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The influence of social media on acne treatment: A cross-sectional survey

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Abstract

Background/Objectives: Social media use has been suggested to worsen psychiatric health among adolescents, especially those with visible skin lesions including acne. However, little is known about social media's impact on acne treatment. The purpose of the study sought to characterize the influence of social media use on acne treatment.

Methods: We conducted a cross-sectional survey of West Virginia University ambulatory patients whose chief complaint was acne was conducted. The survey collected sociodemographics and queried whether individuals accessed social media for acne treatment advice or not, whether changes to acne care were made based on social media, and whether these changes aligned with the American Academy of Dermatology (AAD) clinical guidelines for acne management.

Results: Of 130 respondents, 45% consulted social media for acne treatment advice (54% of women vs 31% of men). 41% of adolescents and 51% of adults consulted social media. The most used platforms were YouTube and Instagram (58% each). Social media users often tried an OTC treatment (81%) or dietary modification (40%). However, only 31% of participants consulting social media made changes fully aligned with AAD clinical guidelines.

Conclusions: Social media-influenced acne treatment advice is prevalent, especially among women, adolescents, and young adults. This treatment advice frequently does not align with AAD guidelines, with notably 40% of respondents choosing dietary modification for acne management. These results suggest that dermatologists should inquire about social media acne treatment advice and directly address misinformation.

Keywords

acne; American Academy of Dermatology; education; guidelines; Instagram; internet; medication; online; pediatric; recommendations; Reddit; social media; teens; treatment; YouTube

1 INTRODUCTION

Dermatology has become a popular topic on the internet.¹ Both physicians and patients use social media to communicate knowledge regarding medical conditions. griffis et al found greater than 99% of us hospitals in the study adopted at least one social media platform to interact with patients, highlighting the increasing reliance on social media in health care.² Furthermore, social media websites are increasingly referenced for acne treatment consultation. it is well-documented social media influences patient perspective on medical treatment.³ However, there remains a gap in our understanding of how social media influences acne treatment specifically. with acne affecting about 85% of adolescents in the united states, analysis of social media's influence on acne treatment is warranted.⁴

2 MATERIALS AND METHODS

2.1 Survey methods and questionnaire content

This study was approved by the West Virginia University institutional review board. The 2-page questionnaire was hand-delivered to West Virginia University ambulatory patients visiting the dermatology clinic with a chief complaint of acne. The non-validated questionnaire consisted of 10 items including age, gender, presence of acne in the last 6 months, patient-reported acne severity, first treatment approach, use of social media guidance for acne treatment, changes based on social media, platforms consulted, and patient-perceived improvement of acne with social media suggestions. The survey did not contain identifiable patient information to ensure anonymity. Patients who used an acne treatment based on a social media recommendation had implemented the recommendation prior to the dermatology office visit. These patients were asked what changes were made, including over-the-counter products, self-made products, diet, and exercise changes.

2.2 Data entry and analysis

Completed questionnaires were manually entered into a secure excel file. Data were analyzed using JMP Pro 14. The respondents were divided into two groups: social media users and non-users, based on responses to the question "Have you tried any treatment for acne based on a social media recommendation?" Descriptive frequencies were used to describe demographics, survey responses, and prevalence ratios. 95% confidence intervals were used to examine the differences between social media users and non-users for gender, age, patient-reported acne severity, and first approach to acne treatment. Acne treatment guidelines published on the AAD website were cross-referenced with patient-reported changes based on social media.⁵ Patients were then categorized as either aligned, aligned with non-recommended lifestyle changes, or not aligned with the published AAD guidelines.

3 RESULTS

3.1 Respondent characteristics

A total of 130 completed surveys were returned out of 130 contacted patients. Characteristics of respondents are listed in Table 1. Most were female (60%), adolescents

(54%), had moderate patient-reported acne severity (51%), and consulted a medical professional first for acne treatment (58%).

3.2 Social media users

The most used platforms were YouTube and Instagram (58%, equally), which correspond to the most frequently used social media platforms by teens.⁶ Among all respondents, 58 (45%) used social media for acne treatment advice. Of these users, most were female (72%). Women were 75% more likely to use social media for acne treatment advice (prevalence ratio = 1.75, 95% CI = 1.11–2.76, $P = .0118$). Most social media users tried an over-the-counter product (81%) and/or dietary modification (40%). Only 7% reported significant improvement in their acne from social media acne treatment advice. Only 31% of participants who consulted social media made changes fully aligning with AAD clinical guidelines (Table 2).⁵

3.3 Social media non-users

Over half of respondents (55%) did not use social media for acne treatment advice. Among these respondents, most elected to contact a medical professional for their first approach to acne treatment (74%).

4 DISCUSSION

There are several important findings from this study. First, social media influences acne treatment. There is a statistically significant difference between social media users and non-users in gender. There was a high prevalence of social media-influenced acne treatment advice among women, adolescents, and young adults.

Second, most treatment decisions based on social media recommendations do not align with AAD guidelines.⁵ Numerous social media users incorporated a lifestyle change not supported by the published guidelines (48%), such as dietary changes and supplement use. Social media users commonly chose dietary modification for acne management (40%). There is limited evidence to suggest a high glycemic index diet and dairy consumption may be associated with acne, but at this time, the AAD does not recommend any specific dietary changes to improve acne. About 17% of social media users started an oral supplement based on social media recommendations. These supplements included probiotics, vitamins, and oils. Currently, the AAD guidelines state there is not enough evidence to support the use of antioxidants, probiotics, or fish oil for the treatment of acne.⁵ These recommendations highlight the importance of proper patient education for those suffering from acne due to an abundance of public misinformation.

Finally, 68% of respondents who used social media for acne treatment advice were more likely to consult a medical professional. Only 7% of social media users reported significant improvement in their acne. This may be due to less accurate content found on social media compared to other health care sources.⁷ Studies have found inaccurate information regarding acne treatment on Reddit and Instagram.^{8,9} The limitations of this study are that all surveyed participants were recruited from a dermatology clinic; thus, only participants who consulted a medical professional were included in the study. The results likely underestimate the

percentage of patients who improve from social media acne treatment advice and do not consult a medical professional.

In summary, the findings suggest social media does influence acne treatment. This is especially true among women, adolescents, and young adults. Many social media users are choosing treatments that do not align with AAD guidelines. Dermatologists should consider inquiring about social media acne treatment advice and directly addressing misinformation.

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TABLE 1

Characteristics of all respondents

Characteristic	Total, No. (%) ^a	Social media consultation, No. (%) ^b	No social media consultation, No. (%) ^b
Sex			
Male	52 (40.00)	16 (30.77)	36 (69.23)
Female	78 (60.00)	42 (53.85)	36 (46.15)
Age			
Preadolescent 9–11	3 (2.31)	0 (0.00)	3 (100.00)
Adolescent 12–18	70 (53.85)	29 (41.43)	41 (58.57)
Adult > 18	57 (43.85)	29 (50.88)	28 (49.12)
Patient-reported acne severity			
Mild	14 (10.77)	5 (35.71)	9 (64.29)
Moderate	66 (50.77)	26 (39.39)	40 (60.61)
Severe	50 (38.46)	27 (54.00)	23 (46.00)
Acne treatment first approach			
Social media recommendation	21 (16.15)	21 (100.00)	0 (0.00)
Family/friend	34 (26.15)	19 (55.88)	15 (44.12)
Medical professional	76 (58.46)	23 (30.26)	53 (69.74)
Other	13 (10.00)	5 (38.46)	8 (61.54)

^aPercent applies to column^bPercent applies to row

TABLE 2

Results of questionnaire on social media use in acne patients

Characteristic	No. (%)
Acne treatment recommendation	94 ^a
OTC product	46 (79.31)
Self-made product	11 (18.97)
Diet modification	23 (39.66)
Exercise modification	4 (6.90)
Supplement use	9 (15.52)
No response	1 (1.72)
Social media platform	112 ^a
Pinterest	18 (31.03)
YouTube	33 (56.90)
Facebook	11 (18.97)
Snapchat	4 (6.90)
Twitter	5 (8.62)
Instagram	33 (56.90)
Tumblr	2 (3.45)
Other	5 (8.62)
No response	1 (1.72)
Acne change	58
No change	23 (39.66)
Minimal improvement	31 (53.45)
Significant improvement	4 (6.90)
AAD guidelines	58
Aligned	18 (31.03)
Aligned with non-recommended lifestyle changes	12 (20.69)
Not aligned	18 (31.03)
No response	10 (17.24)

Abbreviation: AAD, American Academy of Dermatology

^aRespondents could select more than one answer