

Representation matters: Exposure to advertisements featuring models with different skin shades affects body image, well-being and advertising effectiveness among South Asian Women in the UK

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ABSTRACT

Racialised appearance ideals displayed in media and advertising imagery privilege white or light skin. Yet, little research has tested how white or light skin ideals in advertising influence body image. In this online experimental study, South Asian women in the UK ($N = 194$, $M_{\text{age}} = 28.6$ years) recruited via Prolific, were randomly assigned to view advertisements that featured either South Asian women with dark skin, South Asian women with light skin, White women, or products only. Dependent variables included appearance and skin shade satisfaction, mood (feeling confident, inspired, anxious, depressed), and advertising effectiveness. Repeated measure ANOVAs and post-hoc analyses showed that viewing White models reduced participants' skin shade satisfaction and lowered their confidence. Exposure to advertisements with South Asian models with dark skin increased the extent to which women felt inspired, while exposure to advertisements with South Asian models with light skin increased appearance satisfaction. Exposure to either of the South Asian models reduced women's anxiety. Our results present compelling evidence that representation matters – in terms of body image and wellbeing as well as advertising effectiveness. As little experimental work has been conducted on skin shade representation in advertising on body image outcomes, we outline several important future directions.

1. Introduction

1.1. Media and advertising on body image

Media and advertising play a critical role in creating and promoting societal appearance ideals (Derenne & Beresin, 2018; Schaefer et al., 2015). Meta-analyses document the media's negative influence on body image in response to the promotion of the thin ideal for women and a lean and muscular ideal for men (Grabe et al., 2008; Groesz et al., 2002; Huang et al., 2021). Experimental studies showing advertisements with 'average size' models (i.e., those who do not meet narrow and unrealistic appearance ideals) present a promising alternative for advertisers; these

studies show that exposure does not have an immediate detrimental impact on body image or mood and does not negatively affect purchase intentions (Clayton et al., 2017; Diedrichs & Lee, 2011; Lou & Tse, 2020; Simon & Hurst, 2021). However, to date, experimental work on the influence of media and advertising on body image has mostly prioritised body size and shape ideals, neglecting other aspects of societal appearance ideals. This research focuses on the white-centric appearance ideal which privileges white and light skin, and its impact on South Asian women living in the UK.

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1.2. White-centric appearance ideals

The privileging of a white or light skin ideal is ubiquitous in global media and advertising (Akinro & Mbunyuza-Memani, 2019; Davis, 2018; Gopaldas & Siebert, 2020; Mitchell, 2020; Yip et al., 2019). This systematic preference is driven by both racism and colourism, where whiteness or a proximity to whiteness is privileged (Davis, 2018; Dixon & Telles, 2017). While there is some evidence of improvements in racialised diversity in advertising (e.g., Eisend et al., 2023), a recent meta-analysis and content analysis presented a more nuanced picture (Rößner & Eisend, 2023). The authors found that while the representation of racialised minorities has increased over time, this is largely driven by improvements in Asian countries (e.g., Japan, South Korea, and Hong Kong) where the overrepresentation of White models has decreased. The authors did not look at skin shade, so while there were fewer European-White models included in advertising in these markets, it is possible that Asian models with 'Asian-White' (Yip et al., 2019) skin were still overrepresented, relative to those with darker skin shades.

Colourism - skin shade prejudice and discrimination where light skin is favoured, and dark skin is denigrated - can be experienced at the individual, interpersonal, and structural level and can affect individuals in many aspects of their everyday lives (Craddock et al., 2023; Strmic-Pawl et al., 2021). While colourism can affect people of all genders, women experience a greater burden in relation to colourist societal appearance ideals promoted by media and advertising, which position women of colour on a skin shade hierarchy with dark skin as the least attractive and desirable (Gopaldas & Siebert, 2020; Mitchell, 2020). For example, in a content analysis of Indian print media from 2012 to 2014, Indian women with dark skin were almost invisible (Gopaldas & Siebert, 2020). Similarly, a content analysis of US print media from May 2017 to April 2018 found that Black women with darker skin were rarely included, and for some categories (e.g., beauty products for the hair) were excluded completely (Mitchell, 2020). This finding is consistent with an earlier content analysis on eight US magazines from 2002. Baker (2005) reported that when Black women were included in these magazines, they were more likely to have light skin than dark, and this pattern was particularly in mainstream publications that were not tailored to a black audience (e.g., Vogue and Cosmopolitan).

Correlational studies suggest that white or light skin appearance ideals might be harmful to people of colour's body image and wellbeing. For example, research shows that when this ideal is internalised, it predicts skin shade dissatisfaction and the use of skin lightening products in Black women living in the USA and Indian women living in India (Harper & Choma, 2019). Further, research conducted with a multi-ethnic sample of adults living in the UK showed that experiences of colourism were indirectly associated with worse body esteem via skin shade dissatisfaction and skin shade surveillance (Craddock et al., 2023). While skin shade (dis)satisfaction is an important facet of body image for people of colour (Awad et al., 2015; Mishra et al., 2023), little research has experimentally investigated the effect of exposure to skin shade and racial diversity or lack thereof. In addition, almost no work has investigated how to improve skin shade satisfaction within the body image literature.

1.3. Theory and research on racialised minority advertising

Advertising research suggests that there is an increased likelihood of favourable outcomes in terms of advertising effectiveness (e.g., increased purchase intentions) when consumers identify with the model or protagonist in an advertisement. This can be understood through several psychological frameworks often applied in advertising research such as social identity theory (Tajfel & Turner, 1985) and self-congruity theory (Sirgy, 1985). Social identity theory suggests that peoples' self-concept stems from their connection with social groups and so when feelings of group belonging are evoked, individuals experience a boost in self-esteem (Tajfel & Turner, 1985). Applied to advertising, social

identity theory helps explain why consumers respond more positively to advertisements that foster group belonging between the consumer and the brand. Self-congruity theory posits that brand loyalty and engagement is heightened when consumers feel their beliefs, values and self-image are aligned with or reflected by a brand (Kolańska-Stronka & Singh, 2024; Sirgy, 1985). Further, consumers want to enhance their self-image through consuming brands or products that reinforce this self-image (Kolańska-Stronka & Singh, 2024).

In line with these complementary theories, studies have looked at the role of racialised group status among consumers and that of the models/characters within the ad in terms of advertising outcomes. For example, a meta-analysis that included 25 experimental or survey studies published between 1971 and 2009 showed that, in general, consumer ethnic identification with an ad improves attitudes towards the brand, ad, and model, and increases purchase intentions (Sierra et al., 2012). That is, the inclusion of racialised minority models within advertising imagery can lead to favourable advertising effectiveness outcomes with consumers belonging to the same racialised group.

In contrast to the attention paid to racialised representation, very few advertising studies appear to have focused on skin shade of models in relation to advertising effectiveness. One study tested how Black Americans evaluated advertisements and the associated brand that featured Black models with light and dark skin (Watson et al., 2010). The authors found Black women rated ads and the brand similarly regardless of the model's skin shade, though notably rated the model with dark skin as more attractive. Without considering variables such as skin shade, there are notable gaps in understanding in the advertising literature (Meyers, 2011). To the best of the authors' knowledge, no work has compared exposure to racialised minority models with different skin shades as well as white models and a no-model control on measures of wellbeing and advertising effectiveness. Therefore, this study stands to provide a more nuanced understanding of the use of minoritised ethnic groups in relation to body image and advertising effectiveness outcomes.

1.4. The present study

Researchers have called for studies examining how representation of different skin shades affects women's body confidence as well as advertising effectiveness in terms of purchase intentions and favourable attitudes towards a particular brand (Mitchell, 2020; Watson et al., 2010). The aim of this study is to experimentally test the impact of racialised group and skin shade representation in advertising images on South Asian women. Specifically, this study aims to test the immediate impact of exposure to (i) South Asian models with dark skin, (ii) South Asian models with light skin, (iii) White models compared with a (iv) no model, product only control, on skin shade satisfaction, appearance satisfaction, and mood among adult Gen Z and Millennial South Asian women living in the UK.

1.4.1. Why South Asian women?

South Asian women are under-represented in the body image literature (Mishra et al., 2023), arguably a legacy of the replication of white supremacy within body image research (Landor et al., 2024). In the UK, people from Asian ethnic groups make up the largest racialised minority group (9.3 %, Office of National Statistics, 2022). Within this broad category, South Asians are the largest group with people of Bangladeshi, Indian, or Pakistani descent representing 6.9 % of the population (Office of National Statistics, 2022). Yet, British South Asian women point to the lack of South Asian representation in mainstream media, and when South Asian women are included, they reflect an idealised light-skin, Eurocentric standard of beauty (Mishra et al., 2023).

Moreover, satisfaction with skin shade is a salient component of South Asian women's body image (Chan & Hurst, 2022; Craddock et al., 2023). South Asian women experience unique pressures that influence their body image and wellbeing including white and light skin shade

ideals promoted in mainstream culture and media, e.g., advertising (Mishra et al., 2023). Therefore, it is important to explore ways to counter such pressures for South Asian women and boost South Asian women’s body image.

1.4.2. Why Gen Z and Millennial cohorts?

In response to calls to better understand how different generational cohorts respond to, and engage with, advertising (Taylor, 2018) this study focused on adults in Generation Z (born 1997 or after) and Millennials (born 1981–1996) (Pew Research, 2019). To date, marketing researchers interested in diversity have focused on Millennials as “the most racially/ethnically diverse generational cohort” in US and UK markets and the largest generational cohort with the greatest total buying power (Licandru & Cui, 2019, p 261). Yet, there is a lack of research focused on how racialised minority Millennials “actually feel about advertising messages catered to them” (Licandru & Cui, 2019, p 261).

1.4.3. Study research questions and hypotheses

This study tested the immediate impact of brief online exposure to advertisements with South Asian models with dark skin, South Asian models with light skin, white models and a product-only control on body image and related constructs, and advertising effectiveness. Focusing on state appearance and skin shade satisfaction as well as four indicators of state mood, we anticipated that viewing South Asian models (with either light or dark skin) would yield a beneficial effect when compared to viewing white models because of the positive impact of representation. Specifically, we hypothesised that exposure to the advertisements featuring exposure to South Asian models (light or dark) would result in immediate increases, while exposure to White models would result in immediate declines, in state skin shade satisfaction, general appearance satisfaction, and mood representation. We anticipated no change for participants in shown products only.

In terms of advertising effectiveness, we anticipated two possibilities. On one hand, in line with previous research disrupting unrealistic societal appearance ideals and advertising effectiveness (Diedrichs &

Lee, 2011; Simon & Hurst, 2021), advertisements in each condition would be rated as equally effective. On the other, in line with advertising research focused on minoritised ethnic groups (Sierra et al., 2012), advertisements featuring South Asian models (dark and light) would be rated as more effective than those featuring White models or no models. We also tested two exploratory moderations (1. Self-reported skin shade and 2. Appearance-ideal internalisation) for both research questions. These are detailed in the supplementary online materials.

2. Method

2.1. Design

The study employed a between-subjects design with three conditions containing models (South Asian models with dark skin, South Asian models with light skin, White models) and a control condition (products only, no models).

2.2. Stimulus materials

A total of 11 unique images were included for each condition. For the three experimental conditions (South Asian models with dark skin, South Asian models with light skin, white models), these images comprised of a final subset of nine images with models aligned to the condition, alongside two product images which were included as a slight decoy. The images of models were all close-up portrait shots, which prioritised the models’ face. The product-only control showed 11 unique images of products. Sample images are shown in Fig. 1.

2.2.1. Image design

Images were originally sourced via royalty-free stock image libraries, Unsplash, Pexel and iStock and then edited for the purpose of this study. The second author, an expert in social marketing, created a “Dew Skincare” brand logo, which was used across all conditions. Lilac was used as the primary brand colour to convey a calm luxurious aesthetic based on the premise that purple is often perceived as feminine and

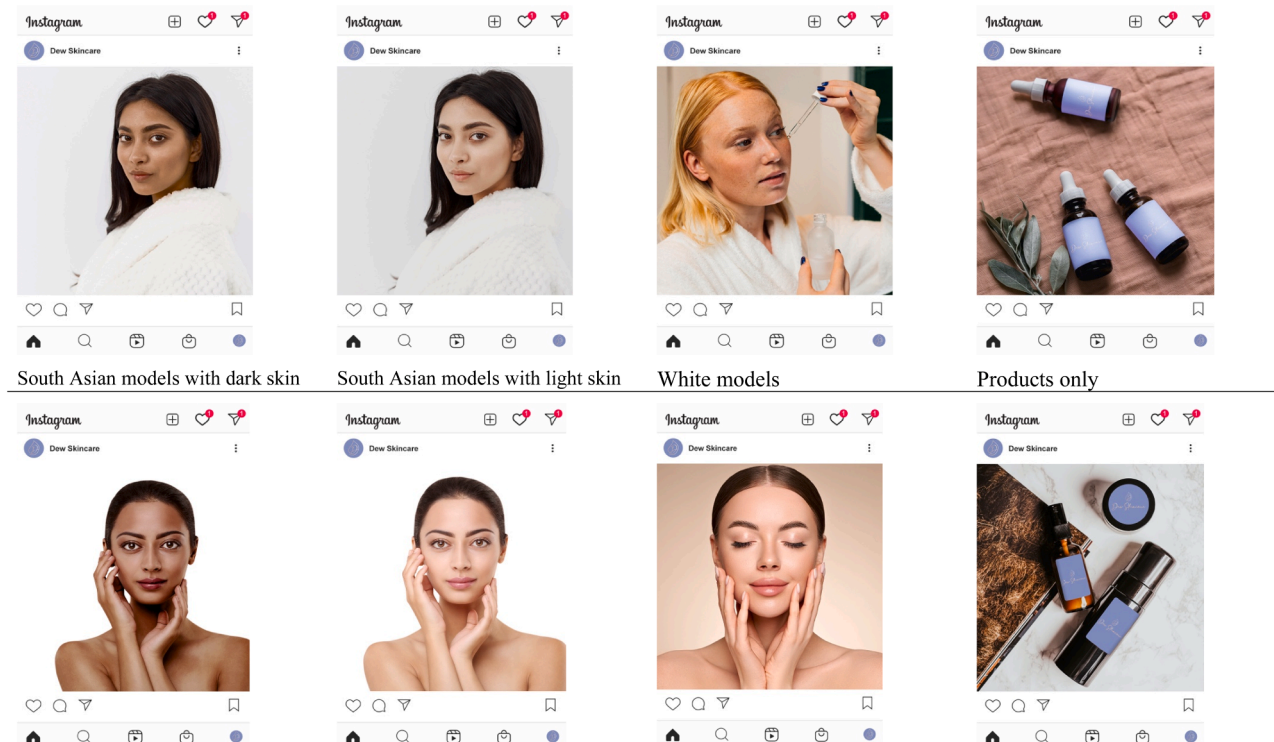


Fig. 1. Sample images from each condition.

expensive (Ridgway & Myers, 2014), while pastel (low saturation) colours are more generally attributed to skincare as they elicit feelings of calmness (The Desiree Team, 2023). Additionally, to avoid distraction, images of fruit or ingredients were removed from stock photos. This helped create a minimalist aesthetic and reinforced the brand's focus on simple skin care routines. The result was a cohesive set of professional-looking Instagram advertisements emphasizing skin and skin care.

All images were presented in the survey as a screenshot of an Instagram post which was posted by our fictitious brand "Dew Skincare." The name was chosen as during the project's data collection phase, 'dewy' skin was trending (Smith, 2023). Moreover, as the 'dewy skin' trend emphasises a natural complexion (i.e., not much make-up) this complemented the selected model images which were chosen based on minimal make up so the focus could be on skin shade. The rationale was that participants would be more inclined to consider their natural skin and skin shade.

2.2.2. South Asian models

A total of 20 close-up portrait images of 13 different South Asian models were initially shortlisted for use as stimuli. Of these, 10 images of 10 different models were selected based on their alignment with the brand's 'minimal', 'dewy skin' aesthetic and focus on the model's face (e.g., images in which the face was partially covered were discarded). To maintain consistency of facial features, pose and styling, the same models were used in the two conditions featuring South Asian models. To enable the experimental manipulation of skin shade, the third author, a skilled photographer, digitally edited their skin shade using Adobe Photoshop. As all the original images had light or medium skin, all 10 images were edited to be made darker for the dark skin condition, and two images were made lighter for the light skin condition. This resulted in 10 images of South Asian models with light skin and 10 images of the same South Asian models but with a darker skin shade.

Due to this editing process, it was important to check if the two sets of South Asian models were plausible and not obviously digitally edited. Therefore, we carried out a small pilot study to confirm that the digital manipulation (a) was successful in creating a duplicate image of each South Asian model with a noticeably different skin shade and (b) that these images were perceived to be ecologically valid (i.e., perceived as believable advertising images with South Asian models) despite the digital alteration.

The pilot was completed by 20 South Asian women living in the UK, $M_{age} = 27.5$ years ($SD = 4.25$) who were recruited and interviewed by the second author. The women represented a range of self-reported skin shades (very dark or dark, $n = 2$; medium-dark, $n = 3$; medium, $n = 7$; medium-light, $n = 5$; and light or very light, $n = 3$). Collectively, these women rated a total 20 different images (ten South Asian models with dark skin and ten South Asian models with light skin). However, each woman rated 10 images of 10 different South Asian models (five with dark skin and five with light skin), such they were not shown the same model with different skin shades twice. Images were presented in a randomised order and the women were asked six questions about the images: 1. whether they were perceived to be South Asian ("yes" or "no"), 2. model attractiveness (1 = not at all to 5 = very), 3. photo quality (1 = poor to 5 = excellent), 4. perceived age of the model ("under 18," "18–25," "26–30," "31–35" and "36 +"), 5. skin shade of the model (1 = very light to 7 = very dark) and 6. whether the image looked like an advertisement ("yes" or "no").

Insights from the pilot indicated that all models were perceived to be South Asian by the women interviewed. On average, models were rated as just over 'average' in terms of attractiveness (3.3), while image quality was approaching 'excellent' (4.6). Models were most frequently rated as being between 26 and 30 years (62.5 % of images), followed by 31–35 years (23 %). The ten South Asian models with dark skin were rated as having an average of medium-dark skin (5.2), ranging from medium to very dark skin. In contrast, the ten South Asian models with

light skin were rating as having medium-light (3.0), ranging from very light to medium skin. Based on the pilot, one model was dropped from the image pool (in both the dark and light skin condition) as this model was rated lower on attractiveness than the other models and the women assessing the images said she stood out from the rest as she was wearing heavier make up. This improved the average attractiveness rating to 3.6 and meant that there was a total of nine images of South Asian models with dark skin and nine images of South Asian models with light skin.

2.2.3. White models

Once the South Asian model images were finalised, the images of White models were selected by the first author to match the style, pose, and approximate perceived age and attractiveness of the South Asian models. The other authors reviewed and approved these selected images in terms of comparability with the South Asian model images and alignment with the fictitious 'Dew' brand aesthetic. As we did not digitally alter the skin shade of the White models, we did not deem it necessary to pilot the images of the White models.

2.2.4. Product images

The images for the product-only control were selected to be consistent with the fictitious brand identity. They had a minimalist aesthetic and featured various skin care product bottles.

2.3. Participants

This study was open to adult Generation Z and Millennial South Asian women living in the UK recruited via an online platform, Prolific. At time of data collection (2023), the eligible age range for participants was 18–42 years (18–26 years = Generation Z and 27–42 years = Millennials). Those belonging to a different racialised group, gender or generation were not eligible for the current study.

A total of 245 South Asian women provided consent and completed the initial demographic questionnaire, with 205 continuing to complete the experimental component of the study approximately 1 week later. Welch's t-tests indicated that women who continued to complete the experimental component were significantly older ($M_{age} = 28.7$ vs 26.2) than those who did not, $t = 6.853$, $df = 60.63$, $p = .011$. They were also less likely to buy skincare products in general ($M = 3.8$ vs 3.4), $t = 7.326$, $df = 51.49$, $p = .009$ and less likely to buy skincare products targeting ageing ($M = 2.5$ vs 2.1), $t = 4.210$, $df = 56.16$, $p = .045$. There were no differences by self-reported skin shade, income, education, or in response to any of the other skincare purchasing questions (e.g., 'how often do you buy skincare products in response to an Instagram advert?').

Data screening revealed that seven participants incorrectly responded to two or more of the four attention checks and so were excluded. Therefore, the final analytical sample was 198 participants. The mean age for the final sample was 28.6 years ($SD = 6.2$), with 42.9 % representing Generation Z and the remaining 57.1 % representing Millennials. Full demographic information is presented in Table 1.

2.4. Procedure

Ethical approval was obtained from the research ethics panel at the first author's institution (REF: HAS.22.01.063).

Participants were recruited on Prolific, a participant recruitment platform which allowed for pre-screening in line with study eligibility criteria (Palan & Schitter, 2018). The project was advertised "A study on advertising effectiveness for a skincare brand". Participants were told the study aimed to understand how consumers – particularly those from underrepresented groups – think and feel in response to sample online advertisements for a new personal care brand.

Data were collected on Qualtrics, an online survey platform. Participants provided digital informed consent and then completed study demographics and some decoy filler questions about skincare, skin concerns, and opinions about beauty/personal care advertising. In

Table 1
Final participant characteristics (N = 198).

	N	%
Ethnicity		
Bangladeshi	34	17.2
Indian	90	45.5
Pakistani	52	26.3
Other South Asian (e.g., Sri Lankan, Nepalese)	19	9.6
<i>Prefer not to say</i>	3	1.5
Born in the UK		
	144	72.7
Skin Shade		
Very Dark	0	0
Dark	8	4.0
Medium	115	58.1
Light	66	33.3
Very Light	9	4.5
Sexual Orientation		
Bisexual / Lesbian / Pansexual / Queer	19	9.6
Heterosexual	173	87.4
<i>Prefer not to say</i>	6	3.0
Income		
Less than £ 15,000	64	32.3
£ 15,001-£ 30,000	63	31.8
£ 30,001-£ 45,000	31	15.7
£ 45,000-£ 60,000	11	5.5
More than £ 60,000	15	7.5
<i>Prefer not to say</i>	14	7.1
Education		
GCSE or vocational level 2 and equivalents	2	1.0
A-Level or vocational level 3 and equivalents	26	13.1
Higher Education Diploma	6	3
Foundation Degree	3	1.5
Undergraduate Degree	107	54
Postgraduate Degree	52	26.3
<i>Prefer not to say</i>	2	1.0
UK Region		
East of England	9	4.5
East Midlands	8	4.0
London	64	32.3
Northeast & Cumbria	1	0.5
Northwest	24	12.1
Southeast	23	11.6
Southwest	6	3.0
West Midlands	30	15.2
Yorkshire & The Humber	19	9.6
Northern Ireland	3	1.5
Scotland	8	4.0
Wales	3	1.5

addition, participants completed two exploratory moderator measures: appearance-ideal internalisation and self-skin shade within this first survey.⁷ To reduce the potential for the experimental manipulation to affect responses to moderating measures, social desirability, and the likelihood of participants' guessing the study aims and hypotheses, the experimental component of the study was made available to participants one week later. Participants were randomly allocated to one of the four conditions and were shown eleven images assigned to their condition in a randomised order (i.e., nine models plus two product-only images or 11 product-only images). Each image was displayed for 15 seconds via a hidden timer and automatically advanced after this set time.

Participants were encouraged to view the images at maximum brightness and were instructed to look at each image carefully and respond to three items per image on its quality, similarity to existing advertisements and model attractiveness (not applicable to those in the

control condition). Before and after viewing these images, participants were asked to complete the state measures of appearance and skin shade satisfaction, mood as well as filler items. The advertising effectiveness questions were presented after the state measures. Then, participants received debrief information which detailed the precise aims of the study and included sources of support. Participants were paid according to Prolific's recommendations – the equivalent to £ 9 per hour.

2.5. Measures

2.5.1. Demographic information

Participants reported their age, specific racialised group, sexual orientation, occupation, approximate annual income, education status, country of birth and the UK region where they live.

2.5.2. State appearance satisfaction, skin shade satisfaction, and mood

Previous research has demonstrated that visual analogue scales are a reliable and sensitive method for capturing changes in body satisfaction and mood (Cohen et al., 2019). In this study, six visual analogue scale items were used to measure state appearance satisfaction, state skin shade satisfaction, and four aspects of state mood, both immediately before and after exposure to advertising images. Of these six items, two were specifically developed for this study: (1) skin shade satisfaction and (2) feeling inspired.

The remaining visual analogue scales items drew from measures that have been widely employed in experimental research on body image and mood. A general appearance satisfaction visual analogue scale item has a strong precedent in body image studies (e.g., Alleva et al., 2016; Heinberg & Thompson, 1995; Cohen et al., 2019). Similarly, the mood-related items—feeling anxious, depressed, and confident—have been used in numerous body image exposure studies (e.g., Fardouly et al., 2015; Fardouly & Rapee, 2019; Cohen et al., 2019).

Participants rated how satisfied they felt about their overall appearance and skin shade using two horizontal sliders ranging from 0 (very dissatisfied) to 100 (very satisfied). Higher scores indicated greater state overall appearance satisfaction and skin shade satisfaction. For state mood, participants indicated how (i) confident, (ii) inspired, (iii) anxious, and (iv) depressed they were feeling immediately before and after exposure to the advertising image using horizontal sliders ranging from 0 (not at all) to 100 (very much so). Increasingly higher scores indicated participants were feeling increasingly more: (i) confident, (ii) inspired, (iii) anxious, and (iv) depressed.

2.5.3. Advertising effectiveness

Advertising effectiveness was assessed by asking participants to indicate how favourably they rated the advertisements they were shown (1 = very unfavourable, 6 = very favourable), as well as how positively they perceived the brand associated within the advertisements they were shown (1 = extremely negative, 6 = extremely positive). Participants were also asked about their purchase intentions in response to the advertisements: "if these brands cost the same as the brand(s) you normally buy, how likely would you be to purchase it on your next shopping trip?" on a six-point scale (1 = very unlikely, 6 = very likely).

2.5.4. Manipulation checks

To ascertain whether images in each condition were perceived as comparable aside from the study manipulation, participants were asked to rate each image they were shown in terms of (1) image quality, (2) similarity to other advertisements, and (3) attractiveness of the model on a 6-point scale. Ratings were averaged with higher scores indicating a more favourable opinion. As the set of South Asian models with dark skin were digitally manipulated based on images of South Asian models with light skin, we asked about image quality to help ascertain that any differences in outcome between the two South Asian model conditions were due to skin shade and not image quality.

⁷ These are detailed in the online supplementary files.

2.5.5. Filler items

To divert attention from the primary study aims, filler items were added throughout both surveys. In the first survey, questions pertained to the topic of skincare. These were added to match the cover story of a study on advertising effectiveness for a skincare brand. Twelve questions were included, for example “how would you describe your skin type?” and “how often do you buy skin protection products (e.g., skincare with UV protection, sun cream)?” In the second survey, two filler questions were included “how much did you identify with the people in the ads?” and “how important is it to you that you identify with the model(s) in skincare/beauty advertising?”

Additionally, to review the degree to which participants were being attentive to the surveys, one attention check item was placed in the first survey, and three more (e.g., “can you describe the first image that was presented?”) were placed in the second survey in between the state items.

2.6. Statistical analyses

All analyses were run on SPSS v. 29.

2.6.1. Preliminary analyses

To test the randomisation process, one-way ANOVAs were conducted exploring differences in pre-exposure measures – mood (confident, inspired, anxious, depressed), appearance satisfaction and skin shade satisfaction.

To test whether there were any differences in participants’ ratings of the advertising images’ quality, similarity to existing online advertisements, and the models’ attractiveness, individual image ratings for each assessment were totalled and an average was created. Average ratings between the four groups were assessed using a one-way analysis of variance (one factor, four levels). Finally, a one-way analysis of variance was used to compare the three study arms excluding the control condition which did not include any models for perceived model attractiveness.

2.6.2. Hypothesis testing

The design has a two by four structure, with assessment point (pre-, post-) as a two-level repeated measures factor, and randomised group as a four level between-subjects factor. This design is analysed using a 2 by 4 mixed ANOVA with initial interest focused on the two-way interaction to determine whether pre- post- changes vary by randomised group. In the first set of follow up analyses, pairwise comparisons were assessed to assess the within condition pre-post change. In the second set of follow up analyses, new variables were created for the mean pre-post change scores. Then, the change between pre and post scores by condition was examined using Tukey HSD. Results were considered significant at the $p < .05$ level.

2.6.3. Sample size calculation

The statistical analysis plan focusses on the ANOVA two-way interaction between assessment time (pre-, post- exposure) and randomised group, followed by appropriate two-group comparisons. The correlation between pre- and post- measures is anticipated to be high ($r > 0.7$) given the short time interval between measures. On this basis a sample size of $N = 45$ per group would have more than 80 % power to detect a lower bound medium effect (Cohen’s $d = 0.5$; Cohen, 1988), as each participant acts as their own control. To preserve power against a 10 % data loss, the aim was to oversample and recruit 50 per group. The combined sample size of between 180 and 200 participants provides 80 % power to detect a two-way interaction term providing the effect size, (partial eta-squared = 0.06) is a lower bound medium size effect.

3. Results

There was no missing data on participant demographics. As there were less than 5 % missing data on study variables, we handled missing

Table 2
Means and Standard Deviations for each Condition at Pre and Post as well as Mean Difference, with Repeated Measures ANOVAs Testing the Comparison in the Pre-Post Change by Condition.

	South Asian Models with Dark Skin (n = 49)			South Asian Models with Light Skin (n = 51)			White Models (n = 52)			Product Only - No Models (n = 46)			Time*Condition Interaction		
	Pre	Post	Difference	Pre	Post	Difference	Pre	Post	Difference	Pre	Post	Difference	F (df)	p	η^2
Appearance Satisfaction*	55.00 (23.29)	58.45 (24.01)	3.45 (17.09)	43.86 ^a (21.73)	53.02 ^a (23.46)	9.16 (19.11)	47.79 (23.89)	47.21 (25.95)	-0.58 (18.96)	42.59 (28.15)	46.33 (28.33)	3.74 (10.88)	2.847 (3, 194)	.039	.042
Skin Shade Satisfaction*	74.67 (23.23)	76.02 (22.14)	1.35 (16.51)	74.06 (26.84)	73.14 (26.43)	-0.92 (8.29)	72.69 ^b (27.08)	67.52 ^b (30.82)	-5.17 (12.72)	68.13 (27.43)	70.28 (27.81)	2.15 (8.38)	3.754 (3, 194)	.012	.055
Feeling Confident*	58.76 (21.74)	59.76 (22.30)	1.00 (15.43)	57.51 (25.33)	54.33 (27.01)	-3.18 (17.46)	64.06 ^b (30.60)	54.42 ^b (29.95)	-9.63 (21.75)	55.98 (24.51)	51.26 (26.67)	-4.72 (18.88)	2.831 (3, 194)	.040	.042
Feeling Inspired*	46.37 ^a (25.18)	53.49 ^a (27.98)	7.12 (17.42)	40.53 (26.76)	42.78 (27.99)	2.25 (21.20)	46.94 (30.65)	44.49 (33.67)	-2.25 (21.17)	37.02 (27.36)	34.00 (27.10)	-3.02 (16.02)	2.905 (3, 194)	.036	.043
Feeling Anxious	37.53 (29.19)	26.80 (23.92)	-10.73 (18.19)	32.29 (27.34)	25.43 (22.35)	-6.86 (17.67)	32.31 (30.39)	26.65 (28.82)	-5.65 (15.88)	28.83 (25.40)	26.00 (25.60)	-2.83 (12.86)	1.926 (3, 194)	.127	-
Feeling Depressed	25.61 (26.24)	24.06 (24.70)	-1.55 (14.26)	24.61 (27.64)	21.57 (26.28)	-3.04 (15.96)	17.40 (25.41)	18.69 (26.54)	1.29 (11.28)	25.24 (27.44)	25.20 (28.28)	-0.04 (10.36)	1.025 (3, 194)	.383	-

* $p < .05$, ** $p < .01$, *** $p < .001$ significant differences condition*time.
 Possible range for all outcomes = 0–100. Anchors for appearance satisfaction and skin shade satisfaction were very dissatisfied (0) and very satisfied (100). Anchors for the four mood items were not at all (0) and very much so (100).
^aSignificant within-group pre-post improvements.
^bSignificant within-group pre-post declines.

data with listwise deletion (Bennett, 2001).

3.1. Preliminary analyses

3.1.1. Testing randomisation

There were no significant differences in the four pre-exposure mood items: inspired ($F(3, 194) = 1.450, p = .230$), confident ($F(3, 194) = 0.928, p = .428$), anxious ($F(3, 194) = 0.774, p = .510$) and depressed ($F(3, 194) = 1.088, p = .355$). The one-way ANOVA comparing means for appearance satisfaction approached significance ($F(3, 194) = 2.567, p = .056$), but post hoc tests did not show any significant differences between condition pairs. There were no significant differences for pre-exposure skin shade satisfaction by condition ($F(3, 194) = 0.600, p = .616$). There were also no significant differences for appearance ideal internalisation by condition ($F(3, 194) = 1.673, p = .174$). Finally, there were no significant differences for self-reported skin shade by condition, ($F(3, 194) = 0.910, p = .437$). Therefore, randomization resulted in equivalent groups on these variables.

3.1.2. Manipulation checks

A one-way ANOVA indicated that there was a significant difference in image quality between the four conditions, $F(3, 194) = 4.727, p = .003$. Post hoc analyses indicated that there were no significant differences in picture quality when comparing the images of the South Asian models with dark skin, the South Asian models with light skin, and the White models (all $p > .25$). However, the images in the product-only condition were rated as poorer quality than those featuring South Asian models with light skin ($p = .004$) and when compared with the images featuring White models ($p = .017$).

There was also a significant difference in how participants rated similarity to existing advertisements by condition, $F(3, 193) = 3.577, p = .015$. Post hoc analyses indicated that participants were less familiar with seeing South Asian models with dark skin in online advertisements compared with White models ($p = .044$). There were no other significant differences between conditions ($ps > .060$).

Finally, a one-way ANOVA indicated that there were no significant differences in perceived model attractiveness for the South Asian models with dark skin, the South Asian models with light skin and the white models, $F(2, 157) = .790, p = .456$.

3.2. Hypothesis testing

Table 2 presents the means, calculated change per condition, and the time*condition interaction results for state appearance satisfaction, skin shade satisfaction, and the four mood constructs by condition. For full ANOVA statistics refer to Table S1 in the [supplementary online materials](#).

We ran analyses twice, once with and once without age as a covariate. As controlling for age did not make a difference to our findings, the results below are without the inclusion of age.

3.2.1. Effects of experimental condition on appearance satisfaction

As seen in Table 2, there was a significant interaction between condition and time for appearance satisfaction. Follow-up pairwise comparisons revealed that appearance satisfaction significantly increased for women exposed to South Asian models with lighter skin ($p < .001$), but there were no significant changes observed in the three other conditions ($ps > .137$). In the second follow-up analysis, testing whether the degree of pre-post change differed by condition, we found one significant result. The improvement in appearance satisfaction observed in women who viewed the images with South Asian models with light skin was significantly greater than in women who were exposed to White models where there was no significant change in pre-post appearance satisfaction ($p = .021$). There were no other significant differences in the degree of pre-post change between all other conditions ($ps > .337$).

3.2.2. Effects of experimental condition on skin shade satisfaction

As detailed in Table 2, there was a significant interaction between condition and time for skin shade satisfaction. Follow-up pairwise comparisons showed that there was a significant decrease in skin shade satisfaction among women shown the images featuring the White models ($p = .002$). Skin shade satisfaction did not significantly change from pre to post exposure for women in the other three conditions ($ps > .225$).

Follow-up between-group comparisons focusing on pre-post change showed two significant differences between conditions. The decline in skin shade satisfaction observed in participants who viewed the images with white models significantly differed from the small (non-significant) improvements found in women who viewed the images featuring South Asian models with dark skin ($p = .035$) and women who viewed the images with products only control ($p = .015$). There were no other significant differences in the degree of pre-post change between all other conditions ($ps > .277$).

3.2.3. Effects of experimental condition on mood

As presented in Table 2, there was a significant interaction between condition and time for 'feeling confident' and for 'feeling inspired'. Follow-up pairwise comparisons showed that there was a significant decrease in feeling confident scores for women who viewed the white models ($p < .001$) and a significant increase in feeling inspired scores for women who viewed the South Asian models with dark skin ($p = .010$). There were no other significant within group differences for feeling confident ($ps > .086$) or feeling inspired ($ps > .287$).

Follow-up between-group comparisons showed that the decline in confidence observed in women who were shown the white models significantly differed from the change found in women who were shown the images featuring South Asian models with dark skin ($p = .023$), whose confidence remained stable. The increase in feeling inspired observed in women who viewed the images featuring South Asian models with dark skin was close to reaching significance when compared to women who viewed products only ($p = .052$) and when compared to women who viewed white models ($p = .071$). There were no other significant differences in pre-post change by condition for feeling confident ($ps > .293$) and for feeling inspired ($ps > .531$).

For the two negatively framed state mood items (feeling anxious and feeling depressed), the time by condition interactions were not significant indicating that there were no meaningful differences in the pre-post change by condition for these items. However, for feeling anxious, follow-up pairwise comparisons showed that while there was no change for women who viewed products only ($p = .242$) there were significant pre-post decreases for women who viewed South Asian models with dark skin ($p < .001$), South Asian models with light skin ($p = .003$) and White models ($p = .013$). In contrast, there were no significant pairwise comparisons for feeling depressed ($ps > .102$). Follow-up analysis comparing change between groups showed no significant differences between any condition for feeling anxious and feeling depressed ($ps > .089$).

3.2.4. Advertising effectiveness

Means, SDs and main effects for advertising effectiveness items are reported in Table 3. There were significant differences by condition based on (1) how favourably the advertisements, (2) how favourably the (fictitious) brand was rated by participants, and (3) reported likelihood to make a purchase.

Post hoc analyses indicated that the advertisements featuring South Asian models with dark skin were rated more favourably than those that featured White models ($p = .010$), but not more than products only ($p = .184$) or South Asian models with light skin ($p = .874$). Further, the brand was rated more positively when the advertising images featured South Asian models with dark skin compared with those that featured White models ($p = .018$) or that only featured products ($p = .007$), but not South Asian models with light skin ($p = .479$).

Table 3
Image Ratings and Advertising Effectiveness Questions, Possible Range 1–6.

	South Asian models -dark skin	South Asian models - light skin	White models	Products only - no models	F (df)	p	η^2
	(n = 49)	(n = 51)	(n = 52)	(n = 46)			
Mean scores (SD) for each image rating							
Image Quality**	4.48 (0.97)	4.80 (0.86)	4.72 (0.81)	4.17 (0.95)	4.727 (3, 193)	.003	.068
Image Similarity to Advertising*	3.84 (1.03)	4.31 (0.94)	4.33 (0.78)	3.94 (0.98)	3.577 (3, 193)	.015	.053
Model Attractiveness	4.52 (0.95)	4.68 (0.80)	4.47 (0.81)	-	0.790 (2, 149)	.456	-
Mean scores (SD) for overall advertising effectiveness							
How favourably are adverts rated*	4.41 (1.27)	4.24 (1.05)	3.69 (1.09)	3.93 (1.14)	3.900 (3194)	.010	.057
How favourably is the brand included within the adverts rated**	4.51 (1.58)	4.22 (0.99)	3.90 (0.96)	3.83 (1.00)	4.542 (3, 194)	.004	.066
Likelihood to buy***	4.16 (1.49)	3.92 (1.40)	3.02 (1.55)	3.30 (1.55)	6.299 (3, 194)	< .001	.089
Mean scores (SD) for general identification with models							
Identification with the models	4.33 (1.86)	3.90 (1.94)	3.50 (2.76)	-	1.730 (2, 149)	.181	-
Importance to identify with models in skincare/beauty advertising	4.06 (1.56)	4.20 (1.56)	4.19 (1.77)	3.57 (1.71)	1.551 (3, 194)	.203	-

* $p < .05$,

** $p < .01$,

*** $p < .001$ significant differences between condition

Participants who viewed the advertising images featuring the South Asian models with dark skin indicated a greater likelihood to buy a product than those who viewed the images featuring the White models ($p < .001$) and compared to those that included products only ($p = .029$), but not South Asian models with light skin ($p = .851$). Additionally, participants who viewed the images featuring the South Asian models with light skin indicated a greater likelihood to buy a product than those who viewed the images featuring the White models ($p = .013$).

3.2.5. Identification with models

There was no significant difference based on participants' identification with the models in the three conditions that included models, $F(2, 149) = 1.730, p = .181$. Similarly, there was no significant difference by condition based on the extent to which participants rated it important to identify with models in skincare or beauty advertising $F(3, 194) = 1.551, p = .203$.

4. Discussion

The global media landscape for women of colour, and South Asian women in particular, has been historically saturated with, and dominated by, whiteness. Racism and colourism are ingrained in advertising by the overrepresentation of White models or people of colour with light skin, as well as the use of positive stereotypes (e.g., beautiful, clean, desirable) associated with whiteness and the frequent exclusion of people of colour with darker skin shades (Davis, 2018; Gopaldas & Siebert, 2020; Mitchell, 2020; Yip et al., 2019). Despite belonging to the largest racialised minority group in the UK (Office of National Statistics, 2022), South Asian women have lamented the lack of South Asian representation in UK advertising (Mishra et al., 2023).

In this study we tested a simple question: does racialised group and skin shade matter when it comes to immediate exposure to advertising images? We tested this in relation to South Asian women's appearance and skin shade satisfaction, mood, as well as their appraisals of the ads, the brand, the models, and their purchase intentions. Our results present compelling evidence that representation matters – both in terms of wellbeing and advertising effectiveness. We found a clear pattern whereby brief exposure to South Asian models immediately boosted or protected South Asian women's appearance and skin shade satisfaction, and their mood.

Viewing South Asian models with light skin immediately boosted appearance satisfaction while viewing while viewing South Asian models with dark skin maintained relatively higher pre-exposure

appearance satisfaction scores. Participants' confidence and feelings of depression did not significantly change in response to either South Asian condition. In contrast, exposure to White models negatively impacted South Asian women's state skin shade satisfaction and confidence. Across each model condition, participants reported a decrease in anxiety, with the largest reduction noted in the South Asian dark skin condition. This may, in part, reflect a relief effect from study participation, as anticipation before the experimental component could have influenced initial anxiety levels.

Exposure to South Asian models also yielded favourable advertising effective outcomes, with exposure to South Asian models with dark skin resulting in the most favourable appraisals. Women shown images with South Asian models with dark skin reported more favourable attitudes to the advertisements and to the (fictitious) brand the advertisements were promoting, as well as an increased likelihood to make a purchase. These results demonstrate that advertisements featuring South Asian women are both commercially effective and good for well-being when considering South Asian women consumers.

Beyond the positive effects of representation for body image, mood, and advertising effectiveness, there may be a broader positive impact of greater representation of South Asian models with differing skin shades. For example, researchers have argued that the inclusion of racialised minority groups in advertising has the potential to shape social norms and disrupt negative stereotypes (Harrison et al., 2017; Licsandru & Cui, 2019). Further, other researchers have posited that, when they are effectively implemented, the inclusion of minoritised ethnic groups may "validate ethnic minority identity" and so become "a means for social recognition of the intended audiences - as consumers, but most importantly, as members of their ethnic minority group" (Peñaloza, 2018, p. 276).

4.1. Strengths

The present study had several strengths. First, we were able to stringently minimise variability and confounding factors between the two South Asian model conditions (light skin and dark skin) with photo editing software, the design expertise of the third author, and a rigorous piloting process to select the final images. The South Asian models in the two conditions were the same, differing only by skin shade. Notably, the images of the models in two South Asian conditions were rated to be of comparable image quality, indicating that the skin shade editing was done to a high standard. The images of the White models were also rated to be of a similar quality to the two sets of South Asian models. Moreover, the models in the three model conditions were rated equally in terms of attractiveness. Consequently, we can be more confident that

conclusions drawn are due to the racialisation and / or skin shade of the models.

Second, the combination of the cover story, the filler questions, the recall activity, and the week-long delay between the demographics and the experimental portion of the study helped reduce priming and social desirability effects. Only two of the participants guessed the aim of the study and results held when these participants were excluded. A third strength of this study related to the methodology was that images were randomised to counter order effects and were each shown to participants for the same length of time (15 seconds). Finally, the study was adequately powered, and the sample represents an under-researched group within body image literature.

4.2. Limitations

Several methodological limitations need to be considered when interpreting the results. First, results are based on data from a non-representative sample of South Asian women living in the UK who have signed up to a research participation platform. The sample broadly reflects UK demographics with Indian, Pakistani, and Bangladeshi being the largest three Asian groups (in order) in the UK (Office of National Statistics, 2022). Consequently, few South Asian women from Nepal, Sri Lanka, Bhutan, and the Maldives were included and thus the generalisability of findings are somewhat limited. Second, the study was conducted online rather than in a laboratory setting and so despite showing the images in a standardised format, we cannot be sure that these images were viewed for this duration. A laboratory setting and the use of eye-tracking technology could yield more precise insights in response to exposure, however, such an approach would not be as ecologically valid as the exposure method in this study.

Third, it was challenging to source images of South Asian women with dark skin from stock image sites. This meant that all the images in the South Asian-dark skin condition were created by digitally editing images of models with light skin shades. Relatedly, to ensure images did not look edited, there was a limit to how much they could be digitally altered before they looked unrealistic. Therefore, the differences between the images in the South Asian light and South Asian dark conditions were relatively subtle. Consequently, it is possible that findings may have been more pronounced if the differences in skin shade between the two South Asian model conditions were greater.

Fourth, while single-item VAS measures are commonly used in experimental research to capture state constructs, they are less robust as multi-item, validated scales. However, single item VAS measures are more acceptable for pre-post assessments within short timeframes and are sensitive to small changes. Further, four of the six VAS outcome items used in the present study have been used in previous experimental body image research (e.g., Cohen et al., 2019; Fardouly & Rapee, 2019) and have been shown to correlate with longer measures of mood and body image (Heinberg & Thompson, 1995). Two additional VAS items, 'skin shade satisfaction' and 'feeling inspired' were included to meet the study objectives. This follows precedence from other studies. For example, Fardouly and Rapee (2019) included 'satisfied with your facial appearance' and 'pleased with your facial complexion' to form a measure of facial appearance satisfaction.

4.3. Future directions

There are several conceptual replication studies variations that would be valuable to further understanding on the role of skin shade representation on people of colour's body image and wellbeing. In a UK context, testing a version of this study with images of Black women with dark and light skin is important given that Black (African or Caribbean) people represent the nation's second largest racialised minority group. Further, it would be interesting to extend the study to test the effects of exposure across racialised minority group to be able to ascertain whether results are contingent on racialised group match or not. For

example, it would be interesting to see whether exposure to images with models with darker skin yield immediate increases in skin shade satisfaction irrespective of a racialised group match.

Relatedly, understanding how White people respond to advertising images featuring racialised minorities will also be beneficial, particularly in a UK context where White people are the majority racialised group. While we could speculate that White people's majority and societally privileged status means that there is no impact on their body image or mood in response to viewing advertising images of racialised minorities, this should be empirically tested. Positive exposure to racialised minorities with different skin shades may also prompt White people to have more positive attitudes and less negative racial or colourist bias (Licsandru & Cui, 2018) and therefore have a broader societal benefit.

Beyond the UK, it would be useful to replicate a variation of this study in South Asian countries such as India or Pakistan. Advertisements in India typically privilege women with light skin (UNICEF, 2021). A UNICEF study analysed 1000 of the top grossing advertisements (82 % TV ads and 18 % digital ads) in India in 2019 and found that two-thirds of female characters had light or medium-light skin and just 4.0 % of all advertisements included characters with a dark skin shade (UNICEF, 2021). Moreover, when characters with dark skin were included, they were often presented as lower-class while characters with light skin were shown as upper-class (UNICEF, 2021). Research from both India and Pakistan shows that people view the media as playing an important role in perpetuating colourism (Masood et al., 2022; Shroff et al., 2018). It would be interesting to see what effect viewing the South Asian models with dark skin has on appearance and skin shade satisfaction and mood in these contexts.

Another important future replication direction is to consider intersectionality within this type of work and simultaneously investigate several diversity attributes – e.g., skin shade and body size, age, and gender. This is consistent with other calls for the introduction of intersectionality into media research and examining the role of multiple personal characteristics in unison (Eisend et al., 2023; Gopaldas & DeRoy, 2015). Additionally, testing what is referred to in the advertising literature as multi-ethnic advertising as opposed to mono-ethnic advertising where there are a group of models from different minoritised ethnic groups (Licsandru & Cui, 2018) in relation to body image outcomes would be valuable. Existing research has found multi-ethnic marketing communications can trigger more positive feelings and are interpreted as a more genuine attempt to ethnic representation among Millennial consumers (Licsandru & Cui, 2019) and so understanding how this can affect body image constructs, including skin shade satisfaction would be a useful contribution.

Finally, further research could more thoroughly investigate theoretical drivers. While we did not find a significant difference between participants' self-reported identification with models across the three experimental conditions, the range in scores (dark = 4.33, light = 3.90, and white = 3.50) suggest that significant results may be found with a larger sample size. Moreover, it is possible that the item we used was not sensitive enough. It would be valuable to tease out subtle differences in the wording of this item - for example, exploring whether it would make a difference if participants were asked how much they 'relate to' (instead of 'identify with') the model. Finally, the role of ethnic pride and belonging may also be a relevant moderator in this line of research, and would be interesting to test in future studies.

4.4. Implications for industry

Results indicated promising effects of exposure to South Asian models on body image and mood, and advertising effectiveness for adult Gen Z and Millennial South Asian women living in the UK. This insight can be beneficial for advertisers wishing to increase advertising effectiveness for different segments of the consumer market, while also fostering in-the-moment positive mood and body image among women

who experience unique body image concerns (Mishra et al., 2023). However, particularly for beauty and personal care brands, it is important products are also suitable (e.g., product formulations that do not leave a white sheen), safe (e.g., do not have medical risks like those associated with some skin lightening products) and inclusive (products available for a range of South Asian skin shades). In line with research identifying challenges and opportunities from an industry perspective related to corporate strategies designed to foster positive body image (Craddock et al., 2019), there is also potential benefit to South Asian employees within industries who have previously felt overlooked.

4.5. Conclusion

This study contributes to literature on the impact of appearance diversity in advertising and media exposure on body image and advertising effectiveness (e.g., Diedrichs & Lee, 2011; Simon & Hurst, 2021), by focusing on skin shade representation and skin shade satisfaction for South Asian women living in the UK – an underrepresented group in the body image literature. Using a four-arm experimental design, we found that when exposed to South Asian models, South Asian women in the UK reported some in-the-moment benefits with regards to their body image and mood. Additionally, participants responded particularly favourably to the South Asian models with darker skin on questions pertaining to advertising effectiveness. Overall, results indicate that representation matters both for body image and wellbeing of the consumer as well as advertising effectiveness to Millennial and Gen Z consumers.

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Declaration of Competing Interest

The authors declare no other conflicts of interest in relation to this work.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at [doi:10.1016/j.bodyim.2025.101858](https://doi.org/10.1016/j.bodyim.2025.101858).

Data Availability

Data will be made available on request.

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