

**Online social networking
& Wellbeing in adolescents**

Niall Bourke

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Supervisor Dr. John Hyland

Head of Department: Dr. S. Eccles

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Department of Psychology

DBS School of Arts



Dublin Business School
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Student no. 1573721

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ABSTRACT

The Internet and online behavior has become such a prevalent aspect of modern society. Questions being asked are (a) does use & size of the social network Facebook in adolescents have a relationship to social anxiety, loneliness and self-esteem. (b) Does the amount of time on the Internet have an impact on wellbeing in adolescents? Participants: adolescent students (n=204), 117 Female & 87 Male. Methods: Two schools took part in the study. A teacher in each school distributed the questionnaire to their classes. This data was then collected and analyzed. Results: 73% use social networking sites frequently. A weak but significant correlation was found for higher Facebook intensity and lower levels of loneliness. Time spent online was found to be positively related to social anxiety and inversely related to self-esteem. A gender difference was identified; effect sizes were greater for females.

Keywords: Social Networking sites, Internet, Adolescents, Wellbeing.

INTRODUCTION

Online Behavior; an introduction

Internet use and online behaviors are an important and interesting area to investigate, as the Internet has become such a prevalent aspect of modern society. There is a wealth of research that has developed alongside the ever-growing online world. Reports state less than 1% of Europeans had the Internet in 1990 and now about 71.5% have access to the Internet (Internet world statistics, 2012). In 2012 there were 3,122,358 Irish Internet users (Approx. 66.8% of the population), according to Internet World Stats. (Internet World Stats, October 2012). The last census in Ireland reports that in a 3-month period 78% of 16-29 year olds (youngest age bracket measured) used the Internet every day (central statistics office, 2012). This is compared to the 2009 PEW study where 93% of American adolescents are on the Internet with 73% having a Social Networking Site (SNS) profile (Lenhart, Madden, Macgill, Manager, & Smith, 2007). It has become clear that adolescents spend a large amount of time online, often communicating with peers (Reich, Subrahmanyam, & Espinoza, 2012). Peer relationships can have a huge influence on the wellbeing of adolescents and the quality of these relationships is a big factor in predicting wellbeing (Greenberg, Siegel, Leitch, 1983). As a vulnerable group the wellbeing of adolescents is extremely important. With these numbers online, potential relationships with online behavior and wellbeing should be investigated. It will be interesting to see if similar relationships exist among adolescents than that found in older samples.

Contrasting viewpoints

The two main views emerging from previous research are somewhat contradictory. While one holds that Internet use has positive social consequences, the other holds that it may have negative consequences. A meta-analysis of Internet use has determined that there are overall detrimental effects to wellbeing, however there is a small effect size (Huang, 2010). This study gives a good overview of the types of studies that have been previously conducted. There may be an issue with the reliability, as many studies aren't measuring the same effects. The Internet has been a quick developing entity and this meta-analysis does not show the change in results over time.

It would be incorrect to say that many older studies on Internet usage reached wrong conclusions, and made false predictions (Valkenburg & Peter 2007). Possibly the development of the Internet over time and the changing nature of online activities may have differing effects on wellbeing. One thing that is now agreed upon, is that it is likely influenced by the type of Internet use, types of social relations, and characteristics of the user (Pollet, Roberts, & Dunbar, 2011). The type of Internet use and social relations has been a changing trend over time. Further research is required to extend current views and theories. The current study aims to add to the existing literature.

Trend of online behaviors

The development of the Internet has seen a change in number of users and online activity over time. This change in type of Internet activity is a possible explanation for

the differing results on wellbeing of users, other than the once believed ‘detrimental’ effects. Research in the late 1990s with adolescents supported the view that Internet use had negative effects on wellbeing, for example (Kraut et al., 1998), though this view has changed. With a greater amount of the population online, and less segregation of offline and online contacts, this trend of interaction has changed from primarily with strangers to communication with members of existing offline social networks (J. J. Gross & John, 2003; Valkenburg, Peter, & Schouten, 2006). SNS are now used to reinforce relationships with existing contacts (Subrahmanyam & Greenfield, 2008). Prior to SNS, early Internet users often engaged with public chat rooms and Multi-user Dungeons (MUD) (Kraut et al., 1998; Valkenburg & Peter, 2009). This primarily involved interacting with strangers online. This was argued to have a detrimental effect on adolescents, while other research showed that it supported the social compensation theory (McKenna, Green, & Gleason, 2002).

With the increase in availability of the Internet, social networking sites (SNS) have emerged as a platform to connect with other offline contacts and these changes lead to the need for further research and clarity. Because of this visible change over time it is important to highlight the type of online activity as a factor when measuring Internet use in relation to wellbeing. The current study investigates trends in online behavior as part of the demographics in order to potentially identify other areas of research interest.

Social Networking Sites

This trend of social networking sites (SNS) has been an increasing area of research. In particular, Facebook CEO Mark Zuckerberg announced on the 5th

October 2012 that it had surpassed one billion users. Roughly 2,183,760 of these users are in Ireland, as of 31st December 2012 (Internet World Statistics, 2012). This is just under half the Irish population. The current study is using the Facebook Intensity Scale (Steinfeld, Ellison, & Lampe, 2008) along with various measures of wellbeing to see if there are significant relationships.

It has been shown that while some have an extensive online network the average user doesn't show a huge quantity of Facebook friends (Reich et al., 2012). An analysis of over 7 million users shows that the average friend count is 190 (Ugander, Karrer, Backstrom, Marlow, & Alto, 2011). While sometimes slightly exaggerated, it may correlate to offline networks. This is also supported by another relatively recent study on 18-19 year old students; it was shown that offline social networks have a big impact on the SNS that were used. Usually signing up for the site that already existing offline social networks are using rather than searching for new contacts (Hargittai, 2007). This finding supports some of the theories that have been identified including the Rich-get-Richer Hypothesis also known as Social Enhancement (Zywica & Danowski, 2008). This theory states that these SNS are used to enhance the quality of existing relationships.

A curvilinear relationship has previously been found in relation to number of Facebook friends and perceived social support (Kim & Lee, 2011). A possible explanation of this result is that we have only limited cognitive capacity to maintain social relationships (Dunbar, 2004). So while online networks increase this may not

translate into real world social support. These results are discussed further in relation to the main theories.

Wellbeing (Self-esteem, Loneliness & Social Anxiety)

The HSE in the beginning of the 3rd annual child and adolescent mental health service report described good mental health as being necessary for healthy development. (HSE, 2011). The current study looks at factors of online behavior that may affect wellbeing in adolescents. When a discrepancy between desired and actual social contact exists the feelings of loneliness occur (Goossens et al., 2009). A study of 1,090 Irish adolescents indicated that adolescence is a time when a peak in loneliness occurs (De Roiste, 2000). The explanation for this surrounds puberty, education and a change in sociocultural norms. An older study has found that adolescents have mostly attributed loneliness to boredom and they copped by listening to music or watching TV (Moore & Schultz Jr., 1983). This highlights the relevance of exploring loneliness in the current study and its potential relationship with Internet use. De Roiste's (2000) study was carried out before the Internet and SNS became as prevalent in adolescents lives as it is today. It will be interesting to see if the current study identifies any potential relationship between loneliness and online activity.

Social anxiety is common among adolescents and it may affect coping with study and a concern about body weight (Mehtalia & Vankar, 2004). If it reaches the criteria for an anxiety disorder it is often comorbid with depression (Mehtalia & Vankar, 2004; Stein, Fuetsch & Mu, 2001). Research has found that increased social anxiety is associated with negative experience among peers in boys (E. A. Storch, Masia-

Warner, Crisp, & Klein, 2005). An increased social avoidance has also been found to be associated with loneliness (E. Storch & Brassard, 2003). It has been reported that many factors of adolescents' social interaction uniquely affect levels of distress and feelings of social anxiety (A. M. La Greca & Harrison, 2005). The Internet is a relatively new platform where social relations are formed and maintained. Following previous research, this could mean it may influence levels of social anxiety (Subrahmanyam & Greenfield, 2008). The current study looks at levels of social anxiety compared with time spent online, size of online network and Facebook Intensity.

One study that looked directly at the type of feedback received on SNS profiles of adolescents found that positive feedback correlated positively with self-esteem and negative feedback was associated with lower self-esteem (Valkenburg & Peter, 2009). It has also been found in a longitudinal study that those who have lower self-esteem have more to gain through their use of Facebook than those who have higher self-esteem (Steinfeld et al., 2008). The authors conclude that online use of Facebook helps individuals with lower levels of self-esteem overcome barriers of interaction with others and helps improve social capital. Time spent on SNS has previously been reported not to be related to Self-esteem and social anxiety in a study that looked at misrepresentation of personal profiles (Harman, Hansen, Cochran, & Lindsey, 2005). This study found that adolescents who misrepresented themselves online, particularly those who made themselves appear older were more likely to suffer from low self-esteem and poor social skills. Valkenburg et al., (2006), also supports this finding; they found that online frequency had an indirect affect on wellbeing, which was mediated by the nature of feedback on the social networking profiles. Exploring

individual profiles is beyond the scope of the current study, but it is worth noting that previous findings show no link between the quantity of time spent online and wellbeing. A contrasting finding in support of Internet usage found a direct relation in reduction of loneliness and increased self-esteem and perceived social support (Shaw & Gant, 2002). This potential relationship with time spent online and wellbeing is investigated in the current study.

Theories

There have been several theories developed on Internet related wellbeing. For example the Social Compensation Hypothesis and the Social Enhancement Hypothesis (Zywica & Danowski, 2008), social support (Manago, Taylor, & Greenfield, 2012) and the Internet-enhanced self-disclosure hypothesis (McKenna et al., 2002). These are primarily concerned with online interaction. The Internet-enhanced self-disclosure hypothesis suggests that online communication of a personal nature with those from an offline network increases the quality of the relationship and this in turn leads to higher wellbeing. This emphasizes self-disclosure as apposed to general communication as being a mediator, improving wellbeing (McKenna et al., 2002). The authors claim that there is a lot of support for this hypothesis from other research e.g. (Kraut et al., 1998), which has been looked at previously. However this may be a confirmation bias. While there is plenty of research on the Internet, very few studies have determined the processes of Internet use (Valkenburg & Peter 2007). This 'self disclosure' and determining the quality of relationships may be difficult to accurately measure.

Following from the assumption of this theory that higher quality relationships lead to higher levels of wellbeing, Social capacity theory suggests that we are restricted by

the quantity of close personal relationships we can maintain (Dunbar, 2004). From this it could be hypothesized that having a larger online social network has an influence on the quality of those connections. This may possibly affect levels of wellbeing. This is factored in the current study. Previous studies have looked at this in terms of perceived social support (Manago et al., 2012), which showed that a larger network size was related to higher levels of life satisfaction and perceive social support. While other studies have shown a curvilinear relationship (Kim & Lee, 2011). The current study will investigate the size of the online network in relation to time spent online and measures of wellbeing.

With a particular focus on social anxiety, the two theories that are often compared are the Social Compensation Hypothesis and the Social Enhancement Hypothesis (Zywica & Danowski, 2008). Much of the research supports the Social Enhancement Hypothesis also know as the Rich-get-Richer hypothesis (RGR); however this may not be to the exclusion of the Social compensation hypothesis. It has been shown that those who are highly active online, (Specifically on social networks) are also highly active on other mediums and face to face (Lenhart et al., 2007). This supports the RGR hypothesis. This RGR has been supported through a positive correlation between time spent online and extraversion (Anderson, Fagan, Woodnutt, & Chamorro-Premuzic, 2012). Other research has shown that extraverts who also spend a lot of time online have higher levels of wellbeing and greater community involvement. This is compared with introverts who spend long periods of time online reporting significantly lower levels of wellbeing (Kraut et al., 2002). While research has also demonstrated that those who are shy face to face find it easier expressing themselves online (McKenna et al., 2002). This research was carried out with a focus

chat rooms and not SNS. The Social Compensation Hypothesis is also supported by (Mesch & Talmud, 2006). These findings might suggest that there may be an overall benefit to Internet use for the majority of people, with the type of Internet use being a moderator.

Opposed to a general sample, adolescents are specifically in search for intimacy and emotional connection (Reich et al., 2012). SNS may provide an additional way to fulfill these needs instead of detracting from them. Communication and information technology theory states that SNS enhances our communication through audiovisual as opposed to just audio on other devices it. It also allows for more open communication to many instead of a dyadic one. This aid to communication can reduce loneliness in its users, as social anxiety and shyness are less of a barrier with online communication (Lou, Yan, Nickerson, & McMorris, 2012). The current study will be looking at intensity of Facebook use and measures of loneliness along with other factors of wellbeing.

Why has Facebook and other social networking sites been such a huge success? (Dunbar, 2004), looking at gossip and the human need to know the activities of others, compared us to primates and grooming. This Evolutionary perspective perhaps is a potential theory to the success of these SNS. The Internet has become such a huge social phenomena that it develops a need to be involved with it, to have input or leave a personal mark, or at the very least to own a personal profile. Bandura's (1989) Social cognitive theory may also be an explanation of this. For some it has become almost impossible to remain part of the pack and not have a presence. According to

Dunbar this can be linked back to primate behavior of grooming. For apes this is a way of communicating and networking with others in the tribe. This allows them to know what is going on and to be able to place themselves in the hierarchy of the group (Dunbar, 2004). Social networks have given us access to larger networks, while also allowing us to communicate with closer family and friends. Celebrities may be considered our social Alphas, and we can now be part of an extensive network knowing what is going on in their daily lives through micro blogs such as Twitter.

From this view point humans can be seen as predominately social in nature, which led to a successful adaption of the Internet to perform social functions. This could be one of the reasons that have led to the huge success of SNS. The Evolutionary perspective has developed interest in science. However it is left open to post hoc ergo propter hoc and questionable testing especially within Psychology (Confer et al., 2010). While this perspective has research limitations, it provides interesting explanations and can stimulate new research (Brinkmann, 2011; Confer et al., 2010; Ramachandran, 2012).

Other theories have looked at the antecedence of Internet use; the need to belong, and social identity have been found as important factors. It is proposed that the social support (lowering loneliness, raising self esteem) gained from use, drives people to use the Internet (Gangadharbatla, 2010). While the current study cannot determine the antecedents of Internet use, it may provide further information on the levels of loneliness and self-esteem on high and low internet users.

Research Question

With the Internet being a fast growing entity the need for up to date research is important. This study aims to add to the previous literature and develop insight into potential areas for future investigation. It does this by identifying online behaviors, such as amount of time spent online, activities partaken online, and Facebook intensity. It does this while looking at measures of Loneliness, Self-esteem and Social Anxiety. The results from these measures may add supporting evidence to existing theories on Internet related wellbeing and social anxiety. While many related studies focus on college students or adults, this focuses on adolescents. Adolescence is considered a time of growth and development (Greenberg, Siegel & Leitch, 1983). It is therefore important to improve the understanding of adolescent behavior and wellbeing. It is also possible that adolescent use and adult use is different. Contradictory evidence on the effects of the Internet has arisen throughout previous literature. This study looks specifically at the relationship with Facebook intensity and multiple factors of wellbeing. SNS are a relatively new phenomena and research is still young in relation to it. Many of the studies on Internet use and wellbeing have looked at Instant Messaging (e.g. Gross, Juvonen, & Gable, 2002) and chat rooms, (e.g. (McKenna et al., 2002) where there is a different dynamic of interaction.

The current study does not look at problematic use of the Internet or SNS, which effects everyday functioning. Rather its focus is on the potential relationships with time spent online, the use of SNS and wellbeing. As with other behaviors overuse and dependence may potentially be considered an addiction, which is something that researchers are exploring. However the current study aims to look at the overall

wellbeing of adolescents for general use. Excluding outliers from analysis will do this. The results from this study may be beneficial. A better understanding of the potential relationships that may exist will allow for better education of potential benefits or risks associated with online activities such as SNS and particularly with spending a large amount of time online.

Hypothesis

It is hypothesized that a significant relationship exists between wellbeing in adolescents and the amount of time spent on the Internet.

It is hypothesized that Facebook intensity, and amount of Facebook friends has a significant relationship with wellbeing in adolescents.

METHODS

Participants

A total of 204 adolescents participated in this study, (male = 87, female = 117). The ages ranged from 12-16 (Mean =13.66, SD=1.131). As a vulnerable population it is important that adolescents are kept from harm (Schwartz, 2012). This study was of low risk, and was passed by a committee for ethical approval. The researcher indicated that they were in good standing by signing a statutory declaration, before proceeding to recruit a sample. Permission was sought through schools to administer this questionnaire to students. Schools were contacted from information provided on an online directory, inviting them to partake in this study. The two schools that elected to participate were both non-fee paying public schools in the suburbs of county Dublin. The participants were also given an information sheet explaining their right to refuse participation. Participants were not compensated for participation. The teachers who facilitated distribution of the questionnaire and collection of the data were thanked with a token gesture.

Design

This study is a cross-sectional study design that was measured at one point in time. The dependent variables are time spent online, amount of Facebook friends and Facebook intensity. These variables are measuring some of the online behaviors of the sample. The independent variables measured are factors of wellbeing. These include Loneliness, Social anxiety and Self-esteem.

Materials/Apparatus

The measures being used include a demographic sheet, which outlines Internet usage (social networks, browsing, research etc.). This measure aims to find out the amount of perceived time online and the activities that are most engaged with while online. SNS have previously been shown to be a major activity online (Lenhart et al., 2007). As such the Facebook intensity scale (Steinfeld et al., 2008) has been included. Multiple factors of wellbeing were looked at using the Social Anxiety Scale for Adolescents (SAS-A) (La Greca & Lopez, 1998), along with Rosenberg Self-Esteem Scale (Rosenberg, 1965). Loneliness was measured using the UCLA Loneliness scale (Russell, 1996). These were completed using a self-administered pen and paper questionnaire. Each of these measures included a description on how they should be answered. For the measures that included Likert scales a key was provided for each of the responses.

The demographics page included questions on age and gender. This measure also aimed to gather information pertaining to the amount of time spent online and preference for online activities (e.g. Blogs, Facebook, Shopping). This was adapted from the young peoples Internet usage questionnaire by the Child Exploitation and Online Protection center. Some items were removed that were not directly relevant to the current study.

The Rosenberg Self-esteem scale (Rosenberg, 1965) has become a widely used standard in relation to measures of wellbeing. Previous findings support that it has concurrent validity with other measures and is suitable for adolescents (Hagborg, 1993; Robins, Hendin, & Trzesniewski, 2001). The Rosenberg Self-esteem scale has also shown good internal consistency ranging from ($\alpha = .8$ to $.84$). It is a ten-item self-report measure that includes reverse scoring. It is measured on a four point Likert scale that ranges from 'strongly agree' to 'strongly disagree'. Half the items are positive and half are negative. An example of an item is "On the whole, I am satisfied with myself" participants then had to rate how strongly this statement related to them.

The Revised UCLA loneliness scale is a 20-item self-report measure that includes 10 reverse scores. This aims to measure subjective feelings of loneliness. There is a high internal consistency for this measure ($\alpha = .89$ to $.94$). Test-retest conditions have indicated for a period of a year there is a high reliability ($r = .73$). There is also support for construct validity as it strongly correlates with other measures of loneliness (Russell, 1996). Participants have to rate on a 4-point Likert scale how often they feel each of the statements is true for them. An example of a statement is 'I have a lot in common with the people around me'. Responses range from 1-never, 2-rarely, 3-sometimes and 4-often.

The Social Anxiety scale for adolescents (La Greca & Lopez, 1998) is a 22-item measure that contains 18 descriptive statements and 4 filler questions. The measure also includes statements with reverse scoring. Responses are recorded based on how true each statement is to the participant. This is done on a 5-point Likert scale

from 1 'not at all' to 5 'all the time'. An example of a statement asked is 'I felt shy around people I don't know'. The scoring of this measure includes three subscales; Fear of negative evaluation (FNE), Social avoidance & distress General (SAD-G) and Social avoidance & distress in new situations (SAD-N). These three subscales are totaled to get an overall score of social anxiety. The higher the score for the scale reflects greater levels of anxiety. Significant correlations have been found between the SAS-A and other measures of social anxiety & phobia, supporting concurrent validity (Ingles, La Greca, Marzo, Garcia-Lopez, & Garcia-Fernandez, 2010). It is also argued by the authors that this measure could also be included in determining a clinical diagnosis of social anxiety. Olivares, (2005) found Internal consistency measured Cronbach's alpha at .91 for the total score as cited by (Ingles et al., 2010).

The Facebook intensity Scale (Steinfeld et al., 2008) is used to determine attachment to the social networking site that goes beyond duration of use. These included 6 items on a 5-point Likert scale that ranged from 1-strongly agree to 5-strongly disagree. An example of one of the items asked is 'would you be disappointed if Facebook shut down'. Two open-ended questions asking for approximate amount of amount of friends and time spent on the site was also included. The log of the two open-ended questions needed to be calculated before summing the mean of each of the items. This measure has good internal consistency ($\alpha = .83$) (Steinfeld et al., 2008).

An open-ended question was included at the end of the questionnaire to get participant comments. This was not directly analyzed for results, but rather to enrich discussion on findings with direct feedback.

Procedure

Two schools participated in which a teacher from each school provided the self-administered pen and paper questionnaire to the students. This took part at the beginning of normal class time. The teachers instructed the students that participation was voluntary and that they did not have to fill in the questionnaire. The questionnaires included an information sheet highlighting that it was completely anonymous and that they may choose not to participate, or may withdraw at any time. This sheet was also accompanied with a detailed list of mental health resource providers. The survey took about 10 minutes to complete. The data was collected and analyzed using SPSS version 18.

Statistical analysis

Descriptive statistics were formulated to identify the age distribution and gender of the sample. The amount of time they spend online and preference for online activities was also analyzed. Tests of internal consistency were carried out on the measures using Cronbach's Alpha, these findings correlated with previous tests of reliability. The measures were then looked at for normal distribution. The data needed to be corrected for extreme outliers.

Inferential statistics used included a preliminary Pearson's correlation, which looked at possible relationships between the measures of wellbeing, amount of time spent online and Facebook intensity. Multiple regressions were then carried out. These regressions were then carried out again including a split in gender.

RESULTS

Descriptive Statistics

A total of 204 adolescents took part in this study (male $n=87$, 42.6%, female $n=117$, 57.4%). The age of participants ranged from 12-16 (Mean = 13.66, $SD=1.131$). This age range more accurately represents the junior cycle of secondary school in Ireland. The mean amount of time spent online per day was 176.68 minutes (just under 3 hours). Females on average reported spending more time online (194.49) than males (154.09). 73% of participants reported Social networking sites were a frequently engaged with activity while online. The average time spent on Facebook in minutes was (Mean =150, $SD=172.431$). The average number of friends was calculated ($N=440.19$, $SD=469.14$); this was after outliers were removed. The preference of online activities can be seen in figure 1 below. The percentages below indicate participants' preference for these activities while online.

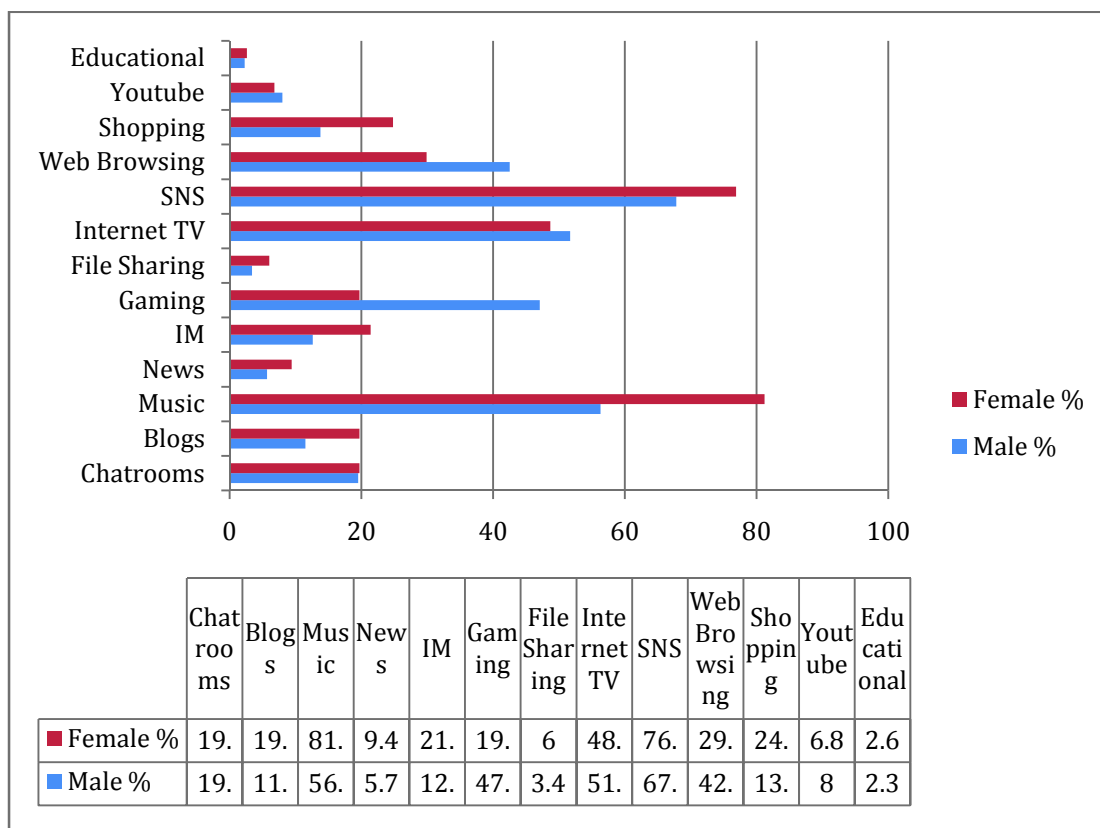


Figure 1. Preference of online activities

This item for online activities also included an open-ended response for other. Responses for this included Twitter (n=4, 2%), Porn (n=1, 0.5%), Fanfiction (n=1, 0.5%), Tumblr (n=1, 0.5%). Cronbach's alpha was carried out to check the reliability of each of the measures used. Facebook Total ($\alpha = .714$), SAS-A ($\alpha = .894$), Self-esteem ($\alpha = .831$), UCLA Loneliness ($\alpha = .945$). Overall good internal consistency was found for the measures being used.

The data was analyzed for any outliers or extreme scores. The means and Standard deviations were then calculated for each of the measures. These are displayed on Table 1.

Table 1:

Variables	N	Range	Mean	SD
Loneliness	145	26.0	52.179	4.935
SAS-A	175	66.0	42.35	13.648
Self Esteem	174	25.0	25.7	4.64
FB Friends	165	3662	440.19	49.14
FB Time	150	1000	150.08 (min)	172.431
FB - Total	133	23.15	18.02	4.98

These are all scale level data, the higher the reported figure, the greater the amount of Loneliness, social anxiety etc. Some of the measures of wellbeing can be considered high medium or low through cut-off scores.

Inferential statistics

Pearson correlations and multiple Regressions were carried out. Table 2 below shows the correlations found in the current study. In the multiple regressions factors of wellbeing were looked at as independent variables. These were measured with Time spent online, amount of Facebook friends and Facebook intensity as dependent variables.

Table 2: Correlation table

	Approx. time online	FB friends	FB time	FB total	Self- esteem	Social anxiety	Loneliness
Approx. time online							
FB friends	.199*						
FB time	.417**	.199*					
FB total	-.227*	-.156	-.320**				
Self-esteem	-.393**	.048	-.196	.037			
Social anxiety	.290**	-.183*	.086	-.037	-.615**		
Loneliness	.088	.16	.17	-.185	-.259	.249**	

*p significant at .05 level

**p significant at .01 level

The strongest relationship that can be seen in table 2. is an inversely proportionate relationship with self-esteem and social anxiety. The amount of time spent on Facebook also has a moderate positive relationship with amount of time spent online and a weak positive relationship with amount of Facebook friends. There were several correlations between time spent online and factors of wellbeing. These effects were stronger in females than males. Over all, multiple factors of wellbeing (Loneliness, Social anxiety & Self-esteem) predicted a relatively small amount of variance for these dependent variables. Individual factors were better predictors of time spent online, amount of Facebook friends and attachment to Facebook.

1st Hypothesis

A multiple regression was used to test whether Self-esteem, Loneliness and Social anxiety were predictors of time spent online. The results of the regression indicated that three predictors explained 14% of the variance ($R^2 = .138$, $F(3, 119) = 7.48$, $p < .001$). It was found that Self-esteem significantly predicted approximate time spent online ($\beta = -.393$, $p < .001$, 95% CI = -14.88 and -4.5). The other measures of wellbeing did not reach significant levels.

The data was then split by gender to examine possible differences for the amount of time spent online based on measures of wellbeing. A multiple regression was used to test whether Self-esteem, Loneliness and Social anxiety were predictors of time spent online split by gender. The results of the regression indicated that three predictors explained 19% of the variance for females ($R^2 = .194$, $F(3, 74) = 7.16$, $p < .001$). It was found that Self-Esteem significantly predicted approximate time spent online for females ($\beta = .47$, $p < .001$, 95% CI = -19.3 and -5.65). The other measures of wellbeing did not reach significant levels for females. There were no significant results predicting time spent online based on measures of wellbeing in male adolescents.

2nd Hypothesis

The second multiple regression was used to test whether Self-esteem, Loneliness and Social anxiety were predictors of amount of Facebook friends. The results of the regression indicated that three predictors explained 8% of the variance

($R^2 = .083$, $F(3, 103) = 4.19$, $p = .008$). It was found that Social anxiety significantly predicted approximate amount of Facebook friends ($\beta = -.281$, $p = .017$, 95% CI = -20.5 and -2.09). As did loneliness ($\beta = .256$, $p = .011$, 95% CI = 6.29 and 46.99). Self-Esteem wasn't a significant predictor.

With the data split by gender a multiple regression was carried out to look at whether Self-esteem, social anxiety and loneliness predicted the amount of Facebook Friends. The results of the regression indicated no significant results for males. For females 17% of the variance was explained by the three predictor variables ($R^2 = .169$, $F(3, 66) = 5.67$, $p = .002$). It was found that Loneliness significantly predicted the amount of Facebook friends ($\beta = .358$, $p = .003$, CI = 15.97 and 73.2) as did social anxiety ($\beta = -.375$, $p = .009$, CI = -28.65 and -4.17). Self-esteem did not reach significant levels.

Multiple regression was used to test whether Self-esteem, Loneliness and Social anxiety were predictors of Facebook Intensity. The results of the regression indicated that three predictors explained 5% of the variance ($R^2 = .052$, $F(3, 91) = 2.73$, $p = .048$). It was found that Loneliness significantly predicted Facebook Intensity ($\beta = -.294$, $p = .006$, 95% CI = -.46 and -.078). The other measures of wellbeing did not reach significant levels. This is an inversely proportionate relationship indicating that loneliness decreases as attachment to Facebook increases.

A Final regression for determining if Social anxiety, Self-Esteem & Loneliness were predictors of overall Facebook intensity, split by gender was not carried out as Pearson correlations did not indicate any significant relationships.

Thematic analysis

An open-ended question was included at the end of the survey. The purpose of this question was to gain feedback and to identify any recurring themes related to the questionnaire. Through this an explanation was provided for missing data relating to amount of time spent online and on Facebook. A few participants responded stating that they had no idea how much time they spend online, because they are logged on all day on their 'smart' phones. One participant said that Facebook was great for talking to people but identified that it can be a source of cyber bullying. Another participant reported that they feel more confident talking to people on Facebook than in real life. This comment can be explained by the social compensation hypothesis (Zywica & Danowski, 2008). It may also correspond with the quantitative findings of the current study that loneliness decreases with attachment to Facebook. Other participants reported they were not aloud on Facebook by parents. Some thought this was a good questionnaire, because it made them think about there own online behaviors.

DISCUSSION

Study overview

As online social networks and the Internet are becoming part of everyday life for many people, research needs to be developed to better understand potential implications. This study set out to identify Irish adolescent wellbeing in relation to online activity and SNS use.

This research was a cross-sectional study carried out at one point in time. This is beneficial for providing descriptive statistics and identifying potential relationships. However it is limited in explanation and determining causality of relationships. The scope of the current study is limited in that it is based on self-report and it cannot confidently determine the direction of the relationships that have been found. Results of this study indicate that factors of wellbeing are directly related to time spent online meaning the null hypothesis can be rejected. These relationships are of weak to moderate size and have found to be stronger in females. Significant relationships were also found for wellbeing and network size. Less significant results were found for wellbeing and SNS intensity, which was an inversely proportionate relationship between loneliness and Facebook intensity. Some of the findings support previous research, while others disagree with previous theories. This highlights the importance of clarity and further research, as there are many inconsistent findings on the subject. These results may help guide the direction of future research.

Findings

There was a good overall response rate for the study. The age range of the participants was reflective of the junior cycle of secondary education in Ireland (Mean = 13.66, SD=1.131). Senior classes that would have included 17 & 18 year olds did not partake. This is a limitation, which is discussed in more detail later. (Mazalin & Moore, 2004) found that more adolescent males than females used the Internet and had higher social anxiety. The primary activities in this sample were gaming and chatting with strangers in chat rooms. This would have been consistent with the findings at the time but as with many recent studies the current findings indicate that the primary use is social networking sites in adolescents. Previous findings from American adolescents Lenhart et al., (2010) and the current study found a similar figure for the amount of adolescents that reported SNS as a main activity while online 73%. With such a high number of adolescents online it is important to identify reasons for SNS use. Previous findings identified that the majority of users join a SNS because their peers are online or to keep in contact with distant friends (Reich et al., 2012). This implies the primary use of SNS is to stay in contact with existing friends. The average number of friends was relatively high (Mean=440.9, SD=49.14) compared to previous research. This is also not an unexpected finding, as a trend of increasing network sizes has been identified across research (Manago et al., 2012; Steinfield et al., 2008).

The Descriptive statistics also highlighted other frequent activities while online including music, online TV and for boys gaming. These results indicate potential factors that could be accounted for in future research. SNS have become a popular

area of interest. The current study identified that online entertainment is another area that should be investigated. Almost a quarter (24.8%) of adolescent girls (mean age 13.66) enjoyed shopping online. This could be simply a changing trend in behavior, but it is possible that this may also lead to particular implications. These could include reduced face-to-face contact & higher levels of social anxiety. These implications are purely speculative and need empirical investigation.

1st Hypothesis: Levels of wellbeing will have a significant relationship with the amount of time spent online.

It was found that an inversely proportional relationship existed between amount of time spent online and Self-esteem. This relationship was looked at again using a split in gender and it was found this relationship is only associated with females, with a moderate effect size. This finding is consistent with previous research. While a significant relationship with loneliness was not found, a recent review of online behaviors indicated a link between loneliness and depression, which were associated with longer Internet use (Ahn, 2011). Older research indicated similar findings (Kraut et al., 1998) that Internet use had an overall negative impact. The same author revisited this in 2002 and changes towards positive outcomes of wellbeing were found for Internet use (Kraut et al., 2002). A possible explanation for the current finding is that more time spent engaging in online activities lowers self-esteem in female adolescents. However a causal relationship cannot be determined and this could be vice-versa. I.e. Lower self-esteem leads to a greater amount of time online. While in many studies the directional relationship with self-esteem is not established it is likely that it is the result of positive/negative feedback (Baumeister,

Campbell, Krueger, & Vohs, 2003). The authors of this study found that general levels of happiness tend to be associated with self-esteem. The current findings of lower self-esteem with Internet use could have implications for educating adolescents about excessive Internet use. The moderating factors that led to this decrease would need to be investigated in more detail and a directional relationship determined.

A more detailed analysis is required before support is given to either of the two main opposing theories. 1) That excessive Internet use can result in reduced real world social interaction and reduced wellbeing 2) socially fearful individuals have a medium through which they are confident communicating through and increased wellbeing. The first theory is supported by compulsive Internet use (PIU; (Van der Aa et al., 2009). The second is supported by a longitudinal study showing that those with low-self esteem at the beginning benefited the most from Internet use (Steinfeld et al., 2008). The current study provides support that Internet use has a relationship with wellbeing but it does not determine a direction.

Further studies have investigated moderating factors of Internet use. An indirect relationship exists with Internet use and wellbeing that is mediated by compulsive/excessive use (Van der Aa et al., 2009). Through structural equation modeling, loneliness was determined to be a result of compulsive Internet use. Introverts who were emotionally unstable were more likely to be compulsive Internet users. These personality factors are also supported by other studies. Higher levels of narcissism and low self-esteem are related to higher use and greater amount of self-presentation content (Mehdizadeh, 2010). This doesn't necessarily go against the

social compensation hypothesis that states Internet use improves social interaction. This hypothesis doesn't consider compulsive or excessive Internet use. This excessive use would reduce time spent with face-to-face contact. These risk factors could be educated to adolescents explaining the potential harmful effects of excessive amounts of time spent online, with a focus on providing alternative social options. Other issues still may exist for prolonged Internet use. Excessive amounts of time online have been shown to be associated a reduction in physical exercise, which could lead to health problems (Leeuw, 2010).

2nd Hypothesis: Wellbeing will have significant relationships with Facebook intensity and amount of Facebook friends.

As stated in the descriptive statistics, the current cohort investigated had a higher than average amount of Facebook friends compared to other research, including the overall average of 7 million users (Mean=190; Ugander et al., 2011). Valkenberg & Peter (2007) stated that boys' benefit more from online communication than that of females. The current study had findings that were inconsistent with this. In general boys wellbeing had no significant relationships in regards to amount of time spent online or use of SNS.

It was found that higher levels of loneliness and lower levels of social anxiety are related to a larger network size on Facebook. This relationship was found in females and doesn't reach significant levels in males. The increase in Facebook friends as social anxiety decreases supports the Social enhancement hypothesis

(Zywica & Danowski, 2008) and that SNS are just another medium for contacting existing members of an offline social network (Subrahmanyam & Greenfield, 2008). It is interesting that in the current study this relationship is not seen in both males and females. This gender split has not been identified in previous literature in relation to network size. In general this coincides with the gender split in which females report lower levels of wellbeing (Piccinelli & Wilkinson, 2000). One possible explanation for lower levels of social anxiety but higher levels of loneliness being linked to larger network sizes is that these extensive online networks don't result in real world social support. Previous findings have found a curvilinear relationship to network size and social support (Kim & Lee, 2011). After a certain point as the network size increases subjective reports of social support decrease. These findings related to network size supports Dunbar's (2004) social capacity theory mentioned at the beginning of this study in. This theory states we have a limited capacity to maintain relationships. This Theory however has received little empirical investigation. The current speculated explanation based on the results would need to be supported by more investigation and confidence in the direction of the relationships. The current findings explain 8% variance over all and 16.8% for females. This means that there are other possible factors that could have a larger influence on network size.

A negative relationship between overall Facebook intensity and subjective feelings of loneliness were also found. This follows findings from previous research (Burke, Marlow, & Lento, 2010; Kalpidou, Costin, & Morris, 2011). There are several possible explanations for this relationship. 1) Those who have lower levels of loneliness are more likely to engage with social media. 2) Use of social media may contribute to desired interactions and lead to lower levels of loneliness. (Burke et al.,

2010) also suggest that reinforcing distant relationships can contribute to lower levels of loneliness. They also postulate that positive feedback through these sites may contribute to greater wellbeing. Another study using structural equation modeling found similar findings, furthermore, that the direction of relationship is likely to be that increasing Facebook intensity leads to lower levels of loneliness (Lou et al., 2012). While a significant result was found, the current study shows a weak effect size and explains 6% of the variance. These results provide evidence that Facebook does not have a detrimental effect on this adolescent sample. More support would be needed to generalize the results to a larger population. These results indicate that there may possibly be a minor positive effect from Social networking sites.

These results add to previous research and provide additional support for social compensation and that SNS are a form of ‘computer mediated communication’. It also dispels some of the myths portrayed in the media about the causal relationships between Facebook and poor wellbeing. Furthermore other research has yielded contrasting evidence. This highlights the need for more research to clarify these issues.

(Cotten, 2008) suggests that new technology and improved communication through SNS & mobile phones enhances the wellbeing of college students. The author argues that communication is a vital part of maintaining relationships for social support. This finding would be expected to generalize to other samples. In contrast to this, ‘computer mediated communication’ is perceived to be less beneficial than face-to-face interaction; furthermore as the amount of time spent online increases, there is

no overall improvement to wellbeing (Schiffrin, Edelman, Falkenstern, & Stewart, 2010). If no benefit in terms of wellbeing is gained from higher Internet use there is a potential risk that a reduction from the benefits of maintaining in person relationships may occur. Testing the two opposing hypothesis, overall findings indicates that self-selection of personal information presented on an individuals profile works to enhance self-esteem (Gonzales & Hancock, 2011). This is associated to feedback. Positive feedback being associated with higher self-esteem and negative is related to lower self-esteem (Valkenburg et al., 2006).

Other non-significant findings included:

- Loneliness was not associated with time spent online.
- Self-esteem was not related with quantity of friends.
- Facebook intensity wasn't linked with self-esteem or social anxiety

Thematic analysis

The indications that some adolescents spend a large amount of time online on their mobile devices could have implications for the educational setting. This has been identified as an issue in previous research. Schools are now trying to control the problem of communication technology as a distractor, while maintaining its educational value (Subrahmanyam & Greenfield, 2008). The current study was not investigating problematic use, however there are indications that these exist through a few individuals reporting spending excessive amounts of time online. This is a

potential issue that should be investigated to determine the implications. A review of the literature has shown cross-sectional studies indicate that excessive use is often comorbid with mental health issues including affective and anxiety disorders (Weinstein & Lejoyeux, 2010).

Positive and negative aspects of Facebook were highlighted in the open response question at the end of the survey. These included identifying that cyber-bullying is a problem and that some individuals are more confident while communicating online. Both of these have been highlighted before and are the issues for research. Cyber-bullying was not investigated in the current study, but this was an issue that was independently reported by a participant. This is possibly an area that still needs investigation and empirical research so as effective interventions may be developed.

Limitations

The study was carried out using well-established measures that have shown good internal consistency. This increases the reliability of the findings; conversely self-report questionnaires come with inherent issues of reliability. Social desirability is a potential issue in the current study as participants were in their normal school environment. There may have been a lack of privacy while completing the questionnaire as participants were sitting beside each other. The completed questionnaire was also being handed up to their teacher. These are all control issues that may affect the reliability of the results. These were difficult to address due to the

constraints of the current study. While there was a good response rate, a major limitation was gaining access to a large sample of adolescents. A larger sample size and increased age range would provide more accurate results and stronger generalization to the Irish adolescent population. The current study doesn't obtain a full picture of the age range in adolescents. As a time of development, the behaviors of 13 year olds compared to 18 year olds could be very different. Future research should ensure that a larger age range be included in the study. Differences between groups could also be looked at. A larger scale study could look at the differences between adolescent, college students and random sample groups. This would give a better description of the effects of Internet and social network use.

Socio-economic status was not controlled for in the current study. Both schools that participated were both non-paying public schools. These schools were both single sex schools. A larger scale study including mixed sex schools, public and private would increase generalization. There is also a risk that as only two schools took part, the different schools could be a confounding variable for gender differences. Confidence in the direction of relationship for these variables is limited in the current study. The use of structural equation modeling could improve reliability for the directional relationship. This would improve the chances of determining a causal relationship. The use of longitudinal and experimental research could also contribute to the current literature. This has been discussed previously with research relating to individuals with low self-esteem benefiting more from Internet use (Steinfeld et al., 2008).

There is no clear explanation of the gender differences from the current study. Little has been previously reported for wellbeing differences between genders for online behaviors. This provides a starting point with previous research to develop new research questions.

Future research

Several important issues have been identified for possible future studies. Recruiting participants through the school system is the most direct way to target the desired sample. This is however met with difficulties. It was found that out of several schools invited, few schools were willing to consent to participate. Out of the schools that did give consent, they wished to administer the questionnaire themselves, as opposed to someone coming in. This may lead to certain problems in controlling the administration of the questionnaires. Another potential issue is that of social desirability, as the data is being handed up to a known teacher. This method of data collection also requires a lot of time taken out of the normal school day and cost of printing. The use of an online questionnaire could possibly be used to target the desired population. An issue with this would be that parental consent could not be guaranteed. The study is of a low risk nature as such, if ethically approved this could be a cost and time efficient method of data collection (Schwartz, 2012).

The current study for online behaviors is made up of cross-sectional research and qualitative comments, as is much of the previous research in the area (Ahn, 2011). Longitudinal and experimental data could greatly contribute to the current

research on online activity. Understanding of the effects of SNS and time spent online is limited; other research designs may help to address this issue. A strength of this study is that it highlights relationships that exist with Internet use and relationships and provides a direction in which to develop future research. However it is not without weaknesses. While many relationships were discovered, the direction of these could not accurately be determined. Furthermore, several of these may have moderating factors that cannot be accounted for. In the case of an inversely proportionate relationship between Self-esteem and Internet use in females, the current study cannot determine specific factors of Internet use that lead to lower self-esteem or if this is even the direction of the relationship. Theories of self-esteem indicate that it is related to feedback, positive-negative. This provides a beginning for investigating this further and determining what possible negative feedback is leading to this lowering self-esteem. If the relationship is the other direction an investigation could be carried out as to what factors lead to higher Internet use for individuals with lower self-esteem.

Due to time constraints longitudinal research or a follow up survey wasn't feasible. Future research should aim to look at the effects of Internet and social network use over time. This will increase the confidence in determining the directions of relationships and how they change over time. In addition, other research has been able to monitor specific activities on participants Facebook profiles (Valkenburg et al., 2006) and measure the exact amount of time spent online. These would provide a more reliable measure than self-report. It would also provide a clearer picture of the specific interactions taking place on the social networking site.

Conclusion

The Internet has clearly become an integrated part of daily living. All participants (Mean age = 13.66) used the Internet every day with 73% reporting social networking sites being one of their main activities. Results from the current study indicate that significant relationships do exist between factors of wellbeing, Internet use and SNS in adolescence. These were also found to exist particularly within the female population. The effect size wasn't strikingly large for any of the conditions but they do indicate directions that may be taken for future research. One of the findings highlighted that a larger network size was related to lower social anxiety, but also higher levels of loneliness. This may show that being more sociable and having more friends doesn't necessarily relate to subjective feelings of social support. Higher levels of Internet use were also associated with low self-esteem in female adolescents. The nature of these relationships needs to be investigated further. Similar findings did not exist for time on Facebook or attachment to the site. A small decline in loneliness was associated with increased attachment. In line with other recent research, the reports of Facebook causing detrimental effects within adolescence by the media appear to be inaccurate. Results do show that potential negative relationships exist for certain types of Internet use; these however have shown to be relatively weak. These potential risk factors could be highlighted to teenagers, showing that excessive use or seeking loads of online friends may not be beneficial to their wellbeing.

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APPENDIX A: INFORMATION SHEET

PLEASE KEEP THIS PAGE FOR YOUR INFORMATION

My name is Niall Bourke and I am currently conducting a research project as part of my undergraduate Psychology degree, under the supervision of Dr. John Hyland. You are being invited to participate in my study. Please take the time to read this leaflet.

STUDY TITLE: Social networking and wellbeing in adolescents

OBJECTIVES OF THIS STUDY: The aim of this study is to gather data from an adolescent sample on Internet usage and potential relationships with wellbeing. The results of this study will add to the collective literature on wellbeing and Internet use in adolescents. The results may also provide relevant information on the online behaviors of adolescents.

RIGHT TO WITHDRAW: You can withdraw from the study at any point prior to returning your questionnaire. However, once the questionnaire has been returned it is not possible to withdraw your data, as it will be anonymous. Your participation is entirely voluntary. If you agree to participate, you will be requested to fill out an anonymous self-report questionnaire on your use of the Internet and measures of wellbeing, which include social anxiety, self-esteem and loneliness.

ARE THERE ANY BENEFITS FOR PARTICIPATION: While there is no direct benefit from participation, studies may make important contributions to the collective knowledge surrounding the social effects of the Internet. As such, any findings may be presented at national or international conferences and may be submitted for publication in peer-reviewed journals. No individual will be identified, as the data is completely anonymous. No incentives are being offered for participation.

ARE THERE ANY RISKS INVOLVED: The risks associated with participation are minimal as any inconvenience in taking part will be limited. However there are potentially distressing questions in relation to self-esteem, loneliness, and social anxiety. If you feel you have become distressed there is a list of resources that has been included. If at any stage during the questionnaire you become distressed please remember that you are free to withdraw from the questionnaire.

WHAT HAPPENS IF I DO NOT AGREE TO PARTICIPATE? Your choice to participate or not will not result in any effects.

CONFIDENTIALITY: All individual information collected, as part of the study will remain anonymous. All participants are asked not to put their name anywhere on the questionnaire. Hard copies will be kept in a private filing cabinet, for a period of up to one year after the thesis has been examined. The electronic raw data may be kept for a period of up to five years.

CONTACT DETAILS: If you have any further questions about the research you can contact:

Resources for looking after mental health

- Headstrong (The National Centre for Youth Mental Health)
<http://www.headstrong.ie/content/journey-so-far-0>
- Pieta House
<http://www.pieta.ie/>
- Childline: 1800 666 666
<http://www.childline.ie/>
- Aware Helpline: **1890 303 302**
<http://www.aware.ie/>
- Samaritans 1850 60 90 90
- 1Life 1800 24 7 100

APPENDIX B: Questionnaire

Age:.....

Sex (Please circle) :

Male

Female

1.) How often do you use the internet?

Every day More than Once a Once a Less than
 once a week week month once a month

2.) If you use it every day how many hours do you use it for?

Less than 1 – 2 2 – 3 3 – 4 More than
 1 hour a day hours hours hours 4 hours a day

Approximate time spent on the internet: _____

3.) What do you like spending your time on the most when you are online?

Chat Rooms Blogs Music News
 (e.g. iTunes)

Instant Messenger Gaming File sharing Internet
 (MSN, Yahoo) (e.g. Limewire) TV

Social Networking Web Shopping Other (Please specify)
 (Bebo, Myspace) Browsing

This is not a test, there are no right or wrong answers. Please answer each as honestly as you can.

Use numbers to show HOW MUCH YOU FEEL something is true for you:

- 1 = Not at all
- 2 = Hardly ever
- 3 = Sometimes
- 4 = Most of the time
- 5 = All the time

Now let's try these sentences first. How much does each describe how you feel?

- a. I like summer vacation.... 1 2 3 4 5
 - b. I like to eat spinach..... 1 2 3 4 5
-
1. I worry about doing something new in front of others..... 1 2 3 4 5
 2. I like to do things with my friends..... 1 2 3 4 5
 3. I worry about being teased..... 1 2 3 4 5
 4. I feel shy around people don't know..... 1 2 3 4 5
 5. I only talk to people I know really well..... 1 2 3 4 5
 6. I feel that peers talk about me behind my back..... 1 2 3 4 5
 7. I like to read..... 1 2 3 4 5
 8. I worry about what others think of me..... 1 2 3 4 5
 9. I'm afraid that others will not like me..... 1 2 3 4 5
 10. I get nervous when I talk to peers I don't know very well..... 1 2 3 4 5
 11. I like to play sports..... 1 2 3 4 5
 12. I worry about what others say about me..... 1 2 3 4 5
 13. I get nervous when I meet new people..... 1 2 3 4 5
 14. I worry that others don't like me..... 1 2 3 4 5
 15. I'm quiet when I'm with a group of people..... 1 2 3 4 5
 16. I like to do things by myself..... 1 2 3 4 5
 17. I feel that other kids make fun of me..... 1 2 3 4 5
 18. If I get into an argument I worry that the other person will not like me 1 2 3 4 5
 19. I'm afraid to invite others to do things with me because they might
say no..... 1 2 3 4 5
 20. I feel nervous when I'm around certain people..... 1 2 3 4 5
 21. I feel shy even with peers I know well..... 1 2 3 4 5
 22. It's hard for me to ask others to do things with me..... 1 2 3 4 5

	Statement	Never	Rarely	Sometimes	Often
1	I feel in tune with the people around me	1	2	3	4
2	I lack companionship	1	2	3	4
3	There is no one I can turn to	1	2	3	4
4	I do not feel alone	1	2	3	4
5	I feel part of a group of friends	1	2	3	4
6	I have a lot in common with the people around me	1	2	3	4
7	I am no longer close to anyone	1	2	3	4
8	My interests and ideas are not shared by those around me	1	2	3	4
9	I am an outgoing person	1	2	3	4
10	There are people I feel close to	1	2	3	4
11	I feel left out	1	2	3	4
12	My social relationships are superficial	1	2	3	4
13	No one really knows me well	1	2	3	4
14	I feel isolated from others	1	2	3	4
15	I can find companionship when I want it	1	2	3	4
16	There are people who really understand me	1	2	3	4
17	I am unhappy being so withdrawn	1	2	3	4
18	People are around me but not with me	1	2	3	4
19	There are people I can talk to	1	2	3	4
20	There are people I can turn to	1	2	3	4

Below is a list of statements dealing with your general feelings about yourself.

If you **strongly agree** with the statement circle **SA**.

If you **agree** with the statement circle **A**.

If you **disagree** with the statement circle **D**.

If you **strongly disagree** with the statement circle **SD**.

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

INSTRUCTIONS: Indicate how often each of the statements below is descriptive of you.

Below is a list of statements:

If you **strongly agree** with the statement circle 1.
 If you **agree** with the statement circle 2.
 If you feel **Neutral** with the statement circle 3.
 If you **disagree** with the statement circle 4.
 If you **strongly disagree** with the statement circle 5.

		SA	A	N	D	SD
1	Facebook is part of my everyday activity	1	2	3	4	5
2	I am proud to tell people I'm on Facebook	1	2	3	4	5
3	Facebook has become part of my daily routine	1	2	3	4	5
4	I feel out of touch when I haven't logged onto Facebook for a while	1	2	3	4	5
5	I feel I am part of the Facebook community	1	2	3	4	5
6	I would be sorry if Facebook shut down	1	2	3	4	5
7	Approximately how many TOTAL Facebook friends do you have?					
8	In the past week, on average, approximately how much time PER DAY have you spent actively using Facebook (in Minutes)					

Please include any additional comments here: