

**Investigating the Relationship between Facebook and Self-Esteem, The  
Need to Belong and Extraversion.**

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Jessica Hodgins

## **Abstract**

The aim of this current study was to investigate the relationship between Facebook use, Self-Esteem, The Need to Belong and Extraversion. Participants were asked to fill out a questionnaire, which was created on SurveyMonkey that included two demographic questions and four different scales. The scales used were The Facebook Intensity scale, The Need to Belong scale, Rosenberg Self-Esteem scale and the Extraversion component of the Big Five Inventory scale. 125 participants took part in the study, 36 Males and 88 Females. The predictor variable being the Facebook Intensity score and the criterion variables were the scores from the Self-esteem, Need to Belong and Extraversion scales. Participants received an email or invitation to a Facebook event to access the questionnaire. The results reported that there was no significant relationship between Facebook use on Self-Esteem and Extraversion. There was in-fact a significant relationship between Facebook and the Need to Belong.

## **Introduction**

### ***Background***

Social media has recently become a fundamental part of our day-to-day lives regardless of or if we are even aware of the impact it is having. Social Media became more 'Social' in the 1990's when the World Wide Web became readily available to whom-ever owned a computer. The early 2000s brought some huge developments in social networking and social media but as it has grown in popularity and become mainstream, it has been faced with growing controversy and been the topic of an extensive amount of research. Social media has come a long way and continues to evolve on a daily basis. Major social networks such as Facebook and Twitter are making changes and improvements on an almost daily basis, it's sure to keep evolving in coming years. Its not likely just a phase and seems to be something that is not going to go away any time soon, therefore it is crucial for our understanding to do research into the psychological effects the likes of Facebook has on our 'Self' and what is it that draws us to use social networking sites such as Facebook.com. In Ireland, it is found that over one third of Irish people spend up to 20 hours online every week (Irishexaminer.com, Para1) this is due to the fact that nowadays internet and social networking are constantly available at our fingertips whenever and wherever we may be. 24 hours a day, 7 days a week, it readily available on our phones, tablets and computers, available to all ages, young and old. In this research study, Facebook is the social networking site I will be using for my research.

Facebook.com originated in 2004 by a Sophomore of Harvard University named Mark Zuckerberg. Facebook was a way for Harvard University students to stay connected with one another and get to know their fellow peers, but after a few months Facebook had

taken off and Zuckerberg had to expand it to other colleges across America. By the end of the following year Facebook was open to anyone, anywhere, over the age of 13 to create a virtual online profile.

Facebook's mission statement is "To give people the power to share and make the world more open and connected" (Facebook.com, 2012). Facebook has a powerful influence on how friendships and also relationships are mediated in today's world. Social Networking sites and particularly Facebook are influencing these relationships, as Facebook is such a vast platform to connect with people and friends that you might have lost contact with or people across the world you would not see on a weekly basis. It broadens your friendship circle but this in one sense can be seen as a disadvantage as we can become so seduced by the ease of connecting that we come to believe that these friendships are so intense and grounded that the person can lose touch with their friends in the outside world and just continuing to create and maintain the virtual ones. Research in February 2014 to celebrate Facebook's 10<sup>th</sup> birthday found that 1.23 billion people globally were using Facebook as a vast virtual platform to promote their lives and connect with friends and family and 62% of these people were logging into Facebook daily for this. Facebook is continually updating a stream of information detailing you and your friend's public activities, thoughts and feelings. This enables a constant sense of connection to others. As Facebook is constantly advancing it also helping create an online virtual world in which people live day to day with dual identities – online and in real life. The goal of this research study is to determine if Facebook use influences or is influenced by variables such as The Need to Belong, Extraversion and Self-Esteem.

## *Self-Esteem*

In Psychology, Self-Esteem is used to describe a person's overall sense of self worth, personal value and how we see our value to the world. Self-Esteem can affect our relationships, our work and nearly every part of our lives. It can be affected by one's need for self presentation, and there is evidence that self presentation is linked with being a self motivator for Social Networking in a study carried out by Baumeister (2013). This study found that when the students were given false feedback about themselves it was found that subjects with higher self esteem were adding more to their descriptions in attempt to alleviate the negative remarks made to them about their personalities. Those with lower self-esteem were seen to accept what had been said about them and taken it for being true. Therefore it is fundamental that research is carried out to examine the use of social networking and how this affects a person's self-esteem. It is likely that a person with low self-esteem will use a social networking platform such as Facebook.com more often than someone with high self-esteem as this could increase Self-Esteem levels. Research done on this area has brought mixed results.

Narcissism and Self-esteem are interconnected but seldom go hand in hand. In 2010, Mehdizadeh examined how Narcissism and Self-Esteem are established and promoted on the social networking site Facebook.com; the sample used was University students that used the site Facebook.com. Mehdizadeh's research found that people with high levels of Narcissism and with lower self-esteem were more likely to use Facebook longer on a day-to-day basis (over 1hr per day). The research also found that these people were more likely to put up self-promoting photos of themselves or using photo shop to edit the pictures that they promote to their own Facebook community of friends. It is easily understood that people who have high self-esteem would put up more self promoting images etc. but this study by Mehdizadeh contradicted this as it found that it was in-fact people with low self esteem that were found to

use Facebook longer, potentially to shape their own public image and to compensate for their short comings. This study was only done on university students so to further results there are grounds for this study to be done outside of third level education.

Ellison, Steinfield & Lampe, 2007 also looked at Self-esteem. Their study found that Internet users with low self-esteem and who avoid face-to-face contact found the Internet to be a better platform to communicate and they also used it to create and develop better interpersonal relationships. Facebook was used to break down social barriers that exist when face to face with others. This research was supported by Harman, Hansen, Cochran & Lindsey's study in 2005 which was carried out on students aged 11-16, which found that people with lower self-esteem chose the Internet for positive social interactions over face-to-face interactions and this was due to them representing with low self esteem and high levels of anxiety.

Gonzales & Hancock (2011) looked at Self-Awareness and the questions raised were 'Does Facebook operate on self-esteem in the same way that non digital information does by lowering self esteem' or 'does having the opportunity to present more positive information and attributes about ones self, increase their self esteem?' The results of this research study found that the more self-aware you were and the more you looked at you own Facebook profile, the more that it enhances your own self-esteem rather than diminishing it. These findings from the above studies prove that online social networks influence and have a significant effect on self-esteem but there is room for further research as contrasting result from studies show the need for a conclusive answer as to whether social networking sites such as Facebook which will be used in this research study, have a positive or negative effect on the self and self-esteem.



### ***The Need to Belong***

The Need to Belong is an 'intrinsic motivation to affiliate with others and to be socially accepted, it is important, as all people need to be liked and socially accepted', this phenomena is called "The Need to Belong" (Baumeister & Leary 1995). This need is "fundamental human motivation that is something all human beings possess ... to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships" (Baumeister & Leary 1995, p. 497). Our need to belong is what drives us to seek out relationships with others, motivates us to participate in social activities and thus by belonging in a group it make us feel important. In Abraham Maslow's 'Hierarchy of Needs', belongingness is one of the great motivators of human behavior. In this model developed by Maslow, our needs are shown in a pyramid shape. The most significant and crucial are shown at the base of the pyramid which is the widest part and crucial to our behavior, the more complex needs are shown then at the tip. Because the level of the need to belong varies from person to person, its effect is seen in varying levels of attitudes and willingness by different people to join and take part in social networking sites such as Facebook.com.

Facebook use has a mixed reputation with regards to The Need to Belong. Some people think that the site's ability to keep us in daily contact with our virtual community of friends and family must be a benefit for interpersonal connection. But does spending so much time interacting on platform such as Facebook with the digitalized versions of our community of friends leaves us isolated and famished for real-world contact? And that we are 'connected' with them rather than 'communicate' with them and our sense of belonging is lost throughout this all. According to research by Sheldon (2011), over a 1,000 college students were asked about the intensity of their Facebook use. In this study they also

researched and tested the university students on their levels of connection and disconnection. A scale was used that asked the students about how often they "felt lonely" or "felt close and connected with other people who are important" to them. The results from this study found that spending a lot of time on Facebook correlated with both high levels of feeling connected to other people and with high levels of disconnection. The results are mixed as people who are lonely and disconnected from the world spend more time on Facebook as a distraction and a method to cope with the intense loneliness that they feel. People that are not lonely in life also frequent Facebook as this helps them establish and maintain social connections with their friends and peers, therefore influencing them to spend longer time online.

The Need to Belong can also be understood on people's fundamental interpersonal relations. Schutz (1966) found that 3 basic needs underlie our group seeking behavior and our Need to Belong. The first being inclusion, which is our need to belong and our need to be included in others lives and their friendship group. The second being affection, as we have the innate need to be loved by others. The third and final one is control, we as humans need to have control over others and give power to thy self over others also. Joining Facebook may look and meet all of these three needs for us to 'remain in the loop'. Because the level of the need to belong varies from person to person, its effect emerges in varying levels of attitudes and willingness of others to use social networking sites such a Facebook.com. There is also evidence to suggest that Facebook use improves self-esteem by increasing users' sense or need to belong. In study carried out by Kim & Lee in 2011, explored the relationship between Facebook use and well being in a group of University students in the United States. The study examined whether the number of Facebook friends, desired image of ones or positive self-presentation on Facebook, influenced subjective well-being. Results showed that both factors had a positive association with the subjective well being number. Kim & Lee concluded that

because Facebook enables visualization of social connections it then in turn also validates and enhances users' Self-esteem. This current study is going to incorporate both Self-Esteem and The Need to Belong, with a third variable 'Extraversion' to see if there is relationship between these variables and Facebook use.

### ***Extraversion***

Personality is made up of characteristic patterns of thoughts, feelings, and behaviors that make a person unique. In 1992, Costa & McCrae developed the big five-factor model to measure personality traits. It divides the persons personality into five main traits, - Openness, Conscientiousness, Extraversion, Agreeableness and lastly Narcissism. The focus of this research project will be on the Personality trait –Extroversion (warmth, gregariousness, assertiveness, activity, excitement seeking and positive emotions). Extraverts tend to be more outgoing, socially active and making new friends is a doddle to them. Extraversion is a unique personality trait that perhaps drives a person to use Facebook as a platform to connect with their friends as family and to promote their daily lives and actions and the most prevalent trait in personality research. The traits from the big five have been shown to explain the nature and extent of social behavior on the Internet, social networking sites and in particular on Facebook (Correa et al, 2010). Wilson, Fornasier & White, 2010 carried out a study on 201 students in an Australian university, their research looked at the role of personality and self-esteem in young adults and their levels of social networking use. The results found that high levels of Facebook use and addictive tendencies were more likely to be found in extroverts. The study also found that extroverts needed unlimited contact with the virtual world and a large pool of friends for high stimulation, this is what Facebook.com ensured them 24/7. This study was Similar to what Siedman carried out in 2013, which was to examine the relationship between the Big Five personality traits and Facebook use to full

fill the needs of belonging and self -presentation needs. 184 undergraduate students participated in the study, answering a questionnaire on personality and Facebook behaviors. This study found that self-presentation behaviors were best predicted by the personality traits conscientiousness in low amounts and high levels of neuroticism. Extraversion was associated with more frequent use of Facebook to communicate with others.

In Contrast, Skues et al (2012) examined the relationship between three of the “big five” personality traits (Openness, Extroversion, and Neuroticism) and Self-Esteem, Loneliness and Facebook use. The study was carried out in an Australian University, 393 first year psychology students were given online questionnaires to answer. The results found from this study were contrasting to Wilson et al, 2010 study results for extroversion as this study found using a negative binominal regression model that, students with higher levels of Openness rather than high levels of Extroversion reported spending more time on Facebook.com and that they had more friends than the others and that Extroversion and Self-Esteem didn't have significant associations with Facebook use.

### ***Rationale***

The rationale for this current study is due to the fact that there are 2.2 million Facebook users in Ireland and that 57 per cent of Irish population use the site regularly, there has been little research done on Irish users even though its where Facebook have one of their global headquarters situated in the capital city, Dublin. So with nearly half the Irish population using Facebook the question is why and what motivates them to use it? .

Contrasting results from studies all the over the world has fuelled the reasoning for this particular research study to try and determine what exactly it is that influences Facebook use or what Facebook use influences in our self. The population of interest is a consenting Irish sample over the age of 18, this research study will look at the relationship between Facebook use and the following three variables- The Need to belong, Self-esteem and on of the 'Big Five' Personalities, Extraversion. The demographics that will be employed in this current research study will be Age and Gender.

To achieve the aim of this study 4 questionnaires will be used to examine the variables. The Facebook Intensity scale (Ellison, Lampe & Stienfield) will be used to measure Facebook use, The Rosenberg Self-Esteem scale (Rosenberg, 1965) will be used to identify person levels of Self-Esteem, The Need to Belong Scale (Leary, 2012) and one section of The Big Five inventory (Goldberg, 2003) will be used to asses the personality Extraversion.

## *Hypotheses*

### **Hypotheses 1-**

There will be a significant correlation between Facebook use and Self- Esteem

### **Hypotheses 2-**

There will be a significant correlation between Facebook use and The Need to Belong.

### **Hypotheses 3-**

There will be a significant correlation between Facebook use and Extroversion.

### **Hypotheses 4-**

There will be a significant difference in the need to belong scores in Male and Females.

### **Hypotheses 5-**

There will be a significant difference in Extraversion scores in Male and Females.

### **Hypotheses 6-**

There will be a significant difference in Self-Esteem scores in Males and Females.

### **Hypotheses 7-**

There will be a significant difference in Facebook Intensity scores in Males and Females.

## **Methods**

### ***Participants***

The participants of this current research study are Irish Facebook users over the age of 18 years old. The total number of participants was 124 people (36 Male and 88 Female). A public event page was set up on Facebook and the snowball effect was used as Facebook users were invited to take part and once they had taken part they were asked to invite others to do so also or to share the questionnaire on their Facebook page for their friends to fill out. Participants were all Irish, as not much research had been done in this area of the Irish population. There was both Inclusion and exclusion criteria. The inclusion criteria was Irish Facebook users over the age of 18 years and the exclusion criteria were non Facebook users and Facebook users below the age of 18. No incentives were used when participants were asked to fill out the online questionnaire.

### ***Design***

The design of this research study was a quantitative design using a questionnaire. Correlation was used to find a relationship between the different variables. The variables used were Facebook use, the Need to Belong, Self-esteem and Extraversion. Independent variables included Gender and Age and the dependent variable included Facebook use. The predictor variable is Facebook use and the Criterion variables were The Need to Belong, Self Esteem and Extraversion. Each questionnaire was created and administered through the website SurveyMonkey.com, and every questionnaire given was the same so no participant given a different one.

### *Apparatus*

The data was collected using a questionnaire created for this research project on the website SurveyMonkey.com as it had a feature which allowed the data to automatically transfer onto a dataset that could be opened and used on SPSS. The statistical software SPSS version 22.0 was used to analyse all data obtained from this research study.

### *Materials*

A questionnaire was created on SurveyMonkey.com. It required information such as the subjects age and gender, it also contained the following questionnaires- The Facebook Intensity Scale, Rosenberg Self- Esteem Scale, The Need to Belong scale and lastly the Big Five inventory but only using the Extroversion component.

The Facebook Intensity Scale (Ellison et. Al 2007) is used to measure Facebook usage beyond simple measures of frequency and duration. It incorporates emotional connectedness to the site and its integration into individuals' daily activities. There are 8 questions in total and it is split into 3 different parts, the first part consists of 6 questions that are answered on a 5-point Likert scale. Response categories range from 1= Strongly Disagree to 5= Strongly Agree. The second two parts are open questions. The second section asks the amount of Facebook friends that any one person has acquired and the third section asks how many hours per day are spent using the site Facebook.com. The scale is computed by calculating the mean of all the items in the scale. A copy of The Facebook Intensity Scale (Ellison et. Al 2007) is enclosed in the Appendix section.

To measure Self Esteem in Facebook use, the Rosenberg Self- Esteem Scale (Rosenberg, 1965) is used. This scale was devised to measure the general Self-Esteem in



users, it was originally designed to measure the self-esteem of High school students but since its development it has been used on a variety of groups including adults. This scale was used in this present study; it is a 10-item scale using a 5-point likert scale as a rating. The response ranges from 1= Strongly Disagree to 5= Strongly Agree to statements such as “*I feel I do not have much to be proud of*” and “*On the whole, I am satisfied with myself*”. The items are scored and some are reverse coded, all items are then scored and the higher the total the greater the participant’s self-esteem is. A copy of The Rosenberg Self- Esteem Scale (Rosenberg, 1965) is enclosed in the Appendix section.

The Need to Belong scale (Leary, M.R 2012) is used to measure the need to belong in regards to Facebook use. It is the most recent and empirically sounds of the current need to belong measures. The Need to Belong is “*A strong desire to form and maintain enduring interpersonal attachments*”. It is a 10- item scale using a 5-point likert scale. The responses range from 1= Strongly Disagree to 5= Strongly Agree. The items are scored and some are reverse coded, all items are scored and the higher the total the greater the participant’s self-esteem is. A copy of The Need to Belong Scale (Leary, M.R 2012) is enclosed in the Appendix section.

The Big Five Inventory Scale (Goldberg, 1993) is a self-report inventory designed to measure the Big Five Personality traits, which are Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism. It assesses these traits with 44 questions. In this research project only 8 statements were used, as it was only the personality Extraversion that wanted to be used as a variable. Respondents are required to answer how well the 8 statements describe their personality. The items include “*I see myself as someone who tends to be lazy*” and “*I see myself as someone who is reserved*”. Scoring the scale requires items

1,3,4,5,7 to be reversed scored. To compute the scale, after the 5 items are recoded, each two items assessing one dimension were averaged. A copy of The Big Five Inventory Scale (Goldberg, 1993) is enclosed in the Appendix section.

### ***Procedure***

To obtain the sample for this study participants received an email or an event request on Facebook. A link produced by SurveyMonkey.com (which was the website that the questionnaire was created on) was provided in both the email and event page. Once the subjects clicked the link they were brought to a information page which informed them briefly with instructions on how to fill the survey out and also the reason for why this research was been taking place. All participants were ensured that they were anonymously taking part in the survey and that all their information was kept confidential and that only myself, and my supervisor had access to the information and results. They were also informed that their results would be kept on a password-protected computer. The final page of the questionnaire included contact details for support services for them if they were in any way affected by the questions asked throughout the survey. Participants answered 32 questions, which took approx. 5-7 minutes to complete and they then submitted the online questionnaire to SurveyMonkey.com. This then could be used for analysis.

## Results

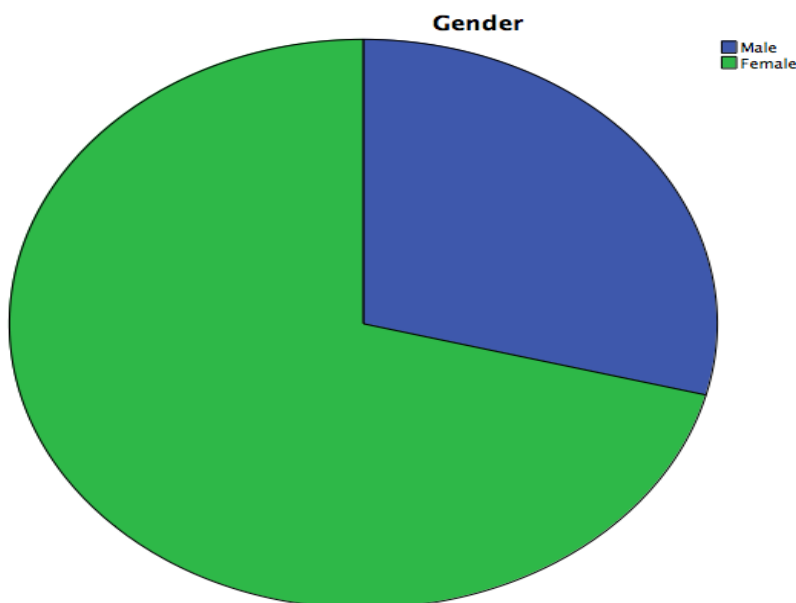
### *Descriptive Statistics.*

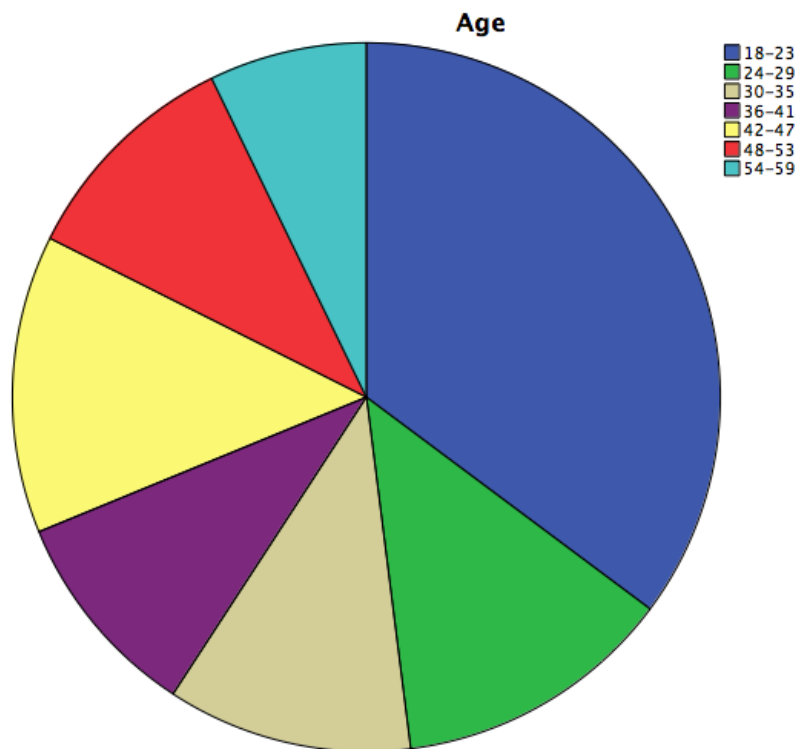
SPSS (Version 22.0) was used to conduct analysis on the data collected in order to determine if the seven Hypotheses were in-fact true and significant.

### **1.1 Demographics**

124 people answered the survey. From this, 29% were Male (N=36) and 71% were Female (N=88) as displayed in Graph 1. With regards the age of Participants, 125 people answered this question (1 person answered just age). Frequencies indicated that 35.2% were aged between 18-23 (N=44), 12.8% in the 24-29 group (N=16), 11.2% aged between 30-35 (N=14), 9.6% falling into the 36-41 age group (N=12), 13.6% aged between 42-47 (N=17), 10.4% in the 48-53 age group (N=13) and finally 7.2% of the people surveyed fell into the 54-59 (N=9) age group. This is shown in Graph 2 below.

**Graph 1-** *Gender of Participants.*



**Graph 2- Age of Participants**

### 1.2 Psychological Measures

Descriptive statistics were run to display the mean scores for the responses on 4 scales- the Facebook Intensity Scale, Rosenberg Self Esteem Scale, The Need to Belong Scale and The Big Five Inventory just using Extraversion. These scores are displayed below in Table 1.

#### *Descriptive Statistics*

**Table 1- Descriptive Statistics of Psychological Measures**

<b>Variables</b>	<b>Mean</b>	<b>Standard Deviation</b>
Facebook Intensity	3.44	.87
Self Esteem	36.31	5.32
The Need to Belong	30.60	6.22
Extraversion	27.79	5.67

*Relationships between variables***Table 2-** *Kendall's Tau b Test*

	Facebook Intensity	Self-Esteem	Extraversion	The Need to Belong
Facebook Intensity	1.00	-.113	.059	.272**
		.099	.385	.000
	119	109	111	113
Self Esteem	-.113	1.00	.247**	-.299**
	.099		.000	.001
	109	110	109	110
Extraversion	.059	.247**	1.00	.043
	.385	.000		.520
	111	109	112	112
The Need to Belong	.272**	-.299**	.043	1.00
	.000	.001	.520	
	113	110	112	114

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

**Hypothesis 1** predicted that there would be a significant correlation between Facebook intensity scores and Self-Esteem. A Kendall's Tau was performed to see if there was in fact a significant correlation with Facebook intensity scores and Self-Esteem, as can be seen in Table 2. The mean scores for Facebook intensity were 3.44 (SD=. 87) and the mean score for Self-esteem was 36.31 (SD=5.32). A Kendall's Tau b correlation found there

was no significant association between Facebook intensity and Self-Esteem ( $\tau_b(109) = -.113, p = .099$ ). Therefore the null hypothesis is accepted.

**Hypothesis 2** predicted there will be a significant correlation between Facebook intensity scores and The Need to Belong, interestingly when a Kendall's Tau b was performed to see if there was a significant relationship between The Need to Belong and Facebook Intensity the Kendall's tau b found there was, in fact, a significant relationship between Facebook Intensity ( $M=3.44, SD=.872$ ) and The Need to Belong ( $M=30.60, SD=6.221$ ) ( $r=.272, p < .001$ ). Therefore the null hypothesis can be rejected and this relationship can account for .074% of variation of scores. Results shown in Table 2.

**Hypothesis 3** predicted there would be a significant correlation between Facebook intensity scores and the personality Extraversion. A Kendall's Tau b was also performed to see if there was a significant relationship between Facebook intensity and Extraversion, shown in table 2. The mean score for extraversion being 27.79 ( $SD=5.67$ ) and Facebook Intensity was 3.44 ( $SD=.87$ ). A Kendall's tau b correlation found that there was no significant association between Facebook intensity and Extraversion ( $\tau_b(111) = .059, p = .385$ ). Therefore the null hypothesis can be accepted.

**Table 3- Independent Samples T-Test**

Variables	Male		Female		T	P value
	M	SD	M	SD		
The need to belong scale	27.48	5.52	31.85	6.11	-3.55	.001
Extraversion	28.56	6.18	27.41	5.45	.96	.337

*Note* p is significant at .05

**Hypothesis 4** predicted there would be a significant difference between the Need to Belong on males and females. An Independent Samples T-test was performed to compare male and female scores on The Need to Belong Scale. The T-test revealed that there was a statistically significant difference between the need to belong on Males (M=27.48, SD=5.52) and Females (M=31.85, SD=6.11). Thus females were more significant (T (111)= -3.55, P=.001, CI (95%) -6.80 - -1.93). Therefore the null can be rejected.

**Hypothesis 5** predicted there would be a significant difference between Extraversion scores on males and females. Males and Females Extraversion scores were compared using an Independent Samples t-test. This found that there was a statistically non- significant difference between Extraversion on Males (M=28.56, SD=6.18) and Females (M=27.41, SD=5.45) (t (109)= .96, p= .337, CI (95%) -1.20 – 3.47). Therefore the Null can be accepted. This can be seen in Table 3.

**Table 4- Mann-Whitney U Test**

	<b>Males</b>	<b>Females</b>		
<b>Variables</b>	<b>Mean rank</b>	<b>Mean rank</b>	<b>Z</b>	<b>P</b>
Facebook use	56.67	60.36	-1.17	.242
Self -Esteem	42	66.16	-3.506	.000

*Note* p is significant at .05

**Hypothesis 6** predicted there would be a significant difference between Self- Esteem scores on males and females Males and Females. A Mann-Whitney U test revealed that

Males (Mean rank= 42) and Females (Mean rank= 66.16) differed significantly ( $Z = -3.506$ ,  $p = .000$ ) on Self Esteem Scores. Females were more significant. This can be seen in Table 4.

**Hypothesis 7** predicted there would be a significant difference between Facebook intensity scores on males and females. Males and Females. Finally a Mann-Whitney U test revealed that Males (Mean rank= 60.36) and Females (Mean rank= 52.67) did not differ significantly ( $Z = -1.17$ ,  $p = .242$ ) on the Facebook use. This is shown in Table 3. Results of the Independent Samples t-tests and Mann-Whitney U test results are found in Table 4.

A Regression was to be performed on Facebook intensity and its relationship with Self-esteem, Extraversion and The Need to Belong but due to the fact when normality checks were carried-out, it was found that Facebook Intensity scores were not normal. Due to this a Regression was unable to be performed.



## Discussion

The purpose of the current study was to investigate the relationship, if any, between Facebook usage and feelings of Self-esteem, The Need to belong and the personality Extraversion among participants.

The first variable to be examined was if there was a relationship between the intensity of Facebook use and the participant's level of Self-esteem. Self-esteem is used to describe a person's overall sense of self worth, personal value and how they see their value to the outside world. The area of self-esteem in research is no way innovative. An abundance of research throughout the years has supported the claim that self-esteem is crucial in defining a person's wellbeing and happiness in life but research on self-esteem and social networking is relatively novel. Secondly the study aimed to examine any relationship that might exist between Facebook use and the Need to Belong. The need to belong is an "intrinsic motivation to affiliate with others and to be socially accepted, it is important, as all people need to be liked and socially accepted" (Baumeister & Leary, 1995). The final variable investigated in this study was Facebook intensity and its relation to the personality trait- Extraversion. Extraversion is a unique personality trait that is the act of directing ones interest outwards and that extraverts tend to be linked with warm, assertive and positive emotions. Furthermore, the present study also looked at the differences between genders in each of the above 4 different variables, to examine if any correlations existed there. It is of popular opinion nowadays that males and females act and fare differently in today's world and also on all aspects of life. This current study then will determine weather or not that theory applies to the variables, Facebook intensity, Self-Esteem, The Need to Belong and the personality trait Extraversion.

### ***Self-Esteem***

The first hypothesis presented in the current study, linking Facebook intensity and Self-esteem was not reinforced by the results retrieved. The results of the statistical tests when a Mann-Whitney was run indicated that no significant correlations existed between Facebook intensity and Self-esteem. This fails to support some of the previous research conducted around these variables. Ellison, Steinfield & Lampe in 2007 looked at self-esteem. Their study found that participants which were, internet users with low self esteem and who avoided daily face-to-face contact with others found that in fact the internet was a better platform to communicate on, this study was also supported by Harman et al, (2005). Mehdizadeh (2010) examined how narcissism and Self-esteem were established and promoted on Facebook. Mehdizadeh's research found in contrast to previous research that people with high levels of Narcissism and low levels of Self esteem were more likely to use Facebook on a daily basis, and out up self-promoting images of themselves. The fact that this current study didn't support Mehdizadeh's results could be due to the fact that Mehdizadeh also used the variable Narcissism which was not used in this current study so due to this it could be concluded that the absence of this variable may be the reason for the lack of correlation in this study. It can be noted that there was also no significant difference with gender on Self-esteem in this current research study. The differing results from the research on Self-esteem and Facebook use, coupled with the lack of a significant results with these variables in this current study suggests that Facebook and Self-esteem have a less important direct relationship that expected in the Hypotheses presented in the introduction.

### ***The Need to Belong***

The second hypotheses presented in this study, was linking Facebook intensity and the second variable-The Need to Belong. The results of the statistical tests carried out on

these variables indicated that there was a weak positive significant relationship between the two variables. So as The Need to Belong decreased, Facebook intensity also decreased also when the Need to Belong increased so did Facebook use. There also was a significant difference between the Need to Belong on gender. As it was found that females differed from males as they were more significant. Social networking sites such as Facebook offer a space in which people can address this Need to Belong by using services provided such as Facebook chat which can enable conversations and information gathering, along with the possibility of gaining social approval by getting 'Facebook Likes', expressing opinions, and influencing others can be achieved by People posting status', on the whole people's attitudes and behavior with regard to Facebook may stem from their Need to Belong. The correlation that was found between Facebook intensity and the Need to Belong is similar with a number of previous studies. Sheldon (2011) did a study on over 1000 college students and tested their need to belong on connection and disconnection levels. The results from this study found that there was a significant correlation and that spending a lot of time on Facebook correlated with the Need to Belong on both high levels of feeling connected and high levels of disconnection. These results are supported by the results in the current research study, as there was also a positive significant relationship between the Need to Belong and Facebook intensity use. In 1966, Schutz found that 3 basic needs underlie our group seeking behavior and our Need to Belong; they are inclusion, affection and control. Joining Facebook may meet all these needs but the level of the Need to Belong varies from person to person, its effect is varying levels of attitudes and willingness. This is supported by the Independent T-tests carried out in this current research study as they found that males differed to females in their levels needing to belong, females were more significant.

### ***Extraversion***

The third Hypothesis, hypothesized that there would be a significant correlation between the personality trait Extraversion and Facebook intensity use. Analysis carried out showed that there was no significant relationship between these variables and the null hypothesis was accepted. Based on previous research it was suggested that individuals that are very sociable and outgoing should demonstrate more of a social activity and engage more on the social networking site Facebook. The results obtained from this research study were not comparable to a number of previous studies. In 2010, Wilson et al carried out a study on students. They looked at the role of personality and self-esteem. Results from this particular study found that high levels of Facebook use and addictive tendencies were more likely to be found in extroverts. This current research study did not support these findings. Similarly, another study that wasn't supported by this current research studies results, was the study carried out by Siedman in 2013. This study investigated if there was a relationship between the Big Five on personality traits and Facebook. The study found that presentation behaviors were predicted by personality traits and that Extraversion was associated with more frequent use of Facebook to communicate with others, these findings were also not supported by the results of this current research study which found no significant relationship between Facebook and Extraversion. This could be due to the fact that this current study only looked at the personality trait Extraversion and not the remainder of the Big Five personality traits but this path of thought has been contradicted as here was a study that was supported by the results of this current research study, that is, the study carried out by Skues et al in 2012. Skues et al examined the relationship between the Big Five traits on self-esteem, loneliness and Facebook use. The results found from Skues et al (2012) study were contrasting to Wilson et al (2010) and Siedman (2013) but similar to this current research study. It was found that students with higher levels of Openness rather than high levels of Extroversion were reported

spending more time on Facebook and that Self-Esteem and Extroversion didn't have significant associations with Facebook use.

### ***Strengths, Weaknesses & Future Recommendations***

It should be noted that there was a number of shortcomings with this research study. A weakness is that there was an extreme gender imbalance as over 71% of the participants were in-fact females, leaving the remaining 29% being male. To overcome this imbalance, future research should target respondents instead of using the snowball effect.

A second weakness in this study is that there was also a small enough sample size considering the amount of Irish people that use Facebook. For future research the Facebook event that the questionnaire is attached to, could be dispersed and shared by more people to ensure a bigger pool of participants to sample from.

A third weakness of this study was that all questions were not answered on the questionnaire, leaving missing values. A feature that can be enabled on Survey Monkey is one that ensures that the participant cannot go on to the next section of the questionnaire until the current section is completed fully. For future research if using SurveyMonkey.com, this feature should be enabled, as it will ensure that every question is, answered, by every participant.

Strength of this current research study is that there was a broad age range of people that participated. Out of the 125 people that answered the questionnaire 35% were in the (18-23) age group with the remaining 65% roughly evenly spread between the remaining 6 age groups. The sample used in previous research was predominantly third level university

students. Different age ranges use social networking sites so it was integral to include different age ranges in this current research study.

The above inconsistencies may influence the reliability of the interpretation of this current study, however, this study is still able to supply noteworthy and valuable points. Studying Facebook related behavior is important as results from this study could have practical applications on the real world.

### *Future applications*

The implications of this research are that the Need to Belong is affected by Facebook use. This could prove valuable in a number of real-world situations.

### *Cyber-bullying-*

Bullying has always been a problem in the work place, school and in everyday activities and events. But in recent years there has been a vast increase in the cases of cyber-bullying on sites such as Facebook.com. So understanding why people use sites such as this may lead to the understanding of the self and the reasons that influence the person to cyber-bully.

### *Marketing-*

In recent years Facebook has introduced the use of business being able to advertise on Facebook and to use Facebook as a platform to market products and services. Information gained from this study, such as, the fact introverts are more likely to use Facebook and that there is a relationship between Facebook and the Need to Belong is vital information that

Marketers can utilize in attracting their consumers on Facebook and this information may be useful to these companies.

*Team bonding-*

The implication of this research is that there is a relationship between Facebook use and the Need to Belong. This can be utilized in a number of group or team bonding situations where there is a perceived lack of belonging. Facebook may be utilized in order to increase feelings of belonging in a person or a group. This also can be applied if one team member is feeling left out, that Facebook can play the role in alleviating this feeling of discontentment and lack of belonging by the person having increased contact on the site.

*Longitudinal study-*

The fact social networking sites are changing all the time and different methods are being used to connect with others, a longitudinal study could be carried out to examine e.g. Personality traits and characteristics of individuals and its relationship with Facebook over time and could track changes in personality over the years and the influence of the ever developing social networking sites such as Facebook, Twitter and Instagram.

## ***Conclusion***

In conclusion to this research study, which investigated the relationship between Facebook intensity and Self-esteem, the Need to Belong and the personality trait Extroversion, this study has produced some interesting results that both reinforce and disprove previous research in these areas. It was hypothesized that there would be a relationship between the Need to Belong and Facebook use. There was a significant relationship between these two variables. It was also found that there was a significant difference in scores on the Need to Belong and Facebook use when viewed across gender, with women reporting higher scores. Despite the fact that some of the results were found to be insignificant, the present study broadens current research in the area of examining what is it that makes people use Facebook, while also providing basis for future studies on this topic.



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## Appendices

### *Informed consent*

*(The following page was included at the beginning of the questionnaire)-*

Jessica Hodgins is my name and I am a final year psychology student in DBS. I am conducting research that hopes to explore the relationship between Facebook Use, The Need to Belong and Social Connectedness. This research is being conducted as part of my final year psychology research project and it will be submitted for examination in March 2015.

I invite you to take part in this study and your participation only involves completing and returning the attached anonymous survey. If any of the questions do raise negative feelings for you, please feel free to contact any of the support services that I have included on the final page of this questionnaire booklet.

Participation in my study is completely voluntary and so you are not obliged to take part, you do however have to be over the age of 18 to take part in this study.

Participation is anonymous and confidential. Therefore responses cannot be attributed to any one participant. For this reason, I must inform you that it will not be possible to withdraw from participation after the questionnaire has been submitted. The questionnaires will be securely stored on a password-protected computer that only myself and my supervisor Margaret Walsh will have access to.

**It is important that you understand that by completing and submitting the questionnaire that you are consenting to participate in the study.**

Should you require any further information about the research, please contact me at xxxxx@mydbs.ie. My supervisor is Margaret Walsh who can be contacted at xxxxx@dbs.ie .

I would like to thank you for taking the time to complete this survey.

***Demographic questions-***

1. Gender?

1. Male
2. Female

2. What Age group do you belong to? :

1. 18 to 23
2. 24 to 29
3. 30 to 35
4. 36 to 41
5. 42-47
6. 48 to 53
7. 54 to 59
8. 59 to 64
9. 65+

***Facebook intensity scale-***

For each of the statements below, indicate the degree to which you, Disagree or Agree with the statement. Response categories ranked from 1-5 'Strongly Disagree' to 'Strongly Agree'.

Questions 7 &8 being openended questions.

1. Facebook is part of my everyday activity
2. I am proud to tell people that I am on Facebook
3. Facebook has become part of my daily routine
4. I feel out of touch when I haven't logged into Facebook for a while
5. I feel I am part of the Facebook community
6. I would feel sorry if Facebook was shut down
7. Approximately how many Facebook friends do you have?
8. In the past week, on average, approximately how much time per day have you spent actively using Facebook?

***The Need to Belong scale-***

For each of the statements below, indicate the degree to which you, Disagree or Agree with the statement. Response categories ranked from 1-5 'Strongly Disagree' to 'Strongly Agree'.

1. If other people don't seem to accept me, I don't let it bother me.
2. I try hard not to do things that will make other people avoid me or reject me.
3. I seldom worry about whether other people care about me
4. I need to feel that there are people that I can turn to in times of need
5. I want other people to accept me
6. I do not like being alone
7. Being apart from my friends for long periods of time does not bother me
8. I have a strong need to belong
9. It bothers me a great deal when I am not included in other peoples plans
10. My feelings are easily hurt when I feel that others do not accept me



***Big Five Inventory- (Extraversion component)***

For each of the statements below, indicate the degree to which you, Disagree or Agree with the statement. Response categories ranked from 1-5 'Strongly Disagree' to 'Strongly Agree'.

1. I see myself as someone who is talkative
2. I see myself as someone who is reserved
3. I see myself as someone who is full of energy
4. I see myself as someone who generates a lot of enthusiasm
5. I see myself as someone who tends to be quiet
6. I see myself as someone who has an assertive personality
7. I see myself as someone who is sometimes shy, inhibited
8. I see myself as someone who is outgoing, sociable.

***Rosenberg Self-Esteem scale-***

For each of the statements below, indicate the degree to which you, Disagree or Agree with the statement. Response categories ranked from 1-5 'Strongly Disagree' to 'Strongly Agree'.

1. I feel I am a person of worth, at least on an equal plane to others
2. I feel that I have a number of good qualities
3. All in all, I am inclined to feel that I am a failure
4. I am able to do things as well as most people
5. I feel I do not have much to be proud of
6. I take a positive attitude towards myself
7. On the whole, I am satisfied with myself
8. I wish I could have more respect for myself
9. I certainly feel useless at times
10. At times I think I am no good at all.