SKIN

BRIEF ARTICLE

Representation and Quality of Acne-Related Content on Social Media

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ABSTRACT

Acne is a common dermatological condition affecting individuals of all races and ethnicities, with most cases occurring in teenagers and young adults. Patients in these age groups frequently turn to online platforms for guidance, relying on videos on social media platforms like TikTok. This study evaluated the top TikTok videos' content quality (DISCERN score) about perceived racial/ ethnic diversity. Findings demonstrate that videos showcasing the skin of individuals of color tend to have lower scientific content and potentially feature the application of agents that would promote dyspigmentation and scarring. Acne-related social media posts need to improve to provide higher-quality content targeted at patients of color, focusing on safer therapeutics.

INTRODUCTION

Over the past two decades, social media has grown in popularity, with more than half of the world's population having an online social media account.[1] In turn, it has become a significant source of dermatologic treatment information for many people.[2] Acne vulgaris is a common skin condition affecting 9.4% of the global population in 2010, representing the eighth most prevalent disease globally. Acne affects approximately 85% of teenagers but can occur in most age groups and persist into adulthood.[3] Girls and boys with acne have lower self-esteem and body satisfaction than those without acne.[4] Teenagers and adults alike have turned to social media for advice, but there are minimal regulations on health-related posts on social media. This study aims to assess the quality of advice on social media concerning race and ethnicity by reviewing acne videos posted on TikTok and rating them using the DISCERN instrument.[5]

METHODS

The top 50 posts (date of review: July 16, 2024) associated with the tagline #acne were reviewed.[5] The quality of each post was analyzed using the DISCERN instrument quality criteria for consumer instruments. Two scores were generated: a total score for 15 questions rated 1-5 and a composite overall quality score (question 16, rated 1-5). The posts were analyzed to extract the author's profession (dermatologist, other doctor, laboratory personnel, influencer, other), treatment plan (oral medication, perceived race/ethnicity of the target population based on the appearance of patients demonstrated, the theme of the content [review of topical medication, procedure, extraction, over the counter,

home therapies]), and sponsorship. Statistical analyses were generated using STATA 18© for Chi-squared analysis. Graphics were created using Googlesheets©.

RESULTS

Of the top 50 videos, 44 were reviewed, and 6 were rejected for not being visible. Of the 44 visible videos, the targeted populations were Asian (n=5, 11.4%), Black/ African American (n=6, 13.6%), Hispanic (n=11, 25%), White (n=20, 45.5%), and Middle Eastern (n=2, 4.5%). The overall quality DISCERN score (question 16) was 1.7 for all 44 videos, i.e., between low and moderate quality. The average total DISCERN score was 25.5 (range: 15-57). Addressing the quality by race, the scores were highest and the percentage of above-average videos was most significant for videos targeting White patients (average= 1.8/composite DISCERN score: 29.2; 47.7%), followed by Asian (average=1.6/composite DISCERN score: 23.8; 36.4%), African American (average=1.5/composite DISCERN score: 23.7; 15.4%), Hispanic (average=1.5/ composite DISCERN score: 23.5; 19%), and Other (average=1.5/composite DISCERN score: 23; 2.5%), in descending order (**Figure 1**). There were more high-quality outliers (question 16) in the videos with White patients (range: 1.3-3.8), while videos targeted at Hispanic patients (range:1.0-3.2) included more below-average outliers (**Figure 1**).

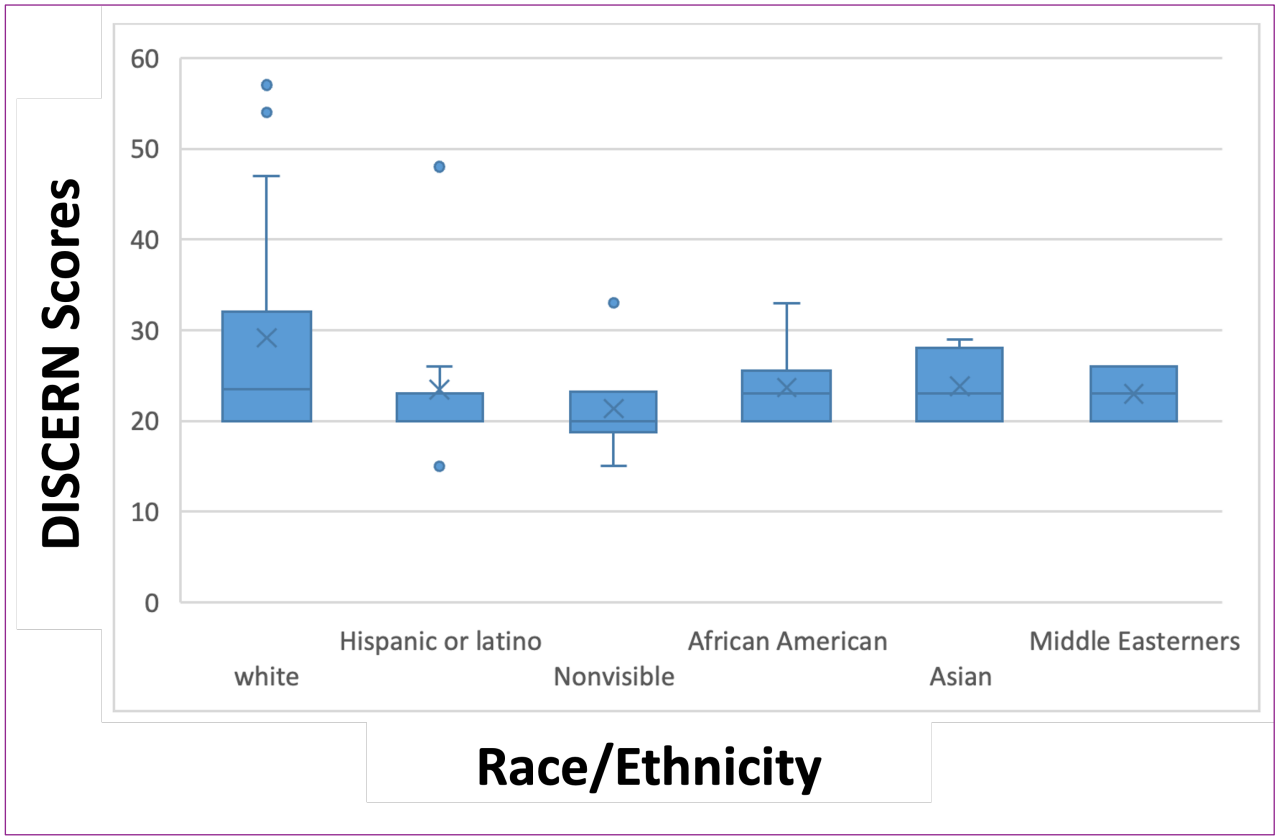

Figure 1. Box and Whiskers Plot Demonstrating Median, Mean (Marked as X), and Skew of DISCERN Scores

When comparing the number of average or above-average videos, White videos had higher quality than Black/Hispanic videos (combined) (p-value=.029132). The result is significant at $p < .05$.

DISCUSSION

Social media has served as a prominent source of advice on acne management for various reasons, including the immediacy of information, the visual nature of content, and the perception of community and support. Platforms like TikTok offer substantial user-generated content that can make skincare routines and treatments seem more trendy, relatable, and accessible. However, this leads to the spread of misinformation and variable content quality.

Individuals of color often seek concordant advice on social media from videos that feature people with similar skin tones and Fitzpatrick skin types. This approach can provide more relevant and relatable guidance, addressing specific concerns such as post-inflammatory hyperpigmentation (PIH) and keloid scarring, which are more prevalent in darker skin tones. This evaluation revealed that concordant posts for individuals of color generally have lower DISCERN scores when compared with those showcasing white skin. Examples of concerning content included a video encouraging Fitzpatrick type 5 skin patients to use high-strength chemical peels, demonstrating significant after-application scarring, and another promoting caustic application of toothpaste for a Fitzpatrick type 4 patient. Darker skin tones are at greater risk of post inflammatory hyperpigmentation and keloidal scarring, and caustic or corrosive agents may promote poor outcomes.

Lower DISCERN scores for most posts featuring individuals of color indicate several issues, including poor reliability, lack of balance or bias, and poor quality of information. In contrast, videos featuring white skin often have higher DISCERN scores, reflecting better adherence to accurate and professional advice. This disparity suggests a need for more high-quality, culturally competent content that addresses the unique dermatological needs of people of color, including more racially and ethnically diverse concordant presenters and featured skin types.

Some possible limitations of this study include the subjective nature of perceived ethnicity, potential biases in the algorithmic selection of videos, and the limited sample size of 50 videos, which may not fully represent the diversity and quality of acne-related content on TikTok.[6] While the DISCERN score is a reliable and valid instrument for judging the quality of written consumer health information, some subjectivity is required for rating certain criteria. Future research would include a broader range of social media platforms. Additionally, studies could explore the impact of algorithmic biases on the visibility of diverse creators.

This study underscores the importance of diverse and high-quality dermatological content on social media, particularly for individuals seeking concordant advice for acne. The lower quality of content available for people of color highlights a significant social determinants gap that needs to be addressed by content creators, healthcare professionals, and social media platforms. By promoting better representation and quality in online health content, we can help reduce health disparities and provide more effective support for individuals of all ethnicities dealing with acne.

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