Original Paper

Understanding Social Media Use and Engagement Among Dermatology Patients to Inform Dermatological Prevention and Care in Vietnam: Cross-sectional Study

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Abstract

Background: Social media has emerged as a common source of dermatological information. Monitoring the patterns of social media use and engagement is important to counteract the limitations of social media. However, evidence in Vietnamese dermatology patients is lacking.

Objective: This study aimed to explore social media use and engagement by dermatology patients and to identify factors associated with social media use and engagement.

Methods: A cross-sectional study was conducted with 519 participants at the Vietnam National Hospital of Dermatology and Venereology during September to November 2018. Data about sociodemographic characteristics, social media use, and social media engagement were collected. Multivariate logistic and tobit regression models were used to identify factors associated with social media use and engagement.

Results: Interest in information about “cosmetic, beauty, and skincare techniques” was the greatest (184/519, 46.2%). The mean engagement score was 8.4 points (SD 2.4 points). Female patients were more likely to use social media (odds ratio [OR] 2.23, 95% CI 1.23-4.06) and be interested dermatological information on social media (OR 3.09, 95% CI 1.35-7.09). Women also had higher social media engagement scores (coefficient=0.68, 95% CI 0.17-1.18). Higher social media engagement scores were related with Instagram use (coefficient=0.58, 95% CI 0.00-1.15) and higher credibility scores for “family members” (coefficient=0.15, 95% CI 0.03-0.26) and “dermatology companies” (coefficient=0.22, 95% CI 0.04-0.39).

Conclusions: This study discovered high social media usage among dermatology patients. However, only moderate utilization and credibility levels were reported regarding the use of social media as a source of dermatological information. More efforts should focus on involving dermatologists in the development of individualized information on social media targeting specific groups of dermatology patients.

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KEYWORDS

dermatology; social media; engagement; prevention; Vietnam

Introduction

Dermatological diseases are popular health issues and the leading causes of disability and mortality worldwide. Skin diseases contributed to 1.79% of the global burden of diseases in 2017; of the skin diseases, dermatitis, acne vulgaris, psoriasis, and urticaria represented the greatest burden [1]. Dermatological diseases are also the most common reasons for health care service utilization [2,3], accounting for 8.4% of primary care visits [4]. People with dermatological diseases often have low quality of life [5] and self-esteem as well as feelings of stigmatization [6]. However, lack of access to dermatology services, particularly in low and middle-income countries [1], still challenges the provision of appropriate care for dermatology patients. As a result, patients seek other ways for self-treatment, including finding information on the internet and social media platforms.

Internet has played a key role in health care by reducing the cost of health service delivery [7], providing health information for specific disorders [8,9], delivering behavioral interventions [10], reducing harm for adverse health habits [11,12], facilitating physical rehabilitation [13], providing access to potential patients during health care crises [14], and supporting caregivers [15,16]. Social media is a popular method of communication [17] that enables internet users to generate information and share their opinions or media (eg, photos, clips) [18,19]. The term social media encompasses a diversity of platforms such as social networking sites (eg, Facebook, Instagram), blogs (eg, Twitter, Tumblr), or media sharing (eg, YouTube) [20-22]. It is estimated that more than 3.1 billion people worldwide were active social media users in 2018 [23]. The use of social media by patients to access medical information has accelerated with overall internet use [24].

Social media is well-recognized as a useful aid for health care providers to communicate and support patients [25-27]. Moreover, it empowers patients by encouraging active information seeking about disease prevention and treatment [28,29], providing support among peers [29,30], improving self-efficacy and self-management [27], supplementing information provided by health professionals [28], and facilitating the patient-health care professional relationship [31]. Social media is a dynamic teaching tool for health professionals [32,33] and has modernized dermatology training [34]. Although social media is a convenient source for health information, there is a paucity of literature that has evaluated the quality [35] and credibility [27] of the information on social media. Therefore, patient misinformation through social media use is a major concern among health professionals [25].

Social media is frequently used by patients to solicit advice related to dermatological concerns, has the potential to advance professional training in dermatology, and can facilitate new research methods [36]. Additionally, for dermatology, social media has the advantages of enabling the sharing of visual components such as images and videos that are important for diagnosis and consultancy. Nonetheless, little is known about the impact of social media on dermatology patients in developing countries.

Vietnam is among the countries with a high burden of dermatological diseases. A recent estimate indicates that skin disorders accounted for 2.3% of the disease burden in Vietnam in 2017 [1]. In addition, the growth in internet and social media use in Vietnam is substantial. In 2015, Vietnam had 44.4 million internet users, and this number grew to 55.8 million in 2018 [37,38]. Social media has been used widely in Vietnam, with about 46 million active users of some of the dominant social media platforms including Facebook, YouTube, Zalo, and Instagram [23]. Despite a call to understand social media use and engagement for seeking health information among dermatology patients or people interested in dermatological issues [39-43], no studies have determined social media use in this population in Vietnam. Hence, this study aimed to explore social media use and engagement by dermatology patients and to identify factors associated with social media use and engagement.

Methods

Study Design and Sampling Method

A cross-sectional study was performed at the Vietnam National Hospital of Dermatology and Venereology (NHDV) from September to November 2018. The NHDV was chosen due to the diversity of dermatology illnesses and the background of treated patients. As a leading hospital for dermatology and venereology diagnosis and treatment in Vietnam, the NHDV receives patient referrals from health facilities at various levels. A convenient sampling technique was adopted to recruit participants for this study. Sample size calculation was conducted using inputs determined based on a study of a similar topic in 13 European countries [44]: an expected mean social engagement score of 0.70, expected standard deviation of 0.20, and a confidence level of 95%. The calculation resulted in a minimum sample size of 385 participants. We selected from the pool of patients attending the outpatient department at the NHDV using the pre-determined eligibility criteria of age ≥18 years, a diagnosis of any dermatology disease, receiving services in the outpatient clinic, ability to provide coherent answers to the interview questions, and agreeing to participate by providing

written consent. A total of 519 participants was successfully recruited for the study. The response rate was 100%.

Measurements and Instruments

We built a structured questionnaire to collect data concerning the sociodemographic status of participants and their social media use and engagement regarding dermatological issues and information. The questionnaire also assessed various aspects of health status and service utilization, based on data from other studies exploring these topics [45]. The questionnaire was first piloted in 10 patients to validate the language and logic of each item. After revising the questionnaire based on the patient feedback, face-to-face interviews were conducted by undergraduate medical students from the Hanoi Medical University, who were well-trained in conducting community interviews. A private room at the hospital was used to hold the interviews to ensure the confidentiality and comfort of the participants.

Sociodemographic Characteristics

Data about age, gender, education, marital status, occupation, and living location were collected.

Social Media Use

In this study, we collected information about the type of social network sites the participants visited and used frequently for dermatology care (eg, What are the social media sites that you use frequently for dermatology care?) and the types of dermatological information in which they were interested to find online. In addition, we asked the participants to rate the credibility of the dermatological information sources on social media including family members, friends/relatives, celebrities (including medical professionals/clinics), television programs/magazines, dermatological product retailers (people who sell dermatology-related products), and dermatology companies (companies manufacturing and selling dermatology-related products). To obtain the credibility score, each source was rated on a scale from 0 points (Totally not credible) to 10 points (Totally credible).

Engagement With Social Media

Data on social media engagement were collected using three questionnaire items: searching for dermatological information on social media, sharing dermatological information on social media, and applying dermatological information obtained from social media. Each item used a Likert scale with five response levels: “always” (5 points) to “never” (1 point). Then, we calculated the engagement score by summing the scores of the three items. The highest possible score was 15 points, and the lowest possible score was 3 points. This approach was adapted from the Social Media Engagement theory [46].

Statistical Analysis

We analyzed the data using Stata version 15.0 (Stata Corp. LP, College Station, TX). Multivariable logistic regression analysis was used to determine the factors correlated with social media use and interest in any dermatological information on social media. Multivariable tobit regression analysis was used to identify the factors associated with the engagement score. Potential explanatory variables included sociodemographic characteristics (age, gender, education, marital status, and occupation), social network platforms, and the credibility score. Stepwise forward selection strategies were combined with the multivariable regressions to reduce the models. A value of 0.2 of the log-likelihood’s *P* value was considered the threshold of variable selection. The results of a previous study indicated that engagement depended heavily on specific contexts, ie, specific social network platforms as well as the credibility of the information from each platform [47]. $P<.05$ was considered statistically significant.

Ethical Approval

The Institutional Review Board of the NHDV approved the study protocol (document number 855/HDDDBVDLTU dated September 7, 2018).

Results

Of the 519 dermatology patients participating in the study, 62.8% (326/519) resided in urban areas. The mean age was 35.7 years (SD 13.7 years), and the greatest proportion of participants was 18-30 years old. Participants were mostly women (282/506, 55.7%), had completed at least a vocational education (341/517, 66.0%), and were married or had a partner (323/518, 62.4%). The most commonly reported occupation was freelancing (176/518, 34.0%), followed by white-collar job (145/518, 28.0%). Atopic dermatitis accounted for the greatest proportion of dermatology diseases (127/519, 24.4%), followed by contact dermatitis (75/519, 14.5%) and skin fungal infections (57/519, 11.0%; Table 1).

Facebook (359/392, 91.6%) and Zalo (247/392, 63.2%) were the most commonly used social media platforms. Information about “cosmetic, beauty, and skin care techniques” was sought by the most participants (184/397, 46.3%), followed by “general information about dermatology diseases” (168/397, 42.5%) and “medical institutions for dermatology disease treatment” (132/397, 32.6%). Regarding the credibility score of information sources on social media, “family members” and “television programs/magazines” scored the highest (mean 6.9 points, SD 2.3 points; mean 6.9 points, SD 2.2 points, respectively). Information from dermatological product retailers scored the lowest (mean 4.8 points, SD 2.3 points). No differences were found between men and women regarding the credibility of information sources or the social network platforms used (Table 2).

Table 1. Sociodemographic and clinical characteristics of the participants, N=519.

Characteristics	n (%)
Living location	
Urban	326 (62.8)
Rural	193 (37.2)
Age group (n=507)	
18-30 years	239 (47.1)
31-40 years	114 (22.5)
41-50 years	72 (14.2)
51-60 years	46 (9.1)
>60 years	36 (7.1)
Gender (n=506)	
Male	224 (44.3)
Female	282 (55.7)
Education (n=517)	
Up to secondary school	73 (14.1)
Upper secondary school	103 (19.9)
Vocational education and higher	341 (66.0)
Marital status (n=518)	
Single	195 (37.6)
Having a partner/married	323 (62.4)
Occupation (n=518)	
Unemployed	13 (2.5)
Freelancer	176 (34.0)
White-collar worker	145 (28.0)
Blue-collar worker	70 (13.5)
Student	62 (12.0)
Other	52 (10.0)
Dermatology diseases (n=519)	
Atopic dermatitis	127 (24.4)
Contact dermatitis	75 (14.5)
Psoriasis	29 (5.6)
Skin infections	13 (2.5)
Skin fungal infections	57 (11.0)
Urticaria	44 (8.5)
Warts	16 (3.1)
Zona	31 (6.0)
Age (n=507), years	35.7 (13.7)[a]

[a]Mean (SD).

Table 2. Social media use among dermatology patients, with comparisons between genders.

Characteristics	Total sample	Men	Women	*P* value
Uses a social network, n (%) (n=493)				
Yes	393 (79.7)	156 (71.9)	237 (85.9)	.00[a]
No	100 (20.3)	61 (28.1)	39 (14.1)	
Social network platform, n (%)				
Facebook (n=392)	359 (91.6)	144 (92.3)	215 (91.1)	.67[a]
Instagram (n=391)	103 (26.3)	35 (22.4)	68 (28.8)	.16[a]
Zalo (n=392)	247 (63.2)	89 (57.4)	158 (66.9)	.06[a]
Other (n=392)	18 (4.6)	5 (3.2)	13 (5.5)	.29[a]
Type of dermatological information sought on social network sites, n (%)				
Cosmetic, beauty, and skin care techniques (n=397)	184 (46.3)	30 (19.1)	154 (64.2)	<.001[a]
Medical institution for cosmetic surgery or beauty salons (n=397)	95 (23.9)	18 (11.5)	77 (32.1)	<.001[a]
Beauty or cosmetic surgery experts (n=397)	60 (15.1)	10 (6.4)	50 (20.8)	.10[a]
General information about dermatology diseases (n=397)	168 (42.3)	68 (43.3)	100 (41.7)	.75[a]
Preventive methods for dermatology disease (n=397)	90 (22.7)	41 (26.1)	49 (20.4)	.19[a]
Treatment methods for dermatology diseases (n=397)	95 (23.9)	41 (26.1)	54 (22.5)	.41[a]
Medical institutions for dermatology disease treatment (n=397)	132 (33.2)	51 (32.5)	81 (33.8)	.79[a]
Medication for dermatology disease treatment (n=397)	128 (32.2)	54 (34.4)	74 (30.8)	.46[a]
Treatment experiences from people who had undergone dermatology disease treatment (n=397)	80 (20.2)	28 (17.8)	52 (21.7)	.35[a]
Others (n=396)	8 (2.0)	3 (1.9)	5 (2.1)	.91[a]
Credibility score regarding dermatological information sources on social media, mean (SD)				
Family members (n=397)	6.9 (2.3)	7.1 (2.1)	6.8	.33[b]
Friends/relatives (n=392)	6.5 (2.1)	6.5 (2.1)	6.5	.60[b]
Celebrities (including famous medical professionals) (n=387)	5.7 (2.4)	5.7 (2.4)	5.7	.66[b]
Television programs/magazines (n=399)	6.9 (2.3)	7.1 (2.1)	6.8	.19[b]
Dermatological product retailers (n=386)	4.8 (2.3)	4.9 (2.3)	4.8	.65[b]
Dermatology companies (n=390)	5.2 (2.4)	5.1 (2.3)	5.2	.92[b]

[a]Chi-squared test.

[b]Mann-Whitney test.

Table 3 outlines the social media engagement by dermatology patients. Actively searching for, actively sharing, and actively applying dermatological information were reported by 95.2% (380/399), 81.4% (323/397), and 85.4% (339/397) of the patients, respectively. Dermatological information on social media was perceived as useful or very useful by 57% (229/399) of the patients. The mean engagement score was moderate (mean 8.4, SD 2.4). The social media engagement score was significantly different between male and female patients (*P*<.001).

Table 3. Engagement with social media among dermatology patients, with comparisons between genders.

Characteristics	Total sample	Men	Women	*P* value
Actively searching for dermatological information on social media, n (%) (n=399)				
No	19 (4.8)	10 (6.3)	9 (3.8)	.24[a]
Yes	380 (95.2)	149 (93.7)	231 (96.3)	
Actively sharing dermatological information on social media, n (%) (n=397)				
No	74 (18.6)	36 (22.8)	38 (15.9)	.09[a]
Yes	323 (81.4)	122 (77.2)	201 (84.1)	
Actively applying dermatological information found on social media, n (%) (n=397)				
No	58 (14.6)	30 (18.9)	28 (11.8)	.05[a]
Yes	339 (85.4)	129 (81.1)	210 (88.2)	
Perceived usefulness of dermatological information on social media, n (%) (n=399)				
Very useful	47 (11.8)	17 (10.8)	30 (12.4)	.39[a]
Useful	182 (45.6)	73 (46.2)	109 (45.2)	
Neutral	154 (38.6)	58 (36.7)	96 (39.8)	
Not useful	14 (3.5)	9 (5.7)	5 (2.1)	
Completely not useful	2 (0.5)	1 (0.6)	1 (0.4)	
Social media engagement score, mean (SD) (n=399)	8.4 (2.5)	8.0 (2.7)	8.7 (2.2)	.00[b]

[a]Chi-squared test.

[b]Mann-Whitney test.

The results of three multivariable regression models are displayed in Table 4. Among dermatology patients, women were more likely to use social media (odds ratio [OR] 2.23, 95% CI 1.23-4.06), while older patients were less likely to use social media. Compared with male patients, female patients were also more likely to be interested in dermatological information on social media (OR 3.09, 95% CI 1.35-7.09) and have higher social media engagement scores (coefficient 0.68, 95% CI 0.17-1.18).

Respondents who were married/had a partner had a higher likelihood of being interested in dermatology information (OR 2.37, 95% CI 1.01-5.53). Regarding social media engagement, higher scores were present for patients using Instagram and who rated the credibility of “family members” and “dermatology companies” higher. Meanwhile, lower social media engagement scores were related with higher credibility scores for dermatological product retailers.

Table 4. Factors associated with social media use and engagement in multivariable regression models.

Characteristics	Uses social media			Interest in any dermatological information on social media			Social media engagement score		
	OR[a]	95% CI	*P* value	OR	95% CI	*P* value	Coefficient	95% CI	*P* value
Gender									
Male	ref[b]	—[c]	—	ref	—	—	ref	—	—
Female	2.23	1.23-4.06	.008	3.09	1.35-7.09	.008	0.68	0.17-1.18	.009
Age									
18-30 years	ref	—	—	—	—	—	—	—	—
31-40 years	0.45	0.16-1.27	.132	—	—	—	—	—	—
41-50 years	0.07	0.03-0.19	.000	—	—	—	—	—	—
51-60 years	0.02	0.01-0.06	.000	—	—	—	—	—	—
>60 years	0.01	0.00-0.04	.000	—	—	—	—	—	—
Occupation									
Unemployed	ref	—	—	—	—	—	—	—	—
Freelancer	1.48	0.16-13.61	.729	—	—	—	—	—	—
White-collar worker	1.68	0.18-15.73	.648	—	—	—	—	—	—
Blue-collar worker	0.40	0.04-3.81	.428	—	—	—	—	—	—
Student	0.85	0.07-9.81	.894	—	—	—	—	—	—
Other	1.74	0.16-18.57	.648	—	—	—	—	—	—
Location of residence									
Urban	—	—	—	ref	—	—	—	—	—
Rural	—	—	—	2.24	0.74-6.83	.156	—	—	—
Marital status									
Single	—	—	—	ref	—	—	—	—	—
Married	—	—	—	2.37	1.01-5.53	.047	—	—	—
Uses Facebook									
No	—	—	—	ref	—	—	ref	—	—
Yes	—	—	—	2.82	0.85-9.37	.090	0.64	–0.26-1.55	.163
Uses Instagram									
No	—	—	—	—	—	—	ref	—	—
Yes	—	—	—	—	—	—	0.58	0.00-1.15	.049
Credibility score regarding dermatological information sources on social media									
Family members	—	—	—	—	—	—	0.15	0.03-0.26	.012
Dermatological product retailers	—	—	—	—	—	—	–0.19	–0.38-0.00	.049
Dermatology companies	—	—	—	—	—	—	0.22	0.04-0.39	.016

[a]Odds ratio.

[b]Reference group.

[c]Not applicable.

Discussion

Principal Findings

Our study found that, despite social media use by a high proportion of dermatology patients, utilizing this platform as a source of credible information for dermatological issues remains modest. Women were more likely to be interested in dermatological information on social media and be engaged with social media. The findings suggest that increased dermatologist involvement in contributing to online dermatological content and more effort to develop targeted, individualized information should be considered to take advantage of social media platforms.

Previous studies have documented the modest use of social media to find or share health-related content and particularly dermatology-related information. Despite reportedly high general social media engagement (85.0-99.3% of the participants reported regular access of at least one social media platform), only 19.0-31.7% of the participants reported accessing dermatology-related information [29,48]. We found that younger patients (aged 18-30 years) were significantly more likely to use social media. Young people in Asia are influenced more by social media than young people in Western countries because young people in Asia have a higher rate of smartphone use [49].

The higher percentage of use found in our study may reflect the increased popularity of social media in health care, due to technological advances and recent changes in the public perception of social media [50]. Our findings support the argument that there has been a desire among patients to use social media as an additional medium to traditional platforms for obtaining medical information [48]. Thus, social networking sites can be utilized as a platform to distribute educational information regarding dermatological issues for a wider reach of the population and at a potentially lower cost, especially in resource-poor settings in developing countries [51,52].

Regarding the sources of dermatological information on social media sites, our findings showed that the highest credibility scores were given to information received from family members, friends, televisions programs, and magazines. This popularity of informal information sources further highlights the lack of active contribution from dermatological health care providers and dermatologists to health information online. Dermatologists have expressed concern that patients might be misled by other social media indicators (eg, number of followers) without checking the educational background and clinical experience of information providers [53]. Increasing the involvement of medical professionals is crucial, as contributions by those with certified expertise would enhance the accuracy and reliability of information available online, reducing the possibility of incidents occurring as a result of misleading, inaccurate information [29,54]. Indeed, concerns over the quality of dermatology-related knowledge obtained online are a main barrier to enhancing the use of social media as a source of health information for health care service users [29]. Such concerns among service users may explain the medium level of engagement with social media for dermatological content reported in our study. Another possible reason for such low engagement may be participant concern about the privacy and security of personal data shared online [55,56]. Taking necessary measures to ensure the confidentiality of patient information over online platforms would also be important when attempting to boost the utilization of social media sites.

In addition, the sociodemographic characteristics of our participants were associated with their level of concern regarding dermatological information on social media and social media engagement. Women, married respondents, and Facebook users were more likely to be interested in dermatological issues on social media. These findings suggest that Facebook, in particular, could serve as the primary social media platform for disseminating dermatological information to targeted groups of online users. For example, this information could focus on dermatological issues that are most relevant to women and married individuals. Previous studies have argued the potential of Facebook for knowledge distribution, owing to its large user base, versatility in providing information in various forms, and capacity to allow for interactions and connections between users [57,58]. The positive association between engagement and the credibility score given to family members and dermatology companies as sources of social media information may also be partially explained by the ability to facilitate communications between sources and receivers of information: the more credible the sources, the more those sources would be used.

One of the implications that can be drawn from our findings is that the presence of dermatologists on social media platforms to provide official, scientific, evidence-based dermatological information should be increased. To facilitate this, the marketing capabilities of dermatology health facilities should be enhanced, so they can reach a wider population. And, patient-physician communication should be encouraged through social networking sites, notably Facebook, with careful consideration of privacy protection measures. The adoption of the Law on Cybersecurity in Vietnam provided stricter regulations on the content and transfer of data online and can be expected to impact the extent of online channel use by both patients and physicians. This should be taken into consideration when designing communication and education campaigns and programs. Regarding content, dermatological information should be created and distributed in an individually customized manner, targeting specific groups with relevant information.

Limitations

This study has certain limitations. First, the self-reported nature of the questionnaire may have introduced recall bias. Second, although effort was made to enhance the diversity of participants by conducting research at a central dermatological hospital, the adoption of a convenient sampling technique and the fact that the study was conducted at a single hospital could affect the generalizability of our study. In addition, although the instrument we used to measure social media engagement has a theoretical background and provides valuable insights on the topic, it has not been officially validated. There are also several possible research considerations and directions not yet covered in our study that may be recommended for further studies. Further research may benefit from studying other online media platforms such as Google and YouTube that have considerable

influence on dermatology patients in developed countries [59,60] or exploring the relationship between social media and cutaneous concerns associated with stigmatized medical conditions (eg, substance abuse). Moreover, further research may consider examining the effect of dermatological conditions on family quality of life, such as atopic dermatitis [61], as well as the impact of social media on caregivers of dermatology patients [62].

Conclusion

In conclusion, this study found high levels of social media use among dermatology patients, but only a moderate level of utilization and credibility regarding the use of social media as a source of dermatological information. Sociodemographic characteristics were associated with dermatology-related social media use and engagement. The results of this study recommend enhancing the involvement of dermatologists on social media platforms, in terms of knowledge contribution through social media for both patients and the general public. In addition, more efforts should be given in developing individualized information that targets specific groups of dermatology patients.

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Conflicts of Interest

None declared.

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Abbreviations

NHDV: National Hospital of Dermatology and Venereology.
OR: odds ratio.

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