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Running Head: EFFECTS OF LONELINESS AND SATISFACTION THROUGH CMC

Effects of Loneliness and Satisfaction through CMC

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21<sup>st</sup> April, 2009

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## Abstract

This study seeks to investigate whether internet habits such as, instances used a day, time spent per week, and age introduced to the internet, have any effect on how lonely we are and how satisfied we are with our face to face relationships. These findings are important as previous studies have shown that those who are lonely suffer from a wide variety of psychological and self reported behavioral issues such as anxiety, depression, boredom, self-depreciation, and interpersonal hostility. Although the internet is widely used and it would be merely impossible to eliminate this use, the findings from this study will give perspective to the optimal amount of internet use and the optimal age to be introduced to the internet in order to avoid problems of loneliness and assure that our society becomes satisfied with their relationships, whether they are face to face or online relationships.

## **Effects of Loneliness and Satisfaction through CMC**

More and more people are turning to the Internet for such activities as shopping, information, communication, plus many other things (Hamburger and Ben-Artzi, 2003). The dominance of the Internet is becoming clear, and as it is becoming more influential, observers are noting that heavy Internet users seem alienated from normal social contacts as the Internet is becoming the predominate social factor in their lives (Hamburger and Ben-Artzi, 2003).

Although Internet may seem great, when it starts to interfere with peoples social and emotional feelings it becomes a hazard. Kraut, Patterson, Lundmark, Kiesler, Mukopadhyay, and Scherlis, (1998) carried out a longitudinal study to examine the effects of Internet on social involvement and psychological well-being. One of their main findings was that heavy use of the Internet is related to the experience of loneliness among users. The results from this study are in line with other academic scholars in this field who also concluded that the Internet caused a negative reaction among users. Brenner (1997) put forth the idea that use of the Internet interferes with other activities and is likely to lead to addiction. Similarly, Stoll (1995) and Turkle (1996) presented that the use of Internet is likely to result in social isolation.

Kraut et al. (1998) demonstrates that Internet has an effect on an individual's social and emotional status; however, the present study will fill attempt to fill in the gaps by studying how much daily Internet use it takes to effect ones behaviors, how many hours a week spent on the internet it takes to become lonely, and from what age does one have to start using the Internet in order to get addicted. This study will also clarify whether people develop stronger relationships over the Internet or through face to face

communication, and clearly distinguish which source develops more satisfying relationships.

Loneliness is important to research, because it is such a common problem for many people (Russell, Paplau and Cutrona, 1980). A national survey found that 26% of Americans reported having felt “very lonely or remote from other people” during the past few weeks (Bradburn, 1969). Russell et al, (1980) have also found that loneliness has been linked to a variety of other serious and social problems, including alcoholism, adolescent delinquent behavior, suicide, physical illness and overutilization of health care services.

According to Emmanouilides and Hammond (2000), future research should be done to measure the amount of time people spend on the Internet. Secondly, consistency of personality traits should be measured to gain some significant trends to explain why different types of people spend different amounts of time on the internet. This study aims to fill in the gaps by researching how much time people spend on the internet weekly, how many instances one has on the Internet daily, and the age at which these people started to use the internet. To stay consistent with personality traits a loneliness and satisfaction scale will be used to help us conclude and justify our reasoning behind use of the internet.

*Therefore, the primary purpose of this study is to obtain significant data to interpret whether students become lonely or satisfied through excess interaction with the internet on a daily or weekly basis, and see whether the age they started using the Internet has any effects on their habits or interactions today. On the other hand, this study will also determine whether our participant’s internet habits have any effect on*

*how satisfied they are with their face to face relationships as well as their online relationships.*

### **Background Information**

Twenty five years ago, computers primary use involved science, engineering and business. By 1998 approximately 40% of all US households owned a personal computer and roughly one third of these homes had the Internet (Kraut et al, 1998). Currently in 2009, the majorities of students have a personal computer and/or are connected to the Internet. Wireless Internet has widened the ability of where you can use the Internet, and now PDA phones with Internet are already becoming a part of history (Emmanouilides, & Hammond, 2000). Stole (1995) and Turkle (1996) argue that the rise in Internet use is causing people to become socially isolated and cut off from genuine social relationships.

On the other hand, scholars argue that the internet leads to more and better social relationships. Minimizing the constraints of geography or isolation, brought about from stigma, illness or schedule allows people to join groups and connect with others on the basis of interests rather than convenience (Katz & Aspden, 1997; Rheingold 1993).

Although the Internet seems to be having a negative effect on ones social and emotional status, the uses of the gratification theory help illustrate and clarify what motivates individuals to use the Internet. According to Muhtasab and Frey (2008), uses and gratifications theory focuses on the choices that media users make to fulfill their needs. Given the emergence of computers and the boom of the Internet, scholars began studying people's motivation for and satisfaction from using the Internet (Muhtasab & Frey, 2008). Ferguson and Perse (2000) explain that people select media

based on their needs, and they make choices among functional alternatives which can fulfill similar goals. Papacharissi and Rubin (2000) compared motives for using the Internet with those for communicating face-to-face and concluded that people use the Internet as a functional alternative when face to face communication is difficult or not preferred.

### **Literature Review**

This literature review will first outline the dimensions of loneliness and satisfaction. It will then show the full scope of how the amount someone communicates on the Internet each day affects how lonely they become, and how satisfied they become with those relationships. Then acknowledging the time spent on the Internet will allow a correlation to form. This study will lastly evaluate the ages at which children are introduced to the Internet and how this affects their social and emotional well being today.

#### ***Loneliness***

Peplau and Perlman (1979) define loneliness as a response to a disjuncture between desired and actual relationships. The problem with loneliness goes deeper. Many scholars have suggested a wide variety of psychological and self reported behavioral issues of loneliness which include anxiety, depression, boredom, self-depreciation, and interpersonal hostility (Jones, Freeman, & Goswick, 1981; Russell, Peplau, & Ferguson, 1978).

Russell et al. (1980) explain that loneliness is related to a number of personal characteristics, including low self-esteem, shyness, feelings of alienation, external locus of control and belief that the world is not a just place. Among students and older adults,

loneliness is linked to negative effects including boredom, restlessness, unhappiness, and dissatisfaction with social relationships (Perlman, Gerson, & Spinner, 1998).

The role of social skills is used to determine the psychological state of loneliness. According to Jones et al. (1981) lonely adolescents and college students have social skill inadequacies including passivity, lack of assertiveness, greater shyness, self consciousness, and problems of inhibited sociability (e.g., Difficulty in making friends). Lonely students report lower dating frequencies, more time spent alone, fewer social and extracurricular activities and less self disclosure (Chelune, Sultane, & Williams, 1980).

Kraut et al (1998) acknowledge that self monitoring studies indicate that lonely students spend just as much time with other people as those students who aren't lonely; however, they point out the ways in which the students interact differently. Students who are lonely generate fewer and less effective solutions to hypothetical interpersonal problems, give less intimate information on self-disclosures, are less willing to share opinions and share more extreme responses to influence attempts, and are less accurate at encoding expressive non-verbal communications (Jones et al. 1982; Horowitz and French, 1979).

### ***Satisfaction***

Shin and Johnson (1978) define relationship satisfaction as a global assessment of a person's relationship according to their chosen criteria. Judgments of satisfaction are dependent upon a comparison of one's circumstances with what is thought to be the appropriate standard (Shin & Johnson, 1978). It is important to acknowledge that how satisfied people are with their present state of affairs is based on the comparison for



which each individual sets for themselves (Diener, Emmons, Larsen, Griffen, 1985). Individuals may place different values on what is important to satisfy them and what is not so important (Diener et al., 1985).

Although one may be satisfied with their online relationships, it is important to be aware that loneliness in students and adults has been linked to negative effects, including dissatisfaction with social relationships (Perlman et al, 1987). So despite the fact that they may have an online relationship they may still be suffering from loneliness. However, some scholars (Katz & Aspden, 1997) have argued that the Internet leads to better social relationships, as people go out of their way to communicate through this median. It frees people from constraints of geography or isolation which could be brought about by stigma, illness or schedule. The Internet allows people to join groups and meet people on the basis of common interests rather than convenience, which may lead to a more satisfying relationship (Katz & Aspden, 1997).

### ***Affects of Daily Internet Communication***

Kraut et al (1998) believe that the Internet causes loneliness, and people who are already lonely and isolated spend large amounts of time on the internet. They present that the debate between scholars is whether the huge increase in Internet use is actually a good or bad thing. The Internet can be used to privatize entertainment, obtain previously inaccessible information, increase technical skills and conduct commercial transactions at home. Despite the overwhelming uses of the Internet, we must realize each of these functions are unsocial and make it easier for people to be alone leading to loneliness (Kraut et al, 1998). Alternatively, Sproull and Faraj (1995) present the idea that people could use the Internet for more social purposes, to communicate and

socialize with colleagues, friends and family through email, message services and video chat.

The launch of the Internet has turned out to be far more social than the television. According to Kraut et al. (1998), interpersonal communication is the dominant use of the Internet at home. However, even though people primarily use the Internet for interpersonal communication, it does not imply that their social interactions and relationships via the Internet are the same as their traditional social interactions and relationships (Sproull & Kiesler, 1991).

The use of Internet may increase social involvement in many cases. For example, many people buy a home computer to keep in touch with their children in college; people who meet face to face can stay connected and develop their relationships through online communication. However it is important to be aware that the Internet is very addicting and may work against you, leading one to feel lonely and dissatisfied with their relationship continued or developed through the Internet (Kraut et al, 1998).

### ***Daily Internet Communication - Hypothesis***

The central belief in this study is that a student is more likely to be lonelier when communicating a high volume of instance per day on the Internet, than those students who use the Internet less each day. Although scholars have shown that the Internet makes us lonely, it also ensures us that those who struggle to develop face to face relationships can have a more satisfying relationship over the Internet.

**H1a:** A person who uses the internet to communicate more instances daily is lonelier than a person who uses the internet less times daily.

**H1b:** A person who uses the Internet to communicate more instances daily will experience a lower level of satisfaction from their face to face relationships than those who communicate less times daily on the internet.

External variables may also have an effect on ones loneliness or satisfaction. It is therefore important to realize that other variables such as personality traits could be studied alongside to ensure consistency between the correlations of the variables.

### ***Affects of Time Spent on Internet***

If people use the Internet primarily for entertainment and information, the Internet's social effects might resemble those of television (Kraut et al, 1998). A study was conducted comparing Australian towns before and after television became available, and suggested that television led to an increase in social behavior (Murray & Kippax, 1978). However, this was when television was very limited so it probably brought people together and created discussion. Besides this ancient Australian study, most studies have indicated television watching reduces social involvement (Brody, 1990; Jackson-Beeck & Robinson, 1981; Nueman, 1991; Maccoby, 1951).

Epidemiological research has also linked television watching with reduced physical activity and diminished physical and mental health (Anderson, Crespo, Barlett, Cheskin, & Pratt, 198; Sidney, Sternfeld, Haskell, Jacobs, Chesney, & hulley, 1998).

Considering this data about television and taking Krauts et al (1998) claim into consideration we are led to believe that using the Internet leads to physical inactivity and limited face to face social interactions. Despite the fact that the Internet can lead to increasing skills and confidence with computers it leads them to consume excessive time and therefore spend more time alone (Vitalari, Venkatesh, & Gronhaug, 1985).

### ***Time spent on Internet - Hypothesis***

The central belief in this study is that a student is more likely to be lonelier when using the Internet more often than those students who use the Internet less often each week. Research also leads us to believe that a student who uses the Internet more each week will be less satisfied with those relationships developed exclusively offline. Although one may be satisfied with their online relationship, minimizing social interaction will have a major impact on ones face to face relationships.

**H2a:** A person who spends more time on the internet each week is lonelier than a person who spends less time on the internet each week.

**H2b:** A person who spends more time on the Internet each week will be less satisfied with their face to face relationships than those who spend less time on the Internet each week.

Similarly to H1, external variables may also have an effect on ones loneliness and satisfaction. It is therefore important to realize that other variables such as personality traits could be studied alongside to ensure consistency between the correlations of the variables. Carrying these two hypotheses, it is important to be aware not to misinterpret the different meanings behind “the number of times a student uses the Internet to communicate”; and the “amount of time a student spends on the Internet each week” when assessing how each effects ones loneliness or satisfaction.

### ***Affects of Age being introduced to the Internet***

Most American children now have home computers and are using them for everything from playing games, doing school work, chatting to friends and surfing the web (Subrahmanyam, Kraut, Green field, & Gross 2000). The increasing amount of time

children are spending on computers and the Internet at home is raising questions to whether this new technology is helping children in areas like home work or causing depression, loneliness and decreasing social skills (Subrahmanyam et al, 2000).

Subrahmanyam et al (2000), explain that children's daily use of computers is increasing at school and at home. Although children are still spending more time watching television than using computers, the use of home computers is growing rapidly accumulating to their total screen time (Subrahmanyam et al, 2000). These scholars also claim that although boys traditionally used home computers more than girls, girls are catching up as they are using Internet communication activities and software such as Barbie fashion designer.

The big issue arises when time on the home computer displaces other activities which have a more developmental value. It is viewed as positive when children use home computers instead of using the Internet. However, when children use computers instead of participating in sports and social activities, it raises concerns about the possible effects of their physical and psychological well being (Subrahmanyam et al, 2000).

According to Subrahmanyam et al. (2000), studies suggest that the extended uses of computers are linked to some serious problems for children. The additional time children spend in front of the computer has an increase in the likelihood of obesity, seizures and hand injuries. The importance of interacting with others to gain social competence also raises concerns for children who form electronic friendships with computers instead of friendships with their peers. This may all have a negative effect on interpersonal skills and is known to also increase loneliness and depression.

Emmanouilides and Hammond (2000) conducted a study to identify the differences in usage patterns by different use of Internet adopters. They concluded that very early adopters or pioneers are more likely than not to be heavy Internet users even when they control other variables

According to Emmanouilides and Hammond (2000), one of the main predictors of one's active or current use of the Internet is the time since they first used the Internet. They believe that the pioneers (very early adaptors of the Internet) are most likely to be very active on the Internet. They also believe that there is a linear relationship between the time since ones first Internet use and frequent and heavy users.

### ***Age being introduced to Internet - Hypothesis***

The central belief in this study is that a person is more likely to be lonelier when using the Internet more often than those students who use the Internet less often each week. Research also leads us to believe that children who are introduced to computers and the Internet early on in life are more likely to become heavy users later on in life. Therefore, early Internet users will also be less satisfied with their offline relationships as their social interaction skills are underdeveloped.

**H3a:** People who started communicating on the internet at a young age will become lonelier than those people who started using the Internet later in their life.

**H3b:** People who started communicating on the Internet at a young age will become less satisfied with face to face relationships compared to those who started using the Internet at an older age.

## **Method**

### ***Data Collection***

The sample will be selected through a convenient sample of University of Portland students. This study will survey two Interpersonal Communication classes for a total of 50 participants. I will stay in the room while the survey is being conducted in case any of the participants have any questions. It will also be optional for each student to complete this survey as they will not be paid for participation.

Respondents will first answer some simple questions about their demographics (age and sex). This will allow us to see the general trend of loneliness and satisfaction between genders. It will also give us an average age and gender of all the surveys conducted.

### ***Instrumentation***

The survey consists of 5 variables: The dependent variables, which are loneliness and satisfaction, and the 3 independent variables, are the amount of times one communicates on the internet daily, the amount of time one spends on the internet weekly, and the age at which participants started communicating on the Internet. The answers for each dependent variable will be compared with each of the three independent variables.

To measure the participants satisfaction with their relationships developed over the Internet, the students will first be asked how many people they can turn to when they are under pressure and feeling tense. On a 1 – 6 scale (1 being very dissatisfied, 6 being very satisfied), they answer how satisfied those people make them feel. The survey will then ask, of those you can turn to – how many are from relationships

developed over the Internet. On the same 1-6 scale, students answer how satisfied those people make them feel.

To measure each participant's level of loneliness, the students will answer the revised UCLA loneliness scale, which will be used to compare with the dependant variables. The students will respond to 20 statements, responding to how often they feel a certain way on a 1 – 4 scale (1 being they Never feel like that, 2 being they rarely feel like that, 3 being they sometimes feel like that, and 4 being they often feel like that) (Russell, Peplau, Cutrona, 1980). The total is the sum of all 20 statements displays the level of loneliness (answers for statements 10, 13, 14, 15, 18, 19, 24, 25, 28, 29 should be reversed before scoring to create consistency). Russell, Peplau and Cutrona (1980) make it clear that this scale has good accuracy compared with others, and that studies using college students showed high consistency (coefficient alpha of 0.96). Previous measures of loneliness suffer from a variety of problems. The scales are typically lengthy, ranging from 38-75 items and internal consistency has varied widely (Russell, Peplau, & Ferguson, 1978).

### ***Data Analysis***

This study will use a One-Way ANOVA test as it can measure the relationship between two variables (Hocking et al., 2003). According to Hocking et al (2003), the results from the test will provide us with a significance level, degrees of freedom and the observed F value. The significance relationship between two variables will be represented by a p-value < 0.05. Therefore, in order for each hypotheses to be valid p must be less than 0.5.



## Results

H1a predicted that a person who uses the internet to communicate more instances daily is lonelier than a person who communicates on the internet fewer instances daily. A One-Way ANOVA indicated that this relationship had no significance and clarified that the hypothesis was not supported by the results ( $F = 1.363$ ,  $df = 4/42$ ,  $p = 0.263$ ). Since the sample in this study only consisted of 47 participants, this likely contributed to the insignificance; however, the perusal of the mean reveals an upward trend showing that participants become lonelier as they communicate on the internet more daily. This is shown in table 1.

**TABLE 1 - Average loneliness for # of instances internet used each day (H1a)**

# instances internet/day	N	Mean (Average)
1-4 Times	13	30.077
5-10 Times	18	33.056
11-15 Times	7	33.143
16-20 Times	5	31.8
21+ Times	4	41.25
Total	47	32.809

H2a predicted that a person who spends more time on the internet each is lonelier than a person who spends less time on the internet each week. A One-Way ANOVA illustrated that there was no significance between the two variables and clarified that the hypothesis was not supported by the results ( $F = 1.675$ ,  $df = 5/41$ ,  $p = 0.162$ ). Since the sample in this study only consisted of 47 participants, this likely contributed to the insignificance; however, a glance at the mean reveals an upward trend showing that participants become lonelier as they spent more time on the internet each week. This is shown in table 2.

**TABLE 2 - Average loneliness for amount of time on internet each week (H2a)**

<b>Time on internet/week</b>	<b>N</b>	<b>Mean (Average)</b>
0-5 Hours	1	25
5-10 Hours	15	32.4677
10-15 Hours	12	30.5
15-20 Hours	12	32.417
20-25 Hours	4	35.25
25+ Hours	3	44.667
Total	47	32.809

H3a predicted that people who started communicating on the internet at a younger age will become lonelier than those who started using the internet later in life. A One-Way ANOVA clarified that there was no significance between the two variables and the hypothesis was not supported by the results ( $F = 0.658$ ,  $df = 4/42$ ,  $p = 0.625$ ).

**TABLE 3 - Average loneliness for age starting to use the internet (H3a)**

<b>Age beg. to use internet</b>	<b>N</b>	<b>Mean (Average)</b>
Before 10 Years Old	1	34
10-12 Years Old	14	33.2857
12-14 Years Old	16	30.6875
14-16 Years Old	10	32.7
16-18 Years Old	6	37.3333
Total	47	32.8085

H1b predicted that a person who uses the internet to communicate more instances daily will experience a lower level of satisfaction with their face to face relationships compared with those who communicate less daily. A One-Way ANOVA indicated that this relationship had no significance and clarified that the hypothesis was not supported by the results ( $F = 1.240$ ,  $df = 4/42$ ,  $p = 0.309$ ). Since the sample in this study only consisted of 47 participants, this likely contributed to the insignificance; however, the perusal of the mean reveals an clear trend showing that as participants

communicate less instances daily they become more satisfied with their face to face relationships. This is shown in table 4.

**TABLE 4 - Average satisfaction for # of instances internet used each day (H1b)**

# instances internet/day	N	Mean (Average)
1-4 Times	13	5.5385
5-10 Times	18	5.4444
11-15 Times	7	5.1429
16-20 Times	5	5
21+ Times	4	5.25
Total	47	5.3617

H2b predicted that a person who spends more time on the internet each is will be less satisfied with their face to face relationships compared to those who spend less time on the internet each week. A One-Way ANOVA illustrated that there was no significance between the two variables and clarified that the hypothesis was not supported by the results ( $F = 1.595$ ,  $df = 5/41$ ,  $p = 0.183$ ). Since the sample in this study only consisted of 47 participants, this likely contributed to the insignificance; however, a glance at the mean reveals a trend which shows that participants may be more satisfied with their face to face relationships if they spend less time on the internet each week. This is shown in table 5.

**TABLE 5 - Average satisfaction for amount of time on internet each week (H2b)**

Time on internet/week	N	Mean (Average)
0-5 Hours	1	5
5-10 Hours	15	5.6
10-15 Hours	12	5.4167
15-20 Hours	12	5.0833
20-25 Hours	4	5.5
25+ Hours	3	5
Total	47	5.3617

H3b predicted that people who started communicating on the internet at a younger age will become less satisfied with their face to face relationships compared to those who only started using the internet later in life. A One-Way ANOVA clarified that there was no significance between the two variables and clarified that the hypothesis was not supported by the results ( $F = 0.859$ ,  $df = 4/42$ ,  $p = 0.496$ ).

**TABLE 6 - Average satisfaction for age starting to use the internet (H3b)**

<b>Age beg. to use internet</b>	<b>N</b>	<b>Mean (Average)</b>
Before 10 Years Old	1	5
10-12 Years Old	14	5.2857
12-14 Years Old	16	5.5625
14-16 Years Old	10	5.3
16-18 Years Old	6	5.1667
Total	47	5.3617

## **Discussion**

The primary purpose of this study was to obtain significant data to interpret whether students become lonely or satisfied through excess interaction with the internet on a daily or weekly basis, and see whether the age they started using the Internet has any effects on their habits or interactions today. On the other hand, this study also attempted to see whether our participant's internet habits had any effect on how satisfied they were with their face to face relationships as well as their online relationships.

As this study developed it became apparent that very few participants had online relationships (less than 5%). Finding this statistic so late in the study hindered us from comparing the satisfaction participants had with their online and offline relationships.

Despite the fact that the results showed no significance between the variables, (Significant is when  $p < 0.05$ ) there were clear trends of satisfaction and loneliness in

H1a, H1b, H2a and H2b. These trends illustrate that there is a relationship between internet habits and loneliness or satisfaction. Many scholars have suggested findings between internet use and loneliness, and the trends from this study only make these findings more substantial. Although the internet is leading the way in technology, most academic sources have shown why the internet is harmful to society. Kraut et al. (1998) give evidence to support our claims. One of their main findings was that heavy use of the Internet is related to the experience of loneliness among users. Brenner (1997) believes that Internet interferes with other activities and is likely to lead to addiction. Similarly, Stoll (1995) and Turkle (1996) state that the use of Internet is likely to result in social isolation.

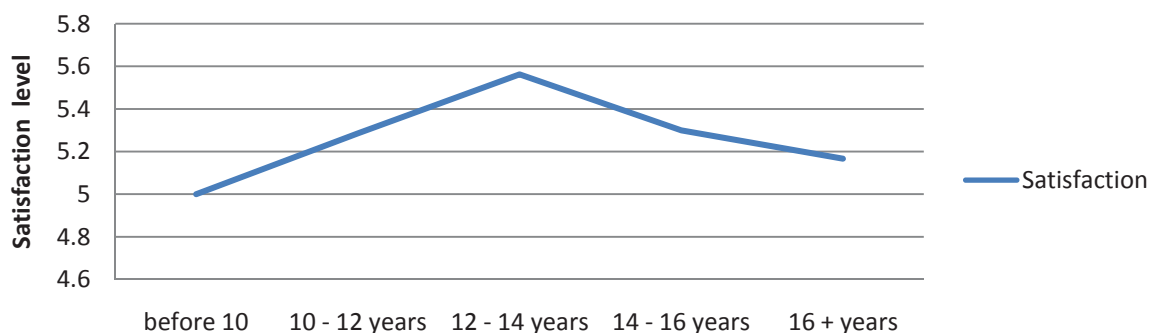
Although the Internet seems to be having a negative effect on ones social and emotional status, the uses of the gratification theory help illustrate and clarify what motivates individuals to use the Internet. According to Muhtasab and Frey (2008), uses and gratifications theory focuses on the choices that media users make to fulfill their needs. Studies have shown that people use the internet because it gives themselves satisfaction; however, it harms their face to face relationships (Muhtasab and Frey, 2008). Once more people start to use the internet to develop relationships, studies will be able to compare the difference in satisfaction among those with online relationships and those with offline relationships. This being said, if more of the participants in this study had online relationships, and were satisfied with those relationships, then the internet may be viewed more positively.

Since the first two hypotheses seemed to have clear trends it is therefore important to reflect back on the third hypotheses. H3a and H3b both attempted to

discover if the age at which the participants started communicating on the internet had any effect on how lonely they were, or how satisfied they were with their face to face relationships. In the results from H3a (refer table 3) it is clear that those who started to use the internet before age 10 were lonelier than the majority of the other participants. However, this situation is complicated as those students who only recently started to use the internet (16-18 years old) have the highest rates of loneliness by the largest margin. Again the uses of gratification theory may help explain this reasoning. Since we already know that people do things in order to satisfy themselves and fulfill their needs, it becomes quite possible that those who have been isolated from the internet for such a long time are now getting addicted.

The results from H3b also hold an interesting case (refer table 6). The results form a sort of pyramid shape (Graph 1). Although these findings do not have a significant p – value, they have a significant meaning. Those who start communicating on the internet at a really early age or a really late age have the lease satisfaction with their face to face relationships. This study clearly shows that kids could hurt their social relationships if they start using the internet too early or too late. 12-14 years old is not only the best age to be introduced to the internet, but it is also the most common age.

**Graph 1: Age beginning to use Internet vs. Satisfaction with FtF relationships**



## ***Limitations***

This study only used a sample size of 47 participants which was clearly not enough. Despite trends in most of our One-Way ANOVA tests, there was very little significance shown through the p – value. The number of participants surveyed who had some sort of relationship online was also minimal. An increase in the number of participants would allow this study to generate more substantial conclusions.

The age variable seemed to have little validity compared to the other independent variables. Both age hypothesis (H3a and H3b) had the highest p – values by a high marginal difference. Even though there was enough evidence from the results that there is an ideal age to be introduced to the internet, even with more data it will be hard to obtain a low enough significance value due to the form of the data.

## ***Future Directions***

Future directions for this study include finding more participants with online relationships. This may mean the sample would not only contain students; however, with such data the satisfaction levels of online and offline relationships could be compared.

Since the majority of the students in this survey were communication majors, it could be quite valuable to use school major as an independent variable. There is definitely a difference in social skills between communication majors and computer engineering majors who often have little face to face social interaction. It is therefore important to realize that other variables such as personality traits could be studied alongside to ensure consistency between the correlations of the variables.

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## Appendix

### DESCRIPTION

My name is Dino Bozzone, and I am conducting a research study at the University of Portland. We are interested in describing how the internet affects people's social relationships with others and changes the way they feel towards themselves. In particular, we are looking at how the use of the internet relates with how lonely and satisfied people feel. We are also looking at how the internet places or isolates people from social groups.

To explore this issue, your help is requested. Attached is a brief survey that will ask you about your use of internet, how satisfied you feel during certain instances and how often you feel a certain like you are included. Prior to each set of questions there will be instructions on how to go about answering the questions. The survey will take 5-10 minutes.

Your participation is important so that researchers can make accurate conclusions about how people are becoming connected or disconnected through technology and the internet. Your contribution to this research will help increase the validity of the findings. There is no right or wrong answers. We only ask for your honest responses.

### RISKS AND BENEFITS

No known risks, stress, or discomfort are involved with this study. You will be reporting only your perceptions about interactions. Results of the study may not benefit you directly, though you may gain some understanding about your self-disclosure.

### COSTS AND PAYMENTS

You will not receive any inducements (money, service) for your participation in the study, nor will you bear any costs for your participation.

### CONFIDENTIALITY

All information obtained from you will be kept strictly confidential. It will include no means of identifying you as a participant in the study. You will never be identified in any description of the study. The survey itself will be shredded upon completing this project.

### RIGHT TO REFUSE OR END PARTICIPATION

Participation in the study is voluntary. You may refuse to participate, choose not to answer any question on the survey, or withdraw from the study at any time. All participants have the right to review and delete any of their responses on research records if requested.

**VOLUNTARY CONSENT:** *I have read this form. I have had an opportunity to ask questions. I understand that any future questions I may have about the research or about my rights as a participant will be addressed by one of the investigators identified above.*

***Filling out the attached survey signifies your voluntarily consent to participate in this project.***

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## COMMUNICATION QUESTIONER

*(Mark the following which applies to you):*

1. How old are you?      18\_\_    19\_\_    20\_\_    21\_\_    22\_\_    23\_\_    24+\_\_
  
2. What sex are you?      M\_\_    F\_\_
  
3. On an average day how many times do you communicate on the internet? (This includes: emailing, forum members, posting on message boards, chat rooms, facebook etc).
  - 1-4times                    \_\_
  
  - 5-10times                \_\_
  
  - 11-15times                \_\_
  
  - 16-20times                \_\_
  
  - 21+times                    \_\_
  
4. How many hours a week do you spend on the internet?
  - 0-5hours                    \_\_
  
  - 5-10 hours                \_\_
  
  - 10-15 hours                \_\_
  
  - 15-20 hours                \_\_
  
  - 20-25 hours                \_\_
  
  - 25hours or more            \_\_
  
5. At what age did you start communicating on the internet on a daily basis? (This includes: emailing, forum members, posting on message boards, chat rooms, facebook etc).
  - Before 10                    \_\_
  
  - 10-12                        \_\_
  
  - 12-14                        \_\_
  
  - 14-16                        \_\_
  
  - 16-18                        \_\_
  
  - Still don't                    \_\_

6. How many people can you turn to when you are under pressure and feeling tense?  
 \_\_\_\_\_people

7. How satisfied do those people make you feel?  
 1-very      2-fairly      3-little      4-little      5-fairly      6-very  
 Dissatisfied    Dissatisfied    Dissatisfied    Satisfied                      Satisfied      Satisfied

8. Of those that you can turn to when you are under pressure, how many of them are from relationships developed over the internet?  
 \_\_\_\_\_people

9. How satisfied do the people from those relationships, developed over the internet make you feel?  
 1-very      2-fairly      3-little      4-little      5-fairly      6-very  
 Dissatisfied    Dissatisfied    Dissatisfied    Satisfied                      Satisfied      Satisfied

***(For the following statements, mark how often you feel the way described in each of the following statements. Circle one number for each statement. )***

**Statement: \_\_\_\_\_ Never Rarely Sometimes Often**

10. I feel in tune with the people around me	1	2	3	4
11. I lack companionship	1	2	3	4
12. There is no one I can turn to	1	2	3	4
13. I do not feel alone	1	2	3	4
14. I feel part of a group of friends	1	2	3	4
15. I have a lot in common with the people around me	1	2	3	4
16. I am no longer close to anyone	1	2	3	4
17. My interests and ideas are not shared by those around me	1	2	3	4
18. I am an outgoing person	1	2	3	4
19. There are people I feel close to	1	2	3	4

<b>20.</b> I feel left out	1	2	3	4
<b>21.</b> My social relationships are superficial	1	2	3	4
<b>22.</b> No one really knows me well	1	2	3	4
<b>23.</b> I feel isolated from others	1	2	3	4
<b>24.</b> I can find companionship when I want it	1	2	3	4
<b>25.</b> There are people who really understand me	1	2	3	4
<b>26.</b> I am unhappy being so withdrawn	1	2	3	4
<b>27.</b> People are around me but not with me	1	2	3	4
<b>28.</b> There are people I can talk to	1	2	3	4
<b>29.</b> There are people I can turn to	1	2	3	4