



## Use of Internet and social media as a new communication medium among nurses

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### Abstract

This study was planned with the aim of determining the usage of the Internet and social media among the nurses at the Centre of Health Research and Practice at the University of Mersin, in addition to investigating its contribution to their professional development and evaluating the usage of social media in an ethical perspective. Nurses as an employee group work very closely with society and provide services to healthy and ill individuals. They have been increasingly using both Internet and social media sources while undertaking their roles. This study is a descriptive study. A questionnaire was supplied to 260 nurses who were on duty at the hospital while the data was being collected and who agreed to participate in the research. The data acquired was analyzed using the statistical methods of arithmetic averages, percentages, standard deviations (SD) and chi-square ( $X^2$ ). The results were evaluated using a confidence interval of 95%, with a level of significance of  $p < 0.05$ . The nurses who stated that they use the Internet comprised 259 of the 260 nurses that participated, while 83.8% of them used social media. According to this study, the usage of the Internet and social media for professional development is also common. The majority of the nurses accept that the usage of social media has various risks and state that there is a need for informative studies directed towards more effective usage of these tools.

**Keywords:** Internet, social media, social networking, nurse, ethics.

### Introduction

Today the role of the Internet and social media as 'new public spheres' in which different social identities coexist, have become important to the socializing. In this new communication medium characterized as a 'network society' (Castells, 2005) individuals are connected to each other locally and globally, through the Internet and social media.

Social media may be described as 'the Internet-based applications built upon the ideological and technological foundations of Web 2.0 which enhance the user to create and share content' (Kaplan&Haenlein, 2010:61). According to Boyd and Ellison (2007:210) on the other hand, they are network-based services founded upon the individuals (1) creating a profile which is open or half-open for the public in a connected system, (2) their preparing a list together with other individuals who have mutual connections and (3) their sharing this list with the lists which have been prepared by other users in the system and their following it.

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With the usage of social media gradually increasing in the world, their roles in the field of health such as looking for information related to health, the development of health, presentation and risk communication regarding both patients and health professionals has also gradually increased (Carillo-Larco, 2012:756). Social media has influenced the communication and interaction of people with each other in subjects related to health. Today, people ask questions regarding their health over social networks and many institutions or experts related to health respond over these networks (Kung&Oh, 2014:64).

In Turkey, patients and health professionals usage of the Internet and social media has gradually increased. From research aiming to determine the rate and level of usage of the Internet and social media by patients and their doctors conducted in Turkey in 2011 by the Department of Clinical Quality and Medicine Safety, 95% of doctors were active on the Internet and spared 47% of their time for scientific research (Arikan&Benker, 2011:1).

Nurses as a group of professionals work very closely with society and provide a service to healthy and ill individuals. In undertaking these functions, they make use of the Internet and information technologies at greater rates (Kaya et al., 2008:89; Ay, 2009:131). While the increasing usage of social media in the profession of nursing has been emphasized many times, it also raises some ethical concerns. The risks relating to the professional ethics of nursing from the usage of social media may be grouped as the uncontrollable content; the violation of patient privacy and the secrecy of personal information; unprofessional behavior and organizational risks (Barry&Hardiker, 2012; Canadian Nurses Association, 2012; The Nursing and Midwifery Board of Australia, 2010).

It is important that nurses' attention is drawn to the ethical principles of nursing in relation to the usage of social media and the Internet. As a result, many guides and documents dealing with the usage of social media are being developed by various institutions, associations and professional organizations in the field of nursing. In 2011, The American Nurses Association (ANA) included the usage of social media in its reviewed code of ethics and published the *Social Networking Principles Toolkit*. In this guide it underlines the importance of the professional principles of occupational ethics in relation to digital/online mediums; the not sharing of the identity of patients, patient records, photographs and other information in online mediums; taking timely action against ethical problems such as the violation of privacy; the reporting of issues and the need for nurses to be part of institutional policy developments regarding online applications (The American Nurses Association, 2011).

### **Purpose**

The aim of this study is to determine the reasons for usage of the Internet and social media by the nurses at the Centre of Health Research and Practice at the University of Mersin in Turkey and their views regarding the risks which can be encountered on an ethical dimension.

### **Methods and Material**

The universe of research consists of the study 320 nurses who were on duty between the dates of 1 October 2014 and 1 February 2015 at the Centre of Health Research and Practice of the University of Mersin. The calculation of the sample size was done using the MedCalc statistical package program and accepting  $\alpha=0.05$  the power of the test= 0.80, minimum sample width was calculated as at least 130 in every group. The study population consisted of 260 nurses who were on duty at the hospital while the data was being collected and who agreed to participate in the research.

The questionnaire consisted of 21 questions which were prepared to determine descriptive personal information; the reasons for usage of the Internet and social media and the risks and ethical problems identified through the researchers knowledge of literature. The time to complete the questionnaire was 20 minutes on average and a pilot study was conducted with 10 nurses prior

to the final version. The nurses who completed the pilot study were not included in the final sample. The questionnaire was given to the nurses participating in the research, with information about the aims and methods of the study and on receipt of verbal consent, the form was completed in the presence of the researchers.

Following application, permission was received from the Board of Ethics of the Health Sciences Department of the University of Mersin and the Centre of Health Research and Practice of the University of Mersin in order to conduct the investigation. The data collected was analyzed using the statistical methods of arithmetic averages, percentages (%), standard deviation (SD) and Chi-square( $X^2$ ). The results were evaluated using a confidence interval of 95%, and a level of significance of  $p < 0.05$ .

## Results

### Demographic and Background Information of Participants

Of the 260 nurses who participated in the research, 82.3% (n=214) of them are women. Of the participants 36.1% (n=94) were in the age group 31–40 years and 6% (n=16) of them in the range 41–46 years, the average age being 29 years (ss= 6, minimum=18, maximum= 46). Those working as a nurse between 1 and 9 years came to 65.7% (n=171); 7% (n=18) of them 20 years or more, the average duration in the profession being 7.9 years (ss=6.5; minimum=1 year, maximum=28 years). Graduates comprised 79.2% (n=206) of participants, only 6.2% (n=16) held post-graduate qualifications, 66.2% (n=172) work as bed-side patient care nurses (Table 1).

The rate of the participants who have expressed that they use the Internet in their daily lives is 99.6% (n=259) and those having access to the Internet at their work places 92% (n=239). In response to the question regarding where they access the Internet from, 36.2% (n=94) of the participants stated that they access from the hospital, home and mobile telephone.

Of the participants who use the Internet to a great extent, 95.8% (n=249) of them use it for ‘accessing information resources’; 68.8% (n=169) of them for ‘watching/listening to video/music’; 61.9% (n=161) of them for ‘check e-mails’; 59.2% (n=154) of them for ‘using the social media (Facebook-Twitter etc.)’; 48.1% (n=125) of them for ‘banking transactions’ and 36.5% (n=95) of them for ‘shopping’.

The participants who use the Internet every day is 72.7% (n=189); 3-4 days a week 24.2% (n=63). While the ones who use the Internet between 1 and 3 hours a day are 46.9% (n=122); the ones using it for less than 1 hour are 45.2% (n=117) (Table 1).

**Table 1: Demographic and Background Information of Participants**

Identifying Characteristics		Used Social Media		Did Not Use Social Media		Total		X <sup>2</sup>	P
		n	%	n	%	n	%		
Sex	Female	178	81.6	36	85.7	214	82.3	0.399	0.528
	Male	40	18.3	6	14.3	46	17.7		
	Total	218	100	42	100	260	100		
Age	18–25	66	30.2	5	11.9	71	27.3	7.093	0.69
	26–30	66	30.2	13	30.9	79	30.4		
	31–40	73	33.4	21	50	94	36.1		
	41–46	13	5.4	3	7.1	16	6.1		
	Total	218	100	42	100	260	100		
Educational status	High school	11	5	2	4.8	13	5	1.645	0.649
	Associate	23	10.5	2	4.8	25	9.6		
	Graduate	171	78.4	35	83.3	206	79.2		
	Post-graduate	13	6	3	7.1	16	6.2		
	Total	218	100	42	100	260	100		

Working position	Bedside patient care	143	65.5	29	69	172	66.2	0.741	0.389
	Nurse managers	29	13.3	4	9.5	33	12.7		
	Other*	46	21.1	8	19	54	20.8		
	<b>Total</b>	218	100	42	100	260	100		
Working years	<1-9	145	66.5	25	14.7	171	65.7	0.967	0.617
	10-19	57	26.1	14	19.8	71	27.3		
	20-29	15	6.9	3	16.7	18	7		
	<b>Total</b>	218	100	42	100	260	100		
Hours of using the Internet per day	<1 hour	88	40.3	29	69	117	45.2	12.171	0.007
	1-3 hours	111	50.9	10	23.8	122	46.9		
	4-6 hours	14	6.4	2	4.8	16	6.2		
	7 hours>	4	1.8	1	2.3	5	1.9		
	<b>Total</b>	218	100	42	100	260	100		

\*Other fields such as polyclinic, surgery room, nutrition, wound care, colonoscopy, gastroenterology, blood-taking unit.

### The Comparison of the States of Usage of the Social Media

While 83.8% (n=218) of participants state that they use social media; the usage of the social media is 87% (n=40) among male nurses. When the states of using and not using social media are compared according to the descriptive characteristics of the participants, no meaningful difference was found between gender and use of social media ( $X^2 = 0.399$ ,  $p = 0.528$ ) (Table 1).

The most frequently used social media sources are Facebook 80.8% (n=210) and Google+ 42.7% (n=111), while the least frequently used are LinkedIn 5.4% (n=14) and blogs 5% (n=13). The biggest difference between social media use by male and female nurses is related to the usage of YouTube and Twitter. Usage of YouTube among the men is 41.3% compared to 26.2% among women. Men use Twitter at a rate of 43.5% and women at a rate of 30.8% (Table 2). Two thirds of social media usage occurred among the 18–30 age group; with the highest usage rate among those with 1–9 years' work experience (Table 1).

When asked their frequency of social media use, 65.8% (n=171) of participants stated that they use it every day and 1.5% (n=4) of them once in 3–4 months. When on the other hand they were asked about their durations of usage in a day, 40.3% (n=88) stated that that they use it for under one hour; 50.9% (n=111) of them between 1 and 3 hours and 8.2% (n=18) of them between 4 and 6 hours and above (Table 1).

When the reasons for using social media were questioned, the greatest rate of 71.5% (n=186) of the participants said that it was for 'receiving information related to their friends'; 63.5% (n=165) of them for 'reading news'; 60% (n=156) of them for 'sharing a message'; 55% (n=143) of them that for 'sharing photographs'; 48.5% (n=126) of them for being informed about professional activities' and 41.2% (n=107) for 'getting information about developments related to health' (Table 2).

In the questions related to professional development and the ethical dimension of the usage of social media, 72.7% (n=189) of participants think that social media has a role in developing professional social networks and relationships for the profession of nursing. The rate of the participants who expressed their awareness of the platforms of the profession of nursing, blogs of it, nursing groups and the association pages related to nursing in the social media is 70% (n=182); while those following these pages on the other hand came to 57.3% (n=149).

Of the participants who use social media, those that share information related to nursing and health aimed at society is 46.9% (n=122). Those sharing emotional moments (happy/sad) related to their professions on the other hand is 26.9% (n=70). Only 6.2% (n=16) of participants stated that

they share information/photographs related to patients for whom they provide care; 81.3% (n=13) of these had received consent related with this sharing.

Of the participants, 80% (n=208) believe that using social media has various risks. Of these risks it was expressed that 'inaccurate information' posed the greatest risk 62.7% (n=163); followed by 'unprofessional behavior' at 58.1% (n=151); 'the violation of patient privacy' at 53.8% (n=140) and on the other hand 'the organizational risks' at 33.8% (n=88)(Table 2). Regarding these risks only 26.5% (n=70) of participants expressed a need for informative education or guidelines regarding the use of social media.

**Table 2: Using Social Media Tools, Reasons and Risks**

<b>Social Media Tools</b>	<b>n</b>	<b>%</b>
Facebook	210	80.8
Google+	111	42.7
Twitter	86	33.1
YouTube	75	28.8
LinkedIn	14	5.4
Blogs	13	5
<b>Reasons</b>		
Receiving information related to their friends	186	71.5
Reading news	165	63.5
Sharing a message	156	60
Sharing photographs	143	55
Being informed about professional activities	126	48.5
Getting information about the developments related with health	107	41.2
Find old friends	103	39.6
Listen and download music	103	39.6
Chat	86	33.1
Sharing professional information, articles and codes of practice	80	30.8
Locating on the ground notifications	57	21.9
To access online nursing groups	77	29.6
Playing games	56	21.5
Making job applications	37	14.2
Following blogs	36	13.8
<b>Risks</b>		
Inaccurate information	163	62.7
Unprofessional behaviour	151	58.1
The violation of patient privacy	140	53.8
Organizational risks	88	33.8
<b>n: Multiple options are marked.</b>		

## Discussion

The majority of the participants in the study are women and between aged 31–40 years. Those with professional experience of between 1 and 5 years came to 45% and the average years of experience 7.9 years. According to the data from the Survey of the Usage of Information Technology in Households by the Turkish Statistical Institute in 2014 the usage rate of the Internet in Turkey is 53.8%. This rate is comprised of 63.5% men and 44.1% women (TurkStat, 2014). The

usage of the Internet by the participants in this study is above the average of Turkey. The younger age profile of the participants affects the usage rates of technology in a positive way.

In Turkey, the rate of nurses using the Internet every day is 72.7%, above the average of Turkey at 71.2% (TurkStat, 2014). The participants in our study use the Internet most frequently between 1 and 3 hours (46.9%) and less than 1 hour (45%). In the study by Kung and Oh (2014:66) the finding that more than half of the nurses spent between 1 and 4 hours a day on the Internet, is similar to the nurses' duration of Internet usage in Turkey. The high Internet usage by participants has important implications regarding their professional development and interactions.<sup>5</sup>

In this study one third (36.2%) of the participants stated that they access the Internet from the hospital, home and mobile telephones. However, despite the majority of participants (92%) having declared that they have Internet access in the work place, a small proportion (3.1%) connect to the Internet only at the hospital. This suggests that the nurses spend most of their working hours in patient care and treatment and that they use the Internet and social media outside working hours.

In Turkey, the Internet is used predominantly with the aim of joining social groups (Facebook, Twitter etc.) (78.8%); reading online news, newspapers, magazines (74.2%) and looking for information about goods and services (67.2%) (TurkStat, 2014). This study shows that nurses use the Internet mostly (95.8%) with the aim of reaching sources of information. This is positive with regard to improving the quality of care provided and their desire to access current professional information.

Worldwide studies indicate that health professionals follow social media closely. In a meta-analysis including doctors, nurses, dentists, chemists and medical students in England, it was found that the use of social networks and Facebook was common; Facebook usage among medical students was 65–96%, while among other health professionals it was 13-47% (Von Muhlen&Ohno-Machado, 2012: 777). A study undertaken of 711 nurses by the College of Nurses of Ontario in Canada in 2012 revealed that 77% of nurses use social media (2012:15). A study of students from universities in Australia that receive education in the health professions has ascertained that Facebook usage is high among all the students (Usher et al., 2014:96). In this study the rate of social media usage was 83.2% among nurses. This widespread usage offers important opportunities regarding professional development and interaction.

According to our study in Turkey the nurses use social media mostly with the aim of communication, being informed and entertainment. Moreover the usage of social media with the aim of professional development is also rather widespread. The nurses accept that social media has a role in developing professional social networks and relationships within the profession of nursing (72.7%). Among these are being informed of professional activities, getting information about developments related to health, sharing professional information, essays, legal issues and reaching nursing groups.

In the world it is seen that social media (LinkedIn (46%) and Facebook (42%)) is frequently used among nurses looking for work (AMN Healthcare, 2013:15). Contrary to this it can be seen that in Turkey social media usage with the aim of looking for work or making job applications is at a low rate (14.2%). The reason for this rate being low may be that nurses are not facing any issues finding employment at present in Turkey.

Three quarters of the participants expressed an awareness of the platforms for the profession of nursing, blogs, nursing groups and professional association pages in the social media; more than half of them actually follow these pages. Accessing correct, reliable, current communication sources related to their profession quickly and easily, has an important role for professional communication and organization. The importance of these tools to the professional development of the nursing

profession, indicated by the numbers following these pages emphasizes the need for education and informative studies directed towards their effective usage.

Social media is also a forum where emotions can be expressed, represented and support can be received from colleagues and support groups (Cronquist&Spector, 2011:38). At the same time it provides nurses with important opportunities to communicate with their colleagues and educators in different regions of the world (Bary&Hardiker, 2012). In this study almost half of the participants stated that they have shared information related to nursing and health oriented topics on social media. More than one quarter of these related to experiences and emotional moments connected to their work. This sharing will strengthen nurses' communication with society in Turkey and their colleagues around the world.

The high usage of social media by the nurses in this study has also raised some concerns regarding ethics. In the study more than three quarters of the participants hold the view that using social media has various risks. The majority of the participants have indicated that the first of these risks is 'inaccurate information'. In general, serious concerns prevail in relation to the lack of control over the information present on the Internet. On social media some poor/incorrect practices related to health can be represented as 'correct practices' and this may result in both health professionals and patients' making wrong decisions (Bary&Hardiker, 2012). This situation besides threatening the health of the individual, diminishes the reliability of the health professionals and may increase health expenditure and prolong recovery periods as a result of the poor quality of information.

More than half of the participants think that social media constitutes a risk related to 'the violation of patient confidentiality'. Information shared on social media spreads in a short time and quickly. The violations of privacy and confidentiality done intentionally or unintentionally may have very serious consequences for nurses, patients and employers. Patient confidentiality besides being one of the most important values to be protected comprises the foundation of nursing values. The process of informing and taking consent in medical ethics is the most important feature of the principle of autonomy and the respect for autonomy in medical practice (Oguz, 1999). The first function of the consent process is to protect the patient and render his/her autonomous choice possible.

The participants have described other risks as 'unprofessional behavior' and 'organizational risks'. While the expressions and images shared on social media affect patient confidentiality, they may also consist of unprofessional behaviors targeting colleagues, employers and managers. One of the nurses' professional responsibilities is to maintain a boundary between their private and professional lives. However, this boundary becomes uncertain especially during online activities. These violations may come into existence in many different ways such as sharing comments, videos or photographs humiliating patients (NCSBN, 2011:3; Andersen&Puckrin, 2011:36). This situation may cause organizational risks which can damage both the nursing profession and the institutional reputation. Within the context of the risks described it can be said that the nurses using social media take into consideration ethical principles. However, they need to know that in the case of ethical violations their patients and profession can suffer.

More than one quarter of the participants indicated that in the context of the risks mentioned above they need informative education or guidelines regarding the usage of social media. Worldwide, the number of ethical principles and informative guides oriented towards the usage of social media is increasing. In 2011 The American Nurses Association (ANA), included the usage of social media, reviewed its ethical codes and published the "Social Networking Principles Toolkit" (2011). The Mayo Clinic prepared a social media users' guide directed towards its staff and opened this for online access for all of its staff (<http://sharing.mayoclinic.org/guidelines/for-mayo-clinic-employees/>). Presently and in future the ethical problems created by the usage of social media

need to be taken into consideration. It is important that in Turkey the professional principles of nursing be reviewed and the ethical principles of “confidentiality and privacy, consent taking” be taken into consideration in relation to the use of social media (Cobaner&Erer, 2014:145).

### Conclusion and Recommendations

The Internet and social media as a new communication medium are frequently being used by the majority of the nurses in Turkey. This study provided a preliminary review on how frequently nurses utilize Internet and social media and the characteristics of nurses who used Internet and social media based on a survey. While the nurses use the Internet mostly with the aim of getting information, communication and entertainment, the majority of them are conscious that the Internet and social media have a role in developing professional social networks and relationships as well as various risks.

Nurses may use social media differently depending on the purposes they have, such as for receiving information related to their friends, reading news, sharing a message and photos, being informed about professional activities, getting information about the developments related with health and professional development. Additionally, according to the results of the research it is important that the nurses be supported regarding the use of the Internet and social media. In this matter the policy makers, professional associations, educational institutions and employers in the health field have a duty. Presently and in the future, the professional principles of nursing, the ethical principles of ‘confidentiality and privacy, consent taking’ have to be reviewed in relation to the usage of social media. Also there is need for studies in this field to be conducted by the policy makers, the universities and professional associations and for the researchers to include larger populations and a greater depth of investigation.

Future research in this area is a need for qualitative and quantitative researches which will encompass a lot of nurses from more different regions oriented towards the social media tools which the nurses frequently use. Moreover the health service being given with a team perspective be taken into consideration, it will be useful that also the comparative studies directed towards the nurses and the other health professionals be done.

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