Social media use during residency training

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Abstract

Social media plays a major role in the revolution of medical learning. Many training centers have incorporated it into their teaching curriculum. The aim of this research is to evaluate the current utilization of social media by residents and its effect on their learning process during their residency training.

We performed a quantitative cross-sectional survey based study. A 20-questions survey was constructed and distributed to residents from all specialties and training levels registered under the national specialty board in training period 2014/2015.

132 (69%) of the resident use social media as a platform for asking medical questions and half of them use it to consult experts in the field and to discuss cases. The most popular media for learning was YouTube 104 (55%) and free chat 49%. (71%) did not receive any course or guidance on how to use social media for educational purposes and 83.2% believe that a course or a formal lecture is needed.

In line of these results medical educators should pay attention to these sites and incorporate appropriate strategies to guide residents on effective use of social media.

Keywords: Medical education; Social media; Residency

Introduction

During the past decade, social media has become increasingly popular for personal and professional use. Its accessibility has made people from different professions depend on it not just as a mode of communication but as a way to exchange knowledge and even solve problems. In particular, there has been a recent explosion in the use of these technologies for scientific circles. (Klee, Covey and Zhong, 2015)

Twitter in particular has become a forum for rapid dissemination of breaking news in medicine. It is considered to
be one of the strong tools. Within hours a topic can disseminate to very wide audience and be transmitted to the world in few seconds.

The role of social media in medical postgraduate training has been unknown until recently. Today we know that its use during residency is considered to be one of the most powerful learning tools. A recent report in the *BJU International* indicated their followers grew by one third from January to April 2013, with continued growth at a rate of ≈100 new Twitter followers per month. This has been accompanied by significant increases in both the Klout score and Peer Index rating, measures of social media influence. (Rivas, Socarrás and Blanco, 2016)

Medical education is trending towards extracurricular education and engaging in social networks. Recently in United statue, researches evaluated this point among the residents and found that 97.7% of their resident spent at least 1 hours using social media and majority of them prefer to learn using social networks especially listening to podcast. (Mallin *et al.*, 2014) Majority of medical trainers have been involved in revolutionizing of social media use for training the residents. One of the most leading force were among the emergency medicine and critical care programs in the united statue, which recently integrate the social media in their residency curriculum. (Scott *et al.*, 2014)

Many countries have recently created their own best practices for social media, recognizing its important potential for learning and contributing to advancement in the field of medicine. This best practice statement emphasizes the importance of transparency and professionalism, while avoiding any content that violates patient confidentiality. (Klee, Covey and Zhong, 2015)

There are some published data done globally about the use of social media in residency in specific specialties but no studies done to evaluate the utilization of social media by different specialties and none was done in the gulf countries.

The primary objective of the study was to assess the usage of social media among residents in residency program in the period between 2014-2015. The secondary objectives was to evaluate the impact of using social media on the learning process of residents in different specialties.

**Methods**

The study was conducted among Oman Medical Specialty Board (OMSB) residents in the period between 2014-2015. It targeted all residents from different 18 training pro- grams including both surgical and medical specialties and different years of training.

The primary investigator constructed a survey aiming to understand the use of social media during residency. It contained 20 questions designed to assess frequency of social media use by residents and their preferred learning domain. The survey also looked into the resident's purpose of using social media and if they had any concerns preventing them from using it. Residents were asked if they were using any guidelines to help them use social media safely and if they would like it to be integrated as part of their learning curriculum. Demographic characteristics were also looked at such as the sex, age, years of residency and training program.

Three experts in the field reviewed the survey before submission to the ethical board. Once approved, it was distributed to OMSB residents in all specialties. Two investigators distributed a total of 382 survey papers. Initially it was delivered by hand to all residents on OMSB research day and then during resident’s academic activity day of each special- tles. Finally, it was also distributed on OMSB workshops to ensure approaching maximum number of
the residents. Before handing a survey paper, the responders were asked if they filled the survey previously, to minimize duplication. Online survey distribution was avoided since previous studies displayed a low response rate among OMSB residents.

Ethical consideration:
The research proposal was submitted to the ethical committee for approval. Consent was attached to the survey to ensure that the participant’s data will be confidential; participant’s anonymity was maintained throughout the study.

Data analysis:
Data was collected in epi-data entry software by 2 investigators and then converted to SPSS. Final analysis was done using SPSS version 19.

Results/Analysis

From a total of survey invitations (382), 189 (49.4%) were completed (Figure 1), which included residents from different specialties and years of training. The majority of responders were from junior years, mainly internal medicine, family medicine and emergency medicine (Table 1).

Figure 1: Participants Survey papers distribution

| 382 Survey to participants | 191 Participants responded |
|---------------------------|---------------------------|
| 189 Participants surveys included | 2 Excluded, due to incomplete answers |
Table 1: Characteristics of OMSB residents

| Characteristics of OMSB residents | Number of resident (%) |
|----------------------------------|------------------------|
| **Gender**                      |                        |
| Male                             | 66 (35.3)              |
| Female                           | 121 (64.7)             |
| **Year of Residency**            |                        |
| R1                               | 43 (23)                |
| R2                               | 52 (27.3)              |
| R3                               | 43 (23)                |
| R4                               | 34 (18.2)              |
| R5                               | 15 (8)                 |
| R6                               | 1 (0.5)                |
| **Training programs**            |                        |
| Surgical                         |                        |
| Anesthesia                       | 3 (1.6)                |
| ENT                              | 12 (6.3)               |
| General surgery                  | 16 (8.5)               |
| Obstetrics & Gynecology          | 11 (5.8)               |
| Ophthalmology                    | 5 (2.6)                |
| Oral and Maxillo-Facial Surgery  | 1 (0.5)                |
| Orthopedics                      | 9 (4.8)                |
| Medical                          |                        |
| Family medicine                  | 30 (15.9)              |
| Biochemistry                     | 1 (0.5)                |
| Hematology                       | 2 (1.1)                |
| Internal Medicine                | 37 (19.6)              |
| Microbiology                     | 2 (1.1)                |
| Dermatology                      | 8 (4.2)                |
| Emergency medicine               | 29 (15.3)              |
| Psychiatry                       | 5 (2.6)                |
| Radiology                        | 4 (2.1)                |
| Pediatric                        | 14 (7.4)               |

The number of resident using social media was 188 (99.5). When asked how often they accessed social media, almost half of the residents reported using it for more than 6 hours per week. With 9% using it for 25 hours per week. And 5% use it for more than 40 hours per week (Table 2).
Table 2: Social media devices and time

| Social media devices and time                  | Number of resident (%) |
|-----------------------------------------------|------------------------|
| Devices used for access for social media      |                        |
| Smart Phones                                  | 174 (92.1)             |
| Notebook computers                            | 52 (27.5)              |
| Desktop computers                             | 17 (9)                 |
| Tablet devices                                | 94 (49.7)              |
| Access time of social media                   |                        |
| At work                                       | 66 (34.9)              |
| At home                                       | 151 (79.9)             |
| On move                                       | 29 (15.3)              |
| 0-6 Hours                                     | 95 (51)                |
| Average hours spent using social media per week|                        |
| 7-15 Hours                                    | 50 (26.9)              |
| 16-24 Hours                                   | 16 (8.6)               |
| 25-40 Hours                                   | 16 (8.6)               |
| >40 Hours                                     | 9 (4.8)                |

In regard to most popular domain, YouTube (55%) was the most commonly utilized by the residents followed by free chat (49.2%), Google+ (34.9%) and Facebook (21.7%) (Figure 2).

Figure 2 : Frequency of resident preferred social media for learning (%)


When asked about the purpose of using social media professionally, 69.8% of residents used it to ask questions to colleagues, while 61.4% use it to share new information. (Table 3) The ease of use was one of the most important reasons for utilizing it for learning (83.1%). In addition, almost half of the residents preferred it due to its wide availability in many smart devices and it is faster to reply and post (49.7%) (Table 3).

### Table 3: Reasons for using the preferred domain of social media for learning

| Reasons for using the preferred domain of social media for learning | Number /Percentage of resident |
|-------------------------------------------------------------------|--------------------------------|
| It is more easy to use                                           | 157 (83.1)                     |
| It is faster in reply and posting                                | 94 (49.7)                      |
| The application is available in many smart                      | 94 (49.7)                      |
| It is free of charge                                            | 87 (46)                        |
| It connects you with many people at the same time                | 81 (42.9)                      |
| More popular among people worldwide                            | 73 (38.6)                      |
| It is more organized                                            | 56 (29.6)                      |
The most common cited concern the residents had from using social media was patient’s privacy (36.5%), liability and lack of time (29.6%). Only 11% of the residents felt it was an inappropriate mode for medical learning (Table 4).

Table 4: Concerns that may hold residents back from interacting using social media in patient care

| Concerns that may hold residents back from interacting using social media in patient care | Number / Percentage of residents |
|---|---|
| Concerns about patient privacy | 69 (36.5) |
| Concerns about liability | 20 (10.6) |
| Feel such interactions are inappropriate | 56 (29.6) |
| Lack of time | 56 (29.6) |
| Just not that interested | 13 (6.9) |
| No concerns | 27 (14.3) |

Despite is being such a popular mode of learning for residents, 52% of the Residents did not receive any courses or lectures on how to use social media, while only 19% had rarely any. Majority if the residents (83.2%)
would be beneficial to have a course or a lecture during residency on how to use social media (Table 5).

| Percentage of residents who had any guidelines /lectures on how to use social media in residency |
|---------------------------------------------------------------|
| Always                                                        | (6%) |
| Usually                                                       | (9%) |
| Sometimes                                                     | (14%)|
| Rarely                                                        | (19%)|
| Never                                                         | (52%)|

| Percentage of residents who think it will be beneficial to have a lecture/ course on how to use social media in their curriculums |
|-----------------------------------------------------------------------------------------------------------------------------|
| Yes                                                                 | (83.2%) |
| No                                                                  | (16.8%) |

Discussion

The global popularity of social media among physicians and countless teaching opportunities it offers demand its incorporation into the medical education. This study looked into social media use among Oman Medical Specialty Board residents. It demonstrated that ninety-nine percent of the residents from all the specialties were using social media. They stated that the ease of Social media use is one of the most important reasons for using it as a learning tool. They find it a very important platform for sharing and exchanging knowledge. YouTube was the most common platform residents used in contrast to USA emergency residents who preferred to use podcasts. (Mallin et al., 2014) Around fifty percent of the residents in our study accessed social media for more than six hours per week, twenty-seven percent accessed it for up to fifteen hours a week. In contrast, EM residents in Mallin M study described using SM for a much lesser time (1 hour 97.7% and 2-4 hours 34.5%). (Mallin et al., 2014) It would be interesting to understand the reasons behind such differences, however this would require another study.

We found that most of the residents in our study have major concerns regarding using social media, patient's privacy being the most predominant one. More than half of the residents from different specialties stated that they did not receive any lectures or courses on how to use social media safely. Eighty-three percent of them reported that it is very important to have courses or some proper guidelines on how to use social media safely during their residency training.

Our study was the first of its kind in the region and it included all the medical and surgical specialties with different years of residency training, which strengthen our result and make it unique.

Since survey response rate was low, study bias over-reporting social media use may be present which may be a limitation of the study.
Conclusion

In conclusion, residents use social media for sharing and exchanging knowledge. While awareness and activism are important, information reliability and maintaining patient privacy can be challenging for residents if not used properly. Published guidelines on using social media provide a useful platform for the safe exchange of medical knowledge. (Pillow et al., 2014) Residency programs should revise their curriculum to incorporate such guidelines and capitalize on the power of social media into a stronger and modern system.

Take Home Messages

Social media is an important tool in residents education. Educators should pay attention to social media and put strategies to incorporate it in the residency programs.

Notes On Contributors

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### Appendices

None.

### Declarations

*The author has declared that there are no conflicts of interest.*

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### Ethics Statement

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