Social Networks in Medical Education in Bosnia and Herzegovina

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ABSTRACT

Introduction: Beginning with the late twentieth and early twenty-first century, the Internet was a significant additional tool in the education of teenagers. Later, it takes more and more significant role in educating students and professionals. Goal: The aim of this paper is to investigate, to what extent and how effectively the Internet is used today by students of biomedical faculties in Bosnia and Herzegovina. In addition, more specifically, this paper will research the implications of the well-known social networks in education of students and health professionals in Bosnia and Herzegovina. We compared the ratio of using Social networks by students for spreading medical information as basics for health education at medical faculties at 3 universities in Bosnia and Herzegovina (B&H). Results and discussion: The results showed that only 11.6% of professors use Facebook type of social network, 49.3% of them have a profile on BiomedExperts scientific social network and 79% have available articles in the largest biomedical literature database MEDLINE. Students are also frequent users of general social networks and educational clips from You Tube, which they prefer to utilize considerably more than the other types of professionals. Students rarely use the facilities of professional social networks, because they contain mainly data and information needed for further, postgraduate professional education. Conclusion: In B&H there are decent conditions for the use of online social networks in the education of health professionals. While students enthusiastically embraced these opportunities, this is not so much a case with health care professionals in practice; while scientific health care workers have not shown greater interest in the use of social networks, both for purposes of scientific research and in terms of self-education and training of students. Key words: Social networks, education, health professionals, students, Bosnia and Herzegovina.

1. INTRODUCTION

Social network is a social structure made up of individuals and organizations that represent “nodes”, and they are associated with one or more types of interdependency, such as: friendship, common interests, work, knowledge, prestige and many other interests (1, 2, 3). Development of modern information and telecommunication technologies has enabled large social networking capabilities (1). Members of the network no longer have to be in a physical contact; they may be on another continent and can exchange information, at any time of day (4, 5).

Such Internet possibilities are used in different ways, during the undergraduate and postgraduate education of health workers and continuing health education (1, 3, 5). At undergraduate level, the students often use global social networks (i.e. Facebook, Twitter, You Tube ...) or some specific health social networks, such as various forums with health issues (e.g. Health Care Forum). They rarely use the health science social networking (Medline, WoS, Scopus, BioMedExperts, WebMD ...), as opposed to other professionals in medical education (1). In the undergraduate studies, the exchanged information is usually needed for the education, training and the acquisition of certain skills. Often, these elements represent non-critical information, which is sometimes inappropriately labeled as, ethics and deontology of health care workers (4). In a graduate study, the usually exchanged scientific information is used to advance the cooperation in the scientific research projects.

2. THE AIM OF THE RESEARCH

The aim of this paper is to investigate, to what extent and how effectively, the Internet is used. The special emphasis is given to the well-known social networks in the education of students and health professionals in B&H.

3. RESEARCH METHOD

The research was conducted by surveying 200 students of the Health Faculty of the University of Zenica, the Faculty of Medicine, University of Sarajevo and 210 health professionals (i.e. doctors and medical technicians) in Zenica-
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Table 1. Correlation between different users of social networks

|                  | SN use to communicate with friends | SN used to extend the circle of acquaintances | SN used to exchange medical educational content | SN used for exchange of written content | Average grade |
|------------------|-----------------------------------|---------------------------------------------|-----------------------------------------------|----------------------------------------|---------------|
| SN use to communicate with friends | Pearson Correlation 1 | 0.360** | 0.134 | 0.274** | 0.118 |
|                  | Sig. (2-tailed) 0.000 | 0.103 | 0.001 | 0.165 |
| SN used to extend the circle of acquaintances | Pearson Correlation 0.360** | 1 | 0.443** | 0.383** | 0.099 |
|                  | Sig. (2-tailed) 0.000 | 0.000 | 0.000 | 0.264 |
| SN used to exchange medical educational content | Pearson Correlation 0.134 | 0.443** | 1 | 0.633** | 0.110 |
|                  | Sig. (2-tailed) 0.103 | 0.000 | 0.000 | 0.197 |
| SN use for exchange of written content | Pearson Correlation 0.274** | 0.383** | 0.633** | 1 | 0.149 |
|                  | Sig. (2-tailed) 0.001 | 0.000 | 0.000 | 0.081 |
| Average grade    | Pearson Correlation 0.118 | 0.099 | 0.110 | 0.149 | 1 |
|                  | Sig. (2-tailed) 0.165 | 0.264 | 0.197 | 0.081 |

** Correlation is significant at the 0.01 level (2-tailed).

Table 2. The ratio of purposes of using social networks by students

|                  | Internet for general information | Internet for exchanging mail | Internet for medical education | Internet to chat |
|------------------|---------------------------------|------------------------------|-------------------------------|-----------------|
| Average grade    | Pearson Correlation 0.057 | 0.142 | 0.124 | 0.112 |
|                  | Sig. (2-tailed) 0.489 | 0.085 | 0.139 | 0.181 |
| Internet for general information | Pearson Correlation 1 | 0.401** | 0.476** | 0.163* |
|                  | Sig. (2-tailed) 0.000 | 0.000 | 0.000 | 0.042 |
| Internet for exchanging mail | Pearson Correlation 0.401** | 1 | 0.485** | 0.410** |
|                  | Sig. (2-tailed) 0.000 | 0.000 | 0.000 | 0.000 |
| Internet for medical education | Pearson Correlation 0.476** | 0.485** | 1 | 0.290** |
|                  | Sig. (2-tailed) 0.000 | 0.000 | 0.000 | 0.000 |
| Internet to chat | Pearson Correlation 0.163* | 0.410** | 0.290** | 1 |
|                  | Sig. (2-tailed) 0.042 | 0.000 | 0.000 | 0.000 |

** Correlation is significant at the 0.01 level (2-tailed).

Doboj Canton. The criteria by which the students were sorted were first three and second three study years.

4. RESULTS

From 180 respondents 88.8% of them have Internet access and they all have a profile on the social networks (mostly on Facebook 86.6%). Pearson correlation between the purpose of using social networks and the average score on the faculty. (Table 1, 2, 3). The correlation is extremely positive for the use intended to expand the circle of acquaintances and exchange of educational and written content. Without statistically significant relationship between the purpose of using social networks and average grades. Pearson correlation between the purpose of internet use shows a pronounced relationship between use of exchange mail and chat with use for medical education. There is also no statistically significant relationship between success (average grade) and the purpose of internet use. (Graph 1,2,3)

Besting the average grade in relation to access the Internet by Student t test, we get that t = 0.462 for which p > 0.05 and conclude that there was no statistically significant differences in the average grade and the use of the Internet.

5. DISCUSSION

Public social networks, based on Internet, enable communication, collaboration and information gathering in the field of health care. More than half (55%) of Americans who are investigating health problems in the Internet age, research the data about the therapy or condition via the Internet, while, a third of them use social networks. About 60% of doctors in the U.S.A. use social networks for professional purposes (1, 5). To a large extent, social networks can be used in undergraduate and graduate education of health professionals.

Students were also frequent users of general social networks, and educational clips from You Tube, considerably more than other professionals. That fact actually determined the possible data and information that they exchange (1). Usually, the exchanged content was related to a process of mastering of certain skills necessary to a graduate education.

Graph 1. Frequency of Internet use by students of the biomedical orientation

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From 180 respondents 88.8% of them have Internet access and they all have a profile on the social network (mostly on Facebook 86.6%).

Graph 2. The purpose of using the internet (on a scale of 1 to 5, where 1 is the worst score and 5 the most favorable)

Graph 3. The purpose of using social networks (on a scale of 1 to 5, where 1 is least and 5 most common)

However, there were no critical reviews of the content, that was often found to be unprofessional and unethical, on the general social networks like Facebook, Twitter and You Tube (4). Students rarely used the facilities of professional social networks, because they mainly contained data and information needed for further, graduate and/or professional education.

Table 3. The ratio of internet users by gender

| Internet access | N   | Mean | Std. Deviation | Std. Error Mean |
|-----------------|-----|------|----------------|-----------------|
| Average grade   | yes | 143  | 7.83           | 0.754           | 0.063           |
|                 | no  | 15   | 7.73           | 0.458           | 0.118           |

Graph 2. The purpose of using the internet (on a scale of 1 to 5, where 1 is the worst score and 5 the most favorable)

Graph 3. The purpose of using social networks (on a scale of 1 to 5, where 1 is least and 5 most common)

6. CONCLUSION

In B&H there are decent conditions for the use of online social networks in the education of health professionals. While students are enthusiastically embracing these opportunities, they are somewhat less embraced by the health care professionals in practice. Scientific health care workers have not shown greater interest in the use of social networks, both for purposes of scientific research and in terms of self-education and training of students. Unlike these scholars, the scholars with similar “background” working outside the B&H use much more the advantages offered by the online social networks, both in education and in support of the scientific research.

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