

**A Study of the Relationships between Self-esteem, Narcissism and Social Anxiety
with Facebook and Internet Use among College Students**

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ABSTRACT

The aim of the study is to examine self-esteem, narcissism and social anxiety and how they correlate to the amount of time spent on Facebook and any other online activities. College students (N = 69) completed the ICT scale, Facebook intensity scale, Rosenberg Self-Esteem, the NPI-16 subclinical narcissism and the Self-consciousness scale. Pearson's r correlation was conducted to test the six hypotheses. The results showed that there was no significant relationship between the amount of time spent on Facebook on self-esteem, narcissism and social anxiety, and overall self-consciousness. Also, there was no significant relationship between the amount of time spent on other online activities on self-esteem, narcissism and social anxiety, and overall self-consciousness. Implications of why Facebook intensity scale, the ICT scale and the self-consciousness scale are used were discussed, including how this study could have implications to society.

INTRODUCTION

Social networking sites such as Facebook and Twitter has been popular in recent years. Facebook is one of the most popular social networking website on the internet and it allows people to stay connected with friends and families, and reconnect with long-lost friends and try to maintain long distance friendships and they also allow people to share information within their circle of friends (Muise, Christofides & Desmarais, 2009). Social media provides a place where people can create a persona they want the world to see (Maldonado, 2014). In 2008 Facebook had 100 million active users and by 2013 it has reached 1.11 billion registered users worldwide (Statistic Brain, 2014). There are 81% of 18 to 24 year olds log in to Facebook through their mobile phones but the highest percentages of Facebook use through mobile phones are 13 to 17 year olds with the percentage of 85% (Fawcett, 2013). There are 78% of college students use social networking sites in the United States (Pew Research, 2014). Social networking sites such as Facebook are redefining to how we interact socially, and have given a whole new meaning to face-to-face interaction. Shields and Kane (2011) proposed the idea that the use of the Internet is high among college students due to the personal and school-related purposes. Due to the popularity of social networking sites such as Facebook and Twitter, especially Facebook, the current study will look at the relationship between the relationship of social anxiety, self-esteem and narcissism with Facebook and internet use among college students. College students are perfect candidates to participate in the current study because majority of these students have Facebook account and they are already familiar with Internet use.

Facebook and Internet Use in Self-esteem

Self-esteem is looked up on how it may play a role on Facebook and Internet use. According to Erber and Erber (2011) (as cited by Pettijohn, LaPiene, & Horting, 2012) Social relationships are considered to be the most important part of a human's life, due to the modern age we live in where Internet and social networking sites are part of our everyday life and it is an easy access, researchers believed that social networking sites would negatively impact people's relationships and feared that virtual communication would replace face-to-face interactions and deteriorate social bonds (Pettijohn, LaPiene & Horting, 2012). Bargh & McKenna (2004) have supported the idea that social networking sites and Internet is another method of keeping people connected and to remain close relationships with family and friends. Howard et al. (2001) (as cited by Bargh & McKenna, 2004) concluded that Internet allows people to stay in touch with family and friends, and also expand their social networks. Social networking sites such as Facebook allows us to add friends, keep track of their status, photos and interests, we can also "like" their statuses, photos and activities. While using social media can have positive benefits in terms of community engagement, enhancement of individual and collective creativity through development and sharing of artistic and musical endeavours, expansion of connections through shared interests, identity development, and developing ideas like gaming websites and videos, but it can also lead to risks like rejection by peers, exposure to inappropriate content, lack of understanding privacy issues, influences of third party advertising groups, cyberbullying, online harassment and Facebook depression (O'Keeffe & Clarke-Pearson, 2011).

According to Jacobsen and Forste (2011) electronic media use negatively impacts face-to-face interactions as people nowadays are more inclined to use emails, chats, text messaging, IM, and social networking sites, and it also influence people's social interactions. Jacobsen & Forste (2011) also added that electronic media use among university students can have both positive and negative consequences. University students can be distracted from their academic success and at the same time they facilitate social interaction and the development of social

networking sites (Jacobsen & Forste, 2011). Wang & Liang (2011) looked at the effects of social media on college students, their research suggests social networking is affecting the students' efficiencies as well as their grades because their research indicated that college students prefer to use social media and spend many hours checking social networking sites. Social networking sites such as Facebook are designed to share information about you to others including likes, hobbies and status updates; this information could make people aware of their own limitations and shortcomings which could lower their self-esteem or this information represents selective and have a positive biased opinion of the self which might raise self-esteem (Gonzales & Hancock, 2011). Gonzales & Hancock (2011) found evidence that exposure to information presented on one's Facebook profile increases self-esteem especially when a person edits the information about themselves.

Ellison et al. (2007) found evidence that self-esteem may play a role as a moderator of the relationship between social networking site and social capital, social capital is a network of relationships among people. They suggested that people who have low self-esteem appear to benefit more from Facebook use from those with high self-esteem. Steinfield et al. (2008) looked at social capital, self-esteem and use of online social networking sites where they interviewed 18 people regarding Facebook use and Internet use, and they also measured their self-esteem and satisfaction with life. They found that self-esteem and satisfaction with life were strongly associated with social capital outcomes. Self-esteem plays a role in the relationship between the amount of Facebook use and bridging social capital, according to Steinfield et al. (2008) people with lower self-esteem gained more from their use of Facebook in terms of bridging social capital than those with higher self-esteem. Pettijohn, LaPiene and Horting (2012) looked at the relationship between active Facebook use, self-esteem based on the quality of friendships and personality on 200 undergraduate students from public universities in Ohio and South Carolina. The result showed that there was a significant positive relationship between Facebook use and

friendship contingent self-esteem but there were no significant relationships between Facebook use and personality (Pettijohn, LaPiene & Horting, 2012). According to Mehdizadeh (2010) people with low self-esteem are more likely to engage in online activities that may raise their self-esteem. Mehdizadeh (2010) looked at self-esteem on social networking site and their associations with online self-promotional content, the evidence found that people with lower self-esteem were related to greater online activity as well as some self-promotional content. This is relevant to the current study because the goal of this study is to see if there is a relationship between self-esteem with Facebook use and other online activities.

Facebook and Internet Use in Narcissism

While self-esteem may play a role on Facebook and internet use, narcissism is also looked up on how it may play a role on Facebook and internet use. Narcissism is a pervasive pattern of grandiosity, an overwhelming need for admiration and usually a complete lack of empathy toward others (Psych Central, 2014). Narcissism is associated with positive self-views of agentic traits, including intelligence, physical attractiveness and power (Mehdizadeh, 2010). There has been tremendous amount of media attention and social networking sites, social media offers a gateway for shallow relationships and emotionally detached communication. There is a growing trend of taking selfies using their smartphones that is linked to mental health conditions that focus on a person's obsession with looks (Keating, 2014). Due to the time we live in where Internet and social networking sites are an easy access to everyone where millions of people uses social networking sites such as Facebook to stay connected to people. Because of the popularity of Facebook and Twitter it offers a gateway for self-promotion via self-descriptions, vanity via photos and large number of shallow relationships, and each of these are potentially linked to narcissism (Buffardi & Campbell, 2008).

According to Riggio (2014) people who are in their 20s are three times more likely to experience a narcissistic personality disorder than those who are in their 60s because young people are more focused on achieving success, making money and personal fame. According to Buffardi and Campbell (2008) narcissism is related to a higher number of social relationships, self-promoting self-presentation, and the perception of having a large number of agentic characteristics. According to Persch (as cited by Muise, Christofides & Desmarais, 2009) Facebook causes jealousy and negatively impacts romantic and sexual relationships, and exposure to the information about the romantic partner's friends and social interactions may result in an environment that encourages jealousy (Muise et al., 2009). Alloway, Runac, Qureshi and Kemp (2014) looked at the relationships among social media use, empathy and narcissism where they looked at Facebook, as it is one of the most popular social networking site on the Internet, their findings suggests that Facebook activities such as chatting were linked to aspects of empathic concern, the photo feature on Facebook was also linked to better ability to place themselves in fictional situations, and they also indicated that certain Facebook features such as photo features were linked to narcissism. Alloway et al. (2014) also found that the relationship between narcissism and empathy was not significant for males, and for females only narcissism was related to personal distress. Mehdizadeh (2010) looked at how narcissism and self-esteem shows on social networking sites such as Facebook, 100 university students were recruited and they have to respond to the Rosenberg Self-Esteem and the NPI-16 subclinical narcissism. The participants were added to Facebook to have their pages coded, the participants' page was coded for the extent to which they are self-promoting. The "About Me" section, profile picture, first 20 pictures on the "View Photos of Me" section, the "Notes" section, and their status updates. Mehdizadeh (2010) found evidence that there is a positive correlation between individuals who scored higher on the NPI-16 subclinical narcissism scale, the number of times Facebook was checked per day and the time spent on Facebook. Mendelson and Papacharissi (2010) looked at

narcissism in college students by using series of their pictures, by analysing the college students' photos but their findings suggests that the series of photos that were taken does not represent narcissism instead the photos represent a strategic representation of a social group and social life in college.

Buffardi and Campbell (2008) looked how narcissism manifested on a social networking site, the result of their study showed that narcissism was not found to be related of a person's self-description on their web page. However, according to Buffardi and Campbell (2008) narcissism is positively related to self-promoting information about the self. Sedikides et al. (2004) looked at how self-esteem can be accounted for the relation between narcissism and psychological health. The participants were measured their self-esteem, narcissism, depression, loneliness and satisfaction with life. The experimenters were using Rosenberg's self-esteem questionnaire, the narcissistic personality inventory questionnaire, the Centre for Epidemiological Studies Depression Scale and the loneliness scale. They also use emotional and social loneliness scale, satisfaction with life scale and affect balance scale. Their evidence showed that self-esteem mediates the relation between normal narcissism and psychological health, according to Sedikides et al. (2004) the self-esteem component of narcissism is responsible for its positive relations with the outcome of psychological health. Kaser & Ryan (1996) (as cited by Foster, Campbell & Twenge, 2003) pointed out that narcissist are more motivated by extrinsic desires than by intrinsic desires, and narcissist tend to be an extravert (Bradlee & Emmons, 1992 (as cited by Foster, Campbell & Twenge, 2003)), socially bold (Emmons, 1984 (as cited by Foster, Campbell & Twenge, 2003)) and less socially anxious. Foster, Campbell & Twenge (2003) looked at the relationship between narcissism, age, ethnicity, world region and gender. Their study showed that narcissism declines in older participants and in gender, males are more narcissistic than females. Ethnic groups differ in narcissism scale, Black and Hispanic participants scored higher on authority, superiority, entitlement, self-sufficiency

and vanity, than White and Asian participants (Foster, Campbell & Twenge, 2003). For the result for world region the narcissistic scale result were somewhat less consistent with participants from more individualistic countries were reported high in narcissism (Foster, Campbell & Twenge, 2003). This is relevant to the current study because the goal of this study is to see if there is a relationship between narcissism with Facebook use and other online activities.

Facebook and Internet Use in Social Anxiety

Self-esteem and narcissism may play a role on Facebook and internet use, social anxiety is also looked up on how it may play a role on Facebook and internet use. Social networking sites have become extremely popular for users to connect, express themselves and share information (Viswanath et al., 2009). Social media changed the way people interacts, social networking sites such as Facebook helps us to stay connected to friends even the ones that we rarely see in person and today due to the popularity of smartphones and the development of “apps,” Facebook, Twitter and other social networking sites is now portable and you can use it on the go. Viswanath et al. (2009) looked at how pairs of users in a social network interact, and they examine how different patterns affect the overall structure of the activity network. They found that only 30% of paired users interact consistently on Facebook from one month to the next. McCord, Rodebaugh & Levinson (2014) looked at the relationships between social anxiety, anxiety on Facebook and Facebook use, they hypothesise that people with high social anxiety would be less frequent in using Facebook than people with low social anxiety and they also predicted that people with high social anxiety would report higher anxiety on Facebook than those with low social anxiety. The findings suggest that social anxiety was positively correlated with anxiety experienced during Facebook use, but they found no correlation between people with high social anxiety would predict higher anxiety on Facebook. McCord, Rodebaugh & Levinson (2014) pointed out that people with high social anxiety use Facebook more frequently than those with low social anxiety.

Fernandez, Levinson and Rodebaugh (2012) looked at social anxiety and internet use, they suggested that people with high social anxiety may try and hide their anxiety through online interactions. They conducted a study where they measured the participants' anxiety using the Social Interaction Anxiety Scale. The participants have to complete the questionnaires and log into their Facebook account and save their Facebook profile in the computer. The coders rate the participants' social anxiety level whether these ratings correlated with the participants' own self-reported social anxiety level. The findings suggested that social anxiety was not significantly correlated to the amount of time using Facebook. They also found out that people with higher social anxiety had fewer Facebook friends. Internet and social networking sites can also be beneficial to individuals who have social anxiety disorder, social networking sites can help people with social anxiety to interact more with other people online (Levinson & Rodebaugh, 2012). Erwin et al. (2004) looked at how to understand the psychological characteristics of socially anxious individuals who seek information about social anxiety disorder and its treatments on the Internet, the participants were recruited via Internet where they responded to an Internet-based survey which is linked to the website of an anxiety specialty clinic. Erwin et al. (2004) found that people with social anxiety disorder who responded to the Internet-based survey were more likely to make an assumption of the different types of social anxiety disorder than those who had actually presented for treatment in the clinic, and also the people who responded to the Internet-based survey rated themselves as experiencing more severe social anxiety than those who had presented for treatment in the clinic. According to Erwin et al. (2004) Internet usage can have benefits for people who are socially anxious, and according to socially anxious Internet users they get social support from Internet interactions. In addition, spending more time on the Internet was associated with perceiving stronger social support and encouragement online and it helps confidence to increase and new friendships in face-to-face interactions but it can also have weaker face-to-face social bonds (Erwin et al., 2004). This is relevant to the current study

because the goal of this study is to see if there is a relationship between social anxiety with Facebook use and other online activities.

According to Back et al. (2010) people do not use their online social networking profile to promote an idealized virtual identity, instead they use social networking sites for expressing and communicating real personality. Facebook and other social networking site can provide an opportunity to make connections with people with similar interests and goals. Tyler (2002) agreed that with the invention of the Internet, people have easy access to other people and they feel better connected and more strongly connected by others which leads to happiness, engagement in families, organizations, communities and society. Tyler (2002) also pointed out that electronic communication may lead to weaker social ties because people have few reasons to leave their homes and actually interact face to face with other people.

Current Study

The goal of this current study is to examine self-esteem, narcissism and social anxiety and how they correlate to the amount of time spent on Facebook and any other online activities. Previous research has not examined the relationship between self-esteem, narcissism and social anxiety with the overall internet use. Social networking sites are extremely popular and are still growing popularity. There are number of popular social networking sites on the Internet but in this current study Facebook is chosen, as Facebook is one of the most popular social networking sites and it is most commonly used. In the current study the link between self-esteem and use of Facebook and the Internet will be examined, also the link between social anxiety and the use of Facebook and the Internet will also be examined, and in addition, the link between narcissism and the use of Facebook and the Internet will also be examined. The amount of time that is spent on Facebook and other online activities are the predictors of self-esteem, social anxiety and narcissism. There are six hypotheses in this study:

- Hypothesis 1: It is hypothesised that there will be a positive relationship between self-esteem and the amount of time spent on Facebook
- Hypothesis 2: It is hypothesised that there will be a positive relationship between self-esteem and the amount of time spent on other online activities
- Hypothesis 3: It is hypothesised that there will be a positive relationship between narcissism and the amount of time spent on Facebook
- Hypothesis 4: It is hypothesised that there will be a positive relationship between narcissism and the amount of time spent on other online activities.
- Hypothesis 5: It is hypothesised that there will be a positive relationship between social-anxiety and overall self-consciousness, and the amount of time spent on Facebook
- Hypothesis 6: It is hypothesised that there will be a positive relationship between social-anxiety and overall self-consciousness, and the amount of time spent on other online activities.

METHODOLOGY

In these section participants, design of the study, materials and how they are measured are mentioned. The participants are college or university students within Ireland and overseas. The design of the current study is a correlational design. The materials that are used in this current study are the ICT scale, Facebook Intensity Scale, Rosenberg Self-Esteem Scale, NPI-16 subclinical narcissism scale, and the Self-Consciousness Scale-Revised. The procedure is how the current study is being done. Ethics and Data Analysis are also mentioned in the method section.

1. Participants

The type of sampling being used to employ participants is snowball sampling. There are 75 people who participated in the current study but only 69 participants who did most of the survey. The participation of the current study is voluntary and can leave anytime without completing the questionnaires, and the participants will be protected through anonymity. The people who participated are college or university students, the majority of the college or university participants are within Ireland (58%), 9% are from Austria, 1% is from India, another 1% is from Iceland, 26% of the participants are from the Philippines, and 3% of the participants are from the United States. The participants were selected by approaching them in person and on Facebook, and asked them for contacts that might be interested in participating in the current study by doing the questionnaires. The participants in this study participated in their own free will if they do not feel comfortable of the questions asked they can leave anytime.

2. Design

The current study is a correlational design because we are examining the relationship between two variables. The predictor variables are the amount of time people use Facebook on their computers or smartphones, and the amount of time people do other activities online, and the criterion variables are social anxiety, self-esteem and narcissism.

3. Materials

ICT items and scale (Corcoran, 2013; see appendix 2) measures the hours spent online on weekdays and weekends. The ICT scale has nineteen questions designed to measure individuals' amount of time spent online on weekdays and weekends. Example questions are "Do you own a Smartphone," "Post information about yourself or others on websites (e.g., Facebook, blogs, forums, etc.)," and "Surf the net." The participants have to indicate "yes" or "no" in questions 1, 3 and 4, in question 2 they have to indicate how often they use their phone in college hours on a five point Likert scale with "never" to "always." Questions five to 19 the participants have to indicate whether they done the following activities during the last three months by answering on a five point Likert scale with "never," "once or twice," "about once a month," "about once a week" and "(almost) daily." The ICT scale has high reliability with a Cronbach's alpha of .82 (Corcoran, 2013).

The Facebook Intensity Scale (Ellison, Steinfield & Lampe, 2007; see appendix 3) measures Facebook usage including, how often they use Facebook, how emotionally connected the individuals are to Facebook, and how well Facebook was integrated into individuals' daily activities. Facebook Intensity Scale included the amount of Facebook friends the individuals' have and the amount of time spent on Facebook per day. Facebook Intensity Scale has eight questions designed to measure individuals' daily activities and emotional connection with Facebook. Example questions are "Facebook is part of my everyday activity," "Facebook has become part of my daily routine" and "I would be sorry if Facebook shut down." The

participants answered the first six questions on a five point Likert scale with “strongly disagree,” “disagree,” “agree nor disagree,” “agree” and “strongly agree,” questions seven and eight was a closed-ended questions for example on question seven the amount of Facebook friends “10 or less, 11–100, 101–251, 300–400, more than 400.” The scale has high reliability with Cronbach’s alpha of .83 (Pettijohn, LaPiene & Horting, 2012).

The Rosenberg Self-Esteem Scale (Rosenberg, 1965; see appendix 4) is a widely used self-esteem measure. The Rosenberg self-esteem Scale measures people’s self-esteem by asking the respondents about their current feelings. Rosenberg Self-Esteem Scale has ten questions designed to measure individuals’ current feelings about themselves. Example questions are “On the whole, I am satisfied with myself,” “I feel I do not have much to be proud of” and “I take a positive attitude toward myself.” The participants have to indicate how strongly they agree or disagree with each statements. They must rate all ten questions and it is a four point Likert scale with “strongly agree,” “agree,” “disagree” and “strongly disagree.” The Self-Esteem Scale has high reliability with Cronbach’s alpha of .88 (Greenberger, Chen, Dmitrieva & Farruggia, 2003).

NPI – 16 Subclinical Narcissism (Ames, Rose & Anderson, 2013; see appendix 5) is a short measure of subclinical narcissism. NPI – 16 measures narcissism, behaviour and consequences. NPI – 16 has 16 statements. The example statements are “I really like to be the centre of attention,” “I am no better or no worse than most people” and “Everybody likes to hear my stories.” The participants have to read each statement and choose one that they most identify with, and if they identify with both statements they have to choose one that they think is the most important. NPI – 16 was found to have a Cronbach’s alpha of .72 (Ames, Rose, & Anderson, 2006).

Self-Consciousness Scale – Revised (SCS – R; Scheier & Carver, 2013; see appendix 6) was designed to measure both private and public self-consciousness, and it also measures social

anxiety. Private self-consciousness is to measure one's inner self and feelings. Public self-consciousness is to measure awareness to the self as it is viewed by others. This kind of self-consciousness can result in self-monitoring and social anxiety. The SCS – R has 22 questions designed to measure one's both private and public self-consciousness, and social anxiety. The SCS – R have three subscales; private self-consciousness, public self-consciousness and social anxiety. Example questions are "I'm always trying to figure myself out" (Private), "I'm concerned about my style of doing things" (Public) and "It takes me time to get over my shyness in new situations" (Social Anxiety). The participants have to indicate whether each statement is like them. They must rate all twenty-two questions in a four point Likert scale with "a lot like me," "somewhat like me," "a little like me" and "not like me at all." The SCS – R has high reliability with the Cronbach's alpha for private self-consciousness was found to be .75, for public self-consciousness it was .84 and for social anxiety .79 (Scheier & Carver, 2013).

4. Procedure

The participants were recruited via social media and by approaching them in person. The responses from college or university students were obtained through an online survey using Kwik Surveys, an online survey tool. The survey included five questionnaires; the ICT scales, the Facebook Intensity scale, the Rosenberg Self-Esteem scale, the NPI – 16 Subclinical Narcissism and the SCS – R. The participants had answered the survey that takes no more than 20 minutes. The participants answered the questionnaires in their own time as it is an online survey. Before the participants answered the survey, the participants were informed of the purpose of the study. By informing them that the purpose of the study is looking at online activity, personal characteristics and how participants feel about themselves, and their feelings about social situations. And that the participation is completely anonymous and the data will not be shared by anyone other than the researcher.

5. Ethics

The study was approved by the Dublin Business School ethics committee. The information sheet (see appendix 1) was handed to the participants before they answer the survey to emphasize that the participation was entirely voluntary, and that they were free to leave anytime. The participants have the right to withdraw if they feel uncomfortable with the questions asked in the survey. Support services were offered at the end after the participants finished the survey (see appendix 7).

6. Data Analysis

Following the descriptive results, a Pearson's r correlation will be carried out between the predictor variable and the criterion variable, for example, between hours spent on Facebook and self-esteem to see if there is a significant relationship between a predictor and a criterion variable.

The participants, the design of the study, the materials that have been used in the current study, the procedure, ethics and the data analysis are mentioned in this section. For the result section, descriptive statistics will be run and a Pearson's r correlation will also be carried out for inferential statistics.

RESULTS

In this section, descriptive statistics and Pearson's r correlation are used. Pearson's r correlation is used because in this current study the variables are robust enough to handle non-normal distributions. Pearson's r correlation allows us to examine how one predictor variable related to one criterion variable.

The six hypotheses are:

1. Hypothesis 1: It is hypothesised that there will be a positive relationship between self-esteem and the amount of time spent on Facebook
2. Hypothesis 2: It is hypothesised that there will be a positive relationship between self-esteem and the amount of time spent on other online activities
3. Hypothesis 3: It is hypothesised that there will be a positive relationship between narcissism and the amount of time spent on Facebook
4. Hypothesis 4: It is hypothesised that there will be a positive relationship between narcissism and the amount of time spent on other online activities.
5. Hypothesis 5: It is hypothesised that there will be a positive relationship between social-anxiety and overall self-consciousness, and the amount of time spent on Facebook
6. Hypothesis 6: It is hypothesised that there will be a positive relationship between social-anxiety and overall self-consciousness, and the amount of time spent on other online activities.

Descriptive Statistics

Descriptive statistics was run with the five variables to see the mean and standard deviation of the participants' response of each variable.

A measure of hours spent on online activities on weekdays and weekends was created by taking the mean of the participants' response on overall internet use ($M = 3.37$, $SD = .37$). (See table 1). Majority of the participants (69%) uses the computer every day, 81% of the participants communicate with their friends via online chats, majority of the participants (37%) post information online about themselves once a week, and 21% of the participants post information about themselves everyday online. Majority of the participants (55%) never played online games, only 9% of the participants play online games every day, and 81% of the participants browse the internet and only 3% browse the internet once or twice in the last three months.

A measure of Facebook usage was created by taking the mean of the participants' response of the amount of time spent on Facebook ($M = 4.03$, $SD = .67$). (See table 1). Majority (47%) of the participants have more than 400 friends and only 2% of the participants have 10 or less friends, and majority of the participants (34%) spent more than 3 hours on Facebook and 22% only spent 30 minutes or less on Facebook per day (See figure 1).

Facebook use per day

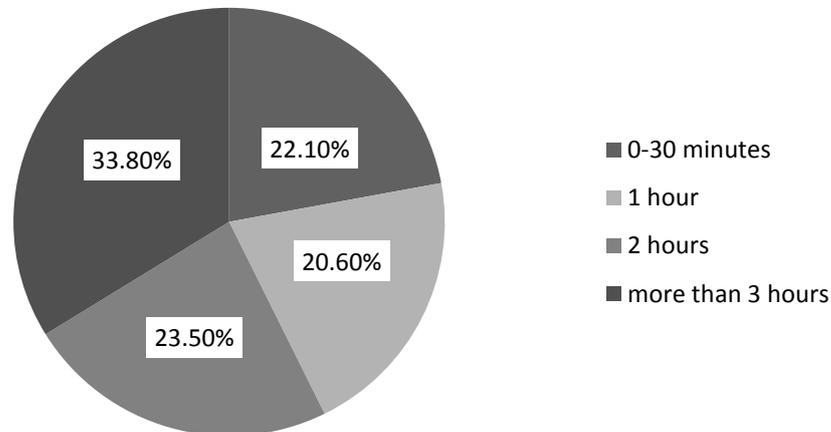


Figure 1. This shows percentages of people spending the amount of time spent on Facebook per day.

The descriptive statistics of the participants' self-esteem was created by taking the mean of the participants' response about their current feelings about self ($M = 2.18$, $SD = .5$). (See table 1). On the satisfaction of self, 51% of the participants agreed, 20% strongly agreed, 23% disagreed and 6% of the participants strongly disagreed. Majority of the participants (67%) agreed that they have a number of good qualities, 24% strongly agreed, 6% disagreed and only 3% of the participants strongly disagreed.

The descriptive statistics of the participants' narcissism level was created by taking the mean of the participants' response about their narcissism levels, behaviour and consequences ($M = 1.5$, $SD = .11$). (See table 1). Majority of the participants (55%) are uncomfortable to be the centre of attention and 45% of the participants answered that they are comfortable to be the centre of

attention (See figure 2). Most of the participants (78%) prefer to blend in with the crowd and 22% of the participants like to be the centre of attention.

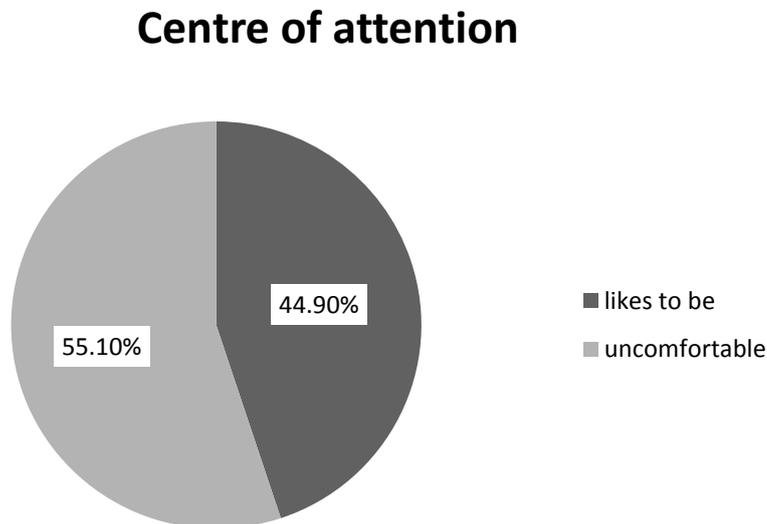


Figure 2. This shows percentages of people who like to be the centre of attention and who are uncomfortable to be the centre of attention.

A measure of self-consciousness was created by taking the mean of the participants' response about both their private and public self-consciousness as well as social anxiety ($M = 2.08$, $SD = .45$). (See table 1). The SCS-R social anxiety subscale has a higher mean (2.29 , $SD = .72$) compared to private self-consciousness ($M = 2.05$, $SD = .49$) and to public self-consciousness ($M = 1.95$, $SD = .6$). (See table 1).

Table 1. Mean and Standard deviation of Facebook use, Internet use, Self-Esteem, Narcissism, Self-Consciousness, Private and Public self-consciousness, and Social Anxiety.

Variables	Mean	Standard Deviation
Internet Use	3.37	.37
Facebook Use	4.03	.67
Self-Esteem	2.18	.5
Narcissism	1.5	.11
Self-Consciousness	2.08	.45
<i>Self-Consciousness sub-scale</i>		
<i>Private Self-Consciousness</i>	2.05	.49
<i>Public Self-Consciousness</i>	1.95	.6
<i>Social Anxiety</i>	2.29	.72

Inferential Statistics

For inferential statistics, Pearson's r correlation is used because in this current study the variables are robust enough to handle non-normal distributions. Pearson's r correlation allows us to examine how one predictor variable related to one criterion variable.

To test Hypothesis 1 that the amount of time spent on Facebook would predict positive relationship with self-esteem, a Pearson's r correlation was run. The mean scores for Facebook use was 4.03 ($SD = .67$) and for the Rosenberg self-esteem was 2.18 ($SD = .5$). A Pearson correlation coefficient found that there was no significant relationship between the amount of time spent on Facebook and self-esteem ($r(68) = 0.02, p = .443$).

To test Hypothesis 2 that the amount of time spent on other online activities would predict positive relationship with self-esteem, a Pearson's r correlation was run. The mean scores for overall internet use was 3.37 ($SD = .37$) and for self-esteem was 2.18 ($SD = .5$). A Pearson correlation coefficient found that there was no significant relationship between the amount of time spent on other online activities and self-esteem ($r(62) = 0.04, p = .366$).

To test Hypothesis 3 that the amount of time spent on Facebook would predict positive relationship with narcissism, a Pearson's r correlation was run. The mean scores for Facebook use was 4.03 ($SD = .67$) and for narcissism was 1.5 ($SD = .11$). A Pearson correlation coefficient found that there was no significant relationship between the amount of time spent on Facebook and narcissism ($r(68) = 0.12, p = .162$).

To test Hypothesis 4 that the amount of time spent on other online activities would predict positive relationship with narcissism, a Pearson's r correlation was run. The mean scores for overall internet use was 3.37 ($SD = .37$) and for narcissism was 1.5 ($SD = .11$). A Pearson correlation coefficient found that there was no significant relationship between the amount of time spent on other online activities and narcissism ($r(62) = -0.17, p = .095$).

To test Hypothesis 5 that the amount of time spent on Facebook would predict positive relationship with social anxiety and overall self-consciousness, a Pearson's r correlation was run. The mean scores for Facebook use was 4.03 ($SD = .67$), for social anxiety was 2.29 ($SD = .72$), and for the overall self-consciousness was 2.08 ($SD = .45$). A Pearson correlation coefficient

found that there was no significant relationship between the amount of time spent on Facebook and social anxiety ($r(62) = -0.11, p = .206$) and there was no significant relationship between amount of time spent on Facebook and overall self-consciousness ($r(62) = -0.2, p = .058$).

To test Hypothesis 6 that the amount of time spent on other online activities would predict positive relationship with social anxiety and overall self-consciousness, a Pearson's r correlation was run. The mean scores for overall internet use was 3.37 (SD = .37), for social anxiety was 2.29 (SD = .72), and for overall self-consciousness was 2.08 (SD = .45). A Pearson correlation coefficient found that there was no significant relationship between the amount of time spent on other online activities and social anxiety ($r(58) = -0.14, p = .140$) and there was no significant relationship between amount of time spent on other online activities and overall self-consciousness ($r(58) = -0.18, p = .090$).

Table 2. Correlations of Internet and Facebook use, Self-Esteem, Narcissism, Self-Consciousness and Social Anxiety

	<i>Internet use</i>	<i>Facebook use</i>	<i>Self-Esteem</i>	<i>Narcissism</i>	<i>Self-Consciousness (SCS)</i>	<i>Social Anxiety</i>
<i>Internet Use</i>						
<i>Facebook Use</i>	.295*					
<i>Self-Esteem</i>	.044	.018				
<i>Narcissism</i>	-.68	.121	-.096			
<i>Self-Consciousness (SCS)</i>	-.178*	-.202	-.444**	-.008		
<i>Social Anxiety</i>	-.144	-.106	-.458**	.051	.755**	

*Note. *Correlation is significant at the 0.05 level (1-tailed) ** Correlation is significant at the 0.01 level (1-tailed)*

DISCUSSION

The aim of this current study is to examine self-esteem, narcissism and social anxiety and how they correlate to the amount of time spent on Facebook and any other online activities. A Pearson's r correlation was run to see if the data analysis supports all of the six hypotheses. The findings did not support first hypothesis, it is found that there was no significant relationship between the amount of time spent on Facebook and self-esteem. In the 2nd hypothesis, the findings found that there was no significant relationship between the amount of time spent on other online activities and self-esteem. The findings did not support the 3rd hypothesis, there was no significant relationship between Facebook use and narcissism. In the 4th hypothesis, the findings found that there was no significant relationship between the amount of time spent on other online activities and narcissism. The findings did not support the 5th hypothesis, there was no significant relationship between Facebook use and social anxiety, and there was also no significant between Facebook use and the overall self-consciousness. The findings did not support the 6th hypothesis, there was no significant association between the amount of time on other online activities and social anxiety and, there was also no significant relationship between the amount of time spent on other online activities and the overall self-consciousness.

The findings in the current study did not support the previous studies. The findings of the current study did not support the first and the second hypotheses, and it also did not support the previous studies on how Facebook and overall Internet use affects self-esteem. Steinfield et al.'s (2008) study found that self-esteem are associated with networks of friends, and that self-esteem plays a role in the relationship with the amount of time spent on Facebook and to stay connected with friends. The findings of the current study could differ from Steinfield et al.'s (2008) study is because they interviewed people regarding Facebook use and internet use rather than using questionnaires to know the amount of time they use Facebook and other online activities.

Pettijohn, LaPiene and Horting's (2012) study also found that there was a significant positive relationship between Facebook use and friendship contingent self-esteem. The findings of the current study could differ from Pettijohn et al.'s (2012) study because the numbers of participants they have are 200, and the current study's participants 75 people responded to the survey and only 69 of the participants answered most of the questions from the survey.

The findings of the current study also did not support the third and fourth hypotheses on how Facebook use and overall Internet use correlates with narcissism. Mehdizadeh's (2010) study found that there is a positive correlation between individuals who score higher on the NPI-16 subclinical narcissism scale, the number of times Facebook was checked per day and the amount of time spent on Facebook. The findings of the current study could differ from Mehdizadeh's (2010) study because not only did the participants respond to the questionnaires that was given, the participants' Facebook page was also coded. In Alloway, Runac, Qureshi and Kemp's (2014) study they found that narcissism and empathy was not significant for males but for females narcissism was significant in relation to personal distress. The findings of the current study could differ from Alloway et al.'s (2014) study it is because the males and females were categorized whereas in the current study the males and females were not placed into groups.

The fifth and sixth hypotheses on how Facebook use and overall internet use correlates with social anxiety were not supported by the findings of the current study. However, in Fernandez, Levinson and Rodebaugh's (2012) study found that social anxiety was not significantly correlated to the amount of time on Facebook and they also found out that people with higher social anxiety had fewer friends on Facebook. The findings of the current study is the same as Fernandez et al.'s (2012) study, maybe it is because internet and social networking sites do have some benefits to the individuals who have social anxiety, social networking sites are proven to be beneficial because it can help individuals who suffer social anxiety to interact more with other people online (Levinson & Rodebaugh, 2012). Erwin et al. (2004) further

supported that internet use can have benefits to people who have social anxiety, and according to Erwin et al. (2004) internet users who are socially anxious can get social support through from online interactions.

The overall findings of the current study have implications that may be useful to the literature. From the findings of the current study showed that there was no significant relationship between the amount of time spent on Facebook on self-esteem, narcissism and social anxiety. Also, there was no significant relationship between the amount of time spent on other online activities on self-esteem, narcissism and social anxiety. While Facebook use and overall internet use was not associated with self-esteem, narcissism levels and social anxiety in the participants from the current study, it might be useful in the literature that Facebook use and overall internet use may be a predictor for the individual's self-esteem, narcissism and social anxiety but it was not enough to predict the participants' self-esteem, narcissism and social anxiety regarding the amount of time they use Facebook, other social media and overall internet use. Facebook Intensity scale and the ICT scale should be implicated in the literature so that for future research, the researcher do not have to train people to code and rate the participants' Facebook page like from the previous studies. The Facebook Intensity scale and the ICT scale is objective and are self-reported so the participants have to answer it by themselves. The next implication is that the questionnaire SCS-R was designed to measure private self-consciousness, public self-consciousness, as well as social-anxiety. It measures an individual's inner self and feelings, awareness to self as it is viewed by others, and social anxiety. The results from this current study suggested that there was no significant relationship between Facebook usage and social anxiety, as well as the overall self-consciousness. There was also no significant relationship between the amount of time spent on other online activities and social anxiety as well as the overall self-consciousness. This suggests that the SCS-R not only measures social anxiety but it also measures private and public self-consciousness. So it might be useful to not

only focus on the social anxiety alone but also both the private self-consciousness and the public self-consciousness.

The overall findings of the current study could also have implications for society. The findings of the current study showed that there was no significant relationship between Facebook use on self-esteem, narcissism and social anxiety. Also, there was no significant relationship between the amount of time spent on other online activities on self-esteem, narcissism and social anxiety. The findings of the current study could have implications to society. Social networking sites could have benefits towards people who are dealing with social anxiety. According to Erwin et al., (2004) the internet was associated with perceiving stronger social support and encouragement online and it helps increase people's confidence and form new friendships but it can also have a weaker face-to-face interactions. Tyler (2002) also supported that the internet can have benefits to people, because people can stay connected with their friends even if they are miles away from each other. This leads to people to be strongly connected with each other which lead to happiness engagement in families, engagement in organizations, engagements in communities and society (Tyler, 2002).

Strengths and Limitations

The strengths the current study is that the college or university students who participated in this study are not exclusively within Ireland but also from other countries. The participation was cross cultural. Not only the college or university students within Ireland are measured but also the college or university students overseas are being measured. The second strength of the study is the Facebook Intensity Scale and the ICT scale are used, it is objective and it is self-reported, so future research do not have train people to rate the participants' Facebook page. The limitations of the current study are the sample size of the college or university students who

participated were small, only 69 of the participants did most of the questionnaires and the recruitment of the participants was through Facebook as it was an online survey so this may affect the results of the current study. Another limitation in the study is that there were no demographic questions that have been asked to the participants, the participants were not put into groups they were all mixed, so male and female college or university students were not compared to each other.

Future Research

While college or university students were the primary group in the current study that were being investigated on Facebook use and overall internet use, for future research maybe it can go beyond college or university populations. Future research should include demographic questions such as age and sex of the participants. For future research, the participants should be put into groups, for example, males and females should be compared to see if there will be a difference between them when it comes to the amount of time spent on Facebook and other online activities on self-esteem, narcissism and social anxiety.

Conclusion

In conclusion, there were no correlation found between self-esteem, narcissism and social anxiety with Facebook use and overall internet use. The findings from the previous studies were significant regarding Facebook and internet use between self-esteem and narcissism. Except for social anxiety as social networking sites have been proven to be beneficial for people who have social anxiety, because they are encouraged to interact more with other people online (Levinson & Rodebaugh, 2012). One of the strengths of the study was not only the college students within

Ireland were measured but also from other countries. One of the limitations of the study was that there were no demographic questions that have been asked. Future research should investigate beyond college populations and demographic questions, such as age and sex, should be included to see if there will be a difference between them.

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APPENDICES

Appendix 1. Information sheet

A Study of Online Activity, Personal Characteristics, Feelings about Self and Feelings about Social Situations

My name is Mary Abarado and I am a final year student at Dublin Business School. As part of my final year project I am looking at online activity, personal characteristics and how participants feel about themselves, and their feelings about social situations.

The questionnaires should no longer take more than 20 minutes to complete.

The participation is voluntary. If you have an issue with questions asked you do not have to answer them. You do not have to complete the questionnaire and can leave anytime. Your anonymity will be protected and your name will not appear in any thesis or publication. The data will not be shared with anyone other than the researcher. The questionnaires will be stored securely in both paper and electronic formats. By completing this questionnaire you are giving your consent.

If you have any questions regarding this study, please contact:

Mary Abarado

xxxx@mydbs.ie

Lucie Corcoran (Supervisor)

xxxx@dbs.ie

Appendix 2. ICT scale

Tick the box that describes your mobile phone and Internet activity

	Yes	No
1. Do you own a Smartphone?	<input type="checkbox"/>	<input type="checkbox"/>

	Never	Rarely	Some- times	Often	Always
2. If you own a phone, how often do you use it during school hours?	<input type="checkbox"/>				

	Yes	No
3. Do you have a social network account, e.g., Facebook?	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No
4. Do you use the Internet at home?	<input type="checkbox"/>	<input type="checkbox"/>

5. How often have you done the following activities during the last three months?

	Never	Once or twice	About once a month	About once a week	(Almost) daily
Use the computer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Make phone calls (i.e., Landline, mobile phone)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Receive or send text messages with a mobile phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Receive or send MMS (i.e., pictures or videos) with a mobile phone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Receive or send emails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communicate with others via chat (e.g., MSN, Facebook, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post information about yourself or others on websites (e.g., Facebook, blogs, forums, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Read others' news (e.g., Facebook, blogs, forums, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use a webcam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Watch or download pictures or videos from the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Download music from the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Play computer or video games	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Play online games (e.g., multiplayer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Look for information on the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Surf the net

*Appendix 3. Facebook Intensity Scale***Please indicate whether you strongly agree or strongly disagree with each statement.****1=strongly disagree 2=disagree 3=agree nor disagree 4=agree 5=strongly agree**

1. Facebook is part of my everyday activity.	
2. I am proud to tell people I'm on Facebook.	
3. Facebook has become part of my daily routine.	
4. I feel out of touch when I haven't logged onto Facebook for a while.	
5. I feel I am part of the Facebook community.	
6. I would be sorry if Facebook shut down.	

7. Approximately how many TOTAL Facebook friends do you have?

10 or less

11-50

51-100

101-150

151-200

201-250

251-300

301-400

More than 400

8. In the past week, on average, approximately how much time PER DAY have you spent actively using Facebook?

0-30 minutes

1 hour

2 hours

More than 3 hours

Appendix 4. Rosenberg Self-Esteem Scale

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement by circling the right answer.

- | | | | | |
|---------------------------------------------------------|----------------|-------|----------|-------------------|
| 1. On the whole, I am satisfied with myself. | Strongly Agree | Agree | Disagree | Strongly Disagree |
| 2. At times I think I am no good at all. | Strongly Agree | Agree | Disagree | Strongly Disagree |
| 3. I feel that I have a number of good qualities. | Strongly Agree | Agree | Disagree | Strongly Disagree |
| 4. I am able to do things as well as most other people. | Strongly Agree | Agree | Disagree | Strongly Disagree |
| 5. I feel I do not have much to be proud of. | Strongly Agree | Agree | Disagree | Strongly Disagree |

6. I certainly feel useless at times.

Strongly Agree Agree Disagree Strongly Disagree

7. I feel that I'm a person of worth, at least on an equal plane with others.

Strongly Agree Agree Disagree Strongly Disagree

8. I wish I could have more respect for myself.

Strongly Agree Agree Disagree Strongly Disagree

9. All in all, I am inclined to feel that I am a failure.

Strongly Agree Agree Disagree Strongly Disagree

10. I take a positive attitude toward myself.

Strongly Agree Agree Disagree Strongly Disagree

Appendix 5. NPI-16 Subclinical Narcissism

Read each pair of statements below and place an "X" by the one that comes closest to describing your feelings and beliefs about yourself. You may feel that neither statement describes you well, but pick the one that comes closest. Please complete all pairs

1. I really like to be the centre (center) of attention
 It makes me uncomfortable to be the centre (center) of attention
2. I am no better or no worse than most people
 I think I am a special person
3. Everybody likes to hear my stories
 Sometimes I tell good stories
4. I usually get the respect that I deserve
 I insist upon getting the respect that is due me

5. ___ I don't mind following orders
___ I like having authority over people
6. ___ I am going to be a great person
___ I hope I am going to be successful
7. ___ People sometimes believe what I tell them
___ I can make anybody believe anything I want them to
8. ___ I expect a great deal from other people
___ I like to do things for other people
9. ___ I like to be the centre of attention
___ I prefer to blend in with the crowd
10. ___ I am much like everybody else
___ I am an extraordinary person
11. ___ I always know what I am doing
___ Sometimes I am not sure of what I am doing
12. ___ I don't like it when I find myself manipulating people
___ I find it easy to manipulate people
13. ___ Being an authority doesn't mean that much to me
___ People always seem to recognize my authority
14. ___ I know that I am good because everybody keeps telling me so
___ When people compliment me I sometimes get embarrassed
15. ___ I try not to be a show off
___ I am apt to show off if I get the chance
16. ___ I am more capable than other people
___ There is a lot that I can learn from other people

Appendix 6. Self-Consciousness Scale

Please answer the following questions about yourself by writing the number in the box. For each of the statements, indicate how much statement is like you by using the following scale:

3 = a lot like me

2 = somewhat like me

1 = a little like me

0 = not like me at all

Please be honest as you can throughout, and try not to let your responses to one question influence your response to other questions. There are no right or wrong answers.

1. I am trying to figure myself out	
2. I'm concerned about my style of doing things	
3. It takes me time to get over my shyness in new situations	
4. I think about myself a lot	
5. I care a lot about how I present myself to others	
6. I often daydream about myself	
7. It's hard for me to work when someone is watching me	
8. I never take a hard look at myself	
9. I get embarrassed easily	
10. I'm self-conscious about the way I look	
11. It's easy for me to talk to strangers	
12. I generally pay attention to my inner feelings	
13. I usually worry about making a good impression	
14. I'm constantly thinking about my reasons for doing things	
15. I feel nervous when I speak in front of a group	
16. Before I leave my house, I check how I look	
17. I sometimes step back (in my mind) in order to examine myself from a distance	
18. I'm concerned about what other people think of me	
19. I'm quick to notice changes in my mood	
20. I'm usually aware of my appearance	

21. I know the way my mind works when I work through a problem	
22. Large groups make me nervous	

Appendix 7. Support Services

If you are affected by these questions there are support services to help you.



www.addictioncounsellors.ie

84 Upper Drumcondra Road,
Drumcondra,
Dublin 9

Phone: (01) 7979187

Email: info@iaaac.net



www.iacp.ie

Irish Association for
Counselling and
Psychotherapy

IACP, First Floor, Marina
House, 11-13 Clarence
Street, Dun Laoghaire, Co
Dublin

Phone: (01) 2303536

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