

Health impacts of Facebook usage among undergraduate students of Health Care Professions

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ABSTRACT

Background: Facebook, the world's most popular social networking website is recently associated with a number of newly emerging public health problems. With this background, we would like to conduct a study among undergraduate students of various health care professions to determine the association between Facebook usage and its health effects. **Materials and Methods:** A Cross-sectional study will be conducted at a reputed private university in Malaysia involving 377 undergraduate students of Pharmacy, Medicine and Dentistry to study the association between association between Facebook usage and its health impacts. The sample will be selected by Stratified Random Sampling technique and data collection will be conducted for 3 months (1st August 2014 to 31st October 2014). A self-developed, expert validated, pre-tested and self-rated questionnaire will be used for data collection. The data collected will be tabulated and analyzed by using the statistical package for social sciences (SPSS) version 18.0 for Windows. Baseline data on categorical variables will be presented in the form of proportions and their 95% confidence intervals (CIs). Comparisons between two categorical variables will be done by using the Chi-square test. Odds Ratio and its 95% CIs will be used to study the strength of association between the exposures and outcomes. Multiple Logistic Regression analysis will be conducted to remove the confounders. In this study, p-value <0.05 will be considered as statistically significant. **Results:** Data collection is under process. Details of results are awaited.

Key words: Facebook, Texting, Chi-square, Multiple, Logistic, Regression, analysis

INTRODUCTION

Facebook usage is popular among undergraduate students. It is used for both social interactions and educational purposes. There are more than 900 million active users of Face book. It is currently the world's most popular social networking website. Face book has been used to keep in touch with others and to surreptitiously monitor their activities (Joinson, 2008). The students spend a lot of time in viewing posts on Face book and sharing their ideas. Face book is attractive to students because it is available for free, easy to use and has anonymous access to information about others. However, it is important on the part of students to understand the pros and cons of Facebook usage (Marshall, 2012).

Some recent studies reported nausea, loss of appetite and migraine to be associated with Facebook usage (Tokunaga, 2011). A study by Sami et al reported a significant association between excessive use of Facebook and holding of urine and defecation,

postponing or skipping meals and sleep deprivation among undergraduate medical students. Significant association was also observed between feeling of isolation from family or society and Facebook usage (Sami, 2013). Though there are many negative health effects of Facebook usage, but it has the potential to be used as a learning tool in higher education in modern era. Facebook was reported to be useful for students in the social and the academic aspects as it allows for interactive learning between students and facilitators in higher educational institutions (Vivian, 2011).

With this background, we would like to conduct a study among undergraduate students of various health care professions to determine the association between Face book usage and health effects. We hope to provide recommendations to improve the strategies to mitigate the negative health effects of Face book usage. In this study health science is defined as Pharmacy, Medicine and Dentistry.

Outcome of the present study will be useful in educating and motivating the undergraduate students of various health care professions to adopt healthy lifestyles and minimizing the Facebook usage in order to avoid the negative health effects.

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OBJECTIVE

To determine the association between Facebook usage and health impacts among undergraduate students of various health care professions.

MATERIALS AND METHODS

Study design: A Cross-sectional study will be conducted at a reputed private university in Malaysia.

Study period: The data collection will be conducted for 3 months (1st August 2014 to 31st October 2014).

Study Population: All the undergraduate students of Pharmacy, Medicine and Dentistry will be invited to participate.

Sample size: Undergraduate students pursuing their professional careers in Pharmacy, Medicine and Dentistry at the designated private university will be invited to participate in this study. The sample size was estimated for finite population with the help of statistical package EPI-Info version 5.0 for windows and verified by using the following formula -

$$= \frac{t^2 pq}{d^2}$$

Here, the confidence level was taken as 95%.

t = Normal deviate corresponding to the required CI. Here, it was 1.96 for 95%CI.

p = Proportion of respondents with Textaphrenia was expected to be at least 50%.

$$q = (100-p).$$

d = Absolute precision of the estimate was set at 5%.

However, after applying probability sample size calculation formula for infinite population, considering 95% Confidence Interval, 5% absolute error of precision and 50% prevalence of negative health effects among heavy Facebook users and mobile text messages, the minimum required sample size is **377**. This sample should be distributed across various professional streams according to probability proportionate to sample size.

Inclusion criteria: Students enrolled in Health Sciences programmes of Pharmacy, Medicine and Dentistry at the designated private university will be invited to participate in this study.

Exclusion criteria: The eligible candidates who are not willing to participate in the study or fail to provide an informed written consent will be excluded.

Sampling technique: Stratified Random Sampling technique will be adopted in this study.

Study instrument: A self-developed, expert validated, pre-tested and self-rated questionnaire will be used (Annexure - A).

Operational definition of Facebook addiction: Facebook addiction is diagnosed to be present if any of the following symptoms are present: feeling of cutting down on Facebook usage; annoyed by people criticizing on Facebook usage; feeling bad or guilty about Facebook usage; Facebook usage is done as first thing in the morning to steady nerves or to get rid of a hangover.

Operational Definition of Health Impacts- The health impacts of Facebook usage include sleep deprivation, addiction to social media, electronic relationships, false sense of connection, lacking communication skills, holding back the urge of urination or defecation, postponing or skipping meals, poor well-being, feeling of isolation and depressive mood.

Ethical considerations:

1. Consent from the institutional research and ethics committee will be obtained prior to the data collection.
2. Informed written consent will be obtained from every participant in the study before the recruitment.
3. All information will be kept confidential and anonymity and privacy will be maintained throughout the study.

Data collection procedure: Data collection date and time will be confirmed from respective programme coordinators. Every effort will be made not to disturb any teaching and learning activities at the designated private university. All the participants will be briefed about the procedure to register their responses in the self-rated questionnaire before data collection. If a

selected student is absent on the first day of data collection, another two attempts will be made to contact him/her on two separate occasions. However, if the investigators fail to contact an eligible candidate on three separate occasions for data collection then the designated person will be excluded from this study.

Data analysis:

- The data collected will be tabulated and analyzed by using the statistical package for social sciences (SPSS) version 18.0 for Windows.
- Quantitative analysis: Baseline data on categorical variables will be presented in the form of proportions and their 95% confidence intervals (CIs). Comparisons between two categorical variables will be done by using the Chi-square test. Odds Ratio and its 95% CIs will be used to study the strength of association between the exposures and outcomes.
- In this study, p-value <0.05 will be considered as statistically significant.

Annexure

SECTION A: SOCIO-DEMOGRAPHIC PROFILE [Please encircle or tick (✓) whichever is appropriate]

<u>Socio-demographic Correlates:</u>	<u>Response</u>	<i>Office Code</i>
1. What is your gender?	Male[2] / Female[1]	
2. What is your age (in completed years)? _____ years		
3. How many siblings do you have? _____		
4. What is your ethnicity?	Malay [1] / Chinese [2] / Indians [3] / others [4] _____	
5. Which School do you belong? _____	Medical [1] / Pharmacy [2] / Dentistry [3]	
6. What is your father's highest level of education? _____		
7. What is your mother's highest level of education? _____		
8. What is your living condition?	Living with both parents [5] / Living with only one of the parents [4] / Living with relatives [3]/ living with friends [2] / living alone [1]	
9. Number of close friends	_____	
10. Preference of spending most of the leisure time in company of:	Family Members / Relatives / Friends /Alone	
11. Habit of smoking cigarettes at least one packet (10 cigarettes) per week	Yes / No	
12. Habit of alcohol consumption at least one peg (60 ml) per week	Yes / No	

SECTION B: FACEBOOK USAGE [Please encircle or tick (✓) whichever is appropriate]

Sl. No.	Questions on Face book Usage	Response	Office Code
1a	Do you have any personal account on Facebook?	Yes [1] / No [2] [If "No", skip questions 1b to 20]	
1b	If YES, since how many months are you using Facebook?	_____ months	
1c	Do you use Facebook applications at least once a week?	Yes [1] / No [2]	
1d	If YES, what is your main purpose of using Facebook?	_____	
2	How many hours in a day (on an average) are you using Facebook?	_____ hours	
3	How many hours in a day (on an average) are you using Facebook for playing online games?	_____ hours	
4	How many hours in a day (on an average) are you using Facebook for connecting with family members and relatives?	_____ hours	
5	How many hours in a day (on an average) are you using Facebook for connecting with friends?	_____ hours	
6a	Do you go through the updates on your friends' Facebook walls every day?	Yes [1] / No [2]	
6b	If YES, do you respond with a 'like' on the updates of your friends' Facebook walls whenever you see them?	Yes [1] / No [2]	
7a	Do you click your self-images (selfie) to upload on Facebook?	Yes [1] / No [2]	
7b	If YES, how often in a day do you click your self-images (selfie) to upload on Facebook?	_____ / day	
8a	Do you share your self-images (selfie) with family members, relatives and friends through Facebook?	Yes [1] / No [2]	
8b	If YES, how often in a day do you share your self-images (selfie) with family members, relatives and friends through Facebook?	_____ / day	
9	How many hours in a day (on an average) are you using Facebook for educational purposes?	_____ hours	
10	How many hours in a day (on an average) are you using Facebook for sharing your viewpoints or critical thinking with friends or colleagues?	_____ hours	

SECTION B: FACEBOOK USAGE (continued) [Please encircle or tick (✓) whichever is appropriate]

Sl. No.	Questions on Facebook Usage	Response	Office Code
11	Do you engage yourself with Facebook after 11pm every night?	Yes [1] / No [2]	
12	How many times in a week do you hold urine while engaging yourself with Facebook?	_____ time(s)/wk	
13	How many times in a week do you hold defecation while engaging yourself with Facebook?	_____ time(s)/wk	
14	How many times in a week do you postpone eating meal while engaging yourself with Facebook?	_____ time(s)/wk	
15	How many times in a week do you forget or skip meal while engaging yourself with Facebook?	_____ time(s)/wk	
16	Do you feel cheerful and in good spirits when you use Facebook?	Yes [2] / No [1]	
17	Do you feel calm and relaxed when you use Facebook?	Yes [2] / No [1]	
18	Do you feel active and vigorous when you use Facebook?	Yes [2] / No [1]	
19	Do you wake up fresh and rested after using Facebook at night?	Yes [2] / No [1]	
20	Do you feel that your life is interesting as you work on Facebook?	Yes [2] / No [1]	
21	Have you ever felt you should cut down on your Facebook usage?	Yes [1] / No [2]	
22	Have people annoyed you by criticizing your Facebook usage?	Yes [1] / No [2]	
23	Have you ever felt bad or guilty about your Facebook usage?	Yes [1] / No [2]	
24	Have you ever done Facebook usage first thing in the morning to steady your nerves or to get rid of a hangover?	Yes [1] / No [2]	

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