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Prevalence Of Using Of Internet And Social Media By Patients For Seeking Medical Information In Al Madinah AL Munawara KSA 2021

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INTRODUCTION

BACKGROUND

Online health information seeking is an activity that needs to be explored in Saudi Arabia. While there are a growing number of studies that adopt a qualitative approach to this issue and attempt to understand the behaviors associated with online health information seeking, previous studies focusing on quantifying the prevalence and pattern of online health.

In the united states, United Kingdom and France several computer science laboratories had the initial concepts of wide area networking. Defense Department of united states awarded contracts in 1960. (1)

Today there is wide spread information on the internet. the national information infrastructure often is the initial prototype. Technological, organizational and community are many aspects which is complex. its influence reaches and increase using of online tools to accomplish electronic commerce, information and community operations are ones of the technical fields of computer communications. (2)

Saudi Arabia is driven by crown prince Mohammed bin Salman to undergo unprecedented social changes. The Saudi society is turning to be more progressive mindset. being reflected in how they communicate with each other and the rest of the world over social media and the internet is called modernism. usage of social media is beginning to play an important role in lives of Saudi Arabians and has expanded so fast. Social media and networking platform has morphed into strong force changing Saudi social life. effective utilizing social media to communicate with citizens and to gauge public consciousness by Saudi government. (3)

Increasingly featured of health care by collaborative technologies and use of web communication which reshape the way patients and professionals interact. variety of purposes can be used by technologies and tools: to discover news, instantly debate issues, analyze research, network with peers, crowd-source information, seek support and provide advice. Implementation successfully of some tools: a lot of cases, the no usage attrition rates are high. Preferences of general population regarding the use of the internet and social media in health care little has known about it. (4)

Online tools that allow people to connect and share information which are twitter, Facebook and WhatsApp. they also allow people to share uncontrolled, unsupervised and unfiltered content irrespective of place and time (5). Consequently, the internet has a lot of self-created content. Number of users of social networking sites is increasing for health-related purposes. Increasing number of patients has been demonstrated in research who are using social networking sites to share their experiences with health care personnel or institutions (6). They are sharing with friends and family via platforms like Facebook, WhatsApp and twitter. If using social networking properly has been approved

then it can be helpful for patients (7). for example, a twitter campaign through study has promoted breastfeeding among Saudi women showed increasing adherence to breastfeeding (8). Effect of twitter on women health education demonstrated that women in Saudi Arabia were interested in discussing gynecological complains and breastfeeding issues on twitter (9). investigations showed that this strategy helps in creating awareness. Recently a study showed that twitter was a powerful platform for health promotion strategies. any health campaign can use influential people who have a huge number of followers can constitute an integral part and help in disseminating knowledge. (10)
There are concerns about the rising numbers of users of social media who they share health experiences and information that might affect choices of the patients regarding their health. Patients interaction with their health care professionals might be affected. (11)
One review has shown that information obtained from social networking sites correlated with many measures of quality of care, including performance measures such as readmission rates and mortality.
Nevertheless, definitive conclusions that cannot be drawn from correlation tests and many questions are not answered regarding the impact of patients using social media. (12)

RATIONAL:

- A lot of patients came to our clinics asking about a medication they heard about it through social media
- Easy to get information about any symptoms through internet

GENERAL OBJECTIVES:

The aim of this study is to evaluate the Prevalence of Using of Internet and Social Media by Patients for Seeking Medical Information in Al Madinah AL Munawara

SPECIFIC OBJECTIVES:

a) To identify the prevalence of using internet in health care
b) To find out what patients look for on the internet
c) To see where patients find information about their health

LITERATURE REVIWE:

Several studies have been conducted around the world about use of internet and social media by patients for seeking medical information:
1.In Netherlands , 2013, Tom H Van de Belt did a study (Internet and Social Media For Health-Related Information and Communication in Health Care: Preferences of the Dutch General Population) the result showed that: The survey was completed by 635 respondents. The Internet was found to be the number one source for health-related information (82.7%), followed by information provided by health care professionals (71.1%). About one-third (32.3%) of the Dutch population search for ratings of health care providers. The most popular information topics were side effects of medication (62.5%) and symptoms (59.7%). Approximately one-quarter of the Dutch population prefer to communicate with a health care provider via social media (25.4%), and 21.2% would like to communicate via a webcam. (13) . And the conclusions for this study: The Internet is the main source of health-related information for the Dutch population. One in 4 persons wants to communicate with their physician via social media channels and it is expected that this number will further increase. Health care providers should explore

new ways of communicating online and should facilitate ways for patients to connect with them. (13)

2.In USA , 2013, Thackeray R did a study (Correlates of health-related social media use among adults) the result show that : telephone survey of 1745 adults Respondents consulted online rankings or reviews (41.15%), used Social network sites for health (31.58%), posted reviews (9.9%1), and posted a comment, question, or information (15.19%). Respondents with a chronic disease were nearly twice as likely to consult online rankings (odds ratio [OR] 2.09, 95% CI 1.66-2.63, P<.001). Lower odds of consulting online reviews were associated with less formal education (OR 0.49, 95% CI 0.37-0.65, P<.001) and being male (OR 0.71, 95% CI 0.57-0.87, P<.001). Respondents with higher incomes were 1.5 times as likely to consult online rankings or reviews (OR 1.49, 95% CI 0.10-2.24, P=.05), than respondents with a regular provider (OR 2.05, 95% CI 1.52-2.78, P<.001), or living in an urban/suburban location (OR 1.61, 95% CI 1.17-2.22, P<.001). Older respondents were less likely to use social network sites for health-related activities (OR 0.96, 95% CI 0.95-0.97, P<.001), as were males (OR 0.70, 95% CI 0.56-0.87, P<.001), whereas respondents with a regular provider had nearly twice the likelihood of using SNS for health-related activities (OR 1.89, 95% CI 1.43-2.52, P<.001). And the conclusions for this study: People are using social media for seeking health information. However, individuals are more likely to consume information than they are to contribute to the dialog. The inherent value of "social" in social media is not being captured with online health information seeking. People with a regular health care provider, chronic disease, and those in younger age groups are more likely to consult online rankings and reviews and use social network sites for health-related activities. (14)

3.In Italy , 2018, Zucco R did a study (Internet and social media use for antibiotic-related information seeking: Findings from a survey among adult population in Italy) the result show that: results: sample of parents of public school students total of 913 parents completed the questionnaire, with a 67.4% response rate; 22.1% did not know when it was appropriate to use antibiotics. 32.3% of parents reported self-medication with antibiotics. 73.4% of respondents used the Internet to search for information about antibiotic use. Among social networks users, 46.5% reported the use of these media to get information about antibiotics and 45% of instant messaging app users share information about antibiotics. The results of the multiple logistic regression analysis showed that Internet use to search for antibiotic-related information was higher among females, younger subjects, with a higher level of education, in those who reported self-medication with antibiotics and in those who needed additional information on side effects of antibiotics from the GP compared with those who did not need any additional information. Internet use was significantly less likely in participants with cardiovascular diseases and cancer compared with those without chronic conditions, and in those who reported to strongly agree/agree, or were uncertain about antibiotic use without a GP prescription, compared with those who reported to be disagree/strongly disagree. And the conclusion for this study: Internet and social media are widely used for antibiotic-related information seeking in the Italian population. Health organizations must consider social media within their communication strategy to promote the appropriate Web use for antibiotic-related information seeking in the general population, although more evidence is needed regarding the optimal mix of communication interventions. (15)

4.in saudi arabia, 2016, Bahkali S did a study (The Prevalence of Internet and Social Media Based Medication Information Seeking Behavior in Saudi Arabia) and the result show that: sample of 4847 participants was collected. Out of the total participants, 68.3% (n=3311) were found to seek online medication related information frequently. Most of the social media users were female 83.5% (n=2766). The majority of respondents 63.6% (n= 3081) used Google, followed by Twitter 28.7% (n= 1392), Snapchat 21%, (n=1019), WhatsApp 13.8% (n= 670), Instagram 11.4%, (n= 553), and Facebook 5.5 % (n= 267),

with few searching YouTube 1.3% (n=65) to access online medication information. Findings indicate that the Saudi population actively uses the internet and social media to obtain medication information. (16)

5.In saudi arabia , jeddah , 2017,Rahila Iftikhar, did study(Health- Seeking Influence Reflected by Online Health-Related Messages Received on Social Media: Cross-Sectional Survey) and the result was : Of the 442 patients who filled in the questionnaires, 401 used Facebook, WhatsApp, or Twitter. The majority of respondents (89.8%, 397/442) used WhatsApp, followed by Facebook (58.6%, 259/442) and Twitter (42.3%, 187/442). In most cases, respondents received health-related messages from WhatsApp and approximately 42.6% (171/401) reported ever stopping treatment as advised on a social media platform. A significantly higher proportion of patients without heart disease (P=.001) and obese persons (P=.01) checked the authenticity of information received on social media. Social media messages influenced decision making among patients without heart disease (P=.04). Respondents without heart disease (P=.001) and obese persons (P=.01) were more likely to discuss health-related information received on social media channels with a health care professional. A significant proportion of WhatsApp users reported that health-related information received on this platform influenced decisions regarding their family's health care (P=.001). Respondents' decisions regarding family health care were more likely to be influenced when they used two or all three types of platforms (P=.003). (17)

METHODOLOGY:

STUDY AREA:
Al-Madinah Al-Munawara is the second holiest city in Islam after Makkah and the burial place of the Islamic prophet Muhammad, located on the country's west side, along the red sea coast. It has an area of 589 km2

STUDY DESIGN:
A cross sectional study targeted to patients in Al Madinah city in Saudi Arabia 2021.

SELECTION CRITERIA INCLUSION CRITRIA:
All adult above 15 years for Both gender from general population were included in this study

EXCULSION CRITERIA:
Geriatric above 65 years, children under 15 years were excluded.

VARIABLES:
The dependent variable is the preferences of the patients in Al Madinah Al-Munawara regarding the use of the Internet and social media in health care. The independent variables are gender, nationality, age, marital status.

SAMPLE SIZE:
To calculate the sample size Epi-info from center for disease control and prevention website was used.
Population size = 1,512,724, Expected frequency = 5%, Worst acceptable = 5, Confidence interval= 95%, The calculated sample size = 384 and the researcher target is to include 430 participate in the study.

STUDY TOOL:
Each participant was subjected to self - administered anonymous questionnaire. The questionnaire took from Dutch study that was created by Tom H Van de Belt, Radboud

REshape and Innovation Center, Radboud University Medical Center, Netherlands. The questionnaire consisted of 17 multiple-choice questions divided over 3 sections: (1) sociodemographic, (2) health-related information and Internet, and (3) respondents' preferences regarding communication in health care.

SOCIODEMOGRAPHIC SECTION

The sociodemographic section contained questions about age, gender, and level of education. Health-Related Information and Internet In the health-related information and Internet section, respondents were asked where they searched for health-related information and how they qualified the value of different sources. The topics were:

1. Sources of health-related information;
2. Type of online information that is searched for;
3. Frequency of health-related searches; and
4. Perceived reliability of different sources.

Respondents' Preferences Regarding Communication in Health Care In the preferences section, preferences regarding communication in health care were acknowledged.
The researcher will translate this form of survey from English to Arabic at translation center.

DATA COLLECTION TECHNIQUE

Data was collected through a self-administered designed questionnaire that was available in the form of an online google form. Data included in survey was as follows; Socio-demographic characteristics, previous and current medical resources used by the participants, easiness and reasons for using certain resources. Additionally, questions assessing influence of these resources on healthcare decisions done by participants were also included

DATA ENTRY AND ANALYSIS:

Data were represented in the form of frequencies (number of responders) and valid percentages for categorical variables. Chi square test was used. IBM SPSS (Statistical Package for the Social Science; IBM Corp, Armonk, NY, USA) was used to perform all statistical calculations, version 22 for Microsoft Windows.

ETHICAL CONSIDRATION:

Institutional research ethics board in AL Madinah Munawara approval was acquired prior to conducting the study protocol. A statement was included at the beginning of the questionnaire clarifying that the participation in this study is totally voluntary and that collected data will be anonymous and will only be used for the purpose of this study.

RESULTS

Analysis and interpretation of data collected from 430 samples size using SPSS statistical program version 22 to assess the Prevalence of Using of Internet and Social Media by Patients for Seeking Medical Information in Al Madinah AL Munawara.

Table 1: demonstrate the distribution of the age group among the patients surveyed

Age					
		Frequency	Percent	Mean	Std. Deviation
	Less than 30	322	74.9		

	31-45	79	18.4	1.33	0.627
	46-60	25	5.8		
	More than 60	4	.9		
	Total	430	100.0		

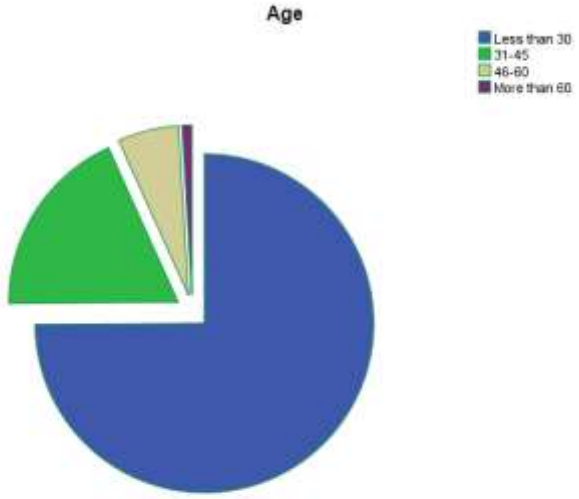

Figure 1: The age group distribution

Table (1) and figure (2) presents the demographic data gathered according to the patients age group who responded to the survey, it was detected that the majority of samples were less than 30 years old (74.9%), with overall age mean and St. Deviation (1.33) and (0.627) respectively

Table 2: demonstrate the distribution of the gender among the patients surveyed

Gender					
		Frequency	Percent	Mean	Std. Deviation
	Male	139	32.3	1.68	0.468
	Female	291	67.7		
	Total	430	100.0		

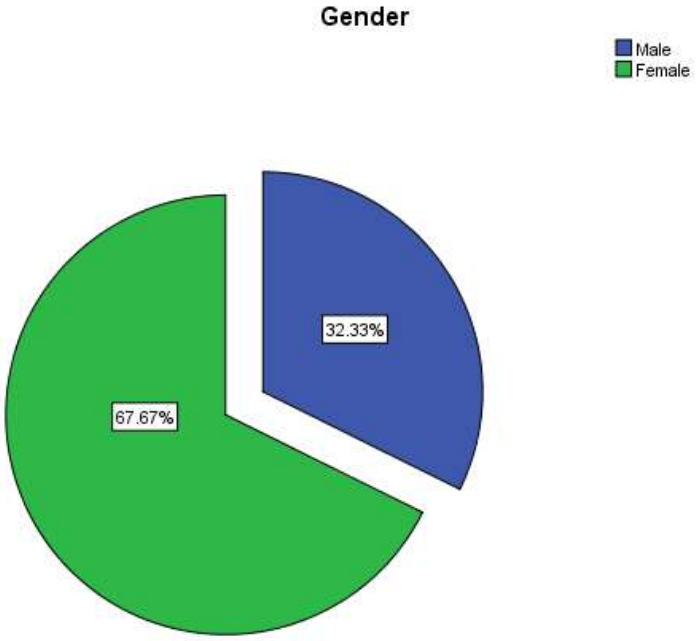

Figure 2: Distribution of the gender

Table (2) and figure (2) presents the demographic data gathered according to the patient's gender who responded to the survey, it was detected that the majority of samples were female (67.7%), with overall gender mean and St. Deviation (1.68) and (0.468) respectively.

Table 3: demonstrate the distribution of the marital among the patients surveyed

Marital status					
		Frequency	Percent	Mean	Std. Deviation
	Single	269	62.6	1.37	0.485
	Married	161	37.4		
	Total	430	100.0		

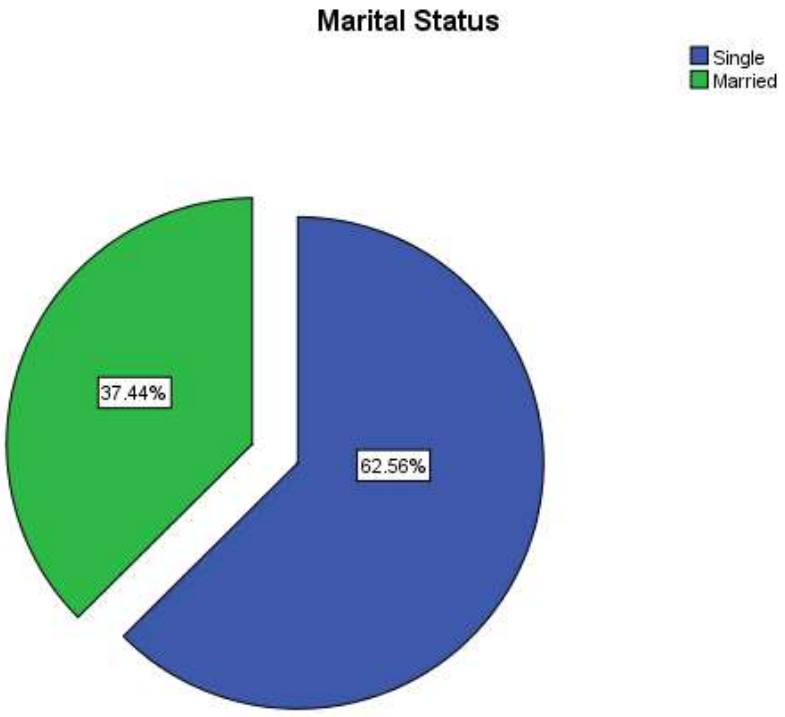

Figure 3: the marital status distribution

Table (3) and figure (3) presents the demographic data gathered according to the patient's marital status who responded to the survey, it was detected that the majority of samples were single (62.6%), with overall marital status mean and St. Deviation (1.37) and (0.485) respectively

Table 4: demonstrate the distribution of the nationality among the patients surveyed

Nationality					
		Frequency	Percent	Mean	Std. Deviation
	Saudi	411	95.6	1.04	0.206
	Non-Saudi	19	4.4		
	Total	430	100.0		

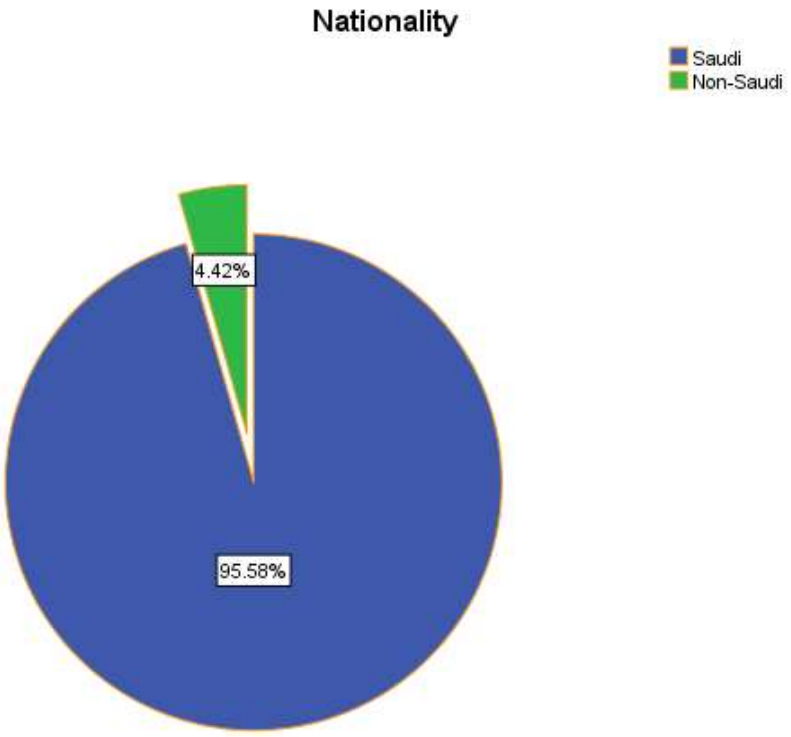

Figure 4: Nationality of the patient's

Table (4) and figure (4) presents the demographic data gathered according to the patient's nationality who responded to the survey, it was detected that the majority of samples were Saudi (95.6%), with overall nationality mean and St. Deviation (1.04) and (0.206) respectively

Table 5: demonstrate the distribution of the occupation among the patients surveyed

Occupation					
		Frequency	Percent	Mean	Std. Deviation
	No job	126	29.3	3.01	2.794
	Teacher	50	11.6		
	Engineering	5	1.2		
	Housewife	27	6.3		
	Student	141	32.8		
	Medical field	32	7.4		
	Accountant	3	0.7		
	management	9	2.1		
	Photographer	5	1.2		
	Government sector	14	3.3		

	Private sector	14	3.3		
	Merchant	4	0.9		
	Total	430	100.0		

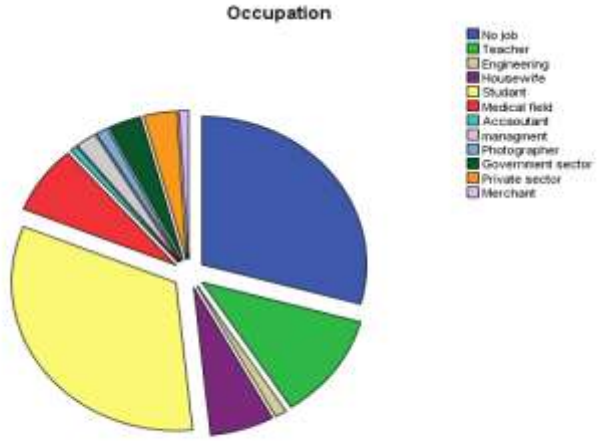

Figure 5: Occupation of the patient's

Table (5) and figure (5) presents the demographic data gathered according to the patient's occupation who responded to the survey, it was detected that the majority of samples were Students (32.8%), with overall occupation mean and St. Deviation (3.01) and (2.794) respectively.

Table 6: demonstrate the distribution of the Qualification among the patients surveyed

Qualification					
		Frequency	Percent	Mean	Std. Deviation
	No education	2	0.5	3.83	0.694
	Primary	15	3.5		
	Secondary	81	18.8		
	University	291	67.7		
	Advanced studies	37	8.6		
	Technician	4	0.9		
	Total	430	100.0		

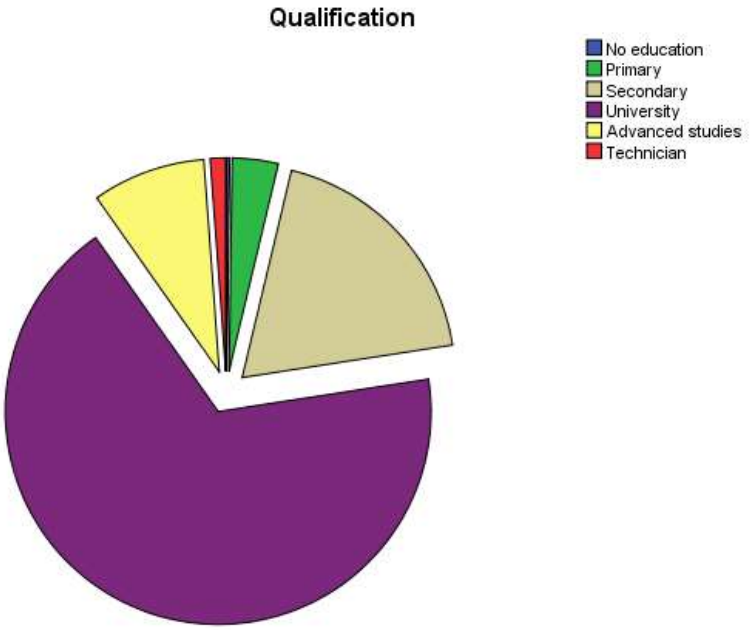

Figure 6: Qualification of the patient's

Table (6) and figure (6) presents the demographic data gathered according to the patient's qualification who responded to the survey, it was detected that the majority of samples were university (67.7%), with overall qualification mean and St. Deviation (3.83) and (0.694) respectively.

Table 7: demonstrate the patients' responses to the survey (source of information)

Questions	Responses	Frequency	Percentage	Mean	Std. Deviation
Where do you find the information about the health?					
1. Internet (computer/smartphone)	Yes	332	77.2	1.23	0.420
	No	98	22.8		
2. Physician (e.g.GP)	Yes	252	58.6	1.41	0.493
	No	178	41.4		
3. Information leaflets, books	Yes	35	8.1	1.92	0.274
	No	395	91.9		
4. Family, friends, or other acquaintances	Yes	157	36.5	1.63	0.482
	No	273	63.5		
5. Experiences of others	Yes	37	8.6		

	No	393	91.4	2.00	0.068

A total of 430 patients responded to a question asking where do you find the information about the health, the majority of the answer recorded as follow, (77.2%) think the interment is the source of them, (58.6%) the physician is the source of them, (91.9%) think the information from the book is not sours of them, (61.5%) think the information from family or friends is not source of them and finally (91.4) Of these responses think that the information from other experience is not source of information.

Table 8: demonstrate the patients' responses to the survey (what patients look for on the internet)

Questions	Responses	Frequency	Percentage	Mean	Std. Deviation
What do you look for on the Internet?					
1. Health care insurance	Yes	37	8.6	1.91	.281
	No	393	91.4		
2. Second opinion	Yes	104	24.2	1.76	.429
	No	326	75.8		
3. Medication and/or side effects	Yes	262	60.9	1.39	.488
	No	168	39.1		
4. Manufacturers of medication (Pharmacy)	Yes	39	9.1	1.91	.288
	No	391	90.9		
5. My hospital or my physician (e.g., GP)	Yes	154	35.8	1.64	.480
	No	276	64.2		
6. Other patients' experiences	Yes	186	43.3	1.57	.496
	No	244	56.7		
7. Specific diagnoses or diseases	Yes	160	37.2	1.63	.484
	No	270	62.8		
8. Therapy or treatment	Yes	175	40.7	1.59	.492
	No	255	59.3		
9. Symptoms	Yes	265	61.6	1.38	.487
	No	165	38.4		
10. Health problems	Yes	148	34.4	1.66	.476
	No	282	65.6		
11. Iets anders – others – namely	Yes	2	.5	2.00	.068
	No	428	99.5		

A total of 430 patients responded to a question asking what do you look for on the Internet about the health, Furthermore, 8.6% (37) of patients had consulted the Internet for health care insurance in relation to their appointment on the day surveyed, 24.2% (104) of patients had consulted the Internet for second opinion, 60.9% (262) of patients had consulted the Internet for medications or side effects, 9.1% (39) of patients had consulted the Internet for manufacture of medication, 35.8% (154) of patients had consulted the

Internet for hospitals or physicians, 43.3% (186) of patients had consulted the Internet for other patient's experiences, 37.2% (160) of patients had consulted the Internet for specific diagnosis or disease, 40.7% (175) of patients had consulted the Internet for treatment, 61.6% (265) of patients had consulted the Internet for symptoms and finally (34.4% (184) of patients had consulted the Internet for health problems.

Table 9: demonstrate the patients' responses to the survey question

Questions	Responses	Frequency	Percentage	Mean	Std. Deviation
1. Have you ever searched for ratings of your hospital or your physician?					
	Yes	268	62.3	1.38	0.485
	No	162	37.7		
2. Would you like to use a social network (e.g., Hyves, Twitter) to get in touch with your physician (e.g., GP) to be able to ask health---related questions? (If preferred, via a secured connection)?					
	Yes	330	76.7	1.32	0.629
	No	62	14.4		
	No opinion	38	8.8		
3. Would you like to get in touch with your physician (e.g., GP) or hospital using a webcam?					
	Yes	230	53.5	1.57	0.681
	No	153	35.6		
	No opinion	47	10.9		
4. How often (on average) do you search for health---related information online?					
	Daily	19	4.4	2.89	0.884
	Weekly	110	25.6		
	Monthly	225	52.3		
	Annually	50	11.6		
	Never	26	6.0		
5. Do you search online after having visited your physician?					
	Very Often	52	12.1	3.13	1.386
	Often	134	31.2		
	Sometimes	49	11.4		
	Rarely	97	22.6		
	Never	98	22.8		
6. Do you search online before visiting your physician?					
	Very Often	95	22.1	2.49	1.146
	Often	139	32.3		
	Sometimes	111	25.8		
	Rarely	61	14.2		
	Never	24	5.6		

A total of 430 patients responded to a question asking have you ever searched for ratings of your hospital or your physician, Furthermore, 62.3% (268) of patients had consulted

the Internet to rate the hospital or physician, the patients responded to a question asking would you like to use a social network (e.g., Hyves, Twitter) to get in touch with your physician Furthermore, 76.7% (330) of patients had consulted the Internet to keep in touch with physician, , the patients responded to a question asking how often (on average) do you search for health---related information online, Furthermore the majority 52.3% (225) of patients search monthly for the information about the health online, the patients responded to a question asking do you search online after having visited your physician, Furthermore the majority 31.2% (134) of patients often search for the information about the health after visit the physician and finally the patients responded to a question asking do you search online before having visited your physician, Furthermore the majority 32.3% (139) of patients often search for the information about the health before visit the physician.

Table 10: demonstrate the patients' level of reliability about the online information

Level of reliability					
		Frequency	Percent	Mean	Std. Deviation
	High Reliable	3	0.7	2.30	0.475
	Moderate Reliable	294	68.4		
	Low Reliable	133	30.9		
	Total	430	100.0		

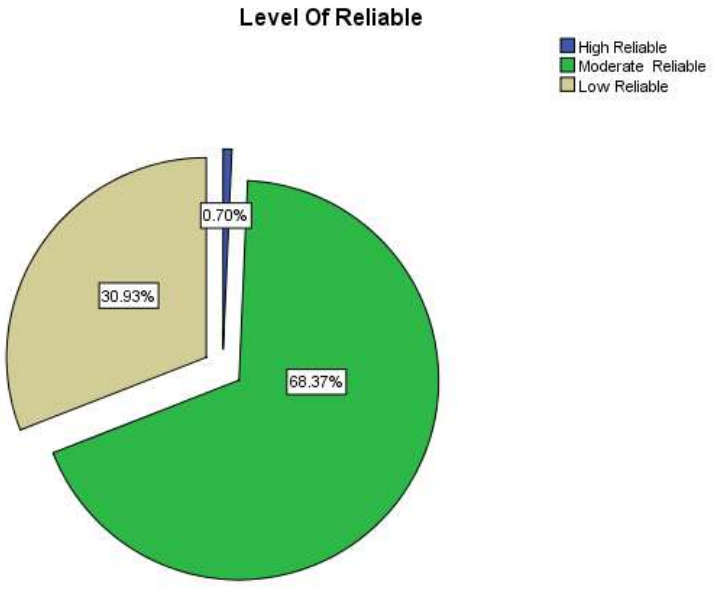

Figure 7: level of reliable

Table (10) and figure (7) presents the level of reliability of patients about the online information who responded to the survey, it was detected that the majority of samples were 294 of the patients were moderate reliable (68.4%), with overall reliable mean and St. Deviation (2.30) and (0.475) respectively.

DISCUSSION:

Internet is becoming an essential part of our daily life with a great influence on medical practice from both physicians and patients' perspectives. This study investigated the information seeking behavior for citizens in AL Madinah Munawara. It was found that most of the respondents were young adults with an age less than 30 years old. Also, they had a university degree student and all from AL Madinah Munawara.

It was revealed that the most common resource for medical information after healthcare professionals is internet, either previously or currently. Additionally, the participants agreed on that the internet influence their medical decisions regarding their health. This result agrees with Tom H Van de Belt 2013 study about (Internet and Social Media For Health-Related Information and Communication in Health Care: Preferences of the Dutch General Population) the result showed that: The survey was completed by 635 respondents. The Internet was found to be the number one source for health-related information (82.7%).

Its was revealed also that the most common gender was female and these results agree with Bahkali S 2016, in Saudi Arabia, the study (The Prevalence of Internet and Social Media Based Medication Information Seeking Behavior in Saudi Arabia) and the result found that most of the social media users were female 83.5%.

The result also revealed that most of the population searching in the internet for general health problems.

The study conducted that most of the people those included in this study had moderate reliable about the information from the internet and social media and they preferred to go to the hospital.

Confidentiality and privacy are important to patients when they search for health information online, especially in relation to how their personal information may be used and the privacy of their search content. In this instance, "others" are a concern when it comes to people finding out about the content of searches and employers are not a concern. This may suggest that online health information seeking is not taking place at work, however, this would require further research. The implications of online health information-seeking behavior on the power dynamic of the traditional health professional and patient relationship should also be the subject of future research as a result of the public availability via the Internet of previously exclusive information (ie, medical information for professionals only). For example, change in the power dynamic because knowledge of the health professional is becoming democratized may cause issues around treatment adherence based on trust and the value that patients place on the knowledge of health professionals.

CONCOLOSION:

Internet is a major source of medical information in AL Madinah Munawara. Information provided through the internet can influence medical decisions done by citizens, these finding should be used in order to tailor the information provided by the internet to meet the need of Saudi population.

Further research is needed to evaluate the impact that the democratization of medical information through online health information seeking among patients has on health care professionals and organizations, including how to access those who sought health information online and did not attend a medical center as a result. Patients want access to health information online at any time, in preference to other sources, and this may be related to increased anonymity and privacy.

With the increasing amount of user-contributed health information, consideration must be given as to the provision of online health information for digital natives versus digital

immigrants, for instance, those who have been socialized in a culture in which digital technologies are part of everyday life compared to those who have had to develop an understanding of digital technologies as adults.

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