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Impact of Social Media on Obesity Awareness in Jeddah City: A Cross-Sectional Study

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Obesity awareness depends foremost on social media, including WhatsApp, Facebook, and Twitter. Persons share health information, regardless its accuracy. The present study first target is to investigate person's approaches to obesity health data on social media. Second, to report in what way social media influences managing our health and evaluating if persons change their medicine upon these data. A cross-sectional study was directed during February 2020 on persons living in Jeddah, Saudi Arabia. We involved persons using WhatsApp, Facebook, and Twitter. We prepared an electronic questionnaire for obesity awareness, including multiple-choice and closed-ended questions to specify which media is mostly used. Questionnaire responses showed that 93.9% used WhatsApp, 79.8% Facebook, and 32.3% Twitter ($p=0.005$). WhatsApp had the major impact regarding health & obesity awareness. Accordingly, accurate and evidence-based health awareness via digital era is necessary.

Keywords: Facebook, Obesity awareness, Social media, Twitter, WhatsApp

INTRODUCTION

Social media including WhatsApp, Facebook and Twitter have turned into the typical online tools letting persons to join and share health information. Moreover, helping us to share abandoned and unverified data, regardless time or place (Hoffman and Novak, 2012). Accordingly, the Internet comprises countless self-generated data (Van et al. 2010) A lot of individuals are progressively using sites of social media for health-related drives. It is demonstrated by research that the number of persons using social media for sharing their involvements with health care professionals or organizations is growing (Greaves et al. 2013) Healthy persons and patients share their experience with family members as well as friends via WhatsApp, Facebook, and Twitter (Adams, 2013, Antheunis

et al. 2013). Signs state that if social media is handled correctly it can benefit persons (Sawesi et al.2016).

It is reported that social media aided in building health awareness. Additionally, a latest study revealed that Twitter was influential for health campaign policies (Albalawi and Sixsmith, 2017). Influencers having enormous number of followers set up a vital measure of every health promotion and aid in spreading awareness. Apprehensions of the growing usage of social media in sharing health experiences and data grow as using these media may influence persons decisions about their health state (Greaves et al. 2012). Likewise, it may disturb person's interaction with health care experts (Tyrawski and Deandrea, 2015). Consistent with one review, data acquired from social media relate with health

care quality, counting performance processes as death and readmission rates (Verhoef et al. 2014). However, strict decisions are not formed by correlation tests and numerous inquiries still one-sided about the impact of social media usage.

Little data are available concerning social media influence on online health data-seeking attitudes in Saudi Arabia (Almairan et al. 2015, Williams and Schroeder, 2015). This study will try to conclude if information gained from social media, including WhatsApp, Twitter and Facebook, influence choices concerning our health care. The present study targets to report how data gained via social media touches the way persons handle their health and testing if persons start or change/stop their medicine as evidenced via social media.

MATERIALS AND METHODS

Subjects

Initially we had 662 responders, only accepted 625 with full answers, of whom 587 were using WhatsApp, Facebook, or Twitter and decided to contribute in the study. Yet, statistics was done merely for the 625 respondents using one of the mentioned social media. Consent form was obtained for every participant.

Research Design

A cross-sectional survey study was done during February 2020, including King Abdul-Aziz University students and employees and other citizens in different Jeddah districts, Saudi Arabia. We comprised persons using WhatsApp, Facebook, and Twitter that are amongst the commonly used social media in Saudi Arabia. The Research Ethics Committee at Faculty of Medical Rehabilitation Sciences approved the study.

Survey Instrument

The study group adopted a formerly validated questionnaire to mark social media consumers and in what way health data via social media influences dealing with their health (Van et al., 2013). Moreover, we designated obesity as the highest predominant public health problem in Saudi Arabia.

The questionnaire questions included both multiple-choice and closed-ended types that were intended to be easily understood. The questionnaire was managed electronically. The questions were to ascertain age, sex, nationality, marital status and educational level. Respondents were also questioned to specify social media type

used and if data received on these networks affect health care choices. Answered questionnaires were studied and the one answered by respondents not using WhatsApp, Facebook, or Twitter were excluded from statistical data analysis.

The survey was conducted from February to May 2020. The study protocol was approved by the Faculty of Medical Rehabilitation Sciences Ethics & Research Committee, King Abdulaziz University, Saudi Arabia (02 February 2020).

Statistical Analysis

Data analysis was done using SPSS version 20. Descriptive statistics were done. Results are stated as percentages for categorical, continuous and nominal variables, with theory of normal distribution. The p -value was also calculated

RESULTS

Social Media Type

WhatsApp was used by about 93.9% of respondents, while Twitter was the least used social media. Almost 7.2% of respondents were using all the channels. More frequent health messages were received on WhatsApp than Facebook or Twitter. Nearby less than one-third of the participants use all three media channels and receive health-related more common posts on WhatsApp than on Facebook or Twitter. Even though the respondents stated receiving medical data via social media, less than one-fifth reported that shared data actually affected their health choices. Moreover, one-quarter of them never arguing health-related data with their doctors

Verification of data Received on Social Media with Health Care Professionals

Regarding verification of health related data, 68.32% of participants verified the validity of received data via social media (Table 1).

Respondents Attitude with Health-Related Data Found on Social Media

Among the respondents, 75.36% started medications and 33.12 % stopped their medications as advised on social media without asking their physician. Generally, 92.8% of respondents started their medicine upon received health-related messages from WhatsApp. WhatsApp frequently swayed the majority of the respondents. Around 64.96% of the participants confirmed the integrity of health data on social media via google.

Table 1: Types of Social Media used by Participants (n=625).

Variables	n (%)
Type of social media platform used	
WhatsApp	587 (93.9)
Facebook	499 (79.8)
Twitter	202 (32.32)
Number of social media channels used	
Never use	18 (2.88)
one type	64 (10.24)
Two types	498 (79.68)
All types	45 (7.2)
Do you receive health-related messages on WhatsApp?	
Yes	541 (86.56)
No	84 (13.44)
Do you receive health-related messages on Facebook?	
Yes	92 (14.72)
No	533 (85.28)
Do you receive health-related messages on Twitter?	
Yes	15 (2.4)
No	610 (97.6)
Do messages on social media channels ever influence your decisions regarding your health care?	
Yes	514 (82.24)
No	111 (17.76)
Do you discuss the authenticity or usefulness of health-related information received on social media channels with a doctor or other health care professionals?	
Yes	427 (68.32)
No	198 (31.68)

*All questions were answered

Table 2: Participants Attitude with Health-Related Data Found on Social Media (n=625).

Variables	n (%)
Have you ever started any medications/treatment as advised/advertised on social media without asking our physician?	
Yes	471 (75.36)
No	154 (24.64)
If yes, which social media channel influenced you most? (n=471)	
WhatsApp	437 (92.8)
Facebook	449 (95.3)
Twitter	64 (13.6)
Have you ever stopped any medications/treatment as advised/advertised on social media without asking your physician?	
Yes	207 (33.12)
No	418 (66.88)
If yes, which social media platform influenced you most? (n=207)	
WhatsApp	189 (91.3)
Facebook	169 (81.6)
Twitter	30 (14.5)
Do you verify the credibility of the health data on social media?	
Yes	406 (64.96)
No	219 (35.04)
If yes, which media sources do you mostly use for verification? (n=406)	
Google	288 (70.9)
Others (PubMed/Ministry of Health website, WHO, etc.)	307 (75.6)
Do you verify the credibility of health-related data before sharing it with other persons?	
Yes	405 (64.8)
No	220 (35.2)

*All questions were answered

Table 3: Obesity health related websites usage among participants

Variables	Male (425)		Female (200)		P
	n	%	n	%	
Are you currently obese or overweight?					
Yes	163	38.4	70	35	.419
No	262	61.6	130	65	
Have you ever been obese or overweight during the given period?					
Childhood	46	10.8	22	11	.192
Teenage	105	24.7	48	24	
Adulthood	53	12.5	14	7	
Never	221	52.0	116	58	
Do you use health related website to get Health-Related Data about obesity?					
Always	148	34.8	92	46	.014**
Sometimes	207	48.7	87	43.5	
Never	70	16.5	21	10.5	
Did you participate in any health-related websites and/or social networks (e.g. Facebook)?					
Yes	176	41.4	77	38.5	.489
No	249	58.6	123	61.5	
How did you know about the information related obesity? #					
WhatsApp	264	62.1	142	71	.005**
Facebook	367	86.4	166	83	
Twitter	309	72.7	154	77	
Google search	146	34.4	38	19	
Can you make a decision based on what you read from social media regarding obesity?					

Always	108	25.4	69	34.5	.008**
Sometimes	273	64.2	122	61	
Never	44	10.4	9	4.5	
How useful is the Health-Related Data you find on social media?					
Useful	243	57.2	125	62.5	.426
not useful	33	7.8	15	7.5	
I do not know	149	35.1	60	30	
How often your decisions on obesity management using social media are helpful?					
Always	114	26.8	64	32	.264
Sometimes	239	56.2	110	55	
Never	72	16.9	26	13	
How would you rate the quality of the content of the Health-Related Data from social media?					
Excellent	195	45.9	89	44.5	.146
Average	144	33.9	83	41.5	
Poor	29	6.8	11	5.5	
I do not know	57	13.4	17	8.5	

The participants rated more than one choice

Nearly 64.8% shared data after proving its accuracy (Table 2).

Respondents' BMI

Approximately obese and overweight persons (BMI above normal) comprised 73.4% of the total studied population.

Obesity health related websites usage among participants.

The results showed that 73.4% (Male 38.4 %; Female 35%) assumed that they are categorized as obese. It was noted that females are using health related data more than males. Facebook was the most significantly used ($p=0.005$). Finally, the results revealed that, participants can make a decision based on what they read from social media regarding obesity ($p=0.008$) (Table 3).

DISCUSSION

The present study discovered the influence of sharing health-related data on social media on persons' online health information-seeking. It is shown that 93.9% of respondents used WhatsApp and 86.56% of media users received health data via these networks. It is found that 82.24% of social media customers reported that received health-related messages on these channels all the time affected their choices concerning health care.

Conclusively, health care and allied health professionals must benefit from social media power for spread health information, (e.g. clinical studies patients enrollment and surveying for gathering opinions on a new therapy technique, tool or device); still, possible threats may arise by using social media if no strict guidelines for

sharing and accepting health care data on these media. Numerous researchers have conveyed worries around the possibility of negative social media effect on patients and their management (Diviani et al. 2015).

In the present study, nearly half of respondents either overweight or obese were influenced by WhatsApp, showing the significance of the manner this channel affects how persons deal with their health state. Less than half of the respondents usually proved data reliability and 49.28% did a Google search for confirming received messages validity. Remarkably, 25.1% of respondents at no time debated health-related messages with their doctors (Albouq and Alturk, 2018). This can be because they have no specific doctor or not feeling it is applicable to debate with health care experts (Al-Kadi et al. 2018). Moreover, females more probably debate health-related data validity with their doctor as matched to males. One more research proved that young male patients pursued medical service less regularly and lean towards escaping any medical consultations (Smailhodzic et al. 2016).

We could conclude that persons with postgraduate levels were expected to confirm the reliability of data received from social media, agreeing with a prior systematic review (Zarcadoolas et al. 2006). At this point, we observed that patients rely on self-medication and using complementary treatments. They frequently get health-related data and have examinations lacking considering the hazard or value for any investigative tests or specific therapy.

Social media has an optimistic influence on health care, as mental health and programs of physical fitness (Laranjo et al. 2015). Actually, it has been advised that using social media for sharing health-related data, can aid doctors to spread valid data to patients, coworkers, and community, and help persons in public areas to spread health-related findings of existing occasions in suitable setting. Some doctors confirm that doctors have moral responsibility to give their opinions to public speech on online health care issues (Al-Qahtani et al. 2018, and Korownyk et al. 2014).

We consider presence of a crucial mass awareness events and campaigns for public education that received medical data on social media must be revised. Misrepresentation builds misperception and put at risk on clinical care. Only 50% of TV health programs offer evidence-based guidance (Iftikhar and Abaalkhail, 2017), while masses of TV programs execute rough inquiries afore broadcasting. Likewise, a data content inquiry on urology spread on Facebook shown that only 13% of the posts were significant, while 40% were product announcements (Hale et al. 2014). Similarly, one more study evaluated how health conditions were signified on Facebook shown that 32.2% of the data was marketable, while 20% were for health awareness (Denecke et al. 2015).

As a result, it is significant that social media customers check the validity and significance of all health-related data received on media. Furthermore, there should be virtual observation as accountability for distributing potentially improper health data. This might be feasible by editor health professionals on social media to fulfill patients' requests.

In our perspective, this study is one of the few investigations to measure the effect of social media on the mode person's act with their health and in what way posts received on social media affect health practices. Though, our results are open as the study was piloted at one of the major universities, as well as one of the largest malls in Jeddah, thus can represent the whole community. Furthermore, as we used a cross-sectional suitability sample, beside the mailed questionnaire, we could found in what way social media touches persons' health choices.

Our results show that social media plays a significant role in health awareness. Furthermore, it effects person's attitude and health practices. This proposes that clinicians must evaluate patients' treatment history in each appointment.

Since adherence to therapy is continually a problem for chronic patients, social media develops other aspect to it. It may deliver unreal, deceptive data and lands for unwarranted medical use. Moreover, message understanding on social media may be hard, unclear, besides not been wholly understood.

Upcoming studies must emphasis on exact diseases rather than obesity as hypertension and diabetes mellitus, and patient's motives for self-medicine. Stress must too be found on types of medicine that patients start and end with, in addition to the results associated with these practices. Experiments must also discover channels most trusted by patients and how they wish delivery of health data. Likewise, the motives of person's hesitation to debate health data and self-medicine performs with a doctor must be discovered qualitatively (Alqahtani et al. 2019, and Bahkali et al. 2015).

Patient education must be conducted to analyze all health data suspiciously (Mackey et al. 2013). Legislators and doctors must attempt to express valid local speech, e.g., Arabic medical websites that patients can see the reliability of received health-related data on social media. Health care managers must plan and predict upcoming medical care concerning in what way and how far physicians are included in online health care (digital clinics) and in what way this can be standardized. Various ethical inquiries necessitate answers afore linking treatment on social media.

CONCLUSION

We concluded that digital health awareness requests accuracy, being evidence-based, and control. As technology in a continuous evolving, we must be equipped to face it. There are two key challenges include lawmaking besides persons privacy. Social media cannot substitute consultation, careful listening to non-verbal signs, touch, assessment, discovering persons' thoughts, prospects, and customized care. So, choices of foremost clinical care should be refreshed in expert setting. The present study had two aims; first, assessing approaches to obesity health data on social media. Second, reporting how social media influences managing our health and estimating if persons change their medicine upon these data.

CONFLICT OF INTEREST

The authors declared that the present study was performed in absence of any conflict of

interest.

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AUTHOR CONTRIBUTIONS

SRE participated in the study with the responsibility in protocol drafting, reference search, data collection and analysis, manuscript writing and final proof. AA, ZN, and AMA participated in data collection, statistical analysis of data and revising the manuscript. All authors read and approved the final version.

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