking healthy foods to peer norms, enjoyment, and self-expression, rather than solely emphasizing health or utility. Future work should explicitly test how individual differences related to cultural norms and social belonging might fit directly into this model as motivational drivers that help explain disparities in nutrition-based decision-making.

Limitations

One limitation is that participants made hypothetical choices about the food they would consume. We believe these results inform on the effect of targeted marketing on real decisions. Indeed, adolescent food preferences shape their actual behavior choices (Daly, et al., 2022). Other research also shows convergent effects using hypothetical choice paradigms and real choice paradigms in children (Porter et al., 2018). Likewise, both food images and real foods lead to similar neural and craving responses (Boswell, et al., 2016), suggesting that hypothetical indications of preferences bear on behavioral outcomes.

We note that we used correlational mediation approaches to test the consequences of experimentally induced changes in visual interest. Our results are consistent with a mediation model. However, because our design does not lend itself to experimentally manipulating the proposed psychological process of visual interest without fundamentally changing the key features like identity-relevant information about the promoter, we are cautious with our interpretation and do not conclude that visual interest causes changes in behavioral intentions to eat unhealthy food. However, we gain assurance in our claims as the correlational relationship between visual interest and food choices is moderated by product type endorsed in the post, limiting the possibility of other confounding variables contributing to the observed relationship.

Moreover, we note that our mediation analysis and additional regression analyses we report in the Supplement (see Tables S1 and S3) predicting food choices did not find a direct effect of participant race, promoter racial congruity, and product type; that is, the 3-way interaction among these variables did not predict the proportion of snacks participants chose that were unhealthy. Instead, consistent with the indirect effects within the mediation analysis, participants selected unhealthier foods similar to the ones that that racially congruent promoters endorsed so long as they appraised the posts they were viewing as visually interesting. The non-significant direct effect suggests that the persuasive influence of social media content may not operate simply through identity matching and behavioral modeling. Rather visually interesting posts may shape food choices by capturing attention and encouraging relatively superficial processing of persuasive cues. This interpretation aligns with the Processing of Commercialized Media Content model, which proposes that food advertising has stronger effects when food-related cues are processed with less cognitive

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elaboration (Buijzen et al., 2010). Visually interesting social media posts may therefore function as persuasive food advertising cues that draw attention while reducing deeper scrutiny of embedded marketing schemes, including the reliance on racialized targeted marketing to increase sales of unhealthy products. This positions visual appeal not as a superficial feature of social media, but as a psychologically meaningful mechanism through which marketing environments shape preferences and behavior.

Notably, racialized targeted marketing on social media of unhealthy foods is not the sole cause of differences in food preferences among youth, nor the sole, or even primary, reason for health disparities. Multiple factors beyond targeted marketing of foods that we studied here contribute to health outcomes including the higher cost of healthier diets (Darmon & Drewnowski, 2015) and access to neighborhood stores carrying healthy food (Walker, Keane, & Burke, 2010). Future research should prioritize integrating multiple sociocultural factors into studies of targeted marketing and nutrition-based disparity.

Conclusion

Shared racial identity is a powerful driver of minority adolescents' health choices. Food advertisements that include identity-congruent promoters are visually engaging, which markedly shifts adolescents' dietary preferences. Such effects may contribute to the development of long-term eating patterns that exacerbate population-level health disparities.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Open Practices

All materials, data, and analytic code are available https://osf.io/75q2w/overview?view_only=927856271f0e4f2b81958f47215d0d39.

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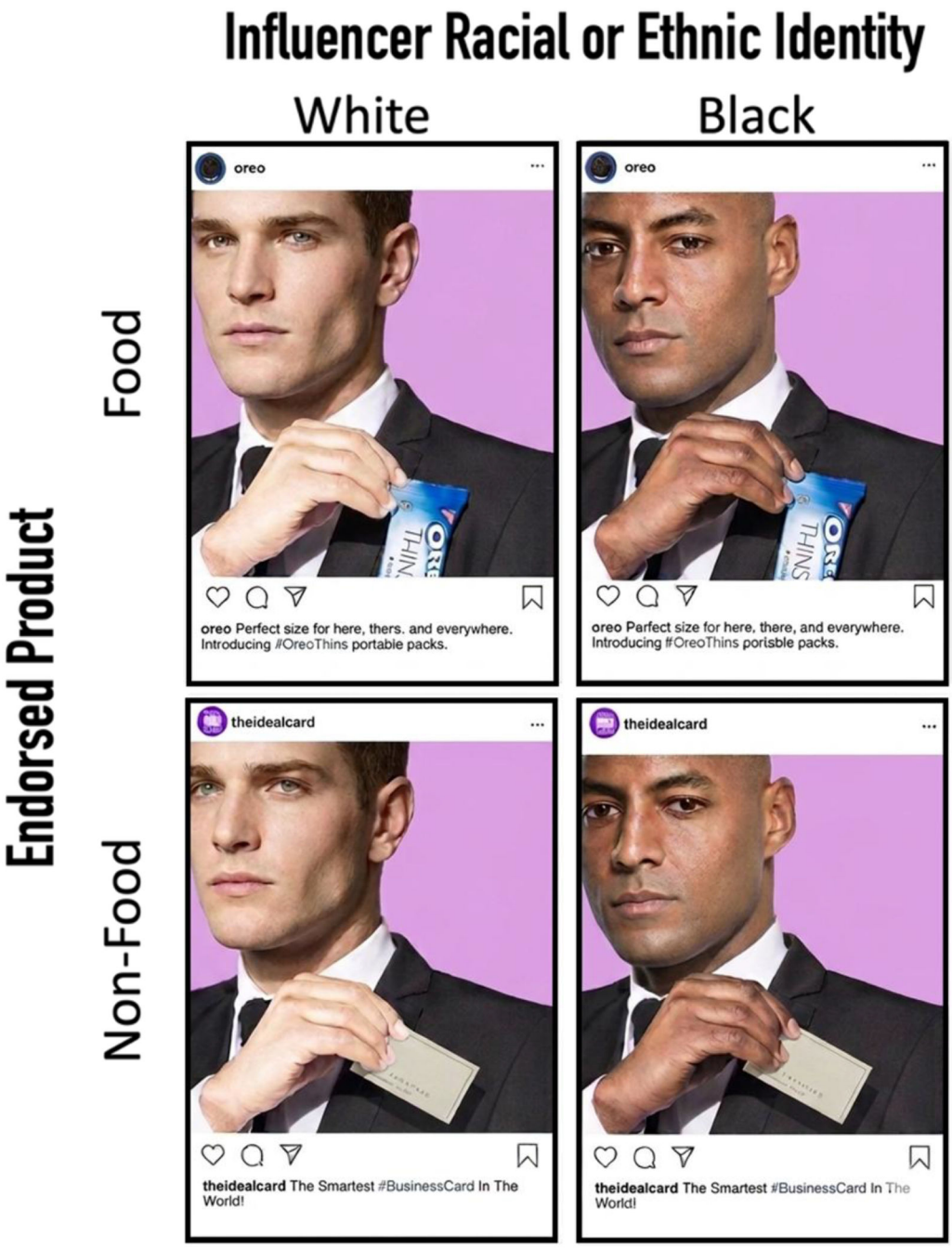


Figure 1.

Examples of Instagram posts used in Study 1. The images shown are similar to, but not identical depictions of, the posts participants viewed. For these examples, we modified facial features because it was not possible to gain permission to publish photographs of the people who appeared in them. Original stimuli are available on OSF.

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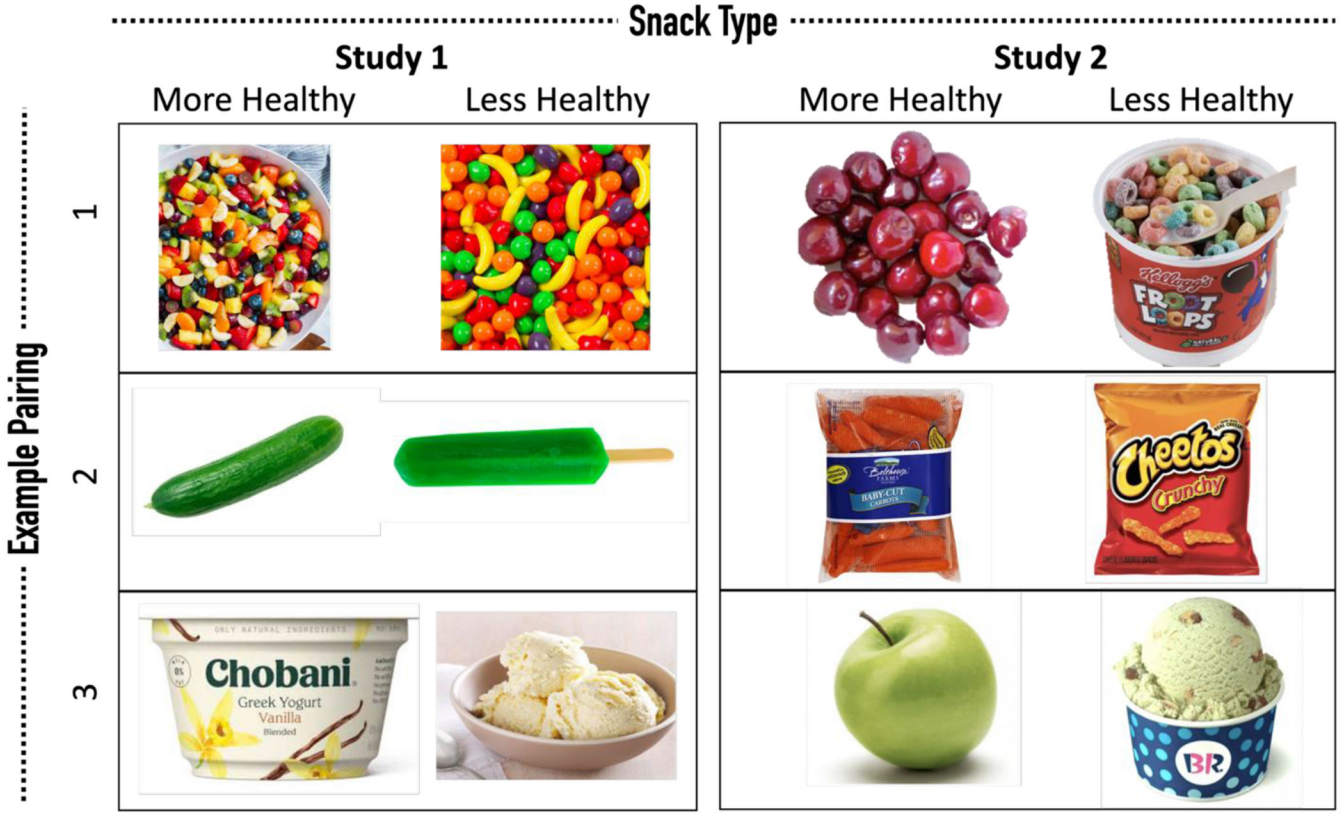


Figure 2.
Examples of snack pairings in Study 1 and Study 2.

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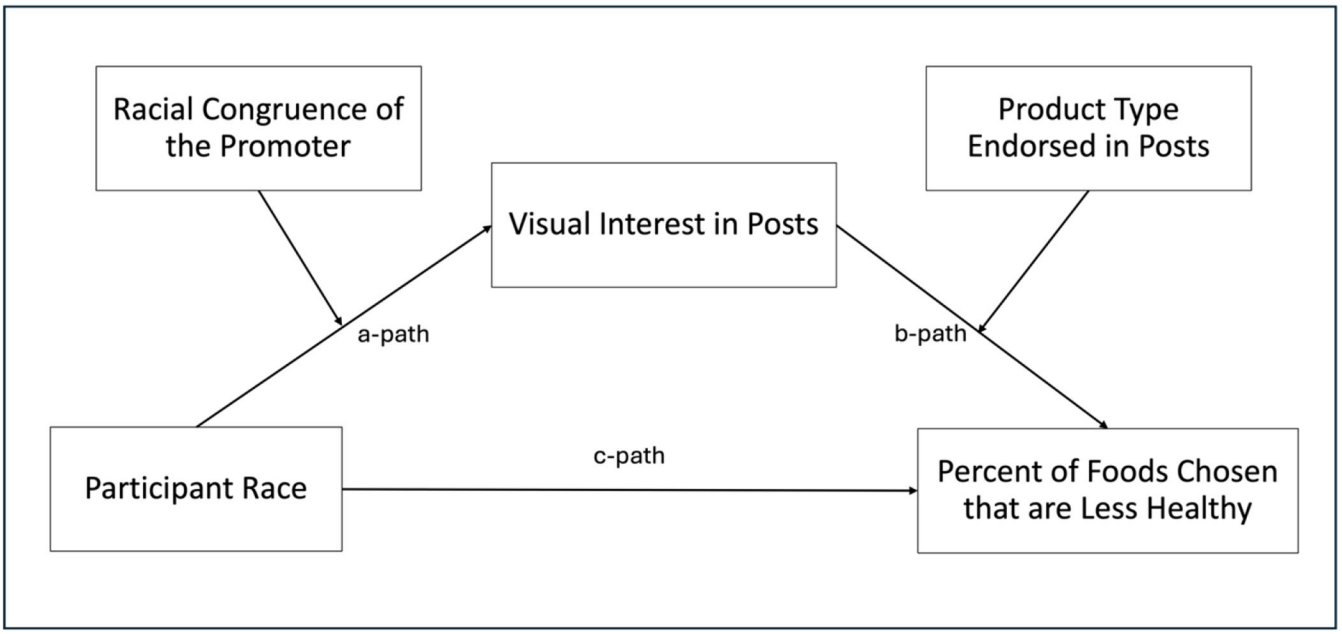


Figure 3.

The figure presents the conceptual model depicting the anticipated relationship between participant race on unhealthy food selection by way of visual interest. Participants' racial identity, as moderated by the racial congruence of the promoter, increases visual interest in posts the promoter appears in, which increases the percentage of foods chosen that are less healthy, conditional on those posts endorsing unhealthy foods (vs non-food products).

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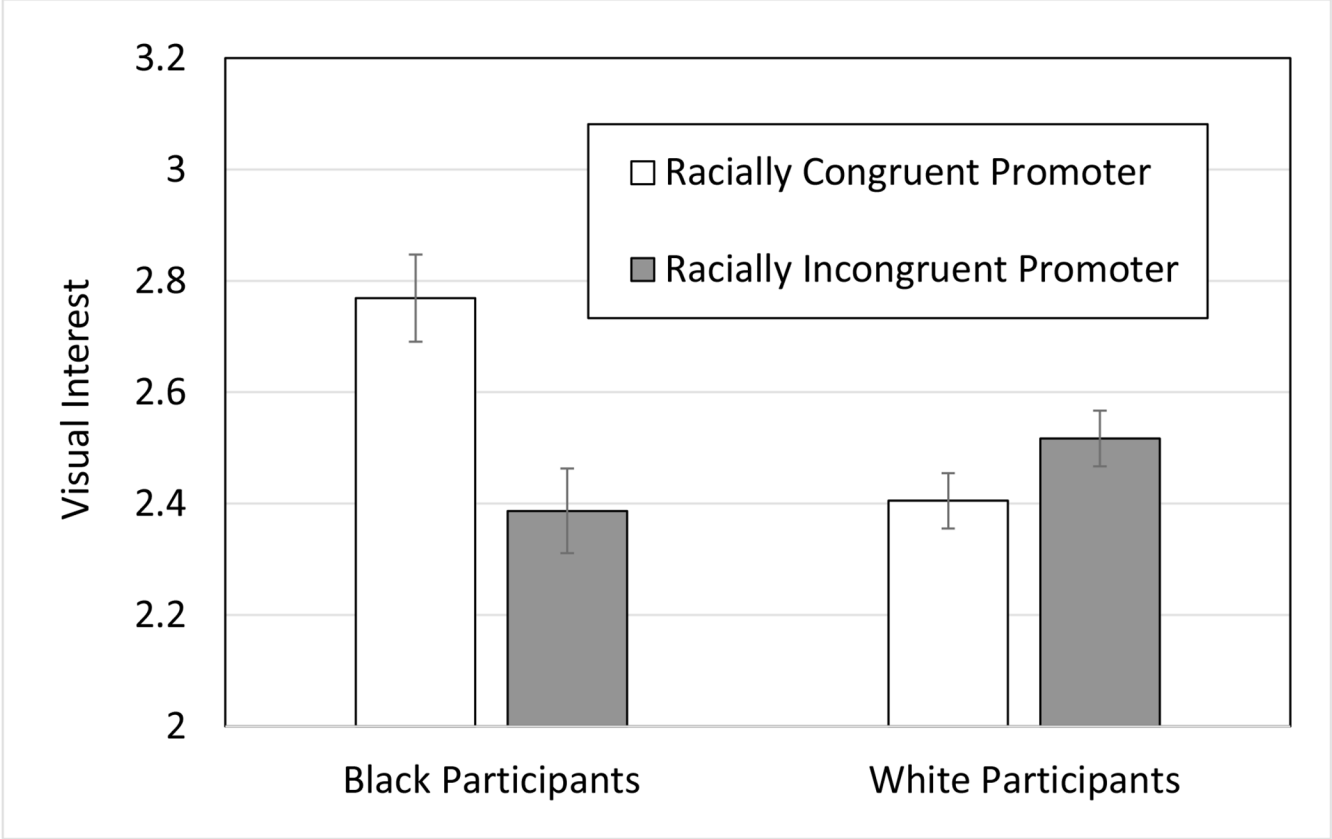


Figure 4.
Study 1, visual interest as a function of participants' race and racial congruence of promoters. Error bars reflect standard error.

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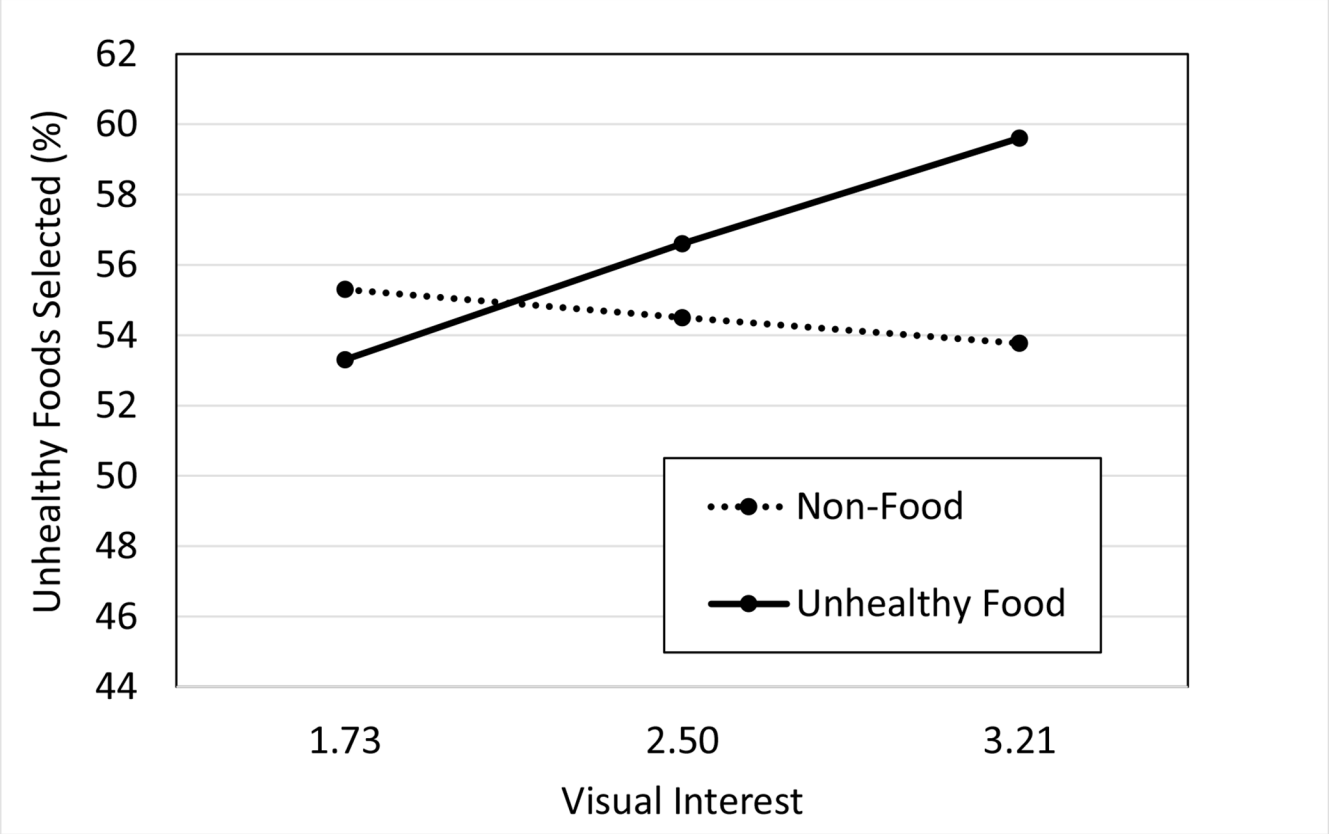


Figure 5.

Study 1, percent of snacks selected for consumption that were less healthy, as predicted by the regression model, as a function of the visual interest of the ads, modeled at the 16th, 50th, and 84th percentiles in the distribution of scores, and whether the posts included unhealthy or non-food products.

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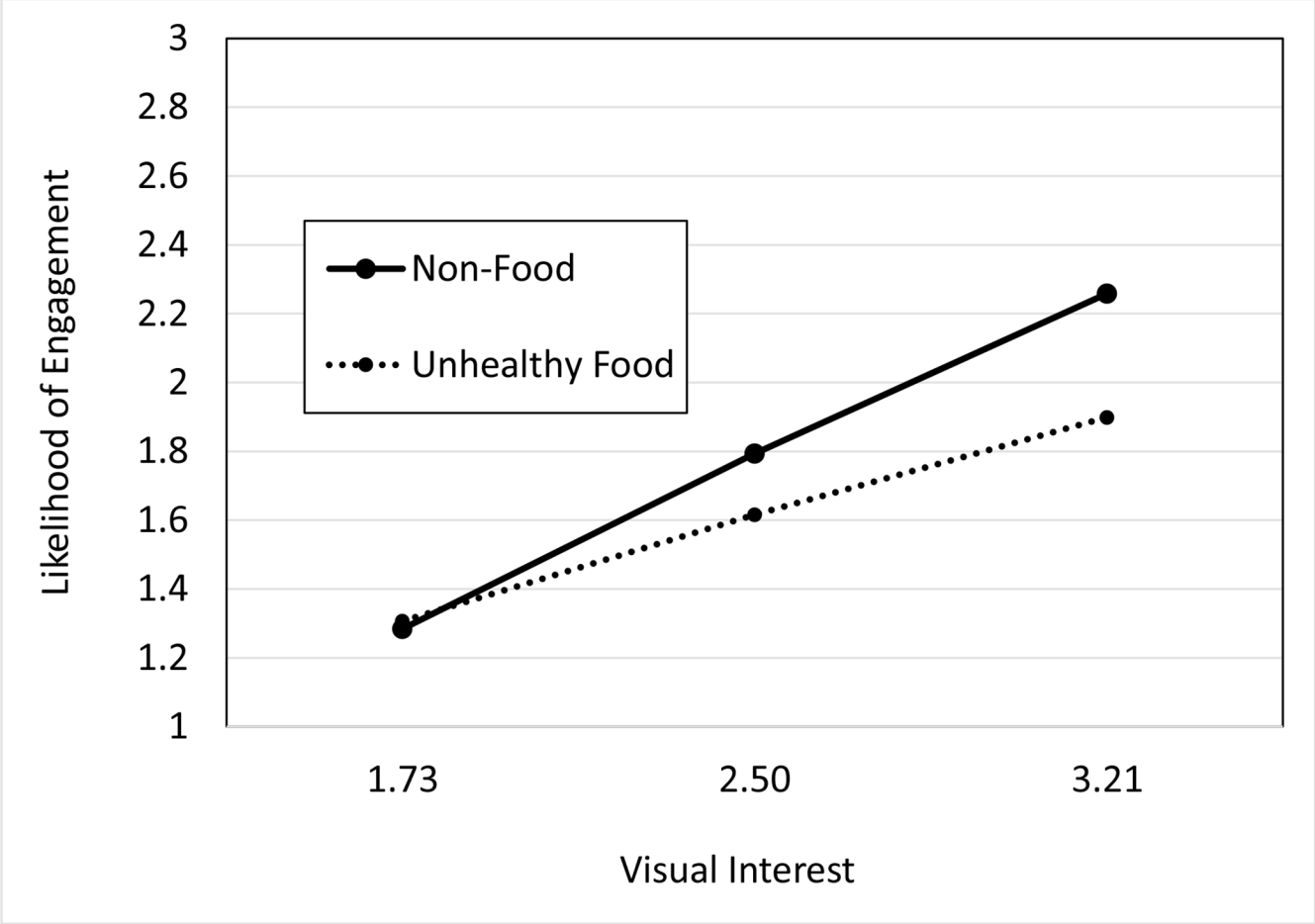


Figure 6.

Likelihood of engaging with posts that endorsed unhealthy food or non-foods, by "liking," commenting on, or sharing, as predicted by the regression model, as a function of the visual interest of the ads, modeled at the 16th, 50th, and 84th percentiles in the distribution of scores.

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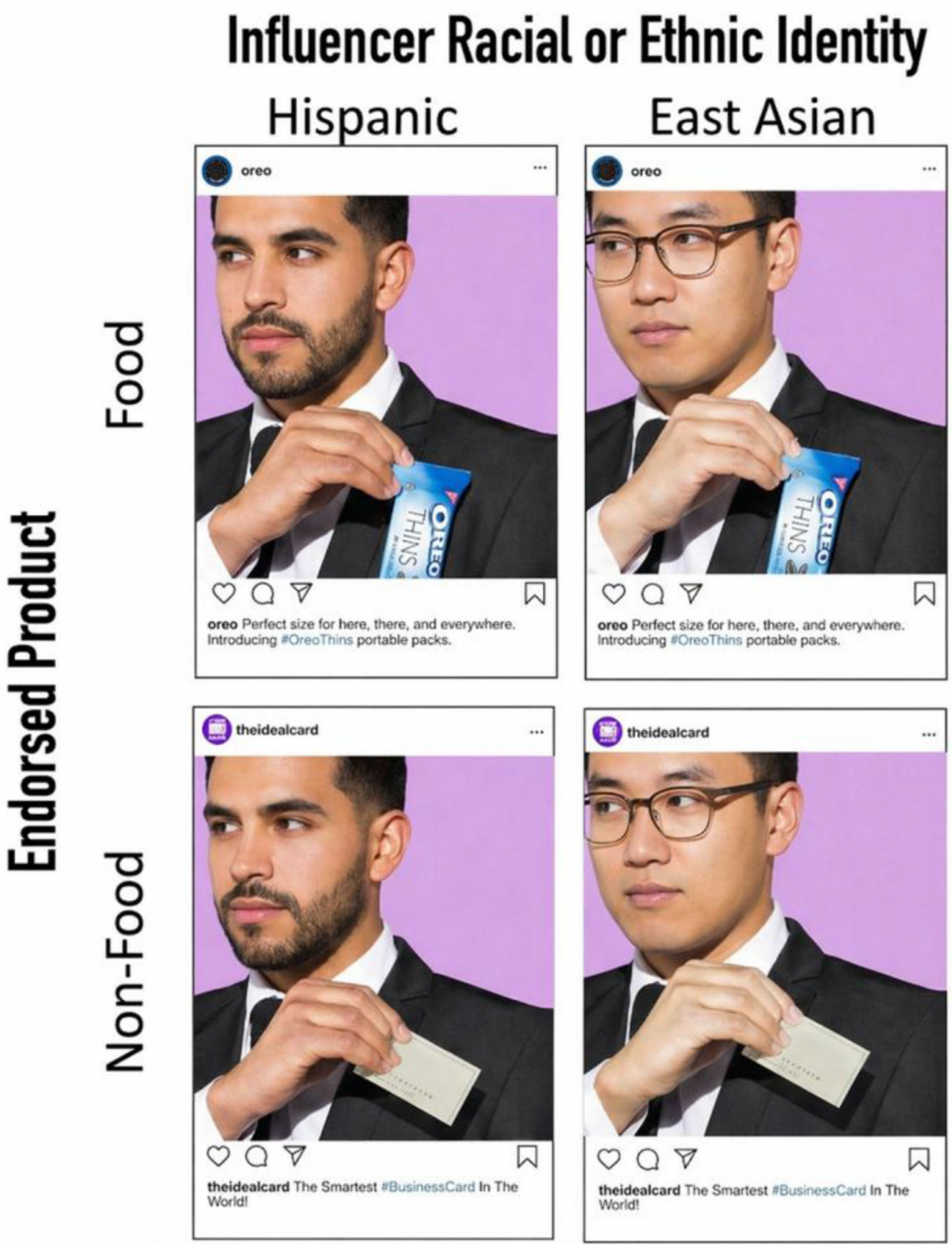


Figure 7.

Examples of Instagram posts used in Study 2. The images shown are similar to, but not identical depictions of, the posts participants viewed. For these examples, we modified facial features because it was not possible to gain permission to publish photographs of the people who appeared in them. Original stimuli are available on OSF.

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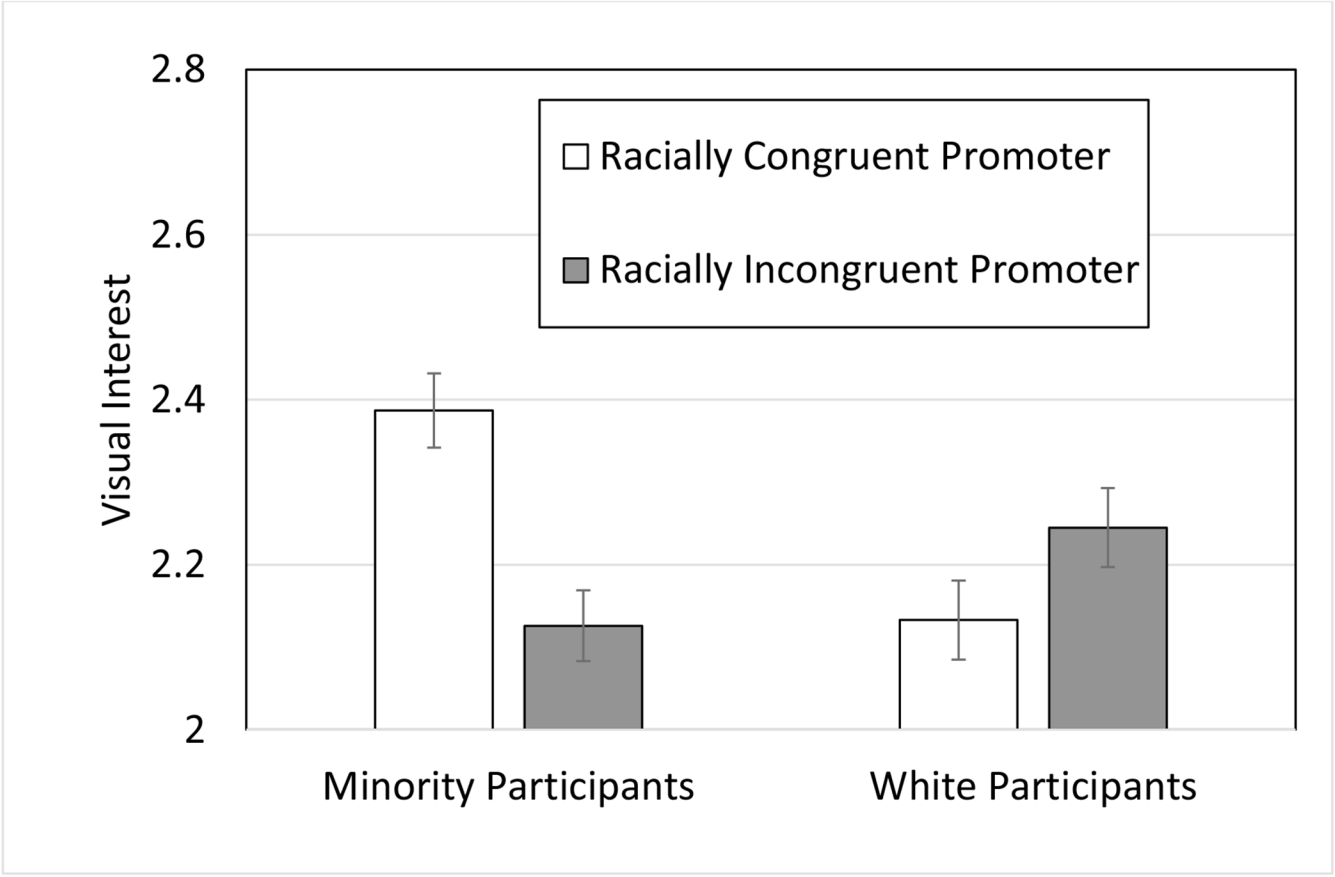


Figure 9.
Study 2, visual interest as a function of participants' race and racial congruence of promoters. Error bars reflect SE.

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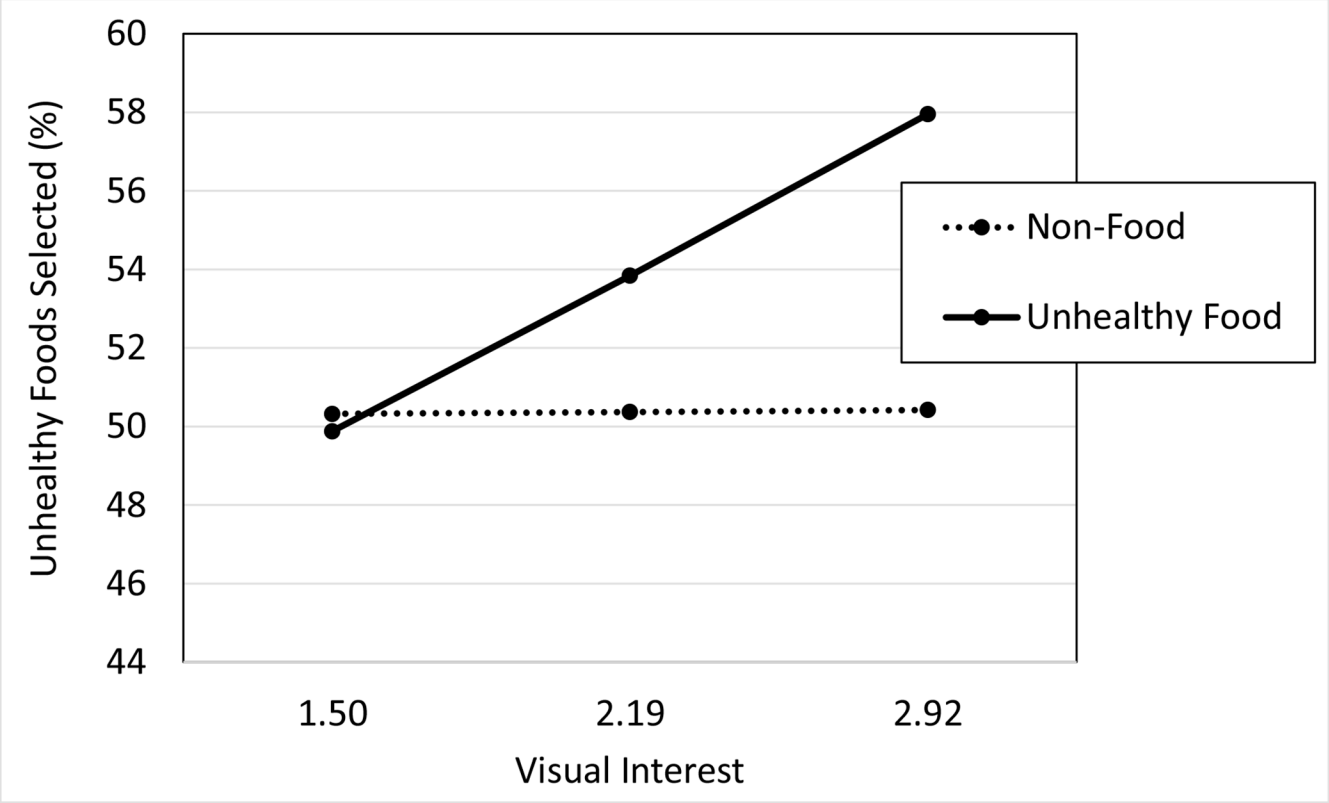


Figure 10.

Study 2, percent of snacks selected for consumption that were unhealthy food rather than healthy foods, as predicted by the regression model, as a function of the visual interest of the ads, modeled at the 16th, 50th, and 84th percentiles in the distribution of scores, and whether the posts included food or non-food products.

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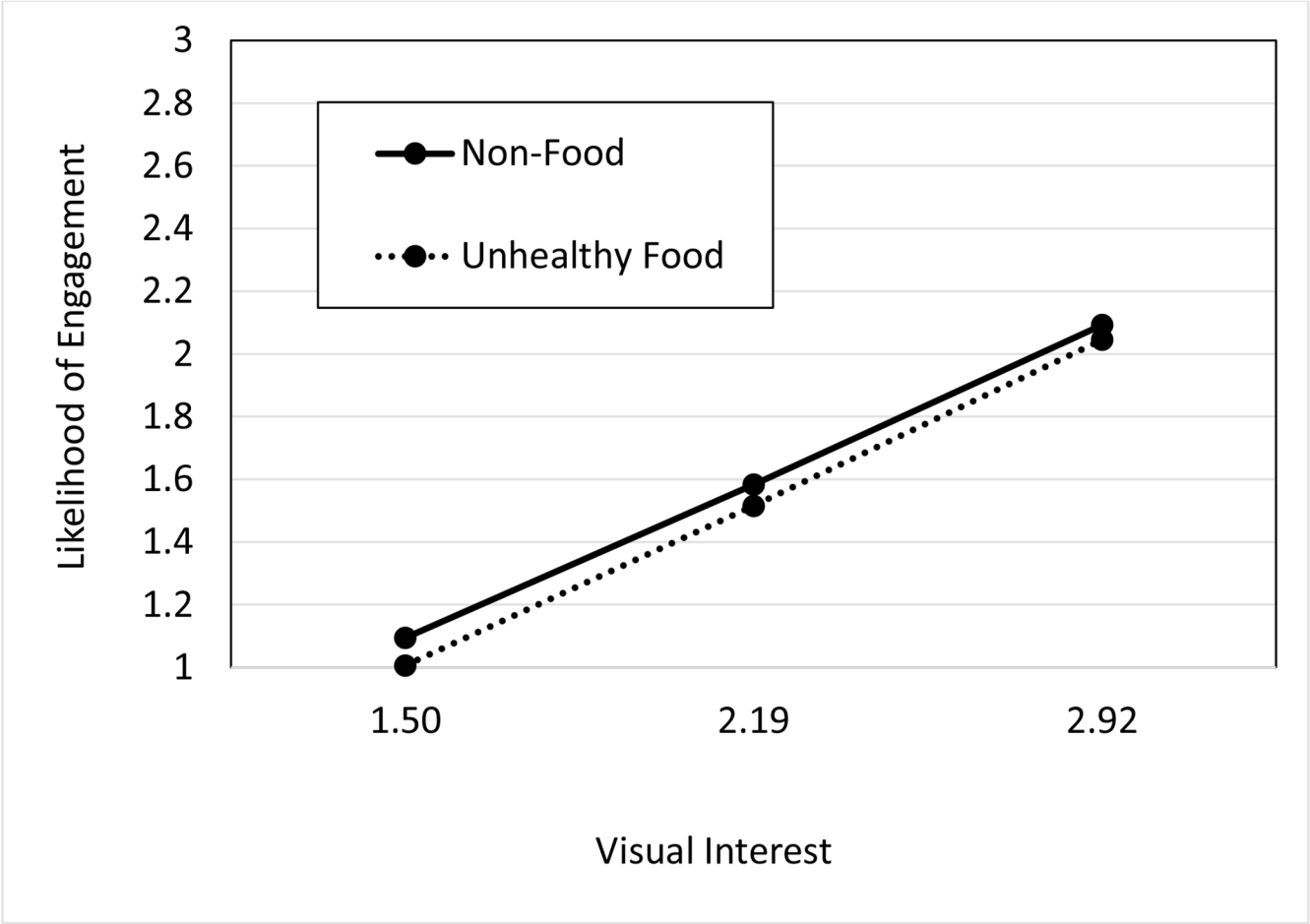


Figure 11.

Study 2, likelihood of engaging with posts that promoted unhealthy food and non-food, as predicted by the regression model, as a function of the visual interest of the ads, modeled at the 16th, 50th, and 84th percentiles in the distribution of scores.

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Table 1.

Indirect effects and bootstrapped standard errors of the effect of promoter racial congruency on the percent of unhealthy foods chosen through visual interest. Significance is confirmed when 95% confidence intervals (CIs) do not include zero.

Participant Race	Product Endorsed	Effect	BootSE	95% CIs
Black	Unhealthy Food	.02	.008	[.003, .034]
	Non-Food	−.004	.007	[−.019, .009]
White	Unhealthy Food	−.005	.004	[−.013, .001]
	Non-Food	.001	.002	[−.003, .007]

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Table 2.

Indirect effects and bootstrapped standard errors of the effect of promoter racial congruency on engagement with posts through visual interest. Significance is confirmed when 95% confidence intervals (CIs) do not include zero.

Participant Race	Product Endorsed	Effect	BootSE	95% CIs
Black	Unhealthy Food	.15	.05	[.07, .25]
	Non-Food	.25	.07	[.12, .38]
White	Unhealthy Food	−.04	.03	[−.11, .01]
	Non-Food	−.07	.05	[−.17, .02]

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Table 3.

Indirect effects of promoter racial congruency on percent of unhealthy foods chosen through visual interest.

Participant Race	Product Endorsed	Effect	BootSE	95% CIs
Racial/ethnic minority	Unhealthy Food	0.015	0.005	[0.006, 0.026]
	Non-Food	0.002	0.004	[−0.008, 0.009]
White	Unhealthy Food	−0.006	0.004	[−0.015, 0.001]
	Non-Food	−0.0001	0.002	[−0.004, 0.005]

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Table 4.

Indirect effects of promoter racial congruency on engagement with the posts through visual interest.

Participant Race	Product Endorsed	Effect	BootSE	95% CIs
Racial/ethnic minority	Unhealthy Food	0.19	0.05	[0.10, 0.29]
	Non-Food	0.18	0.05	[0.09, 0.28]
White	Unhealthy Food	−0.08	0.05	[−0.18, 0.01]
	Non-Food	−0.08	0.05	[−0.17, 0.01]