

The impact of social media on Acne Vulgaris treatment

O impacto das mídias sociais no tratamento da acne vulgar

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ABSTRACT

Introduction: Acne Vulgaris is a skin disease that, with the advent of social media, has become more susceptible to the spread of unreliable information.

Objective: This study aims to characterize the influence of social media on the treatment choice for Acne Vulgaris without medical advice, identify complications of inadequate treatments, and highlight the most influential social media for this purpose and the life quality of these patients.

Methods: It is a descriptive cross-sectional study with a quantitative approach whose sample consisted of 306 social media users over 18 years of age. After signing the Informed Consent ("Termo de Consentimento Livre e Esclarecido - TCLE") the data was collected through a self-administered form along with the questionnaire "Dermatology Life Quality Index - DLQI-BRA" via "Google forms" over 30 days. The data was then tabulated online and analyzed according to descriptive statistics.

Results: The results showed a great impact, especially from "Instagram", in the dissemination of content on the subject and highlighted the role of the dermatologist on social networks as the source of information chosen by the public.

Conclusions: The public was strict about the quality of the information, but there is still a need for greater insertion of trained professionals and information based on scientific evidence on social media.

Keywords: Acne vulgaris; Online social networking; Self medication; Quality of life; Dermatology

RESUMO

Introdução: A acne vulgar é uma doença de pele que, com o advento das mídias sociais, ficou mais suscetível à propagação de informações não confiáveis.

Objetivos: Este trabalho objetiva caracterizar a influência das mídias sociais na escolha do tratamento da acne vulgar sem orientação médica, identificar complicações do manejo inadequado, destacar a mídia social mais influente para esta finalidade e a qualidade de vida desses pacientes.

Métodos: Trata-se de um estudo transversal descritivo e de abordagem quantitativa, cuja amostra foi composta por 306 usuários de mídias sociais maiores de 18 anos. Após a assinatura do Termo de Consentimento Livre e Esclarecido (TCLE), dados foram coletados por meio de um formulário autoaplicável junto com o questionário "Índice de Qualidade de Vida em Dermatologia - DLQI-BRA", via "google forms", por 30 dias. Os dados foram trabalhados em documento online e analisados conforme estatística descritiva.

Resultados: Os resultados mostraram grande impacto, principalmente da rede social Instagram, na disseminação de conteúdo sobre o assunto e destacaram o médico dermatologista nas redes sociais como a principal fonte de informações eleita pelo público.

Conclusões: O público mostrou-se rigoroso quanto à qualidade das informações, porém ainda são necessárias maior inserção de profissionais capacitados e informações baseadas em evidências científicas nas redes sociais.

Palavras-chave: Acne vulgar; Redes sociais online; Automedicação; Qualidade de vida; Dermatologia

Original Article

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INTRODUCTION

The beauty standard is a concept related to culture and social values, varying according to regions and historical times, fueling philosophical debates, and inspiring poets and painters.¹ Traditional media, such as newspapers, magazines, radio, and TV, facilitated the spread of ideas, values, and behaviors, causing beauty to gain more and more prominence. The advent of electronic social networks enhanced the search for an ideal beauty model.²

Major commercial brands in the world of beauty, such as Shiseido, L'Oréal, and Estée Lauder, are adopting a different marketing strategy, where digital influencers can sell their product by causing the sensation of active public participation in the process of choosing as well as a feeling of consumer sympathy for the digital influencer. The virtual environment enabled interaction between seller and consumer and even between consumers in communities created on social networks where they share experiences and recommendations for beauty products, aesthetic procedures, and medications without medical advice.³

The skin, in addition to its biological functions as a protective organ against external aggressions, also plays a social role, being a means of cultural and individual expression. In the current scenario, where social media are widely accessible and influential, there is a great appreciation of what is conventionally called the "beauty ideal". This representation is based on the idea that beauty is having uniform skin, free of imperfections. The enhancement of the external appearance means that people who do not fit the defined aesthetic standards, such as those with skin lesions such as acne vulgaris, suffer a great psychological impact, capable of generating emotional disturbances that compromise the quality of life. It results in shame, low self-esteem, anxiety, and depression.⁴

Acne vulgaris is one of the most common dermatological complaints in the outpatient routine. It is prevalent in adolescents in the puberty phase (95%) and with a growing prevalence among adults, mainly women, representing a psychosocial and emotional impact on about 40% of this population.⁵

Acne vulgaris is a chronic multifactorial disease of the pilosebaceous follicle that results in either non-inflammatory formations, such as comedones, or inflammatory formations, including papules, pustules, and nodular-cystic lesions.⁶

As a multifactorial disease, its etiopathogenesis is complex and involves several genetic and environmental factors, such as smoking, the presence of bacterial antigens in the pilosebaceous follicle, lipid diet, interaction with neuropeptides, deregulation of the skin hormonal microenvironment, hyperplasia of sebaceous glands causing seborrhea, alterations of sebum fatty acid composition, and inflammation and dysfunction of innate and adaptive immunity. These interactions and deregulations in the hair follicle are responsible for transforming physiological microcomedones into comedones and other inflammatory lesions.⁷

According to Gollnick,⁸ acne is a disease that is misunderstood by physicians and the general population, and it's seen

as a simple, self-limiting condition restricted to the pubescent population. Besides neglecting the seriousness of acne vulgaris, there is the feeling of dissatisfaction with self-image and the desire for immediate treatment, which predisposes the patient to try to find a resolution through unreliable means, such as tips from digital influencers, experiences shared in social networks groups and products and medicines recommendations from people with few qualifications.

Self-medication, defined as using medications without a medical prescription, is a growing practice among patients with acne vulgaris.³ Dermatology often finds patients with complications resulting from the use of potent topical steroids without medical advice, which is a big problem.

Inadequate treatment of acne vulgaris under the influence of social media can cause physical complications, such as adverse reactions to products used without medical advice, worsened inflammation, undesirable scars and spot formation, further intensified insecurity concerning self-image, and the onset of symptoms of anxiety and depression. Therefore, it is essential to understand the impact of social media on acne vulgaris treatment and to identify the causes of negligence in medical therapy to establish strategies that increase patient adherence to treatment with a specialized professional, thus preventing future harm from therapies based on misinformation from social networks.

METHODOLOGY

It was a study with a quantitative approach of an exploratory and descriptive nature. The study sample comprised 306 people, with data collected remotely through a digital self-applicable form on the Google forms platform, consisting of a page for signing the informed consent form. The collection started on August 30, 2021, and ended on September 30, 2021, and then the data were analyzed.

The investigation included the following evaluation items through the self-administered questionnaire:

- Identification: age, gender, and education level;
- General knowledge about acne vulgaris: does the respondent consider acne a disease? Does the interviewee declare himself to have acne vulgaris?;
- Identification of the possible influence of social media for the correct management of acne vulgaris: questions about self-medication based on social media indications; which social media is used for this purpose (television, magazines, Internet, others); which social network is most used for this purpose (WhatsApp, Facebook, Instagram, others); from who the respondent usually get indications about medications or products intended for acne (close friends, family, social media groups, digital influencer, beauticians, dermatologists);
- Questions about how acne is being managed by the patient: the frequency of dermatological appointments; what medication or product is currently used to treat

acne; and degree of satisfaction with the treatment used currently;

- Identification of complications due to procedures or self-medication influenced by social media: what was the complication; what was the procedure/product that caused the complication;
- Application of the questionnaire “Dermatology Life Quality Index (DLQI-BRA)”. The questionnaire consisted of 10 questions assessing how much the skin problem interfered with the patient’s quality of life and daily activities during the past week.

For data analysis, we performed the descriptive analysis with univariate frequency tables, percentage distributions for qualitative variables, and the calculation of measures of central tendency such as medians, means, and standard deviations for quantitative variables.

Unicesumar’s Permanent Committee on Ethics in Research involving human beings approved the project, following Resolution 466/12 of the National Health Council.

RESULTS

The study population consisted of 306 Internet users. The average age was 27.86 years. Among the analyzed population, 88% (269) were women and 12% (37) were men. The age group between 18–21 years was the most frequent, totaling 28.10% (86) of respondents (Table 1).

Table 1 shows the number of people analyzed according to age group.

Regarding the educational level, 45.09% (138) had completed higher education, 35.29% (108) had incomplete higher education, and 16.99% (52) had completed high school. Incomplete secondary education was equivalent to 2.28% (7), and completed elementary school to 0.32% (1).

Table 1: Frequency of people according to age group, 2022

Age group	Number of people
18–21	86
22–25	85
26–29	36
30–33	32
34–37	17
38–41	13
42–45	6
46–49	15
50–53	4
54–57	4
58–61	2
Total = 306	

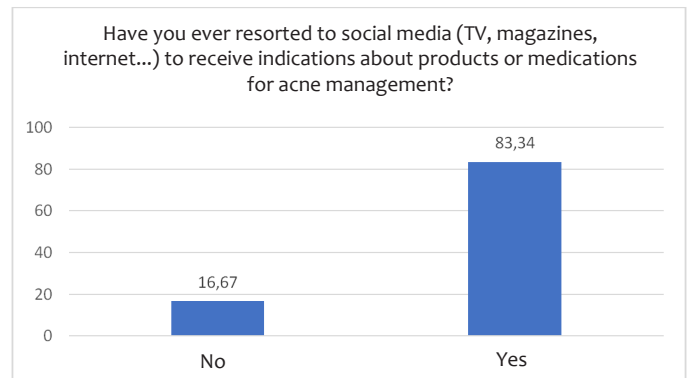


FIGURE 1: Percentage distribution of respondents who searched social media for indications on acne management, 2022

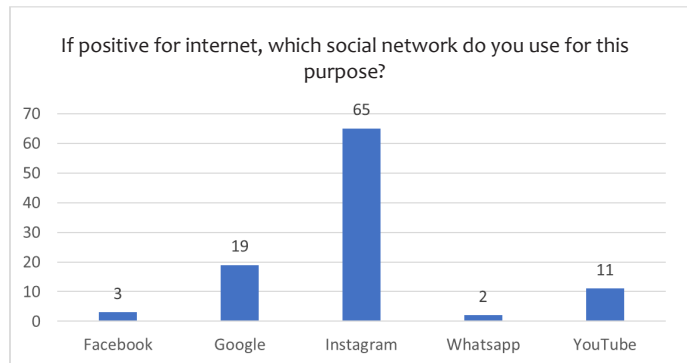


FIGURE 2: Percentage distribution of social network of choice for obtaining information about products/procedures for acne management, 2022

When evaluating general knowledge about acne, 29.41% (90) of respondents said acne is a poorly maintained skin condition, while 70.58 (216) said it is a disease.

Among the investigated population, 58.16% (178) declared to have acne, while 13.07% (40) said “perhaps” to have acne, and 28.75% (88) denied having acne.

Figure 1 presents information regarding whether, at any time, the subject resorted to social media (television, Internet, or magazines) to receive indications about products or medications to manage acne. 83.33% (255) responded positively.

Of the interviewees who stated they searched social media to find indications for acne management, the Internet was the most cited, totaling 82.35% (252), followed by magazines 0.65% (2), and lastly, television 0.32% (1).

Among those who reported using the Internet to obtain information on acne management, the most frequent social network used for this purpose was Instagram, with 65% (164), followed by Google, with 19% (49), and YouTube, with 11% (27). Figure 2 provides information on the percentage distribution of the social network used by respondents.

When asked from whom the interviewee gets information about acne care, 61% (187) replied they followed re-

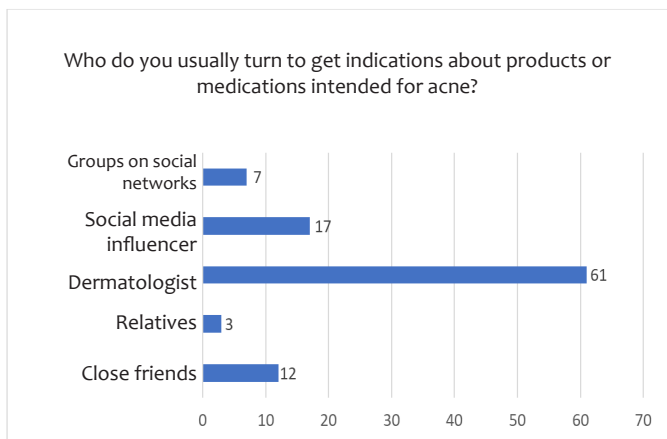


FIGURE 3: Percentage distribution of source of choice for obtaining information and indications on medicinal products or procedures for acne management, 2022

commendations from dermatologists, 17% (52) from digital influencers, and 12% (38) from close friends. Figure 3 shows the distribution of the cited data.

Among the total population assessed, 28% (87) stated that they had never sought consultation with a dermatologist in the last 12 months to manage any skin-related complaint; 27% (82) rarely sought a dermatologist; and 23% (69) marked the frequency as “sometimes”. Of the respondents, only 12% (37) stated they always consult a dermatologist when they have a skin complaint (Figure 4).

Regarding complications after procedures or the use of self-medication influenced by social networks, 10.13% (31) declared they had gone through such a situation. Skin irritation corresponded to 58.84% of complications, followed by 20.58% of worsened acne and 20.58% of spots after using products re-

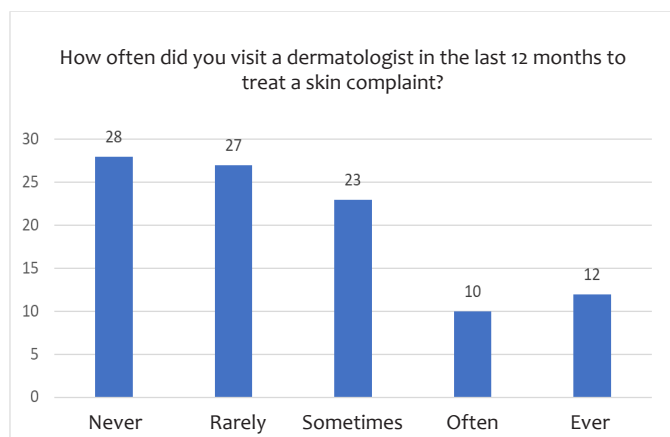


FIGURE 4: Percent distribution of the visits frequency to a specialist dermatologist in the last 12 months for the management of skin-related complaints, 2022

commended by social media.

When asked if acne was being treated, 54.24% (166) said they were undergoing some treatment. Of these, 36.74% (61) used topical acids; 21.68% (36) treated acne only with soaps marketed as anti-acne; 13.85% (23) used oral isotretinoin; and 11.44% (19) treated it with a combination of topical acid and topical antibiotic. Exclusive treatment with oral contraceptives totaled 6% (10) of respondents, followed by spironolactone 3.61% (6), and diet 3.61% (6).

Regarding the degree of satisfaction with the current acne treatment, 38% (115) were satisfied; 34% (103) were indifferent, 15% (47) were very satisfied, 11% (35) were dissatisfied, and only 2% (6) were very dissatisfied with their current acne treatment.

When asked about how much the skin was affected during the past week due to itching, inflammation, pain, or burning, 37.25% (114) said “a little”; 35.29% (108) said “not affected”, while 18.3% (56) indicated it as “quite a lot”, and 9.15% (28) marked it as “really a lot”.

Figure 5, following the Dermatology Life Quality Index (DLQI-BRA), shows the percentage of respondents who felt embarrassed or limited due to their skin condition during the last week. Of the total population, 20% (61) reported it as “quite a lot”, and 10% (31) marked it as “really a lot”.

On how much their skin interfered with their shopping or outing activities, at home or public places during the past week, 13% (40) reported “a lot”; 9.8% (30) as “really a lot”, while “a little” or “not at all” totaled 77.12% (236).

When asked to what extent the skin interfered in the past week with the clothes they usually wear, 79.4% (243) said “a little” or “not at all”. In contrast, 11.43% (35) said “a lot”, and 9.15% (28) said “really a lot”.

Regarding how much the skin affected any of the inter-

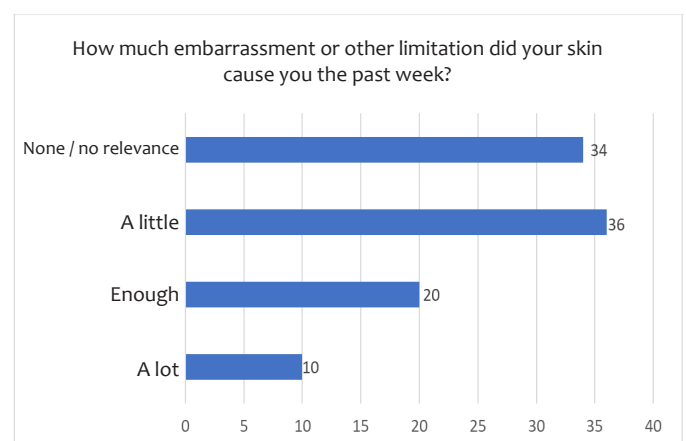


FIGURE 5: Percent distribution of how much embarrassment or other type of limitation was caused in the last week due to skin condition, 2022

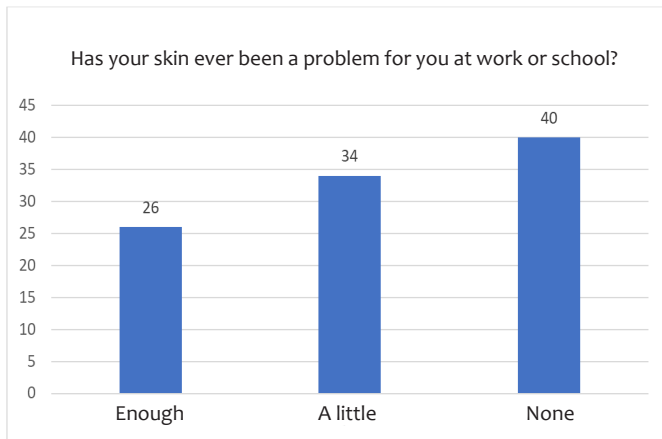


FIGURE 6: Percentage distribution of respondents who answered that their skin was not an obstacle to studying or working in the last week, but it was at some point in their lives, 2022

viewee's social or leisure activities in the past week, 33.4% (102) said "a little"; 14.7% (45) said "a lot"; and 10.45% (32) said they had been "really a lot".

For 8.16% (25) of respondents, their skin condition made it "very difficult" to practice sports during the past week. About 11% (34) stated that there was a lot of difficulty in performing physical activities, and 29% (89) indicated "a little". The highest percentage was those who did not feel affected, with 51.63% (158).

Only 3.6% (11) of respondents stated that their skin condition prevented them from going to work or school in the last week. For the interviewees who answered that their skin did not interfere with their work or studies, the DLQI questionnaire continued to ask this population if, at some point in their lives, their skin had already been a problem at school or work. Of this group, 26% (67) said "quite a lot" and 34% (88) stated that the skin, at some point, had already been a problem, as shown in Figure 6.

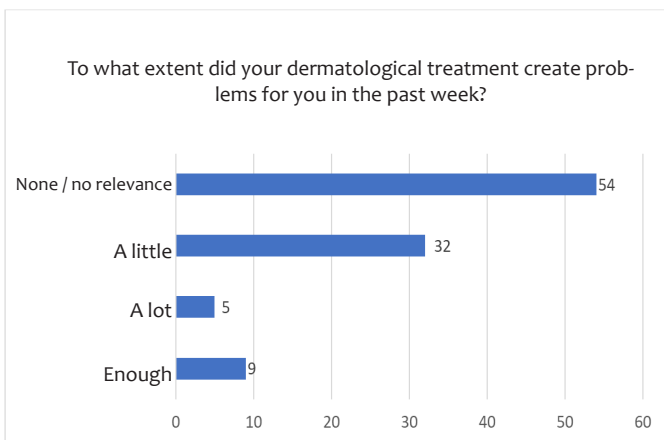


FIGURE 7: Percentage distribution of answers to the question: "to what extent did your dermatological treatment create problems for you in the last week?"

At another time, when asked "how problematic has the relationship with your partner, close friends, or relatives become because of your skin", 12% (36) said "a lot", 9% (28) marked "really a lot", 31% (94) said "a little", while the majority, 48% (148), denied the interference of the skin in interpersonal relationships.

Regarding how much the skin interfered with sexual intercourse in the last week, most respondents – 60% (182) – denied having been affected, and 26% (81) said "a little". The group that considered itself very affected in this regard totaled 8% (25) of the population, and those "really very" affected was only 6% (18).

Finally, Figure 7 provides information on the question "to what extent has your dermatological treatment created problems for you in the past week". The majority, which totaled 54% (166) of the interviewees, denied having had any problems, while only 9% (28) had "a lot" of problems related to the current dermatological treatment.

DISCUSSION

The present study demonstrated that social media, mainly the Internet, has a great impact on acne management. Online platforms provide quick and easy-to-understand information, which may contribute to the preference for this means in obtaining information about products and treatments for acne.²

Instagram stood out as the prevalent social network for obtaining information about acne, preferred by 65% of respondents. As pointed out by Ward,⁹ the heterogeneity of message quality, the possibility of choosing the source of information, and the use of hashtags as a search tool seem to favor this social network by facilitating the search for posts on more specific subjects with a variety of opinions about the same theme.⁹ Also, due to the vast diversity of information, the importance of the dermatologist in this environment is highlighted to provide scientifically based information and alerts regarding procedures and self-medication with potential dermatological risk.

Dermatologists on social networks were highlighted as a source of information about acne management. More than half of the interviewees (61%) used professional dermatologists on social networks to obtain knowledge on the subject, which may have contributed to the vast understanding of acne as a multifactorial disease (70%). Also, the low demand for face-to-face care with a dermatologist due to skin-related complaints emphasizes the significance of the online presence of the dermatologist for public education to reduce self-medication and consequent complications that impact the physical and emotional health of acne sufferers.⁴

Complications generated by procedures or self-medication influenced by social media represented a small part of the total number of respondents (10%), a likely reflection of the public's preference for quality information from sources with a higher scientific basis. The high frequency of use of topical acids in the study population, especially retinoids, also shows the in-

fluence of the professional dermatologist in choosing acne management and highlights the systematic review by Pena, Hill, and Feldman¹⁰ where the number of prescriptions of topical retinoids by dermatologists is substantially higher than among other medical professionals.

Another significant indicator was the “Dermatology Life Quality Index” (DLQI). Respondents did not have a significant impact of acne on their daily lives. However, a notable number of respondents (60%) stated that acne, at some point in their lives, has already been a problem at school or work, which may be related to the current control of the disease and consequent satisfaction with the present treatment.¹¹

CONCLUSION

As anticipated, social media influences decisions around acne vulgaris management significantly. Despite the preference

for online content, social network users are increasingly strict about the quality of information consumed, and, regarding acne vulgaris management, the dermatologist is the reference chosen by the public. Thus, only a small part of the interviewees reported undesirable adverse events due to the use of acne products without a medical prescription, which could also be observed in the high satisfaction rate with the current skin condition.

Even so, the ease of finding products marketed for acne over the Internet often seems to replace face-to-face consultations with dermatologists, which can contribute to increased scarring and skin irritation. In this sense, it is necessary to create tools to verify the reliability of information related to acne vulgaris on the various online platforms, in addition to greater participation of trained professionals in disseminating information based on high-quality scientific evidence. ●

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Statistical analysis; approval of the final version of the manuscript; study design and planning; preparation and writing of the manuscript; data collection, analysis, and interpretation; active participation in research orientation; intellectual participation in propaedeutic and/or therapeutic conduct of studied cases; critical literature review; critical revision of the manuscript.

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