SKIN

RESEARCH LETTER

Assessing the Quality of Rosacea Treatment Content on TikTok: A Cross-Sectional Analysis

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ABSTRACT

TikTok's rapid growth has made it a key source of dermatologic information. Dermatologists are increasingly leveraging social media to disseminate medical knowledge and to counteract misinformation, particularly in response to the growing influence of non-physician creators. We conducted a cross-sectional analysis evaluating the quality of rosacea-related content on TikTok. We reviewed the top videos identified via TikTok's algorithm, using the search terms "rosacea" and "rosacea treatment" on March 5, 2024. A total of 98 videos were included and categorized by creator type: physicians, medical influencers, and non-medical influencers. Using the DISCERN analysis tool, two board-certified dermatologists independently assessed the videos. The overall mean DISCERN score was 2.724, indicating shortcomings in the quality of health information. Dermatologist-created videos that focused on treatment received a higher mean DISCERN score of 3.360 compared to non-physician content score of 2.412 ($p<0.001$). Cohen's kappa was 0.108 ($p=0.0294$), reflecting low agreement between evaluators. As social media continues to grow in importance for education, patient engagement, and treatment options, dermatologists will play a key role in shaping the quality of online medical information.

INTRODUCTION

As one of the fastest-growing social media platforms, TikTok has emerged as a prominent source of dermatologic content. Recent studies have analyzed the most commonly searched dermatology-related content on TikTok, including acne, alopecia, eczema, psoriasis, and skin cancer.[1] Dermatologists are increasingly utilizing social media to disseminate medical information, counteract misinformation, and engage with patients. This has become increasingly important given the prevalence of non-medical influencers who often share misleading information about dermatologic treatments.[2] While previous studies have highlighted the poor quality of TikTok videos on conditions like acne and psoriasis, few have evaluated the quality of rosacea-related content.[3,4] Given that rosacea is a commonly misdiagnosed condition that can significantly impact a patient's quality of life, assessing the quality of information on TikTok is essential. To address the potential spread of misinformation, we conducted a cross-sectional analysis of TikTok videos related to rosacea.

METHODS

We identified the top 100 TikTok videos using the search terms “rosacea” and “rosacea treatment” on March 5, 2024. After excluding removed videos, 98 remained in the final sample. These videos were categorized into dermatologists (board-certified physicians who have completed specialized dermatology residency training), medical influencers, and non-medical influencers (**Table 1**). Additionally, videos were grouped by content type: medical (containing two or more medical facts), entertainment (without factual details), and promotional (mentioning specific products). Two board-certified dermatologists evaluated the content using DISCERN, a validated 16-item questionnaire that assesses the quality of information about treatment choices using a Likert scale from 1 (poor) to 5 (excellent).[5]

Table 1. TikTok video characteristics and mean DISCERN scores based on category

Category	No. of videos (%)	Mean number of likes	Mean number of comments	Mean DISCERN scores
By Sex				
Female	83 (84.69)	19,627.84	212.81	2.64
Male	15 (15.31)	17,567.73	221.13	3.20
By Specialty				
Non-medical influencer	58 (59.18)	15,953.93	190.65	2.34
Dermatologist	35 (35.71)	25,318.29	268.46	3.41
PharmD	2 (2.04)	46,373.50	312.00	2.25
General Practitioner	1 (1.02)	117.00	7.00	3.00
Derm Physician Assistant	1 (1.02)	3,397.00	60.00	3.00
Plastic Surgeon	1 (1.02)	601.00	15.00	2.00
By Content				
Promotional Videos	59 (53.15)	13,234.80	170.32	2.73
Medical Videos	30 (27.03)	10,053.93	178.03	3.25
Entertainment Videos	22 (19.82)	43,543.91	354.45	2.16

RESULTS

The 98 videos generated 1,892,627 likes, 61,155 shares, and 20,980 comments. The overall DISCERN quality rating of all the videos was 2.724, indicating shortcomings in health information on treatment choices (**Table 2**). Of the 98 videos, 35 were created by dermatologists, 5 by other medical

influencers, and 58 by non-medical influencers. The overall DISCERN quality rating for the 80 videos explicitly mentioning treatment was 3.360 for dermatologist videos and 2.412 for non-dermatologist videos ($p<0.001$). Across the majority of DISCERN criteria, videos created by dermatologists consistently received higher mean scores compared to those by medical and non-medical influencers, particularly in the questions related to clarity of aims, relevance, balance, and overall quality. Cohen's kappa for interrater agreement on quality was 0.108 ($p=0.0294$), indicating low agreement between the evaluators.

Table 2. Mean DISCERN scores of all 98 videos from dermatologists and non-dermatologists

Question	Videos from Dermatologist Creators (Mean Value) (n=35)	Videos from Non-Dermatologist Creators (Mean Value) (n=63)	P-Value
1. Are the aims clear?	4.20	3.48	<0.001
2. Does it achieve its aims?	4.04	3.52	<0.001
3. Is it relevant?	4.04	3.30	<0.001
4. Is it clear what sources of information were used to compile the publication (other than the author or producer)?	1.19	1.11	0.359
5. Is it clear when the information used or reported in the publication was produced?	1.46	1.41	0.806
6. Is it balanced and unbiased?	2.53	1.56	<0.001
7. Does it provide details of additional sources of support and information?	1.44	1.08	0.002
8. Does it refer to areas of uncertainty?	2.16	1.62	0.002
9. Does it describe how each treatment works?	2.07	1.90	0.320
10. Does it describe the benefits of each treatment?	2.39	2.29	0.605
11.Does it describe the risks of each treatment?	1.14	1.27	0.105
12. Does it describe what would happen if no treatment is used?	1.44	1.60	0.168
13. Does it describe how the treatment choices affect overall quality of life?	1.64	1.76	0.373

14. Is it clear that there may be more than one possible treatment choice?	2.66	2.24	0.079
15. Does it provide support for shared decision-making?	2.11	1.77	0.080
16.Based on the answers to all of the above questions, rate the overall quality of the publication as a source of information about treatment choices	3.41	2.34	<0.001

DISCUSSION

The results of this study highlight significant disparities in the quality of rosacea-related TikTok content between videos created by dermatologists and those made by non-medical influencers. Dermatologist-created treatment content consistently received higher DISCERN ratings, emphasizing the greater reliability and accuracy of information provided by medical professionals. The differences in content were not only quantitative but also qualitative in nature. Dermatologist videos more frequently provided educational content, including the discussion of rosacea subtypes, clinical signs, common triggers, and the importance of an accurate diagnosis, particularly given that rosacea is often misdiagnosed as acne. Dermatologist videos also emphasized that treatment strategies vary based on rosacea subtype, disease severity, and individual patient factors.

In contrast, non-medical influencer content tended to focus on personal skincare routines, cosmetic camouflage techniques, and over-the-counter products such as color-correcting serums and makeup aimed at masking redness. While the content may be relatable to viewers, it often lacked contextualization regarding disease chronicity, diagnostic considerations, and potential risks or limitations of recommended approaches. This distinction likely contributes to the observed differences in the DISCERN scores between creator groups.

Dermatologist-created videos also discussed established medical therapies, including topical agents, oral antibiotics, adjunctive treatments for erythema, as well as the pathophysiology of flushing and its role in vasodilation. Additionally, dermatologist videos highlighted procedural interventions such as botulinum toxin injections and laser-based therapies for vascular features of rosacea. Importantly, some physician content addressed that rosacea is also very prevalent in patients with skin of color, where erythema may be less apparent.

The low Cohen's kappa statistic observed in this study points to potential inconsistencies in how medical information is assessed, even among experts. This highlights not only the need for more standardized criteria when evaluating online health content to ensure consistency and accuracy, but also the broader challenge of producing high-quality medical information on social media.[6] Limitations of this study include the sample size and the dynamic nature of TikTok's algorithm, which is frequently updated and modified. Given the influence of social media on patient behavior and education, dermatologists who engage online play a key

role in improving the quality of medical information.

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