



## Original Research

# Direct-to-consumer dermatology-related advertising differs in magazines targeted to women of color: A cross-sectional analysis of top-circulating consumer magazines



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## ABSTRACT

**Background:** Advertisements for dermatology-related products in consumer magazines serve as a potential source of health literacy, which varies by demographic group.

**Objective:** This study sought to examine differences in advertisements for dermatology-related products in the top U.S. consumer magazines targeted at women of color compared with three other demographic groups: teenagers, adult women, and adult men.

**Methods:** Dermatology advertisements in the most circulated U.S. consumer magazines targeting these four demographic groups were analyzed. Descriptive statistics were obtained. Simple logistic regressions were used to compare the product indications, language used, and the sex, age, ethnicity, and skin type of models between magazine categories. Limitations of this study included that certain magazines could not be included due to a lack of accessibility, and subjective assessments were made when necessary because not all data collected were explicitly stated.

**Results:** Significant differences exist in print media advertising for women of color in comparison with other demographic groups, including skin-of-color magazines having an increased number of darker-skin models, more advertisements related to products that target pigmentation, and differences in advertisement word choices.

**Conclusion:** The differences in print media advertising for women of color in comparison with other demographic groups may influence the dermatologic concerns of this population, including their dermatology-related knowledge base, grooming practices, beauty perceptions, and utilization of dermatology as a specialty.

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## Introduction

Advertisements for dermatology-related products in consumer magazines serve as a potential source of health literacy (Basch et al., 2014). Dermatologists should be aware of print media's impact on patient health literacy and consumer choices. Although medical-related advertisements have been studied in relation to certain health issues, such as smoking, the current literature related to dermatologic issues is limited.

We recently found that in consumer magazines, advertisements related to sun protection were 3.56 times more likely to be featured in summer compared with winter issues and consisted of

<1% of advertisements for dermatology-related products (Wiznia et al., 2019). The majority of sun-protection advertisements were in mainstream women's magazines, with less prevalence in magazines targeted toward women of color, men, or teens. These differences are important for dermatologists to understand because they are reflective of the messaging regarding sun protection that is received by readers of consumer magazines. Based on the differences found in sun protection advertisements, we expected to find other differences in the advertisements between these demographic groups.

This study sought to examine differences in advertisements for dermatology-related products in the consumer U.S. consumer magazines targeted at women of color in comparison with three other demographic groups: teenagers, adult women, and adult men.

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**Methods**

Monthly magazines with the following standard rate and data service categories were considered for inclusion: general interest, women, men, African American/Black, Hispanic, teen, health, fashion, and beauty. The magazines were then sorted by circulation data (Alliance for Audited Media, 2020). The SDRS is a search engine for rates and contact data for magazines and other media and allows media owners to share their advertising opportunities to media planners and buyers. Publications were excluded if readership was gender neutral, circulation was <100,000 annually, or the editorial content did not include health, fashion, or beauty. Magazine issues not available through the New York Public Library were obtained through the New York University interlibrary loan system. Issues not available in either physical or electronic format were considered inaccessible.

In total, advertisements in 16 magazines (the top four in each category) were analyzed, including each issue from January through December 2015 (Table 1). The magazines from 2015 were chosen for availability. The skin-of-color (SOC) category consisted of publications aimed at primarily adult female African American or Hispanic readership. Magazines in the teen category had primarily female readership between the ages of 18 and 24 years.

For each advertisement, the gender, race and/or ethnicity, and skin color of the model(s) were noted (Tables 2 and 3). Models' skin color was analyzed through subjectively grouping models into lighter versus darker skin color. These grouping categories were used because Fitzpatrick skin types (FST) could not be obtained without appropriate history (Bologna et al., 2012). The lighter category approximated FST I through III and the darker category FST IV through VI. Additionally, the product indication and language used were noted for product advertisements, including the use of buzzwords and whether the product was "dermatologist-recommended." Product indication was divided into seven main categories of skin, eye, lip, hair, nail, antiperspirant, and depilatory/shaving, each with subindications (Tables 4 and 5). Advertisements promoting multiple items were given both a primary and subindication.

Statistical comparisons were calculated between the different demographic categories using STATA statistical software, version 14.0 (STATA Corp., College Station, TX). Descriptive statistics were obtained. Simple logistic regressions were used to compare the product indications, language used, and the gender, age, ethnicity,

**Table 1**  
Top consumer magazines across demographic groups.

Demographic group	Average age of readers, years	Race/ethnicity	Magazine title (age group)	Circulation, n*
Women	57.4	All	<i>Good Housekeeping</i> (older)	4,345,870
	50.5	All	<i>Family Circle</i> (older)	4,051,403
	56.6	All	<i>Women's Day</i> (older)	3,289,256
	34.7	All	<i>Cosmopolitan</i> (younger)	3,038,365
	39.6	All	<i>Shape</i> (younger)	2,528,292
Men	41.0	All	<i>Men's Health</i>	1,817,673
	34.9	All	<i>Maxim</i>	1,678,065
	33.0	All	<i>GQ Gentlemen's Quarterly</i>	964,534
	43.3	All	<i>Men's Journal</i>	763,033
	43.9	All	<i>Esquire</i>	736,424
SOC†	39.4	Black	<i>Ebony</i>	1,333,421
	44.0	Black	<i>Essence</i>	1,059,803
	41.3	Hispanic	<i>Siempre Mujer</i>	553,119
	43.0	Hispanic	<i>Vanidades</i>	477,518
Teen‡	26.0	All	<i>Seventeen</i>	2,012,596
	21.0	All	<i>Teen Vogue</i>	1,011,382

\* Circulation (copies distributed to the public) measured from sales data, from 2015 Alliance for Audited Media year-to-date publisher's statements.  
 † The top five skin-of-color magazines were *Ebony*, *Essence*, *Siempre Mujer*, *Latina*, and *Vanidades*, with *Latina* excluded from the study due to inaccessibility.  
 ‡ The top three teen magazines were *Seventeen*, *Teen Vogue*, and *J-14*. *J-14* was excluded due to inaccessibility, and other teen magazines (e.g., *M*, *Twist*, and *Popstar*) did not have a high enough circulation to be considered.

**Table 2**  
Percentage of advertisements featuring models of different ages by magazine category.

Demographic	Age groups, %		
	<25 years	25–50 years	>50 years
Women	16	81	3
Younger	18	82	0
Older	25	72	3
Teen	46	54	0
Men	0	97	3
Skin of color	10	86	4
<b>Total</b>	<b>21</b>	<b>77</b>	<b>2</b>

and skin type of the models between magazine categories. P-values < 0.05 were considered statistically significant.

**Results**

Data were obtained from a total of 2177 advertisements in 169 issues of 16 magazines. With regard to product indications among all advertisements, 962 (44%) were for cosmetic products (Tables 4 and 5) and appeared predominantly in women, SOC, and teen magazines. Models' race and/or ethnicity varied by magazine type and targeted demographic audience, most notably with regard to SOC magazines (Table 3). Advertisements in general women's magazines were almost six times more likely to have white versus nonwhite models (p < .000) and more than 10 times more likely to have models with lighter skin (p < .000) compared with SOC magazines. In contrast, advertisements in SOC magazines with primarily Black female readership (*Ebony* and *Essence*) had a higher likelihood of darker-skinned models compared with those with primarily female Hispanic readership (*Siempre Mujer*, *Vanidades*, and *Latina*; odds ratio [OR]: 5.23; 95% confidence interval [CI], 3.48–7.87; p < .000).

When analyzing the content of advertisements in female SOC-targeted magazines compared with the other demographic groups, significant differences were also found. Notably, nearly 10% of advertisements in SOC magazines promoted products to reduce pigmentation, compared with approximately 7% of advertisements in general women's magazines. No advertisements addressed pigmentation in teen and men's magazines. Additionally, advertise-

**Table 3**  
Race and ethnicity of featured models in dermatology-related magazine advertisements.

Demographic group	Number of ads with model, n (%)	White model, n (%)	Black model, n (%)	Hispanic model, n (%)	Asian model, n (%)*	Multiracial model, n (%)	Total number of ads, n
Skin of color	99 (16.3)	106 (17.5)	282 (46.5)	70 (11.6)	0 (0.0)	49 (8.0)	606
Men	52 (46.4)	53 (47.3)	4 (3.6)	3 (2.7)	0 (0.0)	0 (0.0)	112
Women	234 (22.5)	574 (55.2)	85 (8.2)	59 (5.7)	21 (2.0)	65 (6.3)	1,038
Teen	81 (19.2)	216 (51.3)	36 (8.6)	34 (8.1)	6 (1.4)	48 (11.4)	421

\* Includes East and South Asians.

**Table 4**  
Frequency of advertisement indication by demographic groups in all magazines.

Demographic group	Skin, %	Eye, %	Lip, %	Hair, %	Nail, %	Antiperspirant, %	Depilatory/shaving, %
<b>All women</b>	41.5	12.7	9.6	24.0	6.5	1.7	4.0
Older	61.5	4.0	10.5	17.0	2.0	4.5	0.5
Younger	37.0	14.6	9.3	25.6	7.5	1.1	4.7
<b>Teen</b>	27.7	19.0	13.3	29.0	8.4	0.0	2.7
<b>Skin of color</b>	27.0	11.8	7.3	48.1	2.8	2.1	1.0
Hispanic	31.4	21.1	13.7	29.1	1.1	2.9	0.6
Black	25.3	8.1	4.7	55.5	3.4	1.8	1.1
<b>Men</b>	19.8	0.8	0.0	37.2	0.0	8.3	33.9

**Table 5**  
Subindication of product advertisements by demographic groups.

Product subindication	Women			Teens	Skin of color			Men
	All, %	Older, %	Younger, %		All skin of color, %	Hispanic, %	Black, %	
Cosmetics*	35.7	15.1	41.0	48.2	44.8	58.5	39.8	6.6
Facial cleanser	2.2	0.0	2.8	6.2	0.6	0.5	0.6	2.6
Body soaps	14.4	6.7	16.4	18.8	12.2	13.3	11.8	46.1
Pore minimizer	1.7	2.9	1.4	2.1	0.3	0.0	0.4	0.0
Moisturizer	18.4	20.5	17.8	15.4	23.4	9.6	28.4	5.3
Anti-aging	9.3	21.8	6.1	0.0	3.0	4.8	2.3	2.6
Sun protection	2.1	2.5	2.0	0.2	0.7	1.1	0.6	0.0
Eczema	1.5	3.8	0.9	0.0	0.1	0.0	0.2	0.0
Psoriasis	0.8	2.1	0.4	0.0	0.1	0.0	0.2	6.6
Acne	2.9	2.5	3.0	9.0	0.9	0.0	1.2	0.0
Stretch	1.5	3.3	1.0	0.0	1.6	1.6	1.5	0.0
Scar	2.3	4.6	1.7	0.0	3.4	1.6	4.1	0.0
Dark marks	4.4	5.9	4.0	0.0	5.5	5.9	5.4	0.0
Dandruff	0.3	0.4	0.3	0.0	0.7	0.5	0.8	7.9
Alopecia	1.4	3.3	0.9	0.0	2.7	2.7	2.7	22.4
Wound healing	1.1	4.6	0.2	0.0	0.0	0.0	0.0	0.0

\* Cosmetics included products such as foundation, concealer, powder, bronzer, mascara, eyeliner, eyeshadow, brow pencils, lipsticks, hairspray, hair styling cream, blow dryers, nail polish, and artificial nails.

ments in general women's magazines were significantly more likely to have antiaging products compared with SOC magazines ( $p < .000$ ) and those targeted toward men (OR: 6.45; 95% CI, 1.57–26.50;  $p < .010$ ). Compared with other categories, teen magazines were significantly more likely to include advertisements for products pertaining to acne ( $p < .000$ ) and had the highest percentage of these advertisements (10%). Men's magazines were 11.4 times more likely to have advertisements for alopecia products compared with women's magazines (OR: 11.43; 95% CI, 5.60–23.35;  $p < .000$ ).

Word choice similarities and differences were also found among the advertisements. Buzzwords, such as “beauty,” “perfect,” and “flawless” were similarly found in women's (43%) and SOC (42%) advertisements and more frequently used than in teen (34%) and men's (5%) magazines. However, advertisements in general women's magazines were more likely to contain the phrase “dermatologist-recommended” compared with SOC (OR: 1.68; 95% CI, 1.10–2.55;  $p < .015$ ) and men's (OR: 10.4; 95% CI, 1.44–75.45;  $p < .02$ ) magazines. Words pertaining to age were 1.5 times more likely to appear in general women's magazines compared with those targeted to SOC readers (OR: 1.56; 95% CI, 1.19–2.01;  $p < .001$ ).

## Discussion

This study provides greater insight into dermatology-related consumer information that print media provides to the public, particularly in relation to the female SOC population. Several important findings were made in this study. Models' race or ethnicity appears to vary by magazine type. Models with lighter skin predominated in women's, men's, and teen magazines, while darker-skinned models were in advertisements directed at SOC readers, in particular Black more than Hispanic women. Given the current composition of the U.S. population with 13.3% African American, 17.8% Hispanic, and 5.7% Asian individuals and projected continued diversification, visual depictions of different skin types should not be limited to SOC magazines (U.S. Census Bureau, 2017). Mainstream magazines would benefit from diversifying the individuals featured so as to be more reflective and inclusive of the current U.S. population.

With regard to word choice, interestingly, both mainstream and SOC women's magazines used similar word choices of beauty, flawlessness, and perfection despite having differing advertisement content. This emphasizes the different ways in which beauty may be defined by media for these demographic groups. In SOC

magazines, there was greater emphasis on even skin tone, but mainstream women's magazines had a greater emphasis on antiaging and wrinkle-free skin. This was further supported by the increased use of words related to age in mainstream women's magazines compared with SOC magazines. Additionally, advertisements in SOC magazines were less likely to contain the phrase "dermatologist recommended" compared with general women's magazines, which raises questions about the importance of this designation in product selection for the two demographic populations. This phrase was also less used in male and teen magazines. Based on these findings, it is not possible to say whether this means that the SOC population along with men and teens are less influenced by this designation or if marketing and advertising companies are making this assumption. This also raises the question of whether this could be a factor in which demographic groups are more likely to seek dermatologic care for their skin, hair, and nail concerns.

This study had several limitations. Certain magazines could not be included due to a lack of accessibility. Not all data collected were explicitly stated. For example, the exact age, ethnicity, and skin type of models could not always be ascertained objectively, and subjective assessments were made when necessary. The exclusion of gender-neutral publications is another limitation of the study.

## Conclusion

Consumer magazine advertisements appear to have different marketing focuses depending on the target demographic, with a greater emphasis on even pigmentation in SOC, clear skin in teens', antiaging and wrinkle-free skin in women's, and retained hair in men's magazines. Of concern is the lack of diverse visual representation in mainstream magazines targeted toward women, men, and teens. Additionally, definitions of beauty seem to be pigmentation focused in SOC magazines as opposed to antiaging and antiwrinkle focused in mainstream women's magazines. The less frequent use of the phrase "dermatologist-recommended" in SOC magazines may be an indication that the SOC population underuses dermatology as a specialty and may be less influenced

by this designation in marketing and consumer advertising. Conversely, it could indicate that dermatology as a specialty needs to do more to reach SOC patients, who may be less likely to see a dermatologist for their skin, hair, and/or nail conditions.

The results of this study can help dermatologists understand the marketing in media that patients are exposed to and how biases in direct-to-consumer advertising can contribute to and reflect societal definitions of beauty standards for women of color and other demographic groups. Awareness of these biases and deficiencies in print advertising regarding dermatologic products highlights an opportunity for dermatologists to partner with media in improving patient education to address knowledge gaps, minimize bias, and increase inclusivity for all demographic groups.

## Conflicts of interest

None.

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None.

## Study approval

N/A,

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