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Facebook Addiction

Factors Influencing an Individual's Addiction

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MGT 478- Honors Thesis
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ABSTRACT

Prior research has proved that an individual could be addicted to the Internet in general, but no research has been done specifically to social networking sites such as Facebook. This study investigates how factors such as personality, gender, procrastination, boredom and ones values may affect the amount of time they spend on Facebook, further concluding that they are either overly obsessive or not about the usage thereof. Further, this study tests whether those same factors influence and individuals likelihood of facing Facebook withdrawal or Facebook devotion. Prior research was conducted using scholarly articles that focused on personality types and Internet addiction. A clear framework was designed prior to this study to outline the major factors that would be targeted through the study and compared against Facebook usage. The model is tested using a two-step approach of qualitative and quantitative methods. The qualitative pre-study was first designed as a way to highlight which factors and values were most important to our particular study. Since very little is known and discussed about Facebook Addiction, it was important for us to use the qualitative pre-study to get an overall understanding of what the general public thinks on this subject matter. Based on the results from the qualitative study, we developed a quantitative survey, which includes likert-style statements that test personality type, values, boredom and procrastination. Based on a sample of undergraduate students we can prove or disprove the theory on personality types directly affecting and individuals Facebook usage. Results most strongly depict that neuroticists, females and those who are procrastinating are more likely to be addicted to Facebook.

Introduction

Today, more than ever before, people are finding ways to connect with friends, family members, co-workers, classmates, and those they have just met using social networking sites. One of the most commonly used sites with 800 million active users is a site most are familiar with, Facebook. According to the Facebook website, more than half of the active users log onto their accounts daily. Over the past few years, as usage of Facebook has expanded beyond individual use and into the hands of companies to promote products and services, it has been a main concern for many Universities, schools and companies to monitor and limit the use of the site for fear that some cant perform other tasks if they have access to this site. However, although Facebook could be a great tool to use to connect with friends and maintain relationships, there is a line that could be crossed in which a person utilizes the Facebook site too much. Where does one cross the line from simply using the site to devoting all of their time and energy to checking their news feeds and staying updated on every aspect of their Facebook page. Relatively little research has been done to explain the phenomenon on Facebook Addiction Disorder, or FAD. Literature research for this specific idea has been questioned around what some theories are that have been used to explain social media addiction and more particularly Facebook addiction as a whole.

Facebook

With more than 70 languages on the site and nearly 75% of all users belonging to countries outside of the United States, Facebook usage has truly become a global phenomenon. Facebook is accessible from any computer, an iPad, and many mobile devices, keeping individuals who utilize the site "connected" at all times throughout the day. According to a new survey, "48 percent of social media users check or update

Facebook and/or Twitter after they go to bed and 56 percent feel compelled to check Facebook at least once a day" (Evangelista 1). Articles relating to the background on Facebook benefit this research question of Facebook Addiction because it provides a walk-through of how the typical encounter with Facebook might happen. A framework for normal Facebook usage can help to compare and contrast a normal user compared to one who is considered "addicted". A study comparing social capital and college students' use of social networking sites illustrates that there is a relationship between Facebook and the maintenance of social capital. Psychologically it is important to understand how there is an association between ones desire to feel socially connected and their Facebook usage. According to the article, "Facebook enables its users to present themselves in an online profile, accumulate ''friends'' who can post comments on each other's pages, and view each others' profiles" (Ellison, 1143).

Drawbacks to Facebook Usage

At first glance, Facebook may seem like a positive gateway to connecting individuals and making it easier for people to stay in touch with those they haven't connected with in the physical world in quite some time. However, it was important to include literature that illustrates a means for concern about Facebook. Since addiction is a serious concern of psychologists as a whole, it is important to understand how one might be "concerned" with Facebook other than the idea of possible addiction. A journal article produced by Kasey Chalk and Tim Jones discusses how Facebook (as well as other social networking sites) can act as a facilitator of Online Obsessive Relational Intrusion in the article entitled "Online Obsessive Relational Intrusion: Further Concerns About Facebook". The authors conclude that through parallels drawn between types of behaviors conducted online and those identified in the literature on relational intrusion, stalking that Facebook enables and

facilitates these behaviors. Further, this article provides framework to enlighten the idea that one may be addicted to Facebook to consider in stalking or obsessive relational intrusion behavior.

Internet Addiction

Since there is no clear explanation as to what Facebook addiction is or how it can be measured, the best way to compare how one may be overusing the Internet for their own personal well being is through literature directed at Internet Addiction. Since Internet Addiction has been professionally discussed and tested, it could act as a means for producing a Facebook Addiction scale for the sake of this test. For example, Kim Young touches upon how Internet Addiction might cause certain marital, academic and job-related problems. This article proved extremely helpful in trying to relate how behavior changes may occur for a person who is addicted to the Internet and how they may make certain decisions that they might not have otherwise made if they were not addicted to the Internet. As a whole, internet addiction is defined by Kim Young in a way that moves beyond the already known definition of addiction which is now "to include a number of behaviors that do not involve an intoxicant, such as compulsive gambling, video game playing, overeating, exercise, love relationships and television viewing. In other words, Internet addiction falls under a different set of criterion to addiction because the Internet could be used as a means to enabling people. Since Internet addiction is a generally new phenomenon in itself, it illustrates the idea that there are subcategories of the Internet, such as Facebook that could have potential risk to addiction associated with it. Diagnostic criteria for Internet addiction provided by Kim Young's article could help to formulate criteria for those who are addicted to Facebook, they are as follows:

1. Do you feel preoccupied with the Internet
2. Do you feel the need to use the Internet with increasing amounts of time to achieve

satisfaction?
3. Have you repeatedly made unsuccessful efforts to control, cut back, or stop Internet use?
4. Do you feel restless, moody, depressed, or irritable when attempting to cut down or stop Internet use?
5. Do you stay online longer than originally intended?
6. Have you jeopardized or risked the loss of a significant relationship, job, and educational or career opportunity because of the Internet?
7. Have you lied to family members, therapists, or others to conceal the extent of involvement with the Internet?
8. Do you use the Internet as a way of escaping from problems or of relieving a dysphoric mood?

On the basis of using this criteria to diagnose an individual with IAD (Internet Addiction Disorder) we can also correlate their similarities between regular Internet addictive usage and their usage on Facebook, an area which has not been investigated into detail yet.

Further Internet Addiction diagnostic criterion is researched through an article "Proposed Diagnostic Criteria for Internet Addiction". Through this study a new diagnostic criteria was developed in order to be useful for the standardization of one who has IAD (Internet Addiction Disorder). Three stages to this study indicated as a Developmental stage, Validation Stage, and Clinical Stage combined to prove that the above proposed criteria is a means for diagnosing one with IAD. The criterion proposed is as follows (Tao, 558):

1. Preoccupation: a strong desire for the Internet. Thinking about previous online activity or anticipation of the next Internet use is the dominant activity in daily life.
2. Withdrawal: manifested by a dysphoric mood, anxiety, irritability and boredom after several days without Internet activity.
3. Tolerance: marked increase in Internet use required to achieve satisfaction.
4. Difficult to control: persistent desire and/or unsuccessful attempts to control, cut back or discontinue internet use.
5. Disregard of harmful consequences: continued excessive use of Internet despite having knowledge of, persistent recurrent physical or psychological problems likely to have been caused or exacerbated by Internet use.
6. Social communications and interests are lost: loss of interests, previous hobbies, entertainment as a direct result of, and with the exception of, Internet use.
7. Alleviation of negative emotions: uses the Internet to escape or relieve a dysphoric mood (e.g. feelings of helplessness, guilt, anxiety)

8.Hiding from friends and relatives: deception of actual costs/time of Internet involvement to family members, therapist and others.

Criterion proposed by this study could be compared with the criterion proposed by Kim Young's study to conclude which criterion for Internet addiction could best suit our basis for criterion on an individual who suffers from Facebook Addiction Disorder. From the workings of Tao we developed our second level to which we test factors against Facebook; this is the likelihood they would experience Facebook withdrawal. Better understanding of Tao, Huang, Wang, Zhang and Li's article helped to highlight the framework to which our hypothesis are drawn: those who overuse Facebook could become addicted on the basis that they increase their tolerance with excessive usage or to escape negative emotions. To prove that there is such level of Facebook usage that transforms to addiction, it is important to prove that an individual could experience withdrawal if they were not allowed usage or decided to stop out of their own free will.

Research Background

Since the topic of Facebook addiction is relatively new and there has not been a definition developed or tested, it is first important to be sure that there is a common understanding between researchers of how Facebook addiction is defined. Defining Facebook addiction should be done under the basis of using the Facebook Intensity Scale developed by Ellison, Steinfield and Lampe (Ellison 1150). It must be understood that this psychological disorder could be compared and further tested under the means and measurements of addiction that have already been developed. Testing of Facebook addiction should be tested under scales produced through Internet Addiction, Facebook Intensity and Facebook Addiction and Withdrawal scales. Further, there should be an understanding of the ideas influenced under the basis that Facebook addiction could be related to personality type.

Research Questions:

1. Is an individuals' personality associated with their addiction to Facebook?

2. How can the urge to meet new people, find friends, and meet those who have similar interests on the Internet act as a facilitator toward a Facebook addiction or FAD?

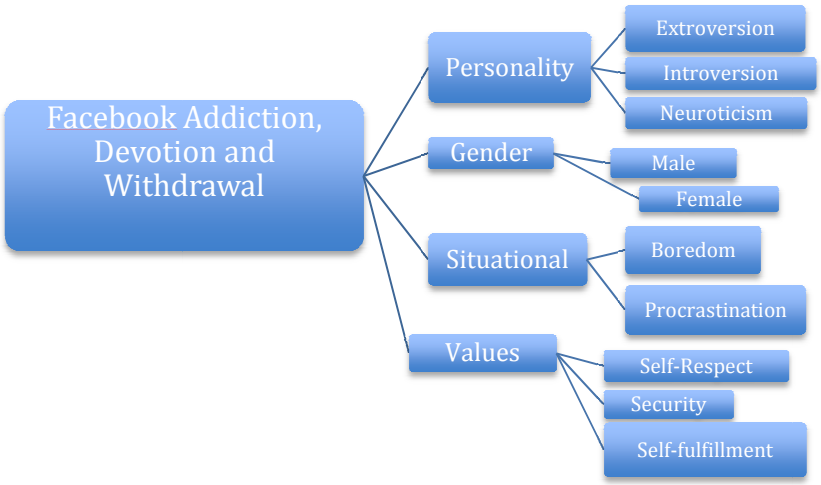
3. What other factors influence an individuals' likelihood of becoming addicted to Facebook?

Method

Prior to conducting a quantitative study, a qualitative pre-test was arranged. Face to face interviews took place between seven individuals between the ages of 18-22. The pretest of this survey was distributed before the to the targeted sample in order to ensure the wording of the questions is clear enough to be understood by the sample and to ensure that it will provide the data we need to answer the research questions. Questions were asked regarding what the individual thought a Facebook addiction might look like and what type of individuals might be more likely to be addicted to Facebook. The purpose of the qualitative pre-test was to understand what the general public thought about Facebook addiction, since there is relatively very little studied about this topic. Furthermore, the qualitative pre-test was designed to indicate which personality factors, situational factors and values were most important to test during the quantitative study. Results from the qualitative study indicated that the most important variables to test were personality factors such as: neuroticism, openness to change and extroversion. The qualitative study was also used to dictate situational factors that affect an individuals Facebook usage: boredom and procrastination. To test these factors, data was collected through a questionnaire designed using an online survey questionnaire and distributed through e-mails to undergraduate students. Each area of the survey was directed in a way that can

help to analyze the presented hypotheses. The questions were generally formulated in a closed-ended type of manner in order to better code and analyze results. Few questions on the questionnaire were open-ended, and were more for our own personal understanding of the results than for statistical comparisons. The questionnaires were designed to be voluntary and completely confidential for those who decided to partake. Further, it was important to administer this survey undisguised and let the respondents know what type of study this is and what it is being done for, in order to promise an overall better turnaround rate of responses. Undisguising the survey also helped ensure a better understanding of the questions being asked, providing validated data and results. As a guideline to producing better results, we worked to evenly distribute the survey to a number of undergraduate business classes to promise that the results will range from person to person.

The questionnaire will be distributed to a large number of undergraduate students to be sure that there is an even distribution. There were five College of Management instructors who agreed to distribute the survey to their classroom of 30 students each via email in order to ensure a promising return rate.



As the framework above illustrates, there are three areas to "Facebook addiction" that

are being questioned. Facebook addiction is the "negative" aspect to which an individual uses and abuses the site compared to "devotion" which is the "positive" aspect to which an individual feels committed to the site. Some might argue that increased devotion could lead further toward addiction of the site. In addition, to prove an individuals addiction, withdrawal was tested to further ensure that what the individual is experiencing is actual addiction. The questionnaire was formulated to test ones personality type, gender as well as their thoughts on certain values and situational factors. The survey was modeled using similar questions used in past studies that are similar to the current study under investigation. Much like the questions used to test Facebook usage in Ellison, Steinfield and Lampe's study, our questionnaire measures "the extent to which participant is actively engaged in Facebook activities: the number of "friends" and the amount of time spend on Facebook in a typical day (Ellison 1150) using the Facebook intensity scale. Further, the measure will also include Likert-Scale attitudinal questions to measure the extent to which the participant is emotionally connected to Facebook and the extent to which Facebook is integrated into their daily activities. Questions will target how many Facebook friends they have, how much they've used Faceook in the past week and a series of rating questions targeted at behavior such as "Facebook is part of my everyday routine".

Facebook addiction was tested using a scale constructed through adapted portions of other addictive scales. Portions of Carry Horvath's "Television Addiction Scale" was adapted to fit the purposes of our study. Much like Horvath's testing's, our scale was designed to test components of addictive behavior. The scale was also adapted in a way to follow the main objective of Horvath's study to "distinguish between normal and problem television viewing" (Horvath, 378). Statements adapted were mostly from Horvath's

Factor 1 area of her scale that depicts the actual problem that is associated with using. Statements highlighted "time spent, cutting down and displacement of other activities" (Horvath 384). For example, statements such as "I feel bad for how much I use Facebook, but I just can't stop" was adapted from that particular scale but was reworded. Further, as previously discussed, portions of Kimberly Young's "Internet Addiction Scale" were used for further testing of Facebook Addiction. Questions such as "I feel preoccupied with Facebook" and "I feel restless when I don't have access to Facebook" were taken from the original Internet Addiction Scale and adapted for the purposes of our study. Further, in order to test usage satisfaction in our Facebook Addiction scale, statements were drawn from Ting Jui Chou and Chin-Chen Ting's study on flow and cyber game addiction. Questions centered on satisfaction with using Facebook were taken from this study and reworded to better fit the means of our test.

Furthermore, we will be testing which personality types have more of a tendency to have an addiction to Facebook. The NEO personality Inventory would be the best method to distinguish personality types of respondents. Although there are five factors associated with the NEO personality inventory we will mostly be concerned with just those who are labeled as "extroversion", "neuroticism" and "openness to change". Paul Costa and Robert McCrae define the term "extravert" as those individuals who "have underlying broad groups of traits including sociability, activity, tendency to experience positive emotions such as joy and pleasure" (Costa 5). McCrae and Costa also define "neuroticism" as the "individual tendency to experience psychological distress" (Costa 5). A high standing "N" would indicate that the respondent suffers from some sort of anxiety or depression. To test respondents, guidelines will be followed closely alongside those used in Costa and McCrae's study as well as the study conducted by Craig Ross, Emily Orr, Mia Sisic, Jamie Arseneault,

Mary Simmering and Robert Orr, who present the idea that identity presentation influences the use of Facebook. Portions of the NEO personality inventory will be drawn from the original 181-factor analysis to distinguish personality traits of respondents. For the purpose of this study and keeping the survey to a certain length, we evaluated the NEO personality factor inventory and used a shortened version of the study known as the "Mini IPIP scales." The scale sets "out to construct a short inventory of the Big Five with the objective of producing scales that are efficient predictors of meaningful outcomes in psychiatric research" (Donnellan 193). This 20-item scale is available at no cost and tests four items: extraversion, agreeableness, contentiousness, neuroticism and Intellect/Imagination (also known as Openness to Change). As noted in the study conducted by Donnellan, Oswald, Baird and Lucas, "each 'Big 5' scale strived to select 2 items keyed in the negative direction and two items keyed in the positive direction" (Donnellan 193). The same procedure was directly used in our quantitative pre-study; both negative and positive directions were used in order to keep our study consistent with the scale to which it was adapted. Respondents were asked to rate personality-type questions using a likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree) depending on how they felt they related to the question asked. Answers to these questions are later used to compare alongside answers to those questions much like those used in the Facebook Intensity Scale and Facebook Addiction Scale to draw correlations between personality types and Facebook "addiction."

As a separate part to this study, we tested the extent to which certain situational factors such as boredom and procrastination could affect an individual's usage of Facebook, therefore considering them a Facebook addict. The extent to which an individual procrastinates was adapted from the Procrastination Scale produced by Clarry Lay in 1986.

Several statements in this scale were adapted to test an individual's extent to which they procrastinate by asking a series of likert-scale style questions with which they would strongly agree or strongly disagree. Responses from these statements were designed to align and be tested against and individuals' answers to the Facebook Addiction Scale questions to compare whether or not an individual who is more likely to procrastinate is more likely to be addicted to Facebook. Furthermore, boredom was tested using statements from the Leisure Boredom Scale which derives from the study, "Leisure and Boredom" by researchers Iso-Ahola and Weissinger. The scale was designed to measure "individual differences in perceptions of leisure as boredom." Leisure Boredom is defined as the "subjective perception that available leisure experiences are sufficient and instrumentally satisfy needs for optimal arousal (Iso-Ahola &Weissinger, 4-5). We derived a few statements from this sixteen-statement scale that were also done using a likert-type scale. By adapting statements from this measure, we can adequately test what an individual does with their free time and further test how much of that free time sent using Facebook or becoming involved in an activity such as Facebook. We can accurately test an individuals "boredom score" against their "Facebook addiction scale" score to determine how likely an individual who is bored often is addicted to Facebook.

A separate factor that was measured through individual responses was the emphasis they place on certain values. Statements were adapted for our study from the Multi- Item Measures of Values produced by Joel Herche in 1994. A few of MILOV's 44 items that cover 9 social Values were taken to incorporate into our own study. Each social value was considered in our study with two or more statements pertaining to each. The 9 social values included were: Security, Self-Respect, Being Well-Respected, Self-Fulfillment, Sense of Belonging, Excitement, Fun and Enjoyment, Warm Relationships with Others, and Sense

of Accomplishment, but our study was concerned primarily with Security, Self Respect, and Self-Fulfillment.

Data

The dependant variable in this study is the amount to which an individual is addicted to Facebook. Addictions to the Internet have been examined in previous literature with varieties of other independent variables such as behavior type, behavior type, types of Internet usage and so forth. Previous literature for addiction to social media has been conducted under the basis of Griffiths' Six Criteria (Cabral 9), but there was no work done to test Facebook in particular. This study is focused on conducting data associated directly with Facebook and the usage there of. Conclusions will be drawn from the respondents to prove if they are or are not addicted to Facebook and these conclusions will further be tested to find correlations between behavior types and the types of internet usages acting as a facilitator for Facebook addiction.

Respondents will be questioned on the basis of usage of Facebook, the feelings they have when they use Facebook, and the amount to which they feel connected to Facebook in a way that feels impossible to let go of. Further questions will be applied to test the personality type of each respondent. All data will be correlated appropriately to answer the research questions.

Analytical Techniques

The data collected was analyzed using SPSS software in order to gather statistical evidence of the variables tested. The confidence interval for performance determined the sampling errors. Further, the mean and standard deviation was be measured for each response using descriptive statistics. For each mean declared, the confidence interval was established.

Linear regression was conducted to test significance for variables, Facebook usage and factors that are predicted to influence it. Correlations were conducted to further test whether there was a relationship between two variables and to test hypothesis predicted. ANOVA testing could help to compare specifically which populations in groups differ. For example, extraverts and the amount of time they use Facebook could be compared. Cross tabulations also helped to determine which personality type, overall is considered to be addicted to Facebook.

Predicted Findings

The research will show that the amount of time an individual is on Facebook is dependant on the type of person that individual is and the situational factors that might influence their usage. One type of behavior will have a more positive impact on Facebook addiction than the other. Hypotheses have been framed in order to better test the particular study. Hypotheses have been broken down into groups of factors in order to better test each prediction.

Gender

H1: Females are more likely to be addicted to Facebook than their male counterparts.
H1(null): Females are not more likely to be addicted to Facebook than their male counterparts.

H2: Females are more likely to have withdrawal from Facebook than their male counterparts.
H2(null): Females are not more likely to have withdrawal from Facebook than their male counterparts.

H3: Females are more likely to be devoted to Facebook than their male counterparts.
H3(Null): Females are more likely to be devoted to Facebook than their male counterparts.

Personality

H1: Based on the argument that these individuals are more sociable and outgoing by nature, extraverts are more likely to express themselves socially via Facebook and are therefore more likely to be addicted.

H1(null): Extraverts will have a negative correlation with Facebook Addiction.

H2: Since those who are "neuroticists" tend to have negative emotional states and levels of high anxiety, they will have a positive correlation to Facebook addiction

H2(null): Those who are "neuroticists" will have a negative correlation to Facebook addiction as measured by the Facebook intensity scale.

H3: Those who are a high O (openness) will be more likely to be addicted to Facebook.

H3: (Null): Those who are a high O (openness) will not have a positive relationship to Facebook addiction.

Boredom/Procrastination: Situational Factors

H1: those who are experiencing a state of "boredom" have positive relationship to a high score on the Facebook Intensity scale.

H1(Null): Those who are experiencing a state of "boredom" have a negative relationship to a high score on the Facebook Intensity Scale.

H2: Those who are more likely to be "procrastinators" are more likely to be addicted to Facebook than those who are bored.

H2(Null): Those who are more likely to be "procrastinators" are not more likely to be addicted to Facebook than those who are bored.

H3: Procrastinators will be more likely to have Facebook Intensity than those who are bored.

H3(Null):Procrastinators will have a low Facebook Intensity than those who are bored.

Value

H1: Those who value their self-respect are more likely to be addicted to Facebook.

H1(null): Those who value their self-respect are less likely to be addicted to Facebook.

H2: Those who value being well respected are more likely to suffer a withdrawal from Facebook.

H2 (null): Those who value being well respected are more likely to suffer a withdrawal from Facebook.

H3: Those who value warm relationships are more likely to correlate higher on the Facebook Intensity Scale than those who do not value warm relationships.

H3(null): Those who value warm relationships are not more likely to correlate higher on the Facebook Intensity scale than those who do not value warm relationships.

Findings

Overall, results calculated from the data analysis software proves that a number of our predicted findings to be true. Based on the calculations listed below (figure 1) we can reject the null hypothesis that neuroticists are less likely to be addicted to Facebook, have Facebook withdrawals or be more devoted to Facebook. Based on the correlations, there is a greater chance that individuals who are neuroticists are more likely to be addicted to Facebook than extraverts. Although extrovert testing relates very closely to neuroticist testing in the group of Facebook withdrawal and Facebook devotion, they are not very relevant in being addicted to Facebook. Further, we fail to reject the null hypothesis that extraverts, although more sociable by nature, are not more likely to be addicted to Facebook. In turn, because "neuroticism" and "extroversion" had very close correlations to one another, we conducted a regression analysis to see which personality factor has the highest significance level for Facebook withdrawal, devotion and addiction. From the linear regression tests depicted below, a number of conclusions can be drawn. The pearson correlation numbers indicate that neuroticists exhibit the highest correlation to Facebook addiction compared to extroverts and those who have a high openness with a significance value of $p>.05$. We can conclude that neuroticists have the most significance to Facebook devotion with $p>.05$ at a value of .230. Furthermore the pearson correlation ($p>.05$) indicates that neuroticists are more likely to experience Facebook withdrawal with $p=.249$. (figure 1A,B,C illustrated below) further conclude that neuroticists are more likely to be addicted to Facebook, devoted to Facebook, and experience Facebook withdrawal. Since neuroticists and extraverts related so closely related in the Facebook devotion and Facebook withdrawal cateogory, it was necessary to conduct a regression analysis to determine which p value was more significant in which categories.

As illustrated in figure 1A, the regression analysis determines that again, neuroticists have a significant relationship to Facebook devotion and Facebook withdrawal with the "t" value of 1.769. This number proves that neuroticists are more likely to be addicted to Facebook not by random chance compared to extraverts.

Figure 1

Correlations

		FBAddiction	FBDevotion	FBWithdrawl	Neuroticism	Extroversion	Oppeness
FBAddiction	Pearson Correlation	1	.559**	.490**	.366**	.093	-.075
	Sig. (2-tailed)		.000	.000	.002	.438	.535
	N	71	71	71	71	71	71
FBDevotion	Pearson Correlation	.559**	1	.693**	.230	.189	.058
	Sig. (2-tailed)	.000		.000	.052	.112	.628
	N	71	72	72	72	72	72
FBWithdrawl	Pearson Correlation	.490**	.693**	1	.249*	.239*	.095
	Sig. (2-tailed)	.000	.000		.035	.043	.428
	N	71	72	72	72	72	72
Neuroticism	Pearson Correlation	.366**	.230	.249*	1	.165	-.064
	Sig. (2-tailed)	.002	.052	.035		.162	.590
	N	71	72	72	73	73	73
Extroversion	Pearson Correlation	.093	.189	.239*	.165	1	.159
	Sig. (2-tailed)	.438	.112	.043	.162		.180
	N	71	72	72	73	73	73
Oppeness	Pearson Correlation	-.075	.058	.095	-.064	.159	1
	Sig. (2-tailed)	.535	.628	.428	.590	.180	
	N	71	72	72	73	73	73

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

*. Correlation is significant at the 0.05 level (2-tailed).

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.765	1.245		.614	.541	-1.720	3.250		
	Neuroticism	.291	.165	.209	1.769	.081	-.037	.619	.969	1.032
	Extraversion	.181	.145	.149	1.244	.218	-.109	.471	.946	1.057
	Openness	.082	.218	.045	.378	.707	-.353	.518	.967	1.034

a. Dependent Variable: FBDevotion

Figure 1A

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	1.609	1.327		1.213	.230	-1.039	4.257		
	Neuroticism	.539	.174	.356	3.089	.003	.191	.887	.966	1.035
	Extraversion	.058	.156	.043	.370	.713	-.254	.369	.947	1.056
	Openness	-.129	.231	-.064	-.559	.578	-.591	.332	.972	1.029

a. Dependent Variable: FBAddiction

Figure 1B

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	1.762	.672		2.622	.011	.422	3.102		
	Neuroticism	.392	.182	.249	2.154	.035	.029	.754	1.000	1.000

a. Dependent Variable: FBWithdrawl

Figure 1C

Figure 2

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
FBDevotion	Equal variances assumed	.588	.446	-2.003	68	.049	-.63937	.31923	-1.27638	-.00236
	Equal variances not assumed			-2.010	65.285	.049	-.63937	.31813	-1.27467	-.00407

Further, we can fail to reject the null hypothesis that females are not more likely to be devoted to Facebook than their male counterparts. Through independent samples t-testing we can prove that females are, as predicted, more likely to be addicted to Facebook than their male counterparts and that there is no real significance that females are more likely to withdrawal from Facebook. According to figure 2, the value .049<.05, illustrating that there is a significant difference between males and females and their devotion to Facebook.

Further testing indicated that we can reject the null hypothesis that those who procrastinate are not more likely to be addicted to Facebook. Procrastinators, who are often unmotivated to get certain tasks done until the last minute, are more likely to be addicted to Facebook than those who are bored, and are also more likely to suffer from Facebook withdrawal. Further regressional analysis proves that it is not by random chance that those who procrastinate are more likely to become addicted to Facebook. We fail to reject the null hypothesis that those who procrastinate will have a lower Facebook

intensisty than those who are bored. To accurately conclude this null hypothesis, we tested with a regressional analysis to determine if the numbers were produced just by random chance. The regressional analysis further confirms that the numbers are not calculated through random chance and that those who are bored are more likely to be intense with their Facebook usage. Figure 3 illustrates this more closely below.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	2.885	1.210		2.384	.020	.471	5.298		
	Boredom	.316	.277	.144	1.141	.258	-.237	.869	.877	1.141
	Procrastination	.073	.197	.046	.368	.714	-.321	.466	.877	1.141

a. Dependent Variable: FIS

Figure 3

Lastly, values were tested of the respondents. According to the correlations, those who value their self-respect are not more likely to be addicted to Facebook. In fact, the best correlation was between the value "well-respected" and Facebook addiction. Thus, those individuals who place a high value in being well respected from other individuals are more likely to be addicted to Facebook. According to these results, we can fail to reject the null hypothesis that those who value their self-respect are less likely to be addicted to Facebook. Figure 4 illustrates this more closely.

Furthermore, we conclude that our predictions based on those who place high value in being well respected and having Facebook withdrawal are true. Based on the correlations test, we can argue that those individuals who answered high of being well

respected are also more likely to have Facebook withdrawals. The regression analysis further concludes that those individuals who place high values in being well respected are more likely to experience Facebook withdrawal not by random chance. The "t" statistic reads that among all other "values" tested, being "well-respected" is put at the most valued with a t value of .297 against Facebook Addiction. The value, p>.05 proves that there is a significant relationship between those individuals that are addicted to Facebook and those that value being well respected.

Correlations

		WellRespected	Security	SelfRespect	SelfFulfillment	SenseBelonging	FunEnjoyment	Excitement	WarmRelationships	Accomplishment	FBAddiction	FBWithdrawl
WellRespected	Pearson Correlation	1	.476**	.135	.370**	.595**	.398**	.212	.423**	.278*	.297*	.358**
	Sig. (2-tailed)		.000	.256	.001	.000	.000	.071	.000	.017	.012	.002
	N	73	73	73	73	73	73	73	73	73	71	72
Security	Pearson Correlation	.476**	1	.561**	.412**	.641**	.533**	.300**	.568**	.566**	.279*	.376**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.010	.000	.000	.018	.001
	N	73	73	73	73	73	73	73	73	73	71	72
SelfRespect	Pearson Correlation	.135	.561**	1	.452**	.338**	.347**	.272*	.325**	.424**	-.003	.031
	Sig. (2-tailed)	.256	.000		.000	.003	.003	.020	.005	.000	.980	.798
	N	73	73	73	73	73	73	73	73	73	71	72
SelfFulfillment	Pearson Correlation	.370**	.412**	.452**	1	.381**	.325**	.366**	.322**	.555**	-.019	.004
	Sig. (2-tailed)	.001	.000	.000		.001	.005	.001	.006	.000	.878	.974
	N	73	73	73	73	73	73	73	73	73	71	72
SenseBelonging	Pearson Correlation	.595**	.641**	.338**	.381**	1	.655**	.477**	.716**	.644**	.201	.263*
	Sig. (2-tailed)	.000	.000	.003	.001		.000	.000	.000	.000	.092	.025
	N	73	73	73	73	73	73	73	73	73	71	72
FunEnjoyment	Pearson Correlation	.398**	.533**	.347**	.325**	.655**	1	.679**	.619**	.592**	.091	.096
	Sig. (2-tailed)	.000	.000	.003	.005	.000		.000	.000	.000	.448	.423

	N	73	73	73	73	73	73	73	73	73	71	72
Excitement	Pearson Correlation	.212	.300**	.272*	.366**	.477**	.679**	1	.583**	.635**	-.078	.034
	Sig. (2-tailed)	.071	.010	.020	.001	.000	.000		.000	.000	.518	.776
	N	73	73	73	73	73	73	73	73	73	71	72
WarmRelation-ships	Pearson Correlation	.423**	.568**	.325**	.322**	.716**	.619**	.583**	1	.736**	.072	.266*
	Sig. (2-tailed)	.000	.000	.005	.006	.000	.000	.000		.000	.549	.024
	N	73	73	73	73	73	73	73	73	73	71	72
Accomplish-ment	Pearson Correlation	.278*	.566**	.424**	.555**	.644**	.592**	.635**	.736**	1	-.064	.234*
	Sig. (2-tailed)	.017	.000	.000	.000	.000	.000	.000	.000		.598	.048
	N	73	73	73	73	73	73	73	73	73	71	72
FBAddiction	Pearson Correlation	.297*	.279*	-.003	-.019	.201	.091	-.078	.072	-.064	1	.490**
	Sig. (2-tailed)	.012	.018	.980	.878	.092	.448	.518	.549	.598		.000
	N	71	71	71	71	71	71	71	71	71	71	71
FBWithdrawal	Pearson Correlation	.358**	.376**	.031	.004	.263*	.096	.034	.266*	.234*	.490**	1
	Sig. (2-tailed)	.002	.001	.798	.974	.025	.423	.776	.024	.048	.000	
	N	72	72	72	72	72	72	72	72	72	71	72

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

*. Correlation is significant at the 0.05 level (2-tailed).

Figure 4

Discussion

As earlier noted, the study was conducted on 77 undergraduate students at the University of Massachusetts- Boston College of Management. Overall, the results illustrated many of our predicted findings to be true. However, despite an extraverts desire to socialize and continuously connect with individuals, they are not more likely to be addicted to Facebook than any corresponding personality type. Neuroticists, as predicted are socially anxious and unpredictable because of their frequent mood swings, but this has shown to have significant influences on the extent to which they are addicted to Facebook and face Facebook withdrawals. As with many other Internet Addiction studies, it is concluded that

neuroticists are anxious, and undergo levels of depression, which might help us to better formulate the idea that they feel comfortable socializing outside of a face to face setting, ie: the Internet (Facebook). Where extravert socialize in all settings, neuroticists choose to meet their social needs in a setting in which they are most comfortable. Further, it was predicted that females are more likely to be addicted to Facebook than their male counterparts. As noted, this hypothesis turned to be true, but females are not more likely or less likely to be devoted to Facebook than their male counterparts. As also expected, values place a huge emphasis on our research. The value "well respected" proved to be the most significant value coming from the list of nine for those who are addicted to Facebook.

Limitations and Further Research

The number of responses that were collected was a lot less than we were expecting to receive. Perhaps the timing of the distribution of the survey was not the most desired one (the end of the semester is busier for more Undergraduate students). However, this was the fastest the survey could be distributed all while making sure we had the right questions to target the right variables and outcomes. We were limited to just sending the survey to College of Management students since that was the best way to retrieve the emails from associate Professors. If we had been able to distribute the survey to a much greater number of undergraduates with diverse areas of study, perhaps our results would illustrate something different or new. The study was aimed at undergraduate students who were roughly between the ages of 18-24, but if the survey was distributed to the general public, we could have concluded separate results that were more representative of the population at large.

In addition, the study was pushed under a very vigorous timeline; and it was nearly impossible to get into too much investigation of any one factor. Had there been room for more time, the pre-study could have been done with more care and could have been a longer process thus highlighting even more important areas of study.

Further Research/Conclusions

However, the best attempt was put forward into the study for the time allotted and all necessary steps were taken to ask the correct questions in order to display the desired results. Further research could display what personality types have an influence on Facebook Intensity or Internet Addiction as a whole. I believe more connections can be drawn between Internet Addiction itself and Facebook Addiction. Further research connecting the two would be beneficial to many studies because there is so much work that is already done and known about Internet Addiction that could be related and used for Facebook Addiction studies.

As Facebook continues to grow as a site, it is important for researchers to understand like they do with many other Addiction studies: what makes people use. Studies like these help psychologically discover how an individuals mind works when they are on the site. Results coming from studies like these benefit businesses as a whole because they can better understand how to target their markets using Facebook. Neuroticists, extraverts, males, females and those who procrastinate were found to be heavy users of Facebook. Knowing this, businesses can inject money into their promotional plans by advertising and targeting on Facebook without feeling that it was a lost cause or waste of promotional dollars. Detailed and speculative further research could be done to understand consumer behavior on Facebook and their thoughts toward Facebook business

advertising and promotions. The study we conducted is merely a simple step toward the big picture of the world of Facebook and how aspects of individuals' lives have changed because of it.

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