Social Science Students Perceive Themselves as More Addicted to Social Media Compared to Science Students

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Abstract: *A hierarchical regression analysis was utilized to determine if science, social science, and engineering majors predicted perceived social media addiction. Perceived social media addiction was quantified on a scale of zero to one hundred. Results indicated that of all of the students surveyed in a public university in the Middle East, around forty percent of them believed they were addicted to social media around 75%. The overall model predicted perceived social media addiction. Science, Social Science, and Engineering majors explained 17% of the variance in perceived social media addiction. Students who were in the Engineering and Social Science majors perceived themselves as about 10% and 20% more addicted to social media compared to the students from the Science majors.*

Keywords: Perceived Social Media Addiction, Engineering, Social Science, Science

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1. Introduction

Recent years have shown a tremendous increase in technology and with it came the internet. The internet now holds an important role in everyone's lives (Grau, Kleiser, & Bright, 2019). While initially computers and laptops were the common devices for internet access, later they were replaced with cell phones. Cell phones allow people to access the internet and communicate with others instantly. With the increase of internet use, different communication methods also surfaced such as Facebook, Instagram, and Twitter (Okdie & Ewoldsen, 2018). Sixty-five percent of university students spend more than three hours online. Nearly seven percent of university students spend more than 40 hours on the internet per week (Cotten, 2008).

Although certain behaviors may seem benign at first, due to biophysical, psychological, and environmental reasons, a behavior can turn into an addiction (Grover et al., 2011). Addiction encompasses four stages. The first stage is non-use, the second stage is non-addition use, the third stage is near-addiction use, and the final stage is addiction. The stages are based on how frequently the event is engaged, how much time is spent on it, how much self-control a person has, and the level of negative consequence (Grau et al., 2019; Martin et al., 2013). There are different types of negative consequences such as psychological, economic, social, or physical. An example of a negative economic consequence would be how social media addiction causes burnout which negatively relates to job performance. The current study looked at the self-perceived addiction of individuals. It is important to look at addiction because the symptoms of internet addiction are similar to that of people with depression, low self-esteem, disinhibition, and anxiety and hostility (Widyanto & Griffiths, 2006), and social networking

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services addiction can lead to "salience, withdrawal, relapse, conflict, and mood modification" (Osatuyi & Turel, 2018, p. 95).

Research on social media is quite recent compared with internet addiction, which has been researched for a longer period (Grau et al., 2019). Social media addiction has become a major concern within the current technological world (Kircaburun, 2016) and is an evolving problem (Eijnden, Lemmens, & Valkenburg, 2016). The need to interact is one of the main reasons people use social media (Palfrey & Gasser, 2008). Thirty-five percent of Americans between the ages of thirteen and seventeen check their social media profiles more than once, in fact, several times a day. When Facebook was examined seventy-six percent of the users were found to visit Facebook daily, with fifty-five percent visiting their account several times a day (Greenwood et al., 2016).

2. Purpose

The purpose of the study was to determine the predictability of Social Science, Science, and Engineering majors on the perceived social media addiction of students from a public university in the Middle East. How is the percentage of self-perceived social media addiction a function of Social Science, Science, and Engineering majors?

3. Methodology

In this study, a hierarchical multiple regression analysis approach was utilized. Linear relationships and the strength of relationships can be identified using scatterplots and correlations. On the other hand, regression analysis quantitatively identities how variables are related. "There are two potential objectives of regression analysis: to understand how the world operates and to make predictions" (Albright & Winston, 2010, p.531). Regression analysis provides the researcher with a formula of the relationship, allowing the prediction of future cases.

The study included university students from a public university in the Middle East with English as the medium of instruction. The total number of students surveyed was 231. The areas of study included in the study were Science, Engineering, and Social Science. Table 1 provides a breakdown of the participating students by area of study. Table 2 provides the list of majors for each area of study that participated in the survey.

There were more females (2/3) compared to males (1/3) in the study. This was because the vast majority of the students in the university were females. Students from all years (Freshman, Sophomore, Junior, and Senior) were surveyed.

Table 1: Participating Students

Majors	N of survey students
Social Science	68
Science	37
Engineering	126

Table 2: Majors by Social Science, Science, and Engineering

Study	Major
Engineering	Civil Eng.
	Chemical Eng.
	Computer Eng.
	Electrical Eng.
	Industrial Eng.
	Mechanical Eng.
	Petroleum Eng.
Science	Biochemistry
	Biology
	Chemistry
	Dietitian
	Geology
	Health S.
	Math
	Medicine
	Microbiology
	Nurse
	Physical Therapy
	Physics
	Public Health
	Systems
Social Science	Accounting
	Architecture
	Business
	Economics
	Education
	Finance
	Geographic
	History
	Law
	Marketing
	Mass Communication
	Theology
	Translation

4. Measure

Participants filled in their gender, major, year, and perceived social media addiction. Since the survey was handed out as hard copies, the data was entered into a database. For reliability, the entrees were double-checked by a second researcher for error.

Participants had to circle either male or female for their gender. For major, participants had to write down their major. Students also had to circle their year, whether they were Freshman, Sophomore, Junior, or Senior. Perceived social media addiction was assessed with the following question, "To what extent do you feel addicted to social media?", using a numerical scale from zero to 100.

5. Findings

Hierarchical multiple regression was conducted to determine which independent variables were predictors of perceived social media addiction. The assumptions of normality, linearity and

homoscedasticity were all met. Multicollinearity was not an issue and no outliers were found. The study met the requirement of fifteen subjects per independent variable, which is necessary for a reliable regression equation.

The average addiction perception of social media was ($\bar{x} = 62.60$) with a standard deviation of (sdv=18.80). Forty-one percent of the 231 students perceived themselves as addicted to social media between 75%-100%. Nine percent of the 231 students perceived themselves as addicted to social media 100%.

For the study, a multiple regression analysis was utilized. Table 3 provides the model summary for the regression analysis. Table 4 provides the coefficients for the final model. As seen in Table 3, regression results indicate that the overall model predicts perceived social media addiction, $R^2 = 0.17$, $R^2adj = 0.17$, $F (2, 228)$, $p < .001$, with the independent variables accounting for 17% of the variance in the dependent variable. Table 4 on the coefficients of the final models reveals that all of the variables in the models are significant. The area of study explained 17% of the variance in perceived social media addiction, $R^2 = 0.17$, $R^2adj = 0.17$, $F (2, 228)$, $p < .001$.

The data was then used to create a multiple regression formula:
Addiction Perception % = 36.72
+ 10.92 Major (Engineering)
+ 20.10 Major (Social Science)

It should be noted that for the base of the regression formula, the area of study was Science. Students in this category had an average of 36.72% perceived social media addiction. If for instance, the area of study was Social Science, the perceived social media addiction would be 56.82%. To validate the formula, the data was split into two. To run the regression model, more than two-thirds of the data was utilized followed by using the remaining to cross-validate the regression equation.

Table 3: Model Summary

Steps	R	R^2	R^2adj	R^2 Change	F Change	p	df1	df2
Area of Study	0.42	0.17	0.17	0.17	24.02	< .001	2	228

Table 4: Coefficients for Final Model

Model	B	Beta	T	Model
Major (Social Science)	24.10	0.59	6.87	0.00***
Major (Engineering)	13.56	0.36	4.22	0.00***

**0.05 ***0.01

6. Conclusion

Perceived social media addiction was examined to determine if it was a function of phubbing frequency and area of study. Of about 250 students, about half of them perceived themselves as addicted to social media above 75%.

For the study, a hierarchical multiple regression analysis was utilized. Thirty percent of the variance in the dependent variable was explained by the independent variables. The area of study explained 17% of the variance in perceived social media addiction. Compared to Science,

students who were in the Engineering and Social Science perceived themselves as more addicted to social media about 11% and 20%, respectively.

References

Albright, S. C., Winston, W. L., Zappe, C. J., & Broadie, M. N. (2012). Data analysis and decision making: selected chapters. Toronto: Nelson Education.

Cotten, S.R. (2008). Students' technology use and the impacts on well-being. New Directions for Student Services, 124, 55-70.

Eijnden, R.J.V.D., Lemmens, J.S., Valkenburg, P.M. (2016). The social media disorder scale. Computers in Human Behavior, 61, 478-487.

Grau, S., Kleiser, S, & Bright, L. (2019). Exploring social media addiction among student Millennials. Qualitative Market Research: An International Journal, 22(2), 200-216.

Greenwood, S., Perrin, A., & Duggan, M. (2016, January 7). Social media update 2016. Retrieved from www.pewinterent.org

Grover, A. Kamins, M., Martin, I., Davis, S., Haws, K., Mirabito, A., Mukerjee, S., Pirouz, D., & Rapp, J. (2011). From use to abuse: When everyday consumption behaviors morph into addictive consumptive behaviors. Journal of Research for Consumers, 11(19), 1-8.

Kircaburun, K. (2016). Self-esteem, daily internet use, and social media addiction as predictors of depression among Turkish adolescents. Journal of Education and Practice, 7(24), 64-72.

Martin, I., Kamin, M., Pirouz, D., Davis, S.W., Haws, K., Mirabito, A.M., Mukerjee, S., Rapp, J. & Griver, A. (2013). On the road to addiction: The facilitative and preventive roles of marketing cues. Journal of Business Research, 66(8), 1219-1226.

Okdie, B.M., & Ewoldsen, D.R. (2018). To boldly go where no relationship has gone before: Commentary on interpersonal relationships in the digital age. The Journal of Social Psychology, 158(4), 508-513.

Osatuyi, B., Turel, O. (2018). Tug of war between social self-regulation and habit: Explaining the experience of momentary social media addiction symptoms. Computers in Human Behavior, 85, 95-105.

Palfrey, J., & Gasser, U. (2008). Born digital: Understanding the first generation of digital natives. New York, NY: Basic Books.

Widyanto, L. & Griffiths, M.D. (2006). Internet addiction: A critical review. International Journal of Mental Health and Addiction, 4, 31-51.