

# ONLINE SOCIAL NETWORKS AND THEIR IMPACT ON THE LIVES OF STUDENTS OF MEDICINE-RELATED STUDIES

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**Abstract:** *The paper deals with the use of social networks in the daily lives of students of medicine-related studies and the potential impact of this activity on their psychosomatic condition. The research was conducted in a total of 200 students at secondary schools and universities aged 15 – 24 in the East Bohemian region. The results of the questionnaire survey were processed using the relative frequency and t-test with equal variance in two groups.*

**Key words:** *social network, health, school, relationships, health care professions, lifestyle*

## Theoretical Points of Reference

Internet social networks are one of the most frequently used means of communication today. The social network can be generally defined as a community existing in the virtual domain. It links groups of people who interact with each other. Social networks are formed on the basis of interests, family ties or sharing of data and finding new contacts online. Social networks bring together people who are physically unable to meet. There are various purposes to social networks; some are used to share information and entertainment, others help to find jobs, for example, or they bring together ethnic or other groups of people. The most popular social networks in the Czech Republic are Lidé.cz (People), Spolužáci.cz (Schoolmates) or Líbím se ti.cz (Do you like me). Among international social networks the most popular are Facebook, Twitter, MySpace, and LinkedIn. As the popularity of social networking has increased enormously over the past few years, especially among young people, social networks have become one of the most highly used methods of communication. This was proved also by the EUKidsOnline organisation survey whose results were presented by the European Commission (1). Therefore, we decided to find out to what extent they influence the lifestyle of students of medicine-related disciplines.

## Survey Objective

The aim of the survey was to identify the influence of online social networks on the psychosomatic condition of health professions students. We also aimed to determine the most frequently used types of online social networks, means used to get in contact with these networks and the average time spent on online social networks. We compared the place of residence, gender, and type of school with an average period of time spent on the online social network.

## Survey Method

The research part of the paper outlines the influence of social networks and their use by students of medicine-related studies. The actual survey was conducted in May and June 2011. The aim was to obtain a sufficient amount of data relating to the students' use of social networks. In total the survey included 205 respondents studying in the Pardubice region; 5 incomplete questionnaires were excluded. We processed 200 questionnaires from 84 respondents from the secondary nursing school and 116 respondents from the university. The selection of respondents was random. The questionnaire contained 23 questions. The obtained data were evaluated through the t-test with equal variances (significance level 0.05), the Chi-square test of independence (significance level 0.05) and relative frequency. The survey was conducted in April-May 2011.

## Results Interpretation

It follows from the questionnaire survey that 195 respondents (97.5 %) use online social networks. Of the total number of 200 students there were 82 (98.7 %) secondary school students and 113 (96.6 %) university students.

### **Representation of respondents by gender**

Since the data were collected in schools focusing on medical disciplines, female respondents prevailed. Among secondary school students there were 77 (93.9 %) girls, among the university students there were 91 (80.3 %) girls, see Fig 1.

### **Relationship between type of school and spending leisure time in online social networks**

By comparing the period of time spent on online social networks we discovered that university students spend 1.6398 hours / day (c. 100 mins) while secondary school students spend 2.1867 hours / day (c. 130 mins). For the calculation we used the t-test with equal variance in two groups with the significance level 0.05. Assuming that  $T - Stat - 1,919 < T \text{ crit } (1) - 1,652$  ;  $T \text{ crit } (2) - 1,972$ , the statistically significant difference was not confirmed.

### **Relationship between place residence and amount of time spent on online social networks**

If we relate the amount of time spent on online social networks to the place of

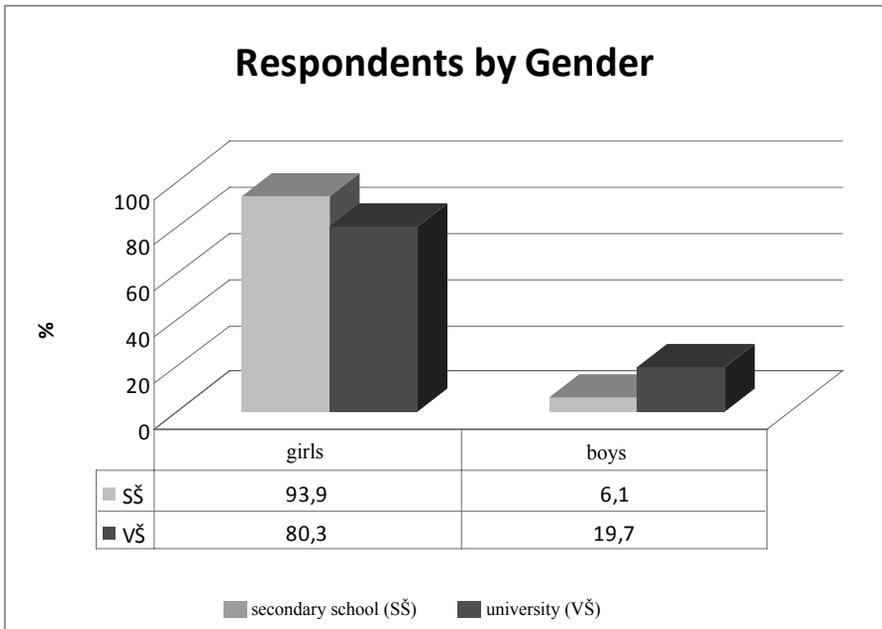


Figure 1: Respondents by gender

residence, we may conclude that students with a place of residence outside cities spend approximately 2.864 hours / day (c. 174 mins) on online social networks. In contrast, students living in cities spend 1.808 hours / day (c. 108 mins). For the calculation we used the t-test with equal variance in two groups with the significance level 0.05. Assuming that  $T - Stat - 3339 > \text{crit } T (1) - 1.652; \text{crit } T (2) - 1972$  (level 0.05, 1 SV), the statistically significant difference was confirmed.

#### **Relationship between gender and time spent on online social networks**

When comparing the gender and amount of time spent on online social networks we can conclude that girls are in contact with the online social networks for c. 2.04 hours / day (c. 124 mins), and boys 1.27 hours / day (c. 87 mins). For the calculation we used the t-test with equal variance in two groups with the significance level 0.05. Based on the result  $T - Stat - 1,986 > T \text{ crit } (1) - 1,652; T \text{ crit } (2) - 1,972$  (level 0.05; 1 SV) the statistically significant difference was confirmed.

## Types of online social networks and types of school

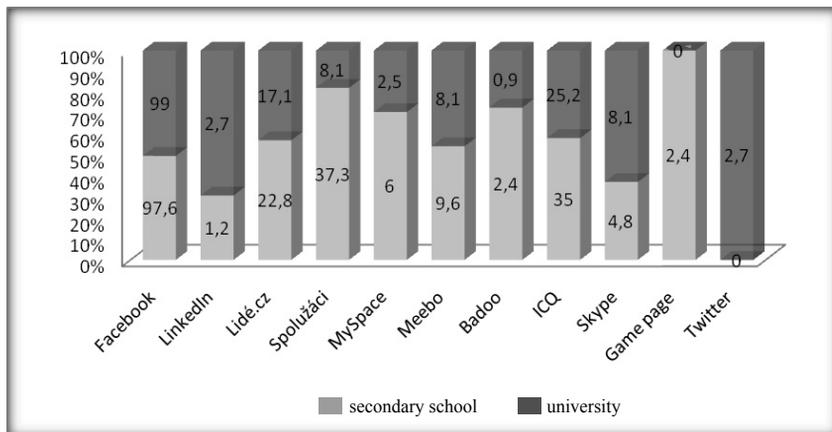


Figure 2: Use of online social networks by health professions students

It follows from Figure 2 that Facebook is the most frequently used online social network (used by more than 97 % students). There are some networks, however, that are preferred by only one group each – it is Game Page for secondary school students and Twitter for university students.

## Means for contact with social networks

Figure 3 shows the types of means used in contact with the online social networks. While desktop computers are the most common means for secondary school students: 39 students (47 %), university students use laptops: 50 students (44 %), university students most often reported a combination of desktop and notebook: 28 students (24.3 %); secondary school students reported laptop, and mobile phone: 13 students (15.7 %).

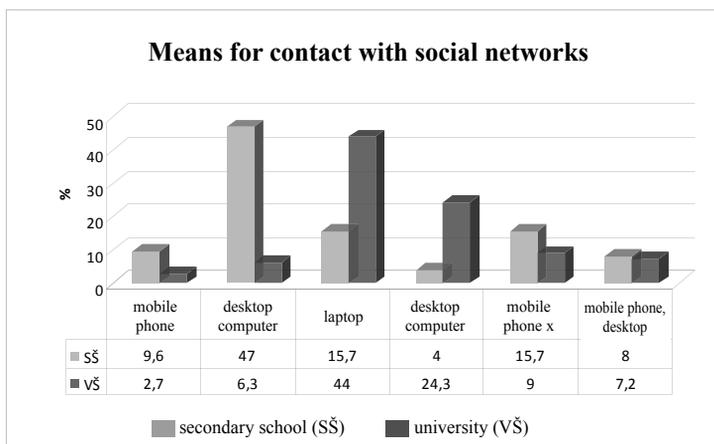


Figure 3: The most frequently used means for contacts with social networks

### **Influence of online social networks on the psychosomatic condition**

Based on the answers obtained from respondents we tried to measure the impact of spending leisure time on nutrition, physical exercise, learning, physical and mental health. We compared the above-mentioned parameters with the type of school. For the calculation we used the Chi-square test of independence with the significance level of 0.05 and 2 SV. A statistically significant difference was confirmed in nutrition ( $p = 0.000623$ ), physical health ( $p = 0.008676$ ) and learning ( $p = 0.002526$ ), see Figures 4, 5, 6. As regards the physical activity, both university and secondary school students agreed that spending time on the online social networks had a negative impact on their physical activity. No statistically significant difference was confirmed between the two surveyed groups.

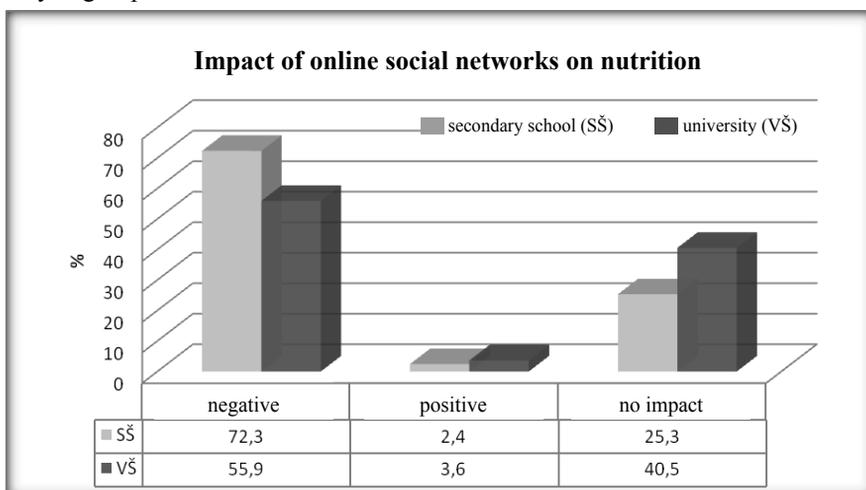


Figure 4: Impact of online social networks on nutrition

Figure 4 suggests that 60 (72.3 %) secondary school students and 63 (55.9 %) university students are convinced that spending time on online social networks has a negative impact on their nutrition and eating habits. Approximately one quarter (25.3 %) of secondary school students and less than one half (40.5 %) of university students believe that spending time on online social networks has no impact on their nutrition and eating habits.

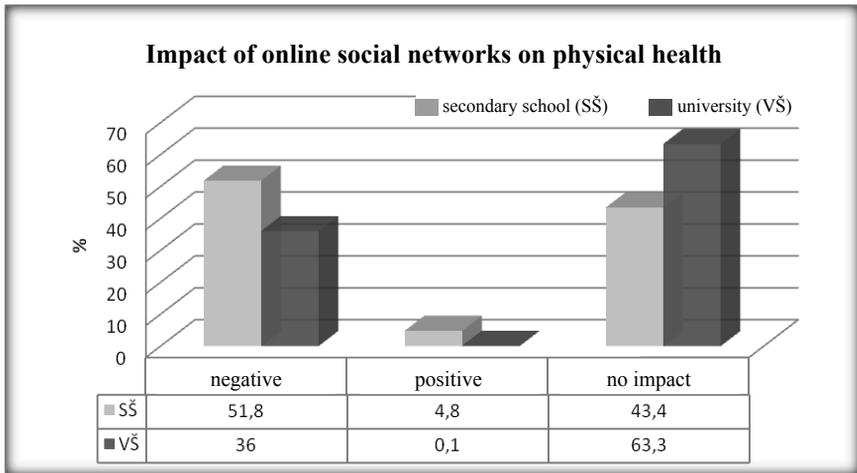


Figure 5: Impact of online social networks on physical health

Figure 5 clearly shows that the most common response from secondary school students (43 students, 51.8 %) is a negative impact of online social networks on their physical health. In case of university students, 72 (63.3 %) responded that online social networks had no impact on their physical health.

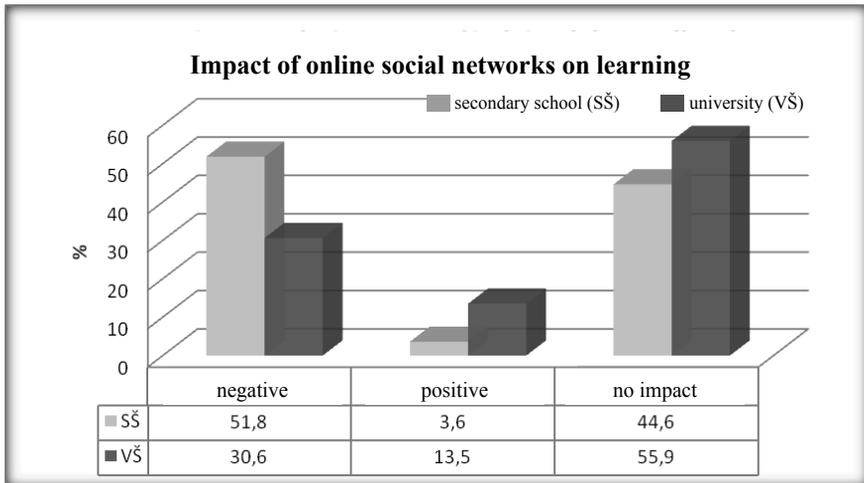


Figure 6: Impact of online social networks on learning

Figure 6 clearly shows that 43 (51.8 %) secondary school students are convinced that spending time on online social networks has a negative impact on their learning and, in contrast, 63 (55.9 %) university students answered that there was no impact.

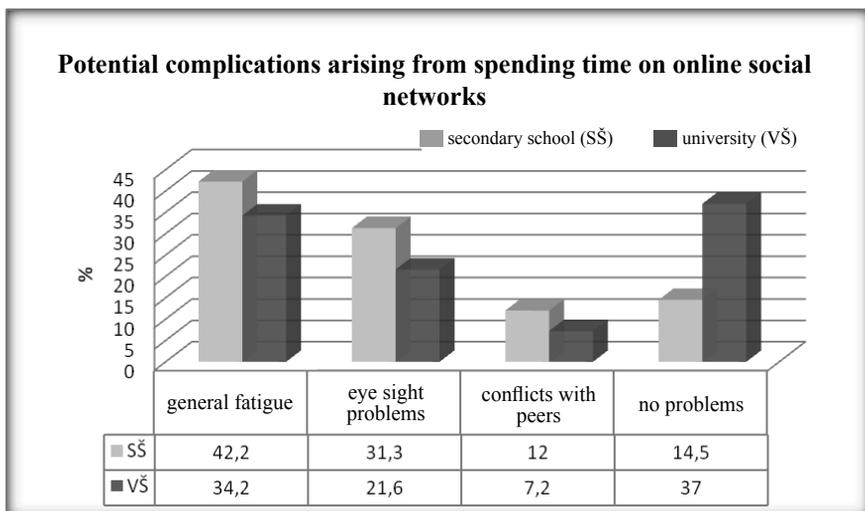


Figure 7: Potential complications arising from spending time on online social networks

Figure 7 above shows that only 12 (14.5 %) secondary school students and 42 (37 %) university students are free of any complications. The most frequently reported complications are general fatigue (35 secondary school and 39 university students), eye sight problems (27 secondary school and 24 university students) and conflicts with peers (8 secondary school and 8 university students).

## Discussion and Conclusion

The results indicate that students of medical disciplines spend approximately 1-2 hours per day on online social networks, provided that for secondary school students it is 130 minutes per day and for university students it is 100 minutes a day on average. A statistically significant difference was confirmed in relation to the place of residence and gender, as it was confirmed that students with residence outside cities spend more time on social networks. As regards the gender, girls tend to spend more time on social networks – this fact was also confirmed in international surveys and in the survey by Aspectio Research (4). The most frequently used social network is Facebook - over 96 % of respondents. If we compare our result with the results of U.S. research by Pew Research Center's Internet & American Life Project (2, 3), we find that in our sample there are 4 % more Facebook users. While for secondary school students the prevailing networks are Spolužáci.cz, Skype, Lide.cz, Meebo, Badoo, for university students it is ICQ, Lide.cz, Skype, and LinkedIn. While Game Page was reportedly used only by secondary school students, Twitter was used only by university students. When comparing with the Pew Research Center's Internet & American Life Project results it is clear that social networks such as Twitter, LinkedIn, and My Space are more often used by students aged 20+ which is due to the orientation of these networks. In evaluating the impact of social networks on exercise, nutrition, physical and mental health and learning both groups agree that in terms of exercise the impact is rather negative but no statistical

significance was established between secondary school and university students groups. As regards nutrition, learning and physical health, university students believe that with the exception of nutrition, namely as regards bad eating habits, online social networks have no impact on their lifestyle. Secondary school students observe rather negative impacts in these categories. Both groups reported a positive impact namely in mental health; both groups of students are convinced that they can relax very well through social networks, however, statistically there was not a clear difference between secondary school and university students groups. Students in both surveyed groups believe that spending over 2 hours on social networks leads to problems. Most often they report general fatigue, eye-sight problems and conflicts with peers. Only 14.5 % university students and 37 % secondary school students are free of any difficulties.

In conclusion we wish to state that the obtained results are interesting. The specific feature of our survey is the fact that data were obtained mainly from girls which is due to the disciplines they study – medical professions where this gender prevails.

## Literature

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## VLIV INTERNETOVÉ SOCIÁLNÍ SÍTĚ NA ŽIVOT STUDENTŮ ZDRAVOTNICKÝCH OBORŮ

**Abstrakt:** Příspěvek se zabývá problematikou využití sociálních sítí v každodenním životě studentů a možným dopadem těchto aktivit na jejich psychosomatický stav. Výzkum byl proveden celkem u 200 studentů středních a vysokých škol ve věku od 15 do 24 let se zdravotnickým zaměřením ve východočeském regionu. Výsledky dotazníkového šetření byly zpracovány prostřednictvím relativní četnosti a dvouvýběrového t-testu se shodným rozptylem.

**Klíčová slova:** sociální síť, zdraví, škola, vztahy, zdravotnické obory, životopráva