

Role of facebook for dissemination of medical knowledge to doctors and medical students

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Received:

29th December 2015

Accepted:

3rd February 2016

Introduction:

Students are most frequent users of social networking sites like Facebook. Our aim was to use facebook as a media for disseminating medical knowledge to young medical students, residents and trainee surgeons and doctors working in the emergency department. The literature available for using the facebook for medical book is very sparse. We published a book 'handbook of plain x-ray abdomen in emergency' (ISBN 978-969-9277-00-9) in the year 2008. To make it freely available, a page was created on facebook on 20th May 2011. Facebook web address is www.facebook.com/zakioonwalasaleemkhantasirmumtaz. The book was also given free access for downloading from the following site: https://l.facebook.com/l.php?u=https%3A%2F%2Fdocs.google.com%2Fa%2Fhamdard.edu%2Fuc%3Fexport%3Ddownload%26confirm%3DoyGa%26id%3D0B_Fwbcn7mLnNTFNjQV9fX1JiVVU&h=GAQQQr4zM. Our aim was to disseminate medical knowledge among medical students and young doctors using facebook as a media.

Material and methods: a web page was created on Facebook on 20th May 2011. Facebook web address is www.facebook.com/zakioonwalasaleemkhantasirmumtaz created on plain x-ray abdomen in emergency. The book was freely made available on the internet. Quizzes was created around the x-ray and posted on the page. The page was analysed on 24th December 2015 and the results documented.

Results: Total number who like the page was till 23rd December 2015 is 1,984. The percentage of female was 38% and that of male 62%. The age group of the visitors were predominantly young adults. 89% were the age group between 18-34 years.

Conclusion: The facebook provided an opportunity to create an educational page, post x-rays of good quality, have a discussion and answer queries. We were able to understand the statistics who visited the page, from where the page was visited, what were their queries and how to improve audience participation.

Key words: facebook, social media, medical education

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Introduction:

Students are avid users of social networking sites like Facebook¹. Our aim was to use Facebook as a media for disseminating medical knowledge to young medical students, residents and trainee surgeon and doctors working in the emergency department. The literature available for using the Facebook for medical book is very sparse. The Handbook plain x-ray abdomen in Emergency and quizzes were made freely available on the page and no payment was required to access

the contents of the page. As teachers in the medical college, we were keen to pass on the knowledge we had learned from our patients.

Methods and materials:

Facebook page was created on plain X-ray abdomen in emergency. The book was also freely made available on the internet. Quizzes were created around the x-ray and posted on the page. This is still continuing and the page is active. The page was analysed on 24th December 2015 and

following are the results.

Results:

Total number who like the page was till 23rd December 2015 is 1984. The percentage of Female was 38% and that of male 62%. The age group of the visitors were predominantly young adults. 89% were the age group between 18-34 years. The page view was kept restricted for the viewers less than 17 years. Less than 2% were above the age of 55yrs.

Published Posts:

To make the page interactive and more interesting, a quiz program was started from September 2014. The following table illustrate the post and visitors with the start of quiz program:

Post	People reached	Like/Comments	Published On
Quiz 1	128	7	14 Sept 2015
Answer Quiz 1	222	18	20 Sept 2015
Summary Quiz 1	174	5	24 Sept 2015
Quiz 2	296	20	30 Sept 2015
Answer Quiz 2	128	5	11 Oct. 2015
Summary Quiz 2	161	5	11 Oct. 2015
Quiz 3	285	24	19 Oct. 2015
Answer Quiz 3	198	11	2 Nov. 2015
Summary Quiz3	222	6	21 Nov. 2015



Quiz 4	232	13	21 Nov. 2015
Answer Quiz 4	131	9	17 Dec. 2015

Example of a Quiz:

Questions.

1. What kind of this x-ray is?
2. What abnormality is seen on this x-ray?
3. What are the differential diagnosis?
4. What are the possible complaints of the patient.

Visitors and their Countries:

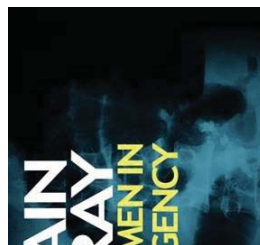
Number of fans	Country
1341	Myanmar
142	Pakistan
102	India
74	Bangladesh
64	Egypt
53	Yemen
42	Iraq
32	Palestine
16	Thailand
15	Saudi Arabia
13	Libya
11	United States of America
9	Nepal
7	United Kingdom
6	Sudan
5	Singapore
4	Jordan, Canada, Australia
3	Russia, Peru, Turkey, China, Malaysia
2	Nigeria, Albania, Qatar, Syria
1	Sweden, Cambodia, South Korea, Algeria, Spain, Israel, Serbia, Philippines, Indonesia, Taiwan, Ecuador, Sri Lanka, Japan.

The highest number of visitors were from Myanmar (Burma). In fact they outnumber the combined visitors from the rest of the other countries. One reason may be non availability of medical books or comparative higher cost of the books in the country. The visitors from Pakistan- the country of origin of the book-are few. The book is available over here and can also be downloaded from Hamdard University, Pakistan web site. There is a very wide spectrum of

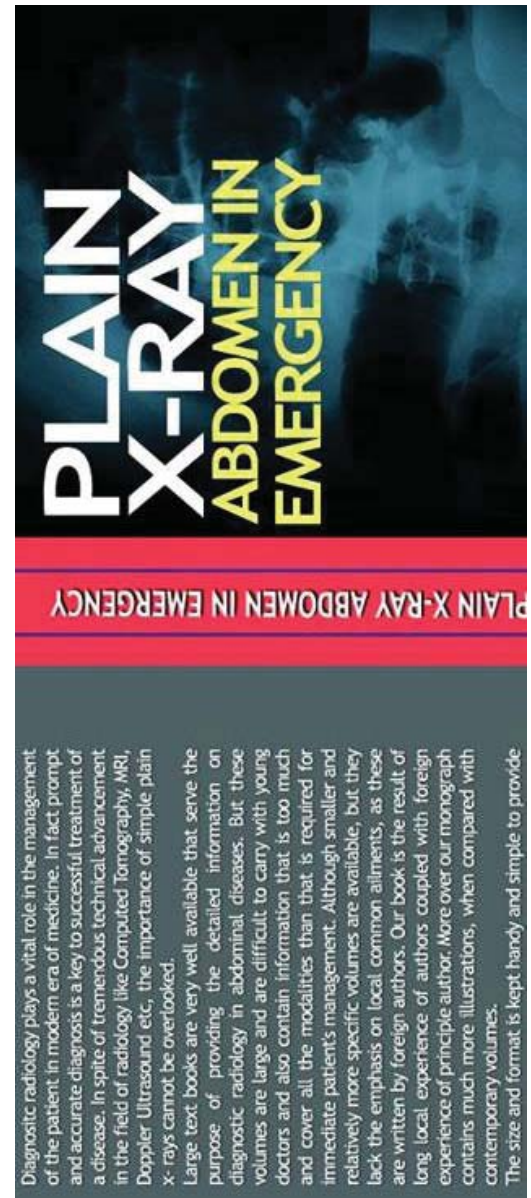
visitors from the globe and it seems that the language (English) is understood worldwide.

Discussion:

Book publication remains the gold standard for dissemination of knowledge. The educators are showing keen interest in how online social networking software can be harness for educational purpose as mentioned by Gunawardena et al.³ Facebook originally created for university students to socialize and now the best known social networking sites, facebook (www.facebook.com) features make it easy for web users to setup and maintain personal profile pages. published content contribute to groups and participate in community online, as stated by Jenkins et al.⁴ Caruso and Salaway found that 49.7% of surveyed were using social networking sites to communicate with classmate about course related topics.⁵ Ipsos MORI found that 37% of 1st year UK students were using these sites to discuss course work and 81% of these students found such activity useful for learning.⁶ Facebook features could provide useful support for student collaboration, student generated contents, student to student communication and the personalization and socialization of student work as mentioned by Dalsgaard et al in their study.⁷ There is a conjecture that facebook features may encourage students to engage in creative and social learning process that extend beyond traditional educational settings



and institution as shown by Wiberg et al⁸ in his study. Facebook benefits from accesses to wide and diverse forces of information and opportunities for communication as stated by Daron et al.⁹ The casual and personal



aspect of student facebook use may preclude or exclude teacher involvement so students may formulate learning goals that are tangential to formal curriculum as mentioned by Selwyn et al.¹⁰

Student facebook users may create many weak connection with each other but find it difficult to develop these into more supportive peer relationship as mentioned by Ellison et al.¹¹ Bugeja et al suggested that facebook use may become addictive.¹²

Recent study specially focus on medical students use of facebook, report that 70.8% of UK medical students use social networking sites as stated by Sandars et al.¹³ Thomsan et al in

his study in 2008 wrote that 64.3% of medical students at one US university has facebook accounts. We encourage use of facebook for dissemination of medical knowledge for medical students and postgraduate students. Facebook can be a useful tool to teach trainee medical students in interpretation of plain x-ray abdomen. The x-ray film are easily uploaded and details are well visualised. The accessibility is universal and benefits a large number of visitors. Youngsters are already familiar with facebook and have an opportunity to enhance their medical studies.

Book publication remains the gold standard for dissemination of knowledge, one needs to take into consideration, the use of social media to spread knowledge. Researchers in Radiology should not ignore opportunities for increasing the impact of research findings via social media.²

We created a page 'Handbook of Plain X-Ray Abdomen In Surgery' on face book. This handbook was published by us and was available in the market. The aim of having the page on the facebook was to make aware facebook user like medical students, residents, trainee surgeon, emergency medical staff to help them in reading and interpreting simple plain x-ray abdomen. The topics covered are soft tissue shadows, pattern of gas in the abdomen and radio opaque shadows. When a patient come to the hospital complaining of abdominal pain, a plain x-ray abdomen is requested to help in making a diagnosis. The message conveyed is to see the x-ray abdomen soon after the exposure, and to appreciate lesions like gas under diaphragm so as not to miss obvious diagnosis like perforated gut. The x-ray of the abdomen, black and white, are comparatively easy to load on the net as compared to printing where art of printing black and white has slowly waned away as colour printing has become more dominant. We made the book available to be downloaded freely at no cost, giving a link, for the benefit of those who are interested.

The page was managed and monitored by us, as to the people who were visiting, liking the page and giving comments. A study was conducted to analyze the results the way the page was vis-

ited. The name of the page is plain x-ray abdomen in emergency.

Results:

The data was collected on 7th September 2014. The page was created 20th May 2011. The decision was made to make the book available freely on the net without any payment, for the benefit of the students and postgraduates. A link was created for the free download and posted on the facebook page in August 2014.

LIKES - People who liked our page. 218 total page likes were reported and more may be added as awareness about the book availability spreads. POST REACH: 506 were the number of people the page was served to.

ENGAGEMENT: 82 people - this unique number of people liked, commented, shared or click the post on the day of data collection.

PEOPLE: The age group 25-34 years constitute nearly 67% of the visitors

This table illustrate the number of people and their country who use our webpage:

Countries:

Myanmar(Burma)	122
Pakistan	24
USA	4
UK	2
Bahrain	1
Thailand	1
India	1
Libya	1

Conclusion:

The facebook provided an opportunity to create an educational page, post x-rays of good quality, have a discussion and answer queries. We were able to understand the statistics who visited the page, from where the page was visited, what were their queries and how to improve audience participation.

The most surprising thing was a large number of visitors from Myanmar. The reason may be a keen desire to learn from experience of others and gain knowledge-particularly when it is freely

available.

Role & contribution of authors:

Dr Tasir A. Mumtaz, Associate Professor, Deptt of Radiology, Hamdard College of Medicine & Dentistry, Hamdard University Hospital wrote this paper.

Prof Saleem Khan formally Professor and Head Department of Surgery, Hamdard College of Medicine & Dentistry, Hamdard Universtiy, Karachi, collected the references and contributed in writing the discussion and results.

Prof. Zakiuddin G. Oonwala formally Professor and Head, Department of Surgery, Karachi Medicial & Dental Hospital and formally Principal of KM&DC, Formally Dean FH&MS, (Faculty of Health & Medical Sciences)Hamdard College of Medicine & Dentistry, presently Professor of Clinical Anatomy, Hamdard College of Medicine & Dentistry, Hamdard University, review the article and give final touches to improve the article.

Conflict of Interest: none

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