Research Article

A Study on Acne Patients' Levels of Obtaining Information Through Social Media and Applying These Information

Zekiye Tamer Gencer (Assoc. Prof. Dr.)
Cumhuriyet University Faculty of Communication
zgencer@cumhuriyet.edu.tr)
Orcid: 0000-0001-6065-7395

Sibel Berksoy Hayta (Asst. Prof. Dr.)
Cumhuriyet University Faculty of Medicine
drberksoy@gmail.com
Orcid: 0000-0002-6185-6094

Abstract

The purpose of this study is to determine the level and way of the internet usage for reaching alternative methods, the level of obtaining information about the treatment of acne vulgaris (AV), i.e. pustule through social media, and the level of using this acquired information in patients diagnosed with AV which is known as pustule colloquially. In the study, the face-to-face interview technique was applied to a total of 121 patients diagnosed with AV who applied to Dermatology Outpatient Clinic of Sivas Cumhuriyet University. An interview form questioning the patients' socio-demographic characteristics, frequency of using internet and media, their social media accounts, their level of searching about their diseases through these tools, their level of acquiring information and status of realizing them as well as acne severity (PA), Dermatology Life Quality Index (DLQI) and Acne-Specific Quality of Life Index (AQOL) was applied to the patients. The interviewed patients' levels of following the contents in the social and traditional media about the acne disease were found to be high, 51.2% of them were following the contents about the disease, and 55.4% were applying what they learnt. Variables of purchasing products at least once from the social media for the acne disease (p=0.026<0.05) and counseling a physician before the usage (p=0.034<0.05) were determined to have a significant effect on social media usage. It was concluded that the social media usage of acne patients had a significant effect in terms of AQOL (p=0.012<0.05) and the probability of accessing information from social media in terms of this index increased by 2.444 items (Exp:2.444). However, the effect of Acne Quality of Life Index was found to be lower than the dermatology life quality index. As a result of this study, due to the properties of acne vulgaris negatively reflecting disease on the social life of a person emotionally and behaviorally, the frequency of using CAM (complementary and alternative medicine) was high. Therefore, all mass media, especially social media, are frequently used by the patients because of the information they provide concerning this issue.

Keywords: Acne Vulgaris, Pustule, Social Media, AV Treatment on the Internet.

Araştırma Makalesi

Akne Hastalarının Medya Üzerinden Enformasyon Sağlama Ve Edindikleri Bilgileri Uygulama Düzeylerine İlişkin Bir Çalışma

Zekiye Tamer Gencer (Doç. Dr.)
Cumhuriyet Üniversitesi İletişim Fakültesi
zgencer@cumhuriyet.edu.tr
Orcid: 0000-0001-6065-7395

Sibel Berksoy Hayta (Dr. Öğr. Üyesi)
Cumhuriyet Üniversitesi Tıp Fakültesi
drberksoy@gmail.com
Orcid: 0000-0002-6185-6094

Öz

Bu çalışmanın amacı akne vulgaris (AV) halk arasında bilinen adıyla sivilce tanısı almış hastalarda, alternatif yöntemlere ulaşılması amacı ile internetin kullanım düzeyi ve şekli, sosyal medya üzerinden AV yani sivilce tedavisi ile ilgili bilgi edinme ve edinilen bilgileri kullanma düzeylerinin belirlenmesidir. Çalışmada, Sivas Cumhuriyet Üniversitesi Dermatoloji Polikliniği'ne başvuran AV tanısı alan toplam 121 hasta ile yüz yüze görüşme tekniği uygulanmıştır. Hastalara, sosyo demografik özellikleri, internet ve medyayı kullanım sıklıkları, hangi sosyal medya hesaplarına sahip oldukları, bu araçlar üzerinden hastalıkları ile ilgili araştırma yapma düzeyleri, bilgi edinme düzeyleri ve bunları hayata geçirme durumları ile sivilce şiddeti (PA), Dermatoloji Yaşam Indeksi (DLQ) ve Akne Yaşam Indeksi (AQOL) düzeyini sorgulayan bir görüşme formu uygulandı. Görüşülen hastaların akne hastalığı ile ilgili sosyal ve geleneksel medyada bulunan içerikleri takip etme düzeyleri yüksek bulundu, %51,2 oranında hastalık ile ilgili içerikleri takip etmekte ve %55,4 ü öğrendiklerini uygulamaktadırlar. Sosyal medyadan akne hastalığı ile ilgili en az bir kez ürün satın alması (p=0,026<0,05) ve kullanım öncesi hekime danışması (p=0,034<0,05) değişkenleri de sosyal medya kullanımında anlamlı bir etkiye sahip olarak tespit edildi. Akne hastalarının sosyal medya kullanımı AQOL açısından anlamlı bir etkiye sahip (p=0,012<0,05) ve bu indeks açısından sosyal medyadan bilgiye ulaşma ihtimali 2,444 (Exp:2,444) kat artmaktadır sonucuna ulaşıldı. Ancak akne yaşam indeksinin etkisi dermatoloji yaşam indeksine göre daha düşük olarak saptandı. Bu çalışmanın sonucuna göre, Akne vulgaris hastalığı kişinin duygusal ve davranışsal olarak sosyal hayatına negatif yansıyan özelliklerinden dolayı TAT (tamamlayıcı ve alternatif tıp) kullanma sıklığı yüksektir. Bu yüzden sosyal medya başta olmak üzere bütün kitle iletişim araçları bu konuda enformasyon sağlama özelliği sayesinde hastalar tarafından sıklıkla kullanılmaktadır.

Anahtar Kelimeler: Akne Vulgaris, Sivilce, Sosyal Medya, İnternette AV Tedavisi.

1. Introductıon

Acne is a common chronic inflammatory disease of the pilosebaceous unit, characterized by lesions such as multifactorial, comedones, papules, pustules, and nodules. It usually starts at adolescent ages, regresses at about the mid-20s, and progresses as more frequent and severe in males. AV, which is more commonly seen in adolescence period, may create serious psychological and social limitations in patients since it can continue for years and cause permanent scars on the skin despite treatments (Hayta et al., 2011 : 430-434). It affects approximately 85% of adolescents and young adults (Hanna et al., 2003). Acne is the most common skin disease and the relationship between acne and the mental status has been investigated for a long time. Emotional stress may trigger the acne and the patients may also experience psychological and psychiatric problems as a result of acne (Koo and Smith, 1991: 185-8). It has been reported that especially patients with moderate and severe acne may experience body dysmorphia, decreased self-esteem, shame, fear of rejection, social isolation, activity disorders, anxiety, depression, anger, problems in family relations, increased acne-related thoughts, suicidal ideations, and suicide attempt. Acne can affect social, occupational, and academic performance of a person due to the psychological effects it may cause (Hayta et al., 2011: 354-357). The emergence of acne during the adolescence period when the highest level of social and physical changes and the identity development are experienced makes this disease a focal point of the people's concerns, therefore it is effective in the interpersonal relationships of the patient, his/her self-evaluation and daily performance (Hanna et al., 2003: 7).

Aktan et al., (2000), Kellet and Gawkrodger (1999), and Hayta et al., (2011) suggest that psychological effects caused by acne are seen more in women than men.

Health related messages, video, presentations and similar contents published and shared through social media increase in Turkey as in the world. As of 2016, the number of users of Facebook which is the most popular online social network in Turkey was nearly 40 million, the number of Instagram users is about ¼ of all internet users (http://www.instaturkiye.com) which is around 10 million based on that data and hundreds of videos are being uploaded into YouTube every second. This rapid change and development is of course due to the technological advancement. Technological developments, especially social media which also changes the way of getting information from the mass media reorganize all social life including health communication. Unlike all existing mass media, internet which allows the user-generated contents is thus creating a new world order with this aspect. Instead of imposing pre-prepared and contented agendas, social networks which allow users to enter information as in continuously updated Wikipedia example have an innovative character in this sense. These rapid and innovative developments in the participatory internet communication are expressed as social media and the health communication presented in social media provides opportunities for changes in behaviors (Korda and Itani, 2013). Individuals use internet and social media extensively about the small accidents they have with any illness or in their everyday lives. The use of social networks is becoming extremely widespread for the search of many alternative ways such as clues about treatment methods, treatment centers and comparative hospital information.

It is known that these social media networks are widely used by the healthcare professionals both as a broadcasting platform to spread the messages coming from both traditional media sources (such as radio, television and printed press) and to establish a collaboration with the audiences and to form a common content to target audiences by public health institutions.

2. Social Media and Health Communication

As different than all other mass communication tools, social media in which the contents originating from users are allowed creates a new world order with that aspect. Social networks in which the opportunity is given for users' data input as in the example of wikipedia which is constantly updated instead of insisting on the agendas which have been prepared previously and whose content has been determined are an innovative feature in this sense. Individuals intensively use the internet and social media about minor accidents which they experience with an illness or in daily life. Using social media for searching a lot of alternative ways as tips about treatment modalities, treatments centers and comparative hospital information becomes extremely popular. Besides, these sharing environments (Moorhead et al.,2013) which has the function of being a communication channel which delivers a message which includes questioning some things enable that innovative ideas come out and spread. Social media which doesn't give an opportunity for the communication which is created via a blog content or tweet or a wall post on Facebook is a historical digital diary, as passing the communication model which is created face to face. (Hawn, 2009) The notes which have been made in these environments about communication enrichment become permanent and personal experiences are reached by the others. For example, individuals share all details about an illness that they experience and about their diet program and give advice via positive/negative outputs. Besides, It has been started (Thackeray et al., 2013) that social media sites become a potential resource for online health information and this is a significant sign that health behavior has changed on social media.

According to Berkman and Glass (2000), It has been determined that those five processes which have become easy by the relations on social networks influence health behaviors and their results: (Lau et al., 2011):

• Social Influence: how it exists, how it has taken action or how it influences as a behavior for the others' expectations (Latané,1981).

• Social adherence and involvement in social media: how a contact is made with other people and how the connections on social networks show an increase (Amichai-Hamburger and McKenna,2006).

• Social advice: how social network systems influence one's information resource and what the ways of access to the resource are and what kind of advices there are (Pirolli, 2009).

• Social involvement: It is defined under the guidance of Fowler and Christtakis how health behaviors and the illness sitiautions (as happiness, obesity, depression) which are non-infectious and which can be "transferred" via spreading from person to person in relation to social network infection are (2008).

• Social support: It significantly supports an individual's health via supports as emotional, functional and informing supporters. (Berkman and Glass, 2000).

Watching online video is one of the main activities of internet users (Madden, 2007) and the internet-based videos for health education which is revealed with studies are efficient tools (Armstrong vd, 2011) are the main reasons that the related video contents have lately been used very vigorously and populary in the field of health communication. It is observed that especially a lot of hospitals, health professionals and doctors who are registered to social media often use video expressions.

As it is considered that the main aims of social media research are the efforts to watch that these enviroments grow rapidly and to use the new communication technologies with the aim of supporting and developing the informing in the field of health, it becomes important to research the relation between social media and health. The significant results which prove this in the actual researches made on the relation between social media and health draw the attention (Chou et al.,2009). These researches which have been made recently has revealed a classification on social media tools as it is seen in the table 2.1. Each of existing numerous networks is used for different and specific areas and individuals access these networks according to their interests and physical conditions.

Table 2.1: *Classification of social media from the point of richness of media and social content and personal presentation and self-expression (Kaplan and Haenlein,2010).*

		Richness of media and social content		
		Low	Middle	High
Personal presentation/ Self-expression	High	Blogs	Social networks (as Facebook, Instagram)	Virtual social world (as Second Life)
	Low	Collaborative projects (as Wikipedia)	Communites which produce content. (as Youtube)	Virtual game world (as World of Warcraft)

It is known that these networks are commonly used nowadays by health personnels as a broadcasting platform in order to generalise the messages which come from traditional media sources (radio, television, printed press) by public health institutions and in order to create an cooperation with audience and common contents for target groups. The main usage aims of social networks are as below according to the study made in 2010 by Schein and the others: to find experimenta subject for clinical researches/tests, education for health experts and professional improvement, communication and coordination among professionals, education simulations, social networks about health, support groups of health and illness, defensiveness of health and donation for health organizations, development of attachments to popular social media platforms and personal management tools, spreading the messages about public health, observing the infectious illnesses (Schein et al.,2010). It is certain that health professionals who use these networks in order to communicate with their patients with all kinds of ways use with more suitable contents as different than patients. Besides, there are a lot of examples of health professionals who use social media posts which include private patient information for advice patient advice (illadvised) (Cain,2011). The interviews were made with patients in this study in which an evalution was made with some data about acne illness on social networks which create a new and quite different world with the usage by both patient and health workers/ professionals. Because a lot of online health sites/communites came out by means of the fast development of internet and a lot of patients visit these sites

in order to get information about their treatments or research their illnesses. (Yang et al.,2012).

3. Patıents and Method

At this study, the basic purpose is to determine the level and way of the internet usage for reaching alternative methods, the level of obtaining information about the treatment of acne vulgaris (AV), i.e. pustule through social media, and the level of using this acquired information in patients diagnosed with AV which is known as pustule colloquially. Acne patients applying to Dermatological and Venereal Diseases Outpatient Clinic of the Sivas Cumhuriyet University Medical Faculty Hospital between 01 March 2016 and 30 November 2016 were included in the study. For the study, ethics committee approval with date: 25.03.2016 and number: 2016-03/03 was taken and written consents of the patients were obtained by informing them about the study with the face-to-face interviews. Questions about the individuals' motivations for information about their acne complaints through media and internet they use for providing information about every subject as well as their internet usage levels were asked. The qualitative method was chosen as the method of study and the average response time of the interview form used in the study was 15 minutes.

3.1.Patient Selection

The study inclusion criteria for the patients:

1. Being 18 years old and over
2. Having acne complaints for at least 1 month
3. Using internet and social media
4. Applying to the outpatient clinic for treatment purpose within the times determined for the study

A total of 5 thousand acne patients were treated in the Department of Dermatological and Venereal Diseases of the Medical Faculty of Sivas Cumhuriyet University within one year (Source: Information Processing of Dermatological and Venereal Diseases of the Medical Faculty Hospital of Sivas Cumhuriyet University). However, since some of these patients are control patients, it is difficult to reach a certain number. Due to the time limitation of the study, the interview technique from the qualitative research methods was applied with full count method to all acne patients who entered between 01 March and 31 November 2016. In the questionnaire used during the interview, the researchers prepared questions aiming to collect information about the patients' usage of the media and the internet, obtaining information from the internet and the media about their diseases, and applying the information they have gathered. Apart from this, DLQI, ALQI, and acne grading scores were used.

4. Results

The data obtained as a result of the study were transferred to the SPSS (23.0) program and the statistical tests on this program are carried out as Frequency, Crosstabs, Chi-Square, and Binary Logistic.

The study was conducted by interviewing with 121 patients applying to dermatology outpatient clinic with acne complaint and using internet (social media).

Table 4.1: *Demographic information table of interviewed patients*

		Frequency	Percentage
GENDER	Female	70	57.9
	Male	51	42.1
	Total	121	100.0
PLACE THEY MOSTLY RESIDE IN	Village	14	11.6
	District	29	24.0
	City	54	44.6
	Metropolitan	24	19.8
	Total	121	100.0
EDUCATION	Primary School	2	1.7
	High School/Associate degree	26	21.5
	University	93	76.9
	Total	121	100.0

It was observed that the majority of the patients evaluated within the scope of the interview were women living in the city and had the university education. In social media ownership, Facebook (81.0%), Instagram (82.6%) and YouTube (66.1%) are the most frequently used tools. Social media tools like Twitter (47.1%), Snapchat (45.5%) and Swarm (37.2%) have lower usage. Among the traditional media tools, the frequency of watching television was 83.5%, newspaper was 48.8% and radio was 28.1%.

Table 4.2: *Attitudes and media follow-up table of the interviewed patients on the pages containing information about acne disease found in Social Media*

In the pages containing information about acne disease found in Social Media,	YES	NO	TOTAL
Following-up the content	62 51.2%	59 48.8%	121 100%
Applying the provided instructions and recommendations	67 55.4%	54 44.6%	121 100%
Using the products at least once	89 73.6%	32 26.4%	121 100%
About acne disease,	YES	NO	TOTAL
Watching TV programs	74 61.2%	47 38.8%	121 100%
Reading newspapers	62 51.2%	59 48.8%	121 100%
Following Internet	69 57.0%	52 43.0%	121 100%

Levels of following the contents found in the social and traditional media about the acne disease by the interviewed patients were high. 51.2% of the patients followed these contents and 55.4% of them applied what they learned. The patients were found to be generally satisfied with the content they learned and applied and 73.6% of them responded as "no" when they were asked whether or not they had a negative outcome. 93.4% of the interviewed acne patients said about their current situation that "I do not like to have acne".

Table 4.3: *Table of general statistics for the interviewed patients*

Report							
	Mean	**N**	**Std. Deviation**	**Minimum**	**Maximum**	**Std. Error of Kurtosis**	**Normal Distribution Compliance**
Age	20.4545	121	2.84605	18 years old	35 years old	.437	0.01535461
Income	529.6612	121	922.33406	400 TL	4000 TL	.437	0.0004738
Time spent on social media (hour)	2.8926	121	2.12839	1 hour	12 hours	.437	0.02053195
Number of followers on social media	304.4959	121	338.52366	50 followers	2500 followers	.437	0.0012909
Acne severity (PA)	5.6281	121	2.18759	1,00	10,00	.437	0.01997632
FDA grading	3.1818	121	.79582	Mild	Severe	.437	0.04591191
DLQI total	8.5702	121	5.18303	.00	30.00	.437	0.0355570
AQoL total	13.4545	121	4.70106	.00	29.00	.437	0.02995776

The average age of the interviewed patients was 20 and their average income was 529 TL. While the average time spent on social media was about 3 (2.89) hours, the maximum time was 12 hours. While the number of followers in the social media accounts of the patients was 304 on average, maximum number of followers was observed to be 2500. The average acne severity of patients was at about 5.62 level, mean DLQI (Dermatology Life Quality Index) was 8.57 and mean AQoL (Acne Life Index) was 13.45.

Binary Logistic Regression analysis providing a more robust measure than the relationship between the variables was conducted. The social media use (dependent variable) of the patients with acne taken as a reference category after the regression analysis was decided according to "**Dependent Variable Encoding**" table, that is, the interactions of the individuals using social media with 1) following the pages on acne disease on the social media, 2) using the given recommendations, 3) purchasing the product at least once and 4) consulting a physician, all of which were defined as independent variable, were examined. As a result of the established model, it was concluded that there was a significant correlation between the variables.

Mean score was calculated as 8.5 in the data of Dermatology Life Quality Index, the mean score was calculated as 13 in the Acne Quality of Life Index data and a model was constructed between acquiring data from social media for those below and above this score. The social media use (dependent variable) of the patients with acne taken as a reference category after the regression analysis was decided according to "**Dependent Variable Encoding**" table, that is, the relationship of the individuals using social media with the DLQI and AQoL index defined as independent variables was examined. The use of social media by the patients with acne had a significant correlation in terms of DLQI (p=0.041) and the possibility to reach information from social media in terms of this index increased 1.084 times (Exp: 1.084). The social media use of acne patients has a significant correlation in terms of AQOL and the probability of accessing information from social media in terms of this index increased 2.444 (Exp:2.444) times (p=0.012<0.05). The effect of Acne Quality of Life Index data on accessing information about acne in social media was higher than dermatology life quality index. In other words, it was concluded as a result of the

model established with Binary Logistic analysis that the score of the individuals with acne disease according to the dermatology and life index had a significant effect in social media usage.

A model was established between the results of the FDA acne severity scale and the acquisition of information from social media. The social media use (dependent variable) of the acne patients taken as a reference category after the regression analysis was decided according to "**Dependent Variable Encoding**" table. In other words, the interactions of the individuals using social media, the relationship of the variables of 1) following the pages on acne disease on the social media, 2) using the given recommendations, 3) purchasing the product at least once and 4) consulting a physician, all of which were defined as independent variable, with FDA was examined. There was no significant correlation between the use of social media and the FDA grade of the patients with acne (p=0,349>0,05).

5. Discussion

It has been proven with numerous statistical data that the internet has become an increasingly popular source of health information. Some of these are as follows: approximately 60% of the internet users are stated to use internet for searching information about health (Atkinson et al., 2009). In addition to search of health information, the result of the study by Wen et al., (2010) revealed that 15% of the internet users also followed information about personal health on the internet (a specific disease, etc.). The determinants of searching for online health information may involve education, gender, race, age, children at home, poor personal health conditions and the residential geographical area (Lustria et al., 2011). Similarly, according to the study by Ruggiero et al., gender, race, education and having a health care (treatment) provider are also among the determinants of internet usage in accessing information about personal health (2011).

Social networks that provide spreading the online sharing of health information allow different shares by changing human relations and interactions with other people through forming masses, spreading the message to large audiences, forming rapid announcement and effect (Chretien&Kind, 2013). Online videos are the primary among these shares. Visual presentations are often found about many subjects such as the use of a treatment method, and preparing and use of some non-medical herbal mixtures especially in health field.

It is known that internet-based videos are effective tools for health education; this is one of basic reasons for the fact that online video contents are used in a very strong and popular way in the recent period in the field of health communication. It is observed that especially many hospitals, registered health care providers and doctors frequently use videos on social media.

The fact that acne can show a chronic course and cause cosmetic problems affects negatively psychosocial functioning and life quality of the patients and forces the patients to search treatment (Bilgiç and Ak, 2011: 111). In the study conducted by Durusoy et al., (2010) in Turkey, the frequency of using complementary and alternative medicine (CAM) in patients with AV was found as 57.4% and the information source of patients using CAM was family and friends at the rate of 63.2%, media communication tools at the rate of 23.7%, internet at the rate of 7.9%, and

doctor, pharmacists and other healthcare professionals at the rate of 5.3%. In the studies conducted in the United States of America, it has been reported that patients generally learn CAM methods through media communication tools. In England, it is reported that these methods are used by learning most frequently from family and friends, and secondly from media communication tools. In the present study, 51.2% of the interviewed patients were following the contents about the disease through social media, the rate of using the description and recommendations given in these contents was 55.4% and the rate of using the recommended products at least once was 73.6%. Information source of female patients about cosmetic applications was primarily television and secondly internet (television-36.1%, internet - 25.8%). On the other hand, men used primarily internet and secondly television (39.2%, 36.5%) for information source. 19.8% of the women and 10.8% of men acquired the information from the physicians. The rate of getting information from newspaper and magazines was higher in men than women; whereas, the rate of getting information from friends and other people was higher in women than men (Okan et al., 2014, 1451). According to the result of this study, the frequency of the CAM use was high since disease of acne vulgaris has properties reflecting negatively on social life of a person emotionally and behaviorally. Therefore, all mass media, especially social media, are frequently used by patients due to their feature of providing information about this issue. In the present study, 61.2% of the patients were watching television programs concerning the disease, 51.2% were following the newspaper news about the subject, and 57.0% accessed to the internet contents.

In the present study, the increase in DLQI and AQoL index values of the patients revealed a significant result in terms of using the recommendations in the presented contents and obtaining information about their diseases through social media. In other words, as the quality of life of the patients impaired in dermatological point of view, their attitudes on searching information from social media increased. However, the increase in AQoL index caused this attitude to be more compared to DLQI. In other words, AQoL index had a more significant effect in terms of acquisition of information through social media and the use of the learned information.

According to previous researches and literature background, information pollution on social media draw attention. Not only it is not possible to mention about reliability of information of these sources, approval of the reliability of the information is also different from other sources. Within this context, it is essential for patients who use social media to be good at accessing and applying the media contents. Therefore works done about new media literacy shed light on the issue .

6. References

Amichai-Hamburger Y, McKenna KYA. (2006). The Contact Hypothesis Reconsidered: Interacting via the Internet. J Comput Mediat Commun, 11:825-43.

Armstrong AW KR, Idriss NZ, Larsen LN, Lio PA. (2011). Online video improves clinical outcomes in adults with atopic dermatitis: a randomized controlled trial. J Am Acad Dermatol, 64(3):502-7.

Atkinson NL, Saperstein SL, Pleis J. (2009). Using the internet for health-related activities: findings from a national probability sample. J Med Internet Res,11(1):4

Berkman L, Glass T. (2000). Social integration, social networks, social support and health. In: Berkman L, Kawachi I, editors. Social epidemiology. New York: Oxford University Press.Bilgiç, Özlem, Ak, Muharrem, (2011). Akne Vulgaris'li Hastalarda Tamamlayıcı ve Alternatif Tıp Uygulamaları İnönü Üniversitesi Tıp Fakültesi Dergisi;18(2):111-4..

Cain, J. (2011). Social media in health care: the case for organizational policy and employee education. American Journal of Health-System Pharmacy,68(11), 1036.

Chou, W. Y. S., Hunt, Y. M., Beckjord, E. B., Moser, R. P., & Hesse, B. W. (2009). Social media use in the United States: implications for health communication. Journal of medical Internet research, 11(4), e48.

Chretien, K. C., & Kind, T. (2013). Social media and clinical care ethical, professional, and social implications. Circulation, 127(13), 1413-1421.

Durusoy ve ark. (2010), Akne ve Melasmada Alternatif Tıp Turk J Dermatol; 4: 14-7.

Eysenbach, G. (2011). The role of social media for patients and consumer health. IMIA Yearbook, 6(1), 131-138.

Fowler JH, Christakis NA. (2008). Dynamic spread of happiness in a large social network: longitudinal analysis over 20 years in the Framingham Heart Study. BMJ, 337:a2338.

Hanna, Shannon, Sharma, Jasdeep, Klotz, Jennifer, (2003), Acne vulgaris: More than skin deep. Dermatology Online Journal 9(3): 8

Hayta, Sibel Berksoy, Yavuz, Göknur Özaydın, Kıncır, Mehmet Fevzi (2000), Akne ve Melasmada Alternatif Tıp, Cumhuriyet Med J 2011; 33: 430-434., Aktan ve ark. 2000, Durusoy ve ark. Turk J Dermatol 2010; 4: 14-7.

Hayta, Sibel Berksoy, Yavuz, Göknur Özaydın, Kıncır, Mehmet Fevzi, (2011), Anxiety, depression, and nature of acne vulgaris in adolescents Cumhuriyet Med J 2011;. Aktan, S., & Özmen, E. (2000)..*International journal of dermatology*, *39*(5), 354-357. ,

Hawn, C. (2009). Take two aspirin and tweet me in the morning: how Twitter, Facebook, and other social media are reshaping health care. Health affairs,28(2), 361-368.

Kaplan AM, Haenlein M. Users of the world, unite! The challenges and opportunities of social media. Business Horizons 2010;53:59-68.

Kellett, S. C., & Gawkrodger, D. J. (1999). The psychological and emotional impact of acne and the effect of treatment with isotretinoin. *British Journal of Dermatology*, *140*, 273-282.,

Koo JY, Smith LL, (1991), Psychologic aspects of acne, Pediatr Dermatol. Sep;8(3):185-8

Korda, H., & Itani, Z. (2013). Harnessing social media for health promotion and behavior change. Health promotion practice, 14(1), 15-23.

Latané B. (1981). The psychology of social impact. Am Psychol, 36(4):343-56.

Lau, A. Y. S., Siek, K. A., Fernandez-Luque, L., Tange, H., Chhanabhai, P., Li, S. Y. W., ... & Eysenbach, G. (2011). The role of social media for patients and consumer health. IMIA Yearbook, 6(1), 131-138.

Lustria ML, Smith SA, Hinnant CC. (2011). Exploring digital divides: an examination of eHealth technology use in health information seeking, communication and personal health information management in the USA. Health Informatics J, 17(3):224-243.

Madden, M. Online Video. (2007). July 25, [17 May 2011]; Available from: http://www. pewinternet.org/~/media//Files/Reports/2007/ PIP_Online_Video_2007.pdf.pdf.

Moorhead, S. A., Hazlett, D. E., Harrison, L., Carroll, J. K., Irwin, A., & Hoving, C. (2013). A new dimension of health care: systematic review of the uses, benefits, and limitations of social media for health communication. Journal of medical Internet research, 15(4), e85.

Okan, U. D. G., Kulaç, M., Rendon, M. (2014), Dermatoloji Polikliniğine Başvuran Hastaların Kozmetik İşlemlere Güncel İlgisi: Bir Anket Çalışması. Dermatoz; 5(1): 1451a1.

Pirolli P. (2009). An Elementary Social Information Foraging Model. Computer Human Interaction Conference, Boston, MA.

Ruggiero KJ, Gros DF, McCauley J, de Arellano MA, Danielson CK. (2011). Rural adults' use of health-related information online: data from a 2006 National Online Health Survey. Telemed J E Health, 17(5):329-334

Schein, R., Wilson, K., & Keelan, J. E. (2010). Literature review on effectiveness of the use of social media: a report for Peel Public Health. [Region of Peel], Peel Public Health.

Thackeray, R., Crookston, B. T., & West, J. H. (2013). Correlates of health-related social media use among adults. Journal of medical Internet research,15(1), e21.

Wen KY, Kreps G, Zhu F, Miller S., (2010). Consumers' perceptions about and use of the internet for personal health records and health information exchange: analysis of the 2007 Health Information National Trends Survey. J Med Internet Res,12(4):e73

Yang, C. C., Jiang, L., Yang, H., & Tang, X. (2012). Detecting signals of adverse drug reactions from health consumer contributed content in social media. In Proceedings of ACM SIGKDD Workshop on Health Informatics.

http://www.instaturkiye.com Erişim Tarihi; 25.08.2016; 14:30