

## Use of Social Media by the Public Regarding Skin Health: Effects on Dermatological Awareness and Preventive Behaviours

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Social media are digital platforms that enable content sharing and real-time interactions, and are now part of daily life among 59.9% of the global population (1). Such platforms are used in many industries, including healthcare. Dermatological information is increasingly disseminated to the public via these networks, providing take-home messages, encouraging awareness of the need for preventive measures, and promoting professional consultation (2, 3). This study used a web-based survey to investigate how the general population uses social media to acquire dermatological information, and examines the influence of these platforms on dermatological awareness and preventive behaviours.

### MATERIALS, METHODS AND RESULTS

A web-based survey was conducted using a 13-question online form via Google Forms (Google LLC, Mountain View, CA, USA); the survey was conducted in Italian language with a mixture of multiple-choice and open-ended questions.

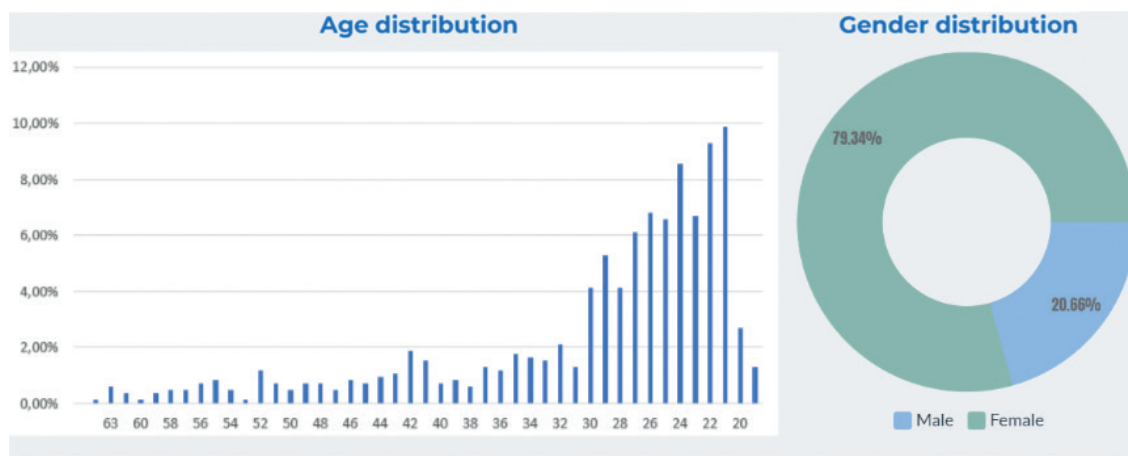
From February 2023 to March 2023 participants were recruited from the general population through dermatology-focused social media groups via Instagram (Meta Platforms, Menlo Park, CA, USA), Facebook (Meta Platforms, Menlo Park, CA, USA), and WhatsApp (Meta Platforms, Menlo Park, CA, USA). Following survey completion, participants were asked to invite acquaintances to take part in the study. Participation in the survey was voluntary and anonymous. Informed consent was obtained through the online survey platform before participants could access the survey questions. The survey questions are listed in **Table I**. In addition, a free-text section was included at the end of the questionnaire

**Table I. Survey questions**

No.	Question	
01	Year of birth?	Free text answer
02	Sex?	Male Female
03	Country of residence?	Free text answer
04	Region of residence?	Free text answer
05	Do you have any dermatological disease?	Yes No
06	Do you think it could be useful to disseminate health-related content through social media for preventive purposes?	Yes No
07	Which social media do you use the most?	Free text answer
08	Which social network do you consider the richest in content related to skin disease prevention?	Free text answer
09	Have you undergone a dermatological examination after being exposed to content on prevention on social media?	Yes Not yet, but will schedule a visit No
10	If so, did the skin examination reveal any new dermatological disease?	Yes No
11	If so, did you receive a diagnosis of skin cancer?	Yes No
12	Did you find out about this survey through social media?	Yes No
13	If so, which social network?	Free text answer

allowing participants to share insights or questions. We analysed the obtained data using Microsoft Excel 16.29 version.

Among 881 respondents, 860 provided informed consent prior to participation; 8 subjects were minors and were thus excluded. The final sample for the present study included 852 participants (96.7% of 881 respondents). Participants ranged in age from 19 to 64 years (mean age of 29.67 years). Women comprised 79.34% of participants ( $n=676$ ) and men 20.66% ( $n=176$ ) (**Fig. 1**). Most participants ( $n=842/852$ , 98.71%) resided in Italy, evenly distributed among northern and southern Italian regions. Approximately one-third ( $n=287$ , 33.69%) reported dermatological problems. Of the participants, 92.84% ( $n=791/852$ ) considered it useful to



**Fig. 1. Distribution of age and sex in the study group (N = 852).**

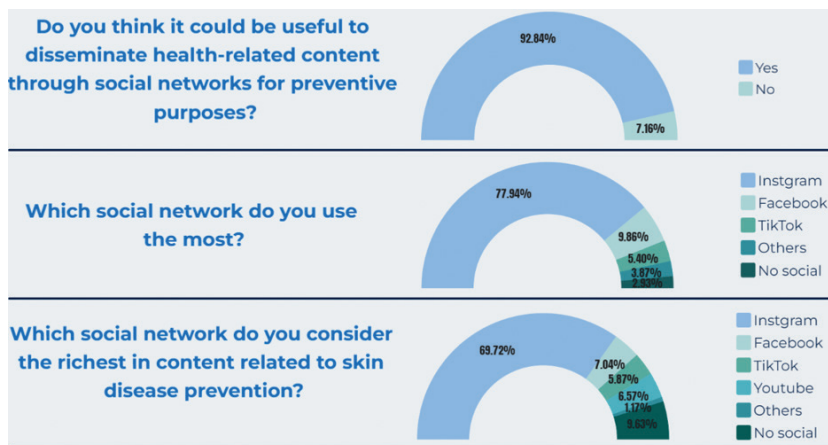


Fig. 2. Graphs of responses to survey questions 6, 7 and 8.

disseminate dermatological health-related content for preventive purposes through social media. Enrolled patients declared that the social media they used the most was Instagram ( $n=664/852$ , 77.94%), followed by Facebook ( $n=84/852$ , 9.86%), TikTok (ByteDance, Beijing, China) ( $n=46/852$ , 5.40%) and others ( $n=33/852$ , 3.87%).

Instagram was considered to be the richest in content related to skin disease prevention (69.72%  $n=594/852$ ), followed by Facebook (7.04%  $n=60/852$ ), YouTube (6.57%  $n=56/852$ ) and TikTok (5.87%  $n=50/852$ ) (Fig. 2).

Of the participants, 13.38% ( $n=114/852$ ) declared they had undergone a dermatological examination after being exposed to dermatologic prevention content on social media; among this subgroup, 25 subjects ( $n=25/114$ , 21.93%) declared they had been diagnosed with a dermatological condition; in particular, 2 of these ( $n=2/114$ , 1.65%; 8% of new dermatological diagnosis) specified they had received a diagnosis of skin cancer (Fig. 3). Moreover, 13.73% of subjects ( $n=117/852$ ) declared they were going to undergo a dermatological examination after being exposed to prevention content on social platforms. 77.93% of the study group ( $n=664/852$ ) became aware of the survey through social media, mainly Instagram (82.98%,  $n=551/664$ ), WhatsApp (10.84%,  $n=72/664$ ) and Facebook (5.12%,  $n=34/664$ ).

### DISCUSSION

Social media have become a significant way of networking, sharing information, and following trends and

news. This technological revolution has inevitably impacted the dissemination of healthcare knowledge, especially in dermatology, a field that is focused on visual content. Social media have proven to be effective communication tools that increase public awareness of health issues, including dermatological concerns. This includes promoting both primary preventive measures, such as sun protection and skin cancer awareness, and secondary preventive measures, such as dermatological screening (3–8).

Of the participants, 79.34% ( $n=676/852$ ) were female, suggesting that women may be more sensitive

to the issue of physical health, although no clear data are available about the prevalence of women and men among users of the social media platforms. It is notable that exposure to social network content on prevention prompted a high number of participants ( $n=114/852$ , 13.38%) to seek dermatological consultation, with a substantial proportion of these (21.93%,  $n=25/114$ ) receiving a new diagnosis, including the detection of skin cancer (1.65%,  $n=2/114$ ).

These findings highlight the potential of social media as educational tools. Dermatologists can join these platforms to share trusted resources, raise awareness of skin disease, and promote healthy skincare practices. Visual content, especially images depicting dermatological conditions, help to raise patients' awareness of the importance of treating skin conditions. Social media might also prove useful among young people in preventing behaviours that could increase cancer risk, such as excessive exposure to ultraviolet (UV) light and tanning (9–11). However, young adults are the main users of Instagram (1), which has been shown to be the most used social network to find dermatological information and, therefore, further data regarding the optimum way to reach all age groups is required. Collaborative efforts among dermatological journals, professional associations, scientific societies, and social media might prove useful in improving the availability and dissemination of reliable public health knowledge.

This study has significant limitations, such as the small sample size and the non-systematic method of participant selection. Furthermore, the lack of a live interviewer means that participants were not able to ask for clarifications regarding any of the questions, thus leading to potentially biased, partial, or non-representative responses. Nevertheless, the results of

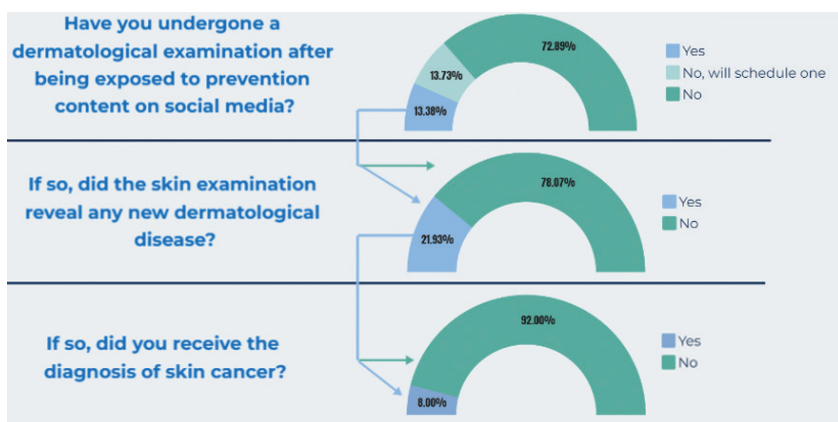


Fig. 3. Graphs of responses to survey questions 9, 10 and 11.

this study may prompt further and more in-depth research on the subject.

## ACKNOWLEDGEMENTS

The patients in this study provided written informed consent for the publication of their case details.

Data are available from the corresponding author upon reasonable request.

*The authors have no conflicts of interest to declare.*

## REFERENCES

1. DataReportal. 2023. Global social media statistics. Overview of social media use. [accessed 2023 May 1]. Available from: <https://datareportal.com/social-media-users>.
2. Patel RR, Hill MK, Smith MK, Seeker P, Dellavalle RP. An updated assessment of social media usage by dermatology journals and organizations. *Dermatol Online J* 2018; 24:13030/qt3jr646v0.
3. Cooper BR, Concilla A, Albrecht JM, Bhukhan A, Laughter MR, Anderson JB, et al. Social media as a medium for dermatologic education. *Curr Dermatol Rep* 2022; 11: 103–109.
4. Barrutia L, Vega-Gutiérrez J, Santamarina-Albertos A. Benefits, drawbacks, and challenges of social media use in dermatology: a systematic review. *J Dermatolog Treat* 2022; 33: 2738–2757.
5. De La Garza H, Maymone MBC, Vashi NA. Impact of social media on skin cancer prevention. *Int J Environ Res Public Health* 2021; 18: 5002.
6. Jhavar N, Lipoff JB. Variable potential for social media platforms in raising skin cancer awareness. *Dermatol Online J* 2019; 25: 13030/qt2t78m4x1.
7. Geist R, Militello M, Albrecht JM, Presley CL, Anderson JB, Laughter M, et al. Social media and clinical research in dermatology. *Curr Dermatol Rep* 2021; 10: 105–111.
8. DeBord LC, Patel V, Braun TL, Dao H Jr. Social media in dermatology: clinical relevance, academic value, and trends across platforms. *J Dermatolog Treat* 2019; 30: 511–518.
9. Yakupu A, Aimaier R, Yuan B, Chen B, Cheng J, Zhao Y, et al. The burden of skin and subcutaneous diseases: findings from the global burden of disease study 2019. *Front Public Health* 2023; 11: 1145513.
10. Arnold M, Singh D, Laversanne M, Vignat J, Vaccarella S, Meheus F, et al. Global burden of cutaneous melanoma in 2020 and projections to 2040. *JAMA Dermatol* 2022; 158: 495–503.
11. Hu W, Fang L, Ni R, Zhang H, Pan G. Changing trends in the disease burden of non-melanoma skin cancer globally from 1990 to 2019 and its predicted level in 25 years. *BMC Cancer* 2022; 22: 836.