YOUTUBE AS A SOURCE OF INFORMATION FOR SELF-SKIN EXAMINATIONS: AN ANALYSIS OF CONTENT AND QUALITY

- Yanci A. Algarin, Bs[a,c]; Anika Pulumati, BA [b,c]; Alex Reznik, BA [c]; Dr. Robert J. Pariser, MD [a]
- a Department of Dermatology, Eastern Virginia Medical School, Norfolk, VA, USA
- b Department of Dermatology, University of Missouri-Kansas City School of Medicine, Kansas City, MO, USA
- c Department of Dermatology and Cutaneous Surgery, University of Miami Leonard M. Miller School of Medicine, Miami, FL, USA

Introduction

YouTube stands as the premier video-sharing platform in the US, yet research indicates a notable deficiency in the quality of health-related content shared on the platform.[1,2] We seek to evaluate the quality of skin self-examination (SSE) videos on YouTube compared to the recommendations of the American Academy of Dermatology (AAD) and American Cancer Society (ACS).[3,4] We hypothesize that most of these videos will fail to meet the high-quality medical information standards set by the DISCERN criteria.[5] Additionally, this investigation will determine whether the content adheres to recommendations issued by AAD and ACS, and whether it specifically addresses individuals with skin of color (SOC).

Methods

A review of 42 YouTube videos on skin self-examinations (SSE) was conducted in January 2024 using standardized, non-personalized search terms. Search terms were: skin self-exams, skin self-monitoring, skin cancer self-exam, self-led skin cancer check, "do-it-yourself" skin check. Video quality was evaluated with the DISCERN instrument, a standardized tool comprising 15 items rated on a 5-point scale, with an additional overall quality rating. Two independent raters assessed each video using DISCERN, with any disagreements resolved by a third rater. Scores ranged from 1 to 5, equating to low and high quality, respectively. Creators were categorized, and average scores were calculated, with content compared against AAD and ACS guidelines.

Results

Table 1. Content Creator Type and Mean DISCERN Scores

Content creator type	# of videos	Total count view	Total content time (min)	Mean DISCERN score
US physicians	21	387,789	98.50	3.2
Board-certified dermatologist	11	149,069	64.38	3.55
Board-certified non-dermatologist	10	238,720	34.12	2.8
All other Youtubers	21	1,243,646	114.26	3.2
Non-US Physician	4	282,264	30.33	3
Dermatology Resident	1	298	4.35	3
Nurse	2	1,056	6.21	3
PA-C	4	26,994	26.29	3.5
Independent Health Organization	5	8,512	16.14	3
Hospital	2	840,078	20.06	3
Health channel	2	82,439	4.30	3.5
Esthetician	1	2,005	6.58	3.9

Table 2. Self-Skin Exam Recommendations by Video Creator Type

Recommendations	Total Number (n=42)	US physicians (n= 21)	Other Youtubers (n=21)
Number of videos that recommend a self-skin exam once a month. (%)	19 (45.2)	8 (38.1)	11 (52.4)
Number of videos advising Board-certified Dermatologist evaluation after noticing any suspicious skin changes. (%)	23 (54.8)	14 (66.7)	9 (42.9)
Number of videos that mention and discuss the ABCDEs of melanoma when conducting a self-skin exam. (%)	33 (78.6)	17 (81.0)	16 (76.2)
Number of videos that mention examining overlooked body parts (behind the ears, mouth, palms and soles, between fingers and toes, and genitals). (%)	24 (50.0)	12 (57.1)	12 (57.1)
Number of videos that mention using mirrors for hard to see body sites (neck, back, buttocks). (%)	23 (54.8)	11 (52.4)	12 (57.1)
Number of videos emphasizing a well-lit room for conducting a self-skin exam. (%)	8 (19.0)	3 (14.3)	5 (23.8)
Number of videos that mention individuals of skin of color should also conduct self-skin exams.(%)	3 (7.1)	1 (4.8)	2 (9.5)
Number of videos containing information directly opposing AAD or ACS recommendations. (%)	1 (2.4)	1 (4.8)	0 (0)

Key Findings

- Board-certified dermatologists (26.2%) achieved an average DISCERN score of 3.55.
- Non-U.S. physicians and other YouTubers (50% of creators) had a mean DISCERN score range of 3 to 3.9.
- Both groups had the same mean DISCERN score of 3.2.
- Board-certified dermatologists scored 2.6 to 4.4, indicating variability in content quality.
- Other YouTubers showed a wider range of 1.7 to 4.3 in DISCERN scores.
- Other YouTubers (52.4%) suggest SSEs more frequently than U.S. physicians (38.1%).
- U.S. physicians (66.7%) advocate more strongly for consulting a dermatologist than other YouTubers (42.9%).
- Only 19.0% of videos highlight the importance of a well-lit room for SSEs, and 7.1% address the inclusivity of skin of color (SOC), suggesting areas for improvement.

Conclusions

The results suggest that there is a need for high-quality videos that accurately discuss SSE, offering comprehensive guidelines on correct procedures for conducting a SSE, that also emphasize SOC. While board-certified dermatologists achieved a mean DS of 3.55, higher than board-certified non-dermatologists (DS=2.8) and non-US physicians (DS=3), the quality and content of their videos are still inconsistent. A limitation of this study is the potential selection bias from evaluating only the top 20 YouTube videos per search term, potentially missing high-quality content due to YouTube's algorithm prioritizing viewer engagement over content quality.

References

1. Team TY. At five years, two billion views per day and counting. Accessed February 23, 2024. https://blog.youtube/news-and-events/ at-five-years-two-billion-views-per-day/. Published 2010.
2. YouTube. Authoritative news and information. Accessed February 23, 2024. https://www.youtube.com/howyoutubeworks/product-features/news-information/.
3. Find Skin Cancer: How to Perform a Skin Self-Exam." American Academy of Dermatology, www.aad.org/public/diseases/skin-cancer/find/check-skin. Accessed 23 Feb. 2024.
4. Skin Exams." American Cancer Society, American Cancer Society, Inc., www.cancer.org/cancer/risk-prevention/sun-and-uv/skin-exams.html. Accessed 23 Feb. 2024.
5. Charnock D, Shepperd S, Needham G, Gann R. DISCERN: an instrument for judging the quality of written consumer health information on treatment choices. J Epidemiol Community Health. 1999 Feb;53(2):105–11.