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Examining the impact that the locus of control, emotional intelligence, and narcissism have on internet addiction and information disclosure among college students

Antonio Avant

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Examining the Impact That the Locus of Control, Emotional Intelligence, and Narcissism Have
on Internet Addiction and Information Disclosure Among College Students

by

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Dissertation

Submitted to the College of Technology

Eastern Michigan University

in partial fulfillment of the requirements for the degree of

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Ypsilanti, Michigan

Dedication

I could not have completed this work without the support of my family, my friends, and many colleagues. I would first like to thank my wife for her enduring love and understanding. I appreciate your patience and your willingness to tolerate the constant interruptions to our life together because of my work on school projects and assignments. To my children, I thank them for their understanding as to why daddy was always so busy and stuck in the library for hours on end even on bright, beautiful, sunny days. A heartfelt dedication goes to my wonderful friends, Dr. Lyons and Dr. Rainey, who encouraged me to press on, despite the challenges. They were always eager to answer my phone calls, texts, or emails and to quickly offer their help, support, and encouragement for to me so that I could finish this work. I thank my mother, who constantly asked me, “When are you going to finish your dissertation?” Special thanks go to Dr. Joy Innis-Johnson, who freely provided me with unsolicited honest and truthful feedback when I needed it most.

I thank you and love you all!

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Abstract

This research analyzes the variables that may impact Internet addiction and information disclosure among college students in two Midwestern universities of both public and private status. The correlation between the locus of control, emotional intelligence (EI), and narcissism to Internet addiction and information disclosure was examined. The study comprised of surveys of 132 subjects ranging from bachelor to doctoral degree-level students, but completed surveys were collected from 114 people. The survey responses were examined by utilizing a correlation analysis to assess the statistical significance and the relational relevance between the variables. The correlation analysis performed determined the relationship between the three independent variables (i.e., narcissism, the locus of control, and EI) and each of the dependent variables (i.e., Internet addiction and information disclosure).

Each combined score for each survey was used for narcissism, the locus of control, and EI, which showed no significant correlation with Internet addiction. However, there was a statistical relationship between narcissism and information disclosure, and only a slight relationship between the locus of control and information disclosure. There was a less than modest negative relationship between EI and both information disclosure and Internet addiction. Further examination of each of EI's subdimensions (self-awareness, empathy, relationship management, and self-management) found no correlation.

An evaluation to determine the influence that gender has on each of the variables reviewed that females had a correlation between locus of control and narcissism to information disclosure and males were found to be have no correlation.

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Chapter 1: Introduction

For many of us, the Internet has become an indispensable tool that is used in activities from shopping to sex, and from research to rebellion (Wallace, 2016).

According to Anderson, M. (2015), “68% of U.S. adults have a smartphone, up from 35% in 2011, and tablet computer ownership has edged up to 45% among adults.” In 1995 less than 1% of the world’s population had an Internet connection that number has increased to 40% or 3.5 billion (“Internet Live Stats,” 2017). There is no doubt that technology has drastically changed the way people interact today. A report by Nielsen Company (2015) finds that “Americans now own four digital devices on average, and the average U.S. consumer spends 60 hours a week consuming content across devices.” This convenience makes it easier for us to become reliant on the use of this technology.

Human communication aided through technology is referred to as computer-mediated communication (CMC) (Thurlow, Lengel, & Tomic, 2004). One aspect of this technological revolution has been the creation of Internet connectivity through many mobile devices (Humphreys, Von Pape, & Karnowski, 2013). Cell phones have become an indispensable part of our daily lives—an almost invisible driver of modern life (Roberts, Yaya, & Manolis, 2014). The first smartphone was introduced in 1993 by Bell South and IBM, and it was advertised as a phone with computer capabilities (News, 2013). Going online is extremely easy, even when using mobile devices (Humphreys et al., 2013). Mobile technology has become a vital part of our daily lives; this technology has become an essential source for things such as news, communications, and appointment reminders. We rely on these devices to serve as alarm clocks, keep track of time, track appointments, and even to stream full-length movies. It is important that

we consider the amount of time users spend on all devices. DeWeese (2014) defines screen time (ST) as the “aggregate amount of time spent on smartphones and computers, as well as time spent multitasking with different devices” (p. 7). She considers excessive ST usage as detrimental to our lifestyles, as it is associated with a lack of physical activity and leads to addiction (DeWeese, 2014).

According to addiction treatment advocates, East Asian countries (China and South Korea) are leading the way for Internet addiction treatment, while the U.S. lags behind. For example, Internet addiction is viewed as a public-health threat (Foran, 2015). Sigman (2012) cites that “the U.S. Department of Health and Human Services now cites reducing ST as one of its key ‘health improvement priorities’ in achieving its ‘national 10-year health promotion and disease prevention objective’ (p. 935). Given the fact that South Korea, Japan, and China are major computer and smartphone producers, this may explain the high prevalence of smartphone ownership in these countries; additionally, these countries are also equipped with good telecommunication infrastructure (Mak et al., 2014). A recent Chinese study surveyed 4,915 college students and concluded that an increase in ST can negatively contribute to multiple health problems such as “anxiety, depression, psychopathological symptoms and poor sleep quality” (p. 4) and low physical activity (Wu, Tao, Zhang, Zhang, & Tao, 2015). Roberts et al. (2014) reported on a Baylor University study that surveyed 167 college students, age from 19 to 22 years from a major university in Texas, which revealed cell-phone activities that might be construed as cell-phone addiction.

Wallis (1997) wrote in *The New Yorker* that “Dr. Ivan K. Goldberg may be the first in his field to gain notoriety for naming a disease he says does not exist.” Goldberg’s assessment is that Internet addiction is similar to research by clinicians and others who have investigated this issue

(Cho, Sung, Shin, Lim, & Shin, 2013c). Yet, debate still continues as to whether Internet addiction is really a disease state and deserves to be part of the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V)*. According to Cho et al. (2013), “it is not clear whether Internet addiction represents a manifestation of an underlying disorder or if is truly a discrete disease entity” , (p. 549). With the large amount of research from Asian countries and the United States, there are still concerns about including Internet addiction as a new disease category, and future technological developments may also link to their own disease categories such as iPhone addiction, mobile addiction, and virtual reality addiction (Chakraborty, Basu, & Kumar, 2010). While the Internet offers users the ability to spend a significant amount of time online engaging in social interaction, the aspect of socialization is what makes it addictive (Bellamy & Hanewicz, 2001; Grohol, 1999).

Surprisingly, the digital age is not enough to discourage individuals from disclosing huge amounts of self-information to others they do not know online (Attrill & Jalil, 2011). Specific personality traits or disorders may significantly influence the disposition for self-disclosure and may additionally contribute to the underlying reasons as to why people are willing to reveal information, thus leading to Internet addiction. For the purpose of this research, self-disclosure and information disclosure was considered uniquely interchangeable. Zheng, Burrow-Sanchez, and Clifford (2010) define self-disclosure as “social validation and relationship development built on mutual trust” (p. 3). Self-disclosure has become an essential aspect of our social interactions which causes us to expose vulnerabilities about ourselves for the purpose creating mutual trust. Yet, Wheelless and Grotz (1976) state that “self-disclosure has been conceptualized as any message about the self that a person communicates to another” (p. 338). In other words, self-disclosure can be characterized as our willingness to control and share information about

ourselves. Nguyen and Campbell (2012) research shows self-disclosure as comprising of three dimensions: frequency, breadth, and depth. According to the authors, “frequency of self-disclosure refers to the amount of information revealed, disclosure breadth is the range or diversity of self-disclosure topics, and depth is the intimacy of personal information divulged” (Nguyen, et al., 2012, p. 103). Escalating security breaches have prompted the National Institute of Standards and Technology in the United States to develop guidelines for protecting personally identifiable information (PII) such as one’s name, date and place of birth, and educational information about one’s self (National Institute of Standards and Technology, 2010). One example of this is the innocent self-photo, often referred to as a *selfie*. Saltz (2014) states that “selfies have changed aspects of social interaction, body language, self-awareness, privacy, and humor, altering temporality, irony, and public behavior” (p. 1). In many ways, selfies have become self-portraits that convey one’s feeling or a mood at a single point in time.

An analysis of narcissism scores among millennials showed that scores rose from 1979 to 2006, due in part to the Internet as well as a change in parenting styles, celebrity culture, and the self-esteem movement (Wallace, 2016). Pincus and Lukowitsky (2010) point out without a universal definition for the meaning of narcissism, it becomes challenging for researchers to use standardized statistical methods for the purpose of formulating an analysis that can be shared. After reviewing the clinical literature from the last 40 years, the authors developed two broad themes of narcissistic dysfunction. According to Pincus and Roche (2011), the basis of the narcissistic personality can be presented as two phenotypes or types: grandiose and vulnerable narcissism. The authors’ “definition of narcissism combines maladaptive self-enhancement with regulatory impairments leading to self-emotional and behavioral dysregulation in response to ego threats or self-enhancement failures” (Pincus & Roche, 2011, p. 32). This asserts that narcissistic

personality types lack the ability to feel empathy, to feel remorse, and to judge other's emotions. Since the advent of camera phones, students have often photographed themselves for nostalgic reasons. The act of posting selfies through social media can be seen as a covert psychological expression of seeking self-glorification and affirmation (Reed, 2015). A significant indication of a focus on one's self would be evident when an individual frequently updates his or her social networking service or personal Web page (Wallace, 2016).

Salovey (1990) found that "one tradition in Western thought has viewed emotions as disorganized interruptions of mental activity, so potentially disruptive that they must be controlled" (p. 185). While the concept of EI was initially introduced by Payne in 1985, (as cited in McLemore and Nicholls, 2015), Salovey and Mayer were given credited for creating the definition of EI in terms of how it is referenced today (Kun & Demetrovics, 2010). It was the best seller *Emotional Intelligence: Why It Matters More Than IQ* that brought EI to the attention of the general public and national media (Goleman, 1995).

Rotter (1966) posits that "social learning theory examines how a reinforcement acts to strengthen an expectancy that a particular behavior or event will be followed by the reinforcement in the future" (p. 2). This is to say that behaviors are a manifestation of a set of past experiences which are fortified by the belief it will occur. Furthermore, the basis investigation in the study of personality exist in the interactions between an individual and his or her environment (Rotter, 1966).

There is a lack of empirical data that explores the impact of the locus of control, EI, and narcissism to help researchers to draw conclusions about their relationship to Internet addiction and information disclosure. Other research has focused exclusively on Internet addiction or on the impact of social media on society; however, a literature review of the current data found that

there was a gap in what is known about the description of the impact of an individual's predisposition or an individual's tendencies related to their locus of control, EI, and narcissism, all of which may have an influence on Internet addiction and information disclosure.

Statement of the Problem

Descriptions of an individual's tendencies related to his or her locus of control, EI, and narcissism, and their impact on Internet addiction and information disclosure have not been adequately investigated nor reported.

Nature and Significance of the Problem

According to Konopnicki and Shmueli (1995), initially, the World Wide Web was created as a way to share data among physicists at CERN, the European Organization for Nuclear Research. In 1995, Mosaic was launched as a new browser to help in facilitating easier searching on the Web, commonly known as "the Internet" (Konopnicki & Shmueli, 1995). Since that time, the Internet has become an obsession for some and is often considered as problematic, or, at worst, it has become an addiction.

A telephone survey in the summer of 2004 of 2,513 adults suggests that the potential markers of problematic Internet use are present in a significant portion of the U.S. population (Aboujaoude, Koran, Gamel, Large, & Serpe, 2006). Surveys such as this provide a reason for more research into the phenomena of the Internet and its effects on our lives. Christakis and Moreno (2009) write that "a 28-year-old boiler repairman had a cardiac arrest after an Internet gaming binge during which he neither ate nor slept" (p. 959). The debate regarding the relevancy of Internet addiction as a disorder and whether it needs to be classified by the *DSM-V* is still unresolved. Studies show that freshman college students are more vulnerable to Internet addiction, with significantly more psychiatric problems as compared to students without an

Internet addiction (Ni, Chen, & Liu, 2009). Yet, Internet addiction is reported to be associated with comorbidities such as major depression, loneliness, and social anxiety (Engelberg & Sjöberg, 2004). Internet addiction is sometimes found in individuals who lack social skills and who experience interpersonal difficulties (Cho, Sung, Shin, Lim, & Shin, 2013a).

Social media such as Facebook has transformed what is considered the norm in sharing personal details through self-disclosure online and through smartphones (Wang, 2013).

However, there is a lack of empirical data that explore the impact of the locus of control, EI, and narcissism to help researchers to draw conclusions about their relationship to Internet addiction and information disclosure.

Objectives of the Research

This study examined the correlative relationship between the locus of control, EI, and narcissism to Internet addiction and information disclosure. Each of the EI subdimensions, such as self-awareness, self-management, empathy, and relationship management, are evaluated based on their relationship to Internet addiction and information disclosure. The research analyzed the relationship that existed between the independent variables (locus of control, EI, and narcissism) and the dependent variables (Internet addiction and information disclosure), and thus formed new knowledge.

Research Questions

The following are the research questions that were examined:

1. Is there a relationship between the locus of control among college students and Internet addiction?
2. Is there a relationship between the locus of control among college students and information disclosure?

3. Is there a relationship between the emotional intelligence among college students and Internet addiction?
4. Is there a relationship between the emotional intelligence among college students and information disclosure?
5. Is there a relationship between each of the subdimensions of EI (self-awareness, self-management, relationship management, and empathy) among college students and Internet addiction?
6. Is there a relationship between each of the subdimensions of EI (self-awareness, self-management, relationship management, and empathy) among college students and information disclosure?
7. Is there a relationship between narcissism among college students and Internet addiction?
8. Is there a relationship between narcissism among college students and information disclosure?
9. To what extent does gender moderate the relationship between the independent variables (locus of control, emotional intelligence and narcissism), and Internet addiction among college students?
10. To what extent does gender moderate the relationship between the independent variables (locus of control, emotional intelligence and narcissism), and Information disclosure among college students?

Delimitations

The population for this study was limited to Midwestern college students. There was no attempt in this study to predict Internet addiction or information disclosure, but only to describe

these aspects. The study captured data on the student's willingness to disclose personal data and not on the actual disclosure of information.

Definition of Terms

1. Internet addiction, as defined by Sanghvi and Rai (2015), is “found by excessive or poorly controlled preoccupations, urges, or behaviors regarding computer use and Internet access that lead to impairment or distress” (p. 64).
2. Emotional intelligence (EI), according to Mayer and Salovey (1997), is comprised of the “perception, appraisal, and expression of emotions; the emotional facilitation of thinking; understanding and analyzing emotions, and employing emotional knowledge; and the regulation of emotions” (p. 10).
3. Locus of control, as presented by Chak and Leung (2004), is “the degree to which a person believes that control of reinforcement is internal versus the degree to which is external” (p. 562).
4. Information disclosure is the “disclosure of personal or intimate information through self-presentation and self-disclosure facilitated by the Internet as well as the avoidance or suppression of disclosure of information”, (Bronstein, 2014, p. 2).
5. Self-presentation, as proposed by Baumeister and Hutton (1987), “is behavior that attempts to convey some information about oneself or some image of oneself to other people” (p. 71).
6. Self-disclosure: Nguyen, et al. (2012) characterized it as “multifaceted, often studied along three dimensions—frequency, breadth, and depth” (p. 103).
7. Narcissism, according to Campbell and Foster (2007), can be found in someone who “possess highly inflated, unrealistically positive views of the self. Oftentimes, this

includes strong self-focus, feelings of entitlement, and lack of regard for others, with less regard for how their actions may benefit (or harm) others” (p. 115).

8. Personally identifiable information (PII), as stated by National Institute of Standards and Technology (2010), “is any information about an individual maintained by an agency, including (1) any information that can be used to distinguish or trace an individual’s identity, such as name, social security number, date and place of birth, mother’s maiden name, or biometric records; and (2) any other information that is linked or linkable to an individual, such as medical, educational, financial, and employment information” (p. ES-1).

Assumptions

Both private and public university students have similar characteristics when interacting on the Internet. There is no statistical difference in student perceptions between the fall and summer semesters.

Chapter 2: Review of the Literature

Emotional Intelligence (EI)

Derksen, Kramer, and Katzko (2002) wrote that “research on intelligence clearly implies that a person’s success in career and personal life depends not only on IQ” (p. 37), but also on other personal factors. In traditional Western cultures, emotions are seen as irrational and disruptive of the affective state of consciousness with the capacity to interrupt mental activity (Salovey, 1990). As cited in McLemore and Nicholls (2015), emotional intelligence (EI) was initially introduced as a concept by Payne (1985, p. 1), but Salovey and Mayer were among the first to define EI as we perceive it today (Kun & Demetrovics, 2010). Unfortunately, past research on EI presented very different incompatible definitions on categorizing what encompasses EI (Landau & Meirovich, 2011). According to Goleman (1995), EI relates to abilities such as being able to motivate oneself and persist in the face of frustration, to control impulses and delay gratification, to regulate one’s moods and keep distress from swamping the ability to think, to empathize, and to hope. More importantly, EI is a set of skills that helps to accurately appraise and understand our own emotions and those of others, and to appropriately manage our internal feelings in such a way so as to motivate, plan, and achieve one’s personal goals and objectives in one’s life (Salovey, 1990). According to Schutte (1998), EI is complicated by basic and complex human processes whereby individuals navigate through different emotional states. Being able to assess the moods, temperaments, motivations, and intentions of others is one aspect of how personal intelligence relates to emotions that are referred to as EI (Gardner, 1983). As represented in Figure 1, Schulze and Roberts (2005) offer the following view of EI:

EI constitutes three connected mental processes. These processes are: (a) the appraisal and expression of emotional information, (b) the regulation or control of emotion and (c) the utilization of emotion in adaptive ways. In the lower branch, self and other perspectives are subdivided into verbal and nonverbal domains. The upper left branch has four sub-factors, this shows a high EI person, who utilizing the each of the appropriate emotions. Reflected in this model, EI individuals are adept in certain domains, such as (a) appraising their own emotions accurately, (b) expressing and communicating them accurately and responding to them with socially, (c) recognizing the emotions in others accurately and responding to them with socially adaptive behaviors, (d) regulating emotions in themselves and other effectively and (e) using their own emotions to solve problems by motivating adaptive behaviors. (Schulze & Roberts, 2005, p. 33)

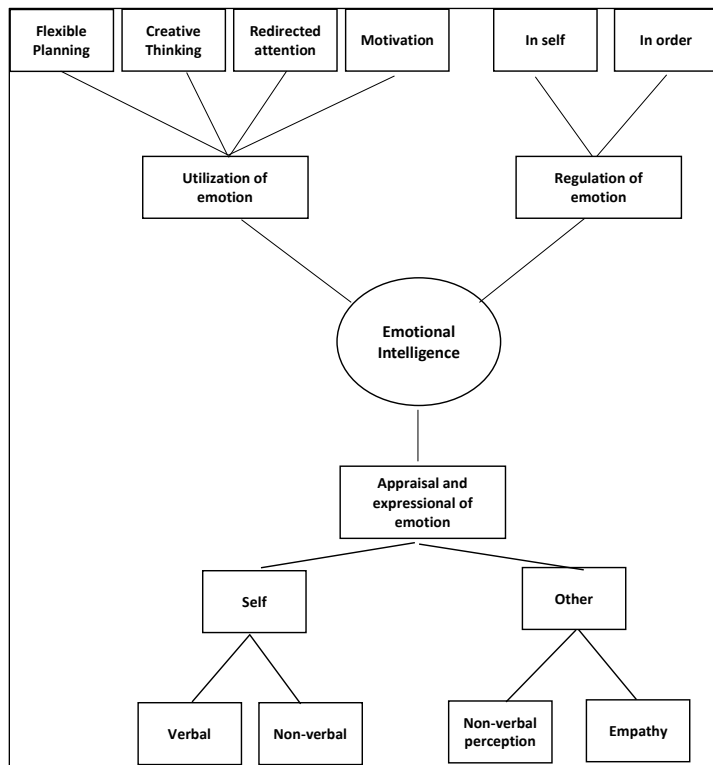


Figure 1 - Salovey and Mayer's 1990 model of EI (Schulze & Roberts, 2005).

In contrast, Kun and Demetrovics (2010) suggest that EI, or aspects of it, is merely the reconceptualization of other former constructs, for example, psychological well-being, satisfaction with life, or the positive poles of the Big Five personality trait dimensions.

Warwick and Nettelbeck (2004) cite that one construct of EI can be divided into two: trait EI and ability EI. Trait EI is associated with “typical performance and is best operationalized by self-report” (p. 1092). As reported by Warwick and Nettelbeck (2004), ability EI is associated with “actual ability, operationalized by maximal performance methods rather than self-report” (p. 1092).

The interest in the constructs of EI is outpacing the assessments of the constructs of EI (Schutte, 1998). Furthermore, other researchers have postulated other personal variables of EI that are worth noting. In accordance with Petrides and Adrian (2000), the authors refer to trait EI as a cross-situational behavior that is exhibited by characteristics such as empathy, assertiveness, and optimism. The authors refer to information-processing EI as abilities such as the ability to identify, express, and label emotions (Petrides & Adrian 2000). Even gender can have an effect on trait EI. In an investigation involving 260 predominantly White participants where the scores were a measure of trait EI based on 15 EI facets, females scored higher than males on “social skills,” which is a measured trait EI factor (Petrides & Furnham, 2000).

Thorndike’s recognition of intelligence is an earlier theory of intelligence that was used in developing the notion of EI (McLemore & Nicholls, 2015). Only a few researchers have explored how to define the relationship between academic success and emotional and social competencies (Parker, Summerfeldt, Hogan, & Majeski, 2004). One such attempt can be found in a study by Parker et al. (2004) of 372 first-year, full-time students at a small Ontario university who completed the short form of the Emotional Quotient Inventory (EQ-i: Short).

Results of the study suggest that academic success was strongly associated with several dimensions of EI. Students who achieved a first-year university grade point average (GPA) of 80% or better versus relatively unsuccessful students who received a first-year GPA of 59% or less (Parker et al., 2004) ranked as positive for these EI dimensions.

This study has attempted to assess the impact of the feelings of college students relative to emotional intelligence on information disclosure and Internet addiction. Scholars have come to understand that personality traits that lead to someone recognizing their ability to manage mood and emotions and to accurately assess the emotions of others are just as important as intellect and thus give rise to EI (Gardner, 1983; Goleman, 1995; Salovey, 1990). The assumption is that typical college students are hindered by their inability to regulate their internal controls for self-management and self-awareness, motivating their actions to disclose and to become addicted to the Internet. Because of this, college students with a low EI score will have a greater inclination to score highly for both information disclosure and Internet addiction. The Internet has fundamentally redefined, in many ways, practically everything related to our social interactions.

Locus of Control

Dweck (1999) writes that “there is no question that our society’s ideas about success, praise, and confidence” (p. 3) are the basis of our conviction that if students believe in their abilities, they will thrive. In social learning theory, an individual’s expectancy based on past behavior can influence the relationship between goal preferences that can actually lead to a satisfying outcome over one that leads to punishment, failure, or to negative reinforcement (Rotter, 1954). So, in other words, a person’s past reactions to psychological situations may

permit an accurate assessment of a subject's expectancy (Rotter, 1954). Our locus of control is shaped by the level of blame we put on what happens in our life (Sinicki, 2017).

As stated earlier, Rotter's research found that a basic assumption is that of the interaction one has with one's meaningful environment and that the internal versus external control of reinforcement is often referred to as the locus of control (Rotter, 1966, 1990). An important component of our personality, as considered within psychology, is the locus of control (Neill, 2015). Rotter defined the locus of control as the degree to which a person believes that the control of reinforcement is internal versus the degree to which it is external (Rotter, 1966). An internal locus of control is where one believes that rewards are the results of one's own efforts and an external locus of control is where one believes that rewards are the result of other interventions (Chak & Leung, 2004).

It was Phares' study of chance and skill effects on expectancies for reinforcement that became the first attempt to measure an individual difference in one's expectancy or one's belief in external controls (Rotter, 1966). Two Ohio State University dissertations served as the basis for the creation of the first locus of control scale (Lefcourt, 1981). The scale showed that people's beliefs that their experiences of failure and success differed when the outcomes were said to be due to skill or chance (Lefcourt, 1981). In graphical form (Shojaee & French, 2014), this belief is shown as existing on one continuum composed of two extremes: the internal locus of control and external locus of control (see Figure 2).

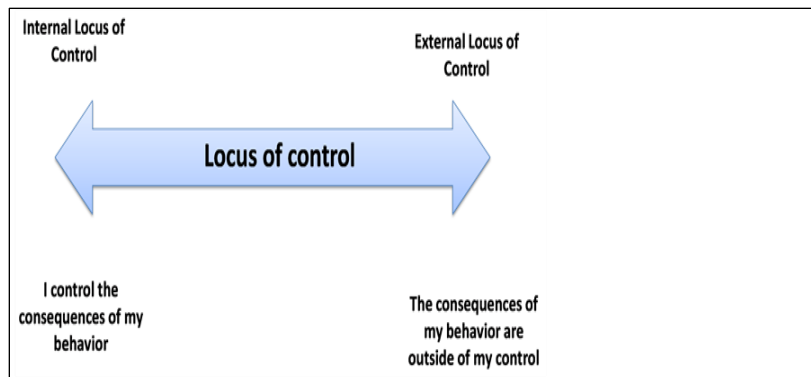


Figure 2 - The continuum of the locus of control (Shojaee & French, 2014).

As described by Lefcourt (1981) in *Research with the Locus of Control Construct*, a variety of locus of control scales were constructed by investigators to examine the utility of different areas such as health, school achievement among minority children, social-political involvement, alcoholism, psychopathology, and demographic factors. For the purpose of this study, researching the list of potential locus of control constructs would be a major undertaking and thus would have altered the direction of the study. Thus, only a few relevant findings will be mentioned.

Research into understanding human behavior has evolved from a series of studies that explored the different aspects of social interactions that are usually guided by an individual's experience and their self-interest in terms of controlling their own destiny. Notwithstanding the fact that relatively little research is available from the United States to understand the locus of control and its interplay in daily life, there is some evidence that suggests there is international interest in contributing to this body of knowledge. A recent study from India examined the use of information communication technology (ICT) tools and the role of the individual's belief that they were in control of their daily usage. The aim of the investigation was to measure the relationship between ICT use and the student's reaction to the impact of his or her ICT use (Vijayakumar & Agrawal, 2013). A random sample of 89 college students on a post-graduate

business management course in central India examined ICT usage and self-control over situations, motivations, and emotions in terms of the effects of ICT usage (Vijayakumar & Agrawal, 2013). The authors only reviewed the effects of the external locus of control and Vijayakumar and Agrawal (2013) found that high ICT usage was beneficial to students who believed in chance and external agency, as these factors were thought to control the events that affected them, and that high ICT usage was detrimental to students who believed less in chance and external agency. The conclusion of the study was that students who lacked the ability to make necessary personal life adjustments experienced higher levels of tardiness, a loss of sleep, and a lack of direct communication, and that this negatively influenced their grades (Vijayakumar & Agrawal, 2013).

Other international studies have considered a correlation between the mood disorder of depression and that of the locus of control. Naik and Sundaramoorthy (2016) estimate in the *Global Burden of Disease Report*, that “1.9% of men and 3.2% of women” (p. 249) have unipolar depressive episodes, and depression is a common illness worldwide, affecting 350 million people. This abnormality can lead to people experiencing a lack of interest, a lack of enjoyment in their daily activities, significant weight loss or gain, insomnia or excessive sleeping, a lack of energy, an inability to concentrate, feelings of worthlessness or excessive guilt, and recurrent thoughts of death or suicide (Naik & Sundaramoorthy, 2016). A study of 171 college students in Gulbarga City found a significant association between depression and a high external locus of control (Naik & Sundaramoorthy, 2016). The implication of this research is that determining the degree of one’s locus of control may potentially predict the presence of depression, and thus, it has a high potential in terms of predicting depression (Naik & Sundaramoorthy, 2016). However, the limitations of the investigation were that contradictory

findings existed in previous research that showed that there was no significant correlation between the locus of control and depression or between the locus of control and gender (Naik & Sundaramoorthy, 2016).

In 1975, Rotter suggested that predicting achievement performance could be improved with more precise context-specific scales (Curtis & Trice, 2013). At that time, a number of scales emerged for specific applications in areas such as health, mental health, weight loss, marital satisfaction, and alcohol use (Lefcourt, 1981). One study attempted to associate the level of the locus of control with the achievement in a student's academic GPA.

The basic finding of Curtis and Trice (2013) was that freshmen-year students in the upper quartile for the external locus of control also had poor academic performance. It was conducted at a southeastern university using two versions of the Academic Locus of Control (ALC) Scale spanning several decades. The researchers developed the ALC Scale for those interested in the relationship between the locus of control and student achievement. The ALC Scale examined the relationship between the locus of control and a variety of academic behaviors, including course grades, GPA, attendance, procrastination, adjustment to college, and graduate-school orientation. After 30 years, the revised version of the ALC (ALC-R) Scale was created that factored in important academic variables. The participants in the ALC study were 322 psychology students from a southeastern university (76 men, 246 women). The ALC-R continues to show promise in academic research with college students. One limitation of the study was that it was carried out at a single university; however, the study found statistically significant relationships between the ALC-R scores and several other measures such as the GPA, number of absences, academic entitlement, procrastination, anxiety, and depression (Curtis & Trice, 2013).

Yet, there are different types of intelligence associated with the external locus of control. Dweck (1999) puts forward two theories about intelligence. The first is the entity theory of intelligence, and it describes aversions to looking dumb, avoiding a challenge, and a decreased ability to cope with setbacks. The second is the incremental theory of intelligence. This states that intelligence can be learned and improved through one's own efforts; intelligence is not static or something that one possesses (Dweck, 1999). It is the foundation of these theories that forms the basis for understanding of entity and incremental beliefs. A study conducted by (Bodill & Roberts, 2013) involving 94 university students enrolled across a range of facilities at a Western Australian university explored two things: one, if there was a connection between intelligence and the academic locus of control, and two, whether intelligence or the academic locus of control were good predictors of academic effort. Participants were recruited through Facebook using a snowball sampling method. This was an online survey that had one scale consisting of seven entities and seven incremental items, and another scale with items measuring thoughts about the participants' ability to manage academic outcomes. The results of the investigation were that the entity beliefs were significantly positively related to the external academic locus of control, while incremental beliefs were not significantly related to the academic locus of control. Additionally, the researchers found that there appeared to be a direct relationship between studying and the academic locus of control (Bodill & Roberts, 2013).

Hrbáčková, Hladík, and Vávrová (2012) write that “the theory of ‘thinking about thinking’ was first described by Flavell in the 1970s as metacognition” (p. 1805). Hrbáčková et al's (2012) research considers the extent to which metacognition and the internal or external locus of control aligns with that of academic success, and 282 third-year students from Tomas Bata University in Zlín completed a self-report questionnaire. Zlín is a region in the Czech

Republic. Participants were given a survey that contained 30 items to measure metacognition and 12 items to measure the internal and external locus of control. Academic success was assessed by evaluating student end-of-semester performance. The study found that metacognition was significantly associated with both academic success and the internal locus of control. Conversely, academic success was not directly connected with the external locus of control. In conclusion, the researchers were able to prove that metacognition is a predictor of academic success, and it amounts to 90% of the variability. Metacognition was also affected by the internal locus of control factors such as motivation, perceived personal competence, will, emotions, attitudes, study habits, and the learning environment (Hrbáčková et al., 2012).

What role does a belief in God have in enabling one to take control of one's personal health? An inquiry into understanding this phenomenon of religious belief affecting the degree to which one can take control of one's health was launched by a group of researchers for acute and chronic health conditions (Wallston et al., 1999). Rotter's Internal-External Locus of Control Scale has been used in the development of the Health Locus of Control (HCL) Scale (Wallston, Wallston, Kaplan, & Maides, 1976). What difference exists between Black and White respondents about their beliefs in an external authority having power over their health? The validity of the Multidimensional Health Locus of Control (MHLC) Scale was addressed in 2005, 30 years after its initial development, and published forms A and B of the first MHLC Scale were developed (Wallston, 2005). This scale consisted of 81 items that analyzed domains in the internal health locus of control, powerful other domains in the health locus of control, and the chance locus of control (such as fate and luck under the rubric of chance; Wallston, 2005). Using the psychometric instrument of the MHLC (LaNoue, Harvey, Mautner, Ku, & Scott, 2015), Black respondents had control beliefs that were positively correlated with "chance" in terms of

their health and with the God locus of control subscale. Eight hundred and sixty-three patients who presented at the emergency department (ED) were asked to participate in a short paper-and-pencil survey. The respondents comprised of 45.5% White, 42.6% Black, and 8.2% Hispanic individuals (LaNoue et al., 2015, p. 8). Black respondents scored significantly higher than White respondents on the chance locus of control subscale. Additional research supports that patients who responded higher for their belief in powerful others and/or the chance dimension were likely to have higher utilization rates, while those who responded higher for their belief in their internal locus of control had less hospital admissions, fewer ED visits, and less physician visits (LaNoue et al., 2015).

MacDonald (1973) investigated race based on civil disorder and the war on poverty, where the attitudes and beliefs of the White majority were examined rather than those of the Black minority. MacDonald showed that it was common practice to develop programs or to treat people using Rotter's (I-E) Scale when manifestations of the problem were truly found in (Heider, 1958) basic concepts of an individual's motivation to change. As reported by Shojaee and French (2014) that "both types of personality traits, internal or external locus of control, create different motivational behaviors, tendencies, and cognitions" (p. 969). These personality traits are often exhibited by differing locus of control orientation that can affect behaviors positively or negatively involving such area as social avoidance or social interactions. Gottesfeld and Dozier (1966), Heider (1958), MacDonald (1973) note that this behavior is distinguished among *want*, *can*, and *try* as a self-perception of one's ability to influence outcomes. According to Heider (1958), there are three important concepts that lead to change (p. 17):

- Whether a person does something or not is a very important consideration which affects our attitude toward his or her prediction of the future.

- Trying to cause a change is a concept related to causation. First, that the person does not really cause the change; second, that the person is doing something more than just wishing to cause the change; and finally, that the situation represents something different from being able to cause the change but not trying.
- Wanting something brings about a certain state of affairs.

When people feel that they can do something on their own behalf, like the poor, it inspires hope and ambition (Gottesfeld & Dozier, 1966). In a 1966 Harlem study using Rotter's (I-E) Scale, 31 community organizers' beliefs in internal or external control changed significantly as they gained experience in their new leadership positions (Gottesfeld & Dozier, 1966). This study found that contrary to the Federal government's lack of efforts on war of poverty, organizers maintained the belief that they were agents of change.

As we become more dependent on the use of the Internet, the literature shows that previous studies have found a negative association between the internal locus of control and Internet addiction (Chak & Leung, 2004; Iskender, 2010).

The expectation is that college students should score slightly more on the external locus of control scale. A comprehensive study that included 477,380 high school seniors from 1976–2006 found that millennials are less concerned about social problems and less trusting and more cynical compared to previous generations (Trzesniewski & Donnellan, 2010). With daily news cycles constantly filled with negative images and reporting, the impact of this type of environment helps to influence an orientation towards a higher external locus of control. As for the sample of college students struggling with their own sense of control, the expectation is this may encourage a sense of mistrust, which promotes a hesitancy to engage in any type of disclosure and furthermore increases their desire for news consumption and more Internet use.

Narcissism

As defined by Konrath (2014), the term *narcissism* comes from the mythical Greek character Narcissus, who fell in love with his own image reflected in the water. The term narcissism can be reflected in the earlier writings of authors such as Ellis (1910) who wrote that “It is the love of beauty, the expression of tenderness and affection for what God has made manifest, in an ingenuous kiss imprinted on the empty and incorporeal reflection” (p. 206). Even with a long history of narcissism as a construct in psychology and psychiatry, there are still challenges in terms of understanding this construct in a clinical setting (Pincus, & Lukowitsky, 2010).

The concept of a narcissistic personality or character was first articulated by Walder in 1925, who described individuals with a narcissistic personality as condescending, feeling superior to others, preoccupied with themselves and with admiration, and as exhibiting a marked lack of empathy, often most apparent in their sexuality, which is based on purely physical pleasure rather than being combined with emotional intimacy (Campbell & Miller, 2011).

As a culture, Americans have decided that the notion of self-admiration is worthy of influencing them to have high opinions of themselves. This shift in recognizing self-admiration and self-love as essential to developing healthy children has caused a flight from reality to the land of grandiose fantasy. Twenge (2009) states that the cultural focus on self-admiration began with the shift toward focusing on the individual in the 1970s, documented in Tom Wolf’s article on “The Me Decade” (1976) and Lasch’s *The Culture of Narcissism* (1979). She continues by arguing that the 1960s was about the greater good and, by the 1980s, it was more about looking out for number one (Twenge, 2009). A study conducted by Twenge et al (2009) reviewed 85 samples of 16,275 college students who filled out the Narcissistic Personality Inventory (NPI)

between 1979 and 2006, and they discovered that the move toward self-admiration has a dark side. The researchers found that by 2006, the 85 samples they reviewed showed two-thirds of college students scored above the scale, which is a 30% increase in only two decades (Twenge, 2009).

Bennett (2014) reports that the first hashtag, #selfie, occurred in 2004 on the website Flickr, but it was not until 2012 that it became a part of the public lexicon. According to Pew Research Center (2014), social media provides millennials a platform on which to share photos for posterity and to communicate with others by chronicling their personal and daily activities. Bennett (2014) found that people aged 18–34 admitted taking selfies at least once per week and that women take selfies 1.3 times more often than men do. Particularity, millennials want to maintain some control of their self-image across digital networks (Pew Research Center, 2014). Through social media, selfies are now a social norm for young people to establish an online presence and to stay connected with others (Wickel, 2015). Cohen (2016) notes that “one thousand selfies are posted to Instagram every 10 seconds” (p. 1). Some believe that posting selfies is seen as a form of self-expression within the context of social and psychological meaning (Weiser, 2015). In March 2014, a national Qualtrics’ online survey with a sample of 1,000 men aged 18–40 provided the first evidence that narcissism was associated with posting selfies and with editing photos of one’s self for sharing on social media sites (Fox & Rooney, 2015). While currently there is limited research into this phenomenon, the few studies that are available appear to suggest that the act of posting selfies can exhibit traits of a narcissistic personality disorder. Wickel (2015) found that 93 female college participants at Elon University reported that the behavior behind posting selfies was narcissistic. While 55% of participants agreed that posting selfies to different social networking platforms encouraged their narcissism

and selfish behavior. As shown in Figure 3, the highest number of participants mentioned that they sought to impress their online friends by sharing their social experiences, while the lowest ranking reason was that they believed that people were genuinely interested in what they were doing. Manifested as primarily a psychological defense, the compulsion to engage in self-promotion to seek the approval of others is an attempt to counteract the self-doubt that pervades us (Michaelson, 2013). Users are willing to post on social media so that they can generate as many likes as possible from their audience (Wickel, 2015).

Reason for posting selfie	Number of times each reason was mentioned
Posting a selfie allows their audience to notice their "impressive" social life.	52
Getting the maximum number of likes and comments on their selfie.	43
The participant believes they look attractive in their photo, and they want others to perceive them as such.	38
There is someone in specific (ex. Boyfriend, friend) that the participant is hoping to make jealous.	37
The participant genuinely believes that people are interested in what they are doing.	28

Figure 3 - Reasons for posting selfies (Wickel, 2015)

The evolution of social change over the last 20 years has largely been spurred by the proliferation of technology. These technological innovations have instantly transformed the way in which we consume media content. Contributing to the rising narcissism scores among millennials is a society enamored by celebrity status, different parenting styles, along with a movement toward enhancing self-esteem (Wallace, 2016). Today there are a variety of venues for online and offline narcissistic behaviors to engage in self-indulgence and self-presentation. Wang (2013) posits that Facebook allows users to construct tailored impressions for their social networks that may elicit the selective presentation of particular characteristics of themselves to result in the desired outcomes that can still be attributed to their offline image.

Narcissists have a distinct urge for validation and admiration, leading to the desire to seek out self-enhancement experiences (Pincus & Roche, 2011). Campbell and Miller (2011) propose that very little research exists regarding which features of the World Wide Web narcissists might be drawn to or which activities narcissists spend more time participating in online. Yet Wallace (2016) implies that just reading and responding to prompts is a characteristic of narcissism because it reinforces an individual's sense of self-absorption and an inflated sense of uniqueness and importance.

One thing most scholars can agree on is that narcissism in non-clinical settings is a phenomenon that is complicated by its complexity and multidimensional facets (van der Linden & Rosenthal, 2016). However, in clinical environments, narcissism can be assessed as a descriptor of interdependent mental processes and behaviors such as interpersonal exploitativeness and exhibitionism. One group of researchers are exploring whether narcissism and its associated personality traits can be accurately measured with a question (van der Linden & Rosenthal, 2016). Of the various measures of narcissism that have been developed, the NPI has received the most empirical attention to date. The NPI scale was initially developed to evaluate differences in narcissism for a non-clinical population (Raskin & Terry, 1988). Konrath (2014) developed a single-item scale that can measure narcissism in social psychological research. This scale differs from the original NPI 80-item scale involving a group of undergraduate students that was used to explore a hypothesized relationship between narcissism and creativity (Raskin & Terry, 1988). Since that time, other studies have analyzed the construct validity of the narcissism scale to shorten the NPI items from 80 to 54 and to the widely used 40-item scale.

The Single-Item Narcissism Scale (SINS) has been found to have an intrapersonal correlation between aspects such as positive affect, depression and aggression; relationship quality; and prosocial behavior among their study population of undergraduates and nationally representative adults (Konrath, 2014). This single item puts individuals into one of five groups (Miller et al., 2015): neuroticism, extraversion, openness, antagonism, and conscientiousness (Konrath, 2014). The measure is such that in just a few seconds, researchers are able to obtain a valid measure of narcissism that correlates with the lengthier narcissism scales (Konrath, 2014).

Other examinations have a link between narcissism and self-absorption. The manifestation of a complete obsession with self-absorption is a dimension of narcissism. Barnett and Sharp (2017) investigated the relationship between self-absorption, gender, and narcissism in a study of 813 U.S. college students. Furthermore, self-absorption can be characterized as being either public or private. Researchers such as Barnett and Sharp (2017) defined self-absorption as follows: “private self-absorption reflects excessive thoughts about oneself, which can interfere with an individual's ability to concentrate and perform daily tasks and public self-absorption reflects excessive leads to critical thoughts about oneself” (p. 326). The study found that women had a greater association with both public and private self-absorption and narcissism, while men were correlated with public self-absorption and narcissism (Barnett & Sharp, 2017).

Frequent selfie posting by individuals who are highly self-absorbed and with high self-esteem can be seen as an attribute of narcissism. Barry, Doucette, Loflin, Rivera-Hudson, and Herrington (2017) conducted a study that analyzed the responses of 128 participants of a southeastern university in the United States and found that self-esteem and narcissism were found to be negatively correlated. In the study, 98.4% of participants posted selfies and those who posted frequently also shared multiple images of themselves (Barry et al., 2017). The role

that social media plays in terms of self-presentation, self-absorption, and narcissism is certainly debatable. While it is clearly undeniable that social media has transformed our society, this is even more evident in the biochemical reactions connected to the emotional indulgence centering on the way people feel. As users can engage in self-presentation and in the feedback they receive, narcissism has become an inherent factor in social media (Barry et al., 2017).

From an effort to raise healthy children with extraordinarily high self-esteem and self-worth, today's youth has been characterized as being self-absorbed, egotistical and entitled. As stated earlier, Twenge (2009) found that narcissism in college students had increased by 30% in two decades. While this may be a stretch, the data clearly suggest that activities that arouse the neurological parts of the brain and have become a cultural phenomenon will undoubtedly be reflected highly on most measurements. More broadly speaking, you would expect individuals craving attention (scoring highly in narcissism) to become more provocative in online disclosure to gain popularity or, better yet, attempt going viral for that 15 minutes of fame. Just look at the numbers, as published by Fishwick (2016): "80 million photographs uploaded to Instagram every day, 3.5 billion likes every day and 1.4 billion people (20% of the world's population) are on the Internet." This data alone suggest narcissists would also spend a greater amount of energy on online activities, which increases the risk for addictive behaviors and more self-disclosure.

Internet Addiction

Dr. Kimberly Young first brought the issue of the problematic use of the Internet to clinical attention in a 1996 case where a non-technically-oriented, 43-year-old homemaker was spending up to 60 hours per week online in chatrooms (Young & Nabuco de Abreu, 2010). Since that time, the psychological dependence on the Internet has been characterized by some clinicians as an addiction to the Internet (Kandell, 1998). Sanghvi and Rai (2015) define

“Internet addiction as found by excessive or poorly controlled preoccupations, urges, or behaviors regarding computer use and Internet access that lead to impairment or distress” (p. 64). In other words, Internet addiction is the lack of control leading to the loss of control or time while on the Internet and mood disorder and anxiety when not on the Internet.

The first published U.S. press article regarding Internet addiction disorder was entitled “The Lure and Addiction of Life on Line”, and it appeared in the *New York Times* (Chak & Leung, 2004). Addiction specialists were quoted when comparing excessive Internet use to other compulsions such as shopping, exercise, and gambling (Chak & Leung, 2004). Internet addiction behaviors have been associated with other disorders, for example, obsessive–compulsive disorder (OCD) and impulse control disorders (ICDs; Sanghvi & Rai, 2015).

Yet other researchers see extreme Internet usage as merely a function of a pathological condition. Pathological users find that the Internet makes it easier to engage with others and to develop friendships as compared to offline (Dittman, 2003).

According to the American Psychiatric Association (2013), the *DSM-V* refers to Internet gaming disorder (IGD) in individuals who compulsively use the Internet as:

“a pattern of excessive and prolonged Internet gaming that results in a cluster of cognitive and behavioral symptoms, including progressive loss of control over gaming, tolerance, and withdrawal symptoms, analogous to the symptoms of substance use disorders. As with substance-related disorders, individuals with Internet gaming disorder continue to sit at a computer and engage in gaming activities despite neglect of other activities. They typically devote 8-10 hours or more per day to this activity and at least 30 hours per week” (p. 796).

Even though there is considerable controversy regarding whether Internet addiction should be included as a diagnosis in the *DSM-V*, it is still uncertain if the addiction is caused by an underlying disorder or if it represents a discrete disease entity (Cho, Sung, Shin, Lim, & Shin, 2013b). For some individuals, just logging into the Internet has been described as stimulating a sense of tension or arousal, yielding pleasure, and this temptation was shown to be difficult or impossible to resist (Shapira, Goldsmith, Keck, Khosla, & McElroy, 2000). In addition, clinical studies have linked Internet addictions with high dopamine levels and extensive computer game playing, which is part of the brain's reward system (Sigman, 2012).

The Internet has profoundly enhanced our ability to communicate with others around the world. Consequently, this technology has contributed to a more modernized society, which affects our interactions with one another and promotes new ideologies that lead to social change. The importance of the Internet as an aspect of social technology used for communication with individuals and groups has also been associated with a decline in social engagement and diminishing psychological health (Kraut et al., 1998). Yet other researchers such as Egger and Rauterberg (1996) have noted that Internet addiction disorder, unlike alcoholism (which is a recognized medical addiction), is like pathological gambling, an out-of-control behavior that threatens to overwhelm the addict's normal life.

Moore (2008) reports that China's Ministry of Health will be the first to adopt new definitions for Internet addiction that "lists symptoms of the addiction including irritation, difficulty in concentration or sleeping, mental or physical distress and a yearning to get back online." In the United States, the Illinois Institute for Addiction Recovery has certified addiction counselors who are trained to identify and treat Internet addiction (Illinois Institute for Addiction Recovery, 2017). At the time of this research study, the number of addiction centers offering

treatment for Internet-related issues is unknown. However, after an exhaustive search, there is a paucity of publications dedicated to supporting an understanding of the significance of Internet addiction problems. Despite the scant attention paid to this issue, there is some evidence emerging that shows the concerns that healthcare professionals have about Internet-related problems in clinical settings. A recent editorial review by Young (2010) notes:

Pioneer treatment centers specializing in Internet addiction recovery emerged at McLean Hospital, a Harvard Medical School affiliate, and at the Illinois Institute for Addiction Recovery at Proctor Hospital in Peoria, Illinois. Inpatient addiction rehabilitation centers such as The Canyon, Sierra Tucson, and The Meadows started to include Internet-related compulsivity as one of the sub-specialties they treat. Globally, the first inpatient treatment center opened in Beijing, China in 2006, and it is estimated that Korea has over 140 Internet addiction treatment recovery centers. Most recently, the first inpatient residential care center opened in the US: the Restart Program in Redmond, Washington (p. 91)

China is leading the way in recognizing Internet addiction as a clinical disease, as more of its citizens spend an increasing amount of time in chatrooms, blogging, or playing online games (Moore, 2008). Southeast Asia is especially concerned about Internet addiction, and it is evident in the hundreds of Internet Addiction Centers in many parts of the world (Wilkerson, 2015). Asia considers Internet addiction as a serious behavioral health problem (Mak et al., 2014). In the United States, costing between \$25,000 and \$30,000, Utah Outback Therapeutic Expeditions offers a combination Internet-addiction recovery program and mental-health retreat as an outdoor adventure (Foran, 2015).

However, it is worth noting that there is some variation in the way authors describe Internet addiction. The extent to which authors are interpreting Internet addiction differently only illustrates the inconsistencies and weaknesses in the body of literature and sheds further light on the complex nature of this phenomenon. As cited by Iskender and Akin (2010), researchers have described a wide range of symptoms of Internet addiction such as an intense preoccupation with using the Internet (Chou, 2001; Treur, Fabian, & Furedi, 2001), excessive amounts of time spent online, compulsive use of the Internet, difficulty in managing the time spent on the Internet, feeling that the world outside of the Internet is boring, becoming irritated if disturbed while online, and decreasing social interaction with “real” people (Kraut et al., 1998). One notable difference is seen in Tsitsika et al (2011) the authors found that adolescents from divorced families were more likely to have poor academic performance, limited extracurricular activities, and engage in high-risk behaviors, which associated with Internet addiction. According to Widyanto and Griffiths (2006), in a 1996 study by Young on Internet addiction, five or more of the eight criteria were classified as Internet addiction in the participants who were surveyed. The authors describe Internet addiction as a dependency falling into two categories: dependents spending “38.5 h per week and non-dependents spending 4.9 h per week” (p. 33), where online interactions were consumed by time spent in chatrooms and forums (Widyanto & Griffiths, 2006).

When analyzing Internet usage, it is important to consider all platforms that people use when accessing the Internet. Usually, some studies have revealed that Internet usage and addictions are related to computers (Suhail, 2006). Other technologies are just as important when examining overall Internet activity. Today’s findings would suggest that cell-phone time is mostly spent accessing various social networking site (SNS) such as Pinterest, Instagram, and

Facebook (Roberts et al., 2014). Maximizing the use of one's time can occur in some unusual places: The average smartphone user, aged 18–29, reported “using their phone while on the toilet and [checking] their device every six and a half minutes (that's 150 times a day)” (Gregoire, 2013). Facebook is by far the most popular SNS in the world (Ryan, Chester, Reece, & Xenos, 2014). From 2015 to 2016, “Facebook gained 7% in online usage, roughly eight-in-ten online Americans (79%) now use Facebook” (Greenwood, Perrin, & Duggan, 2016, p. 3). See Figure 4.

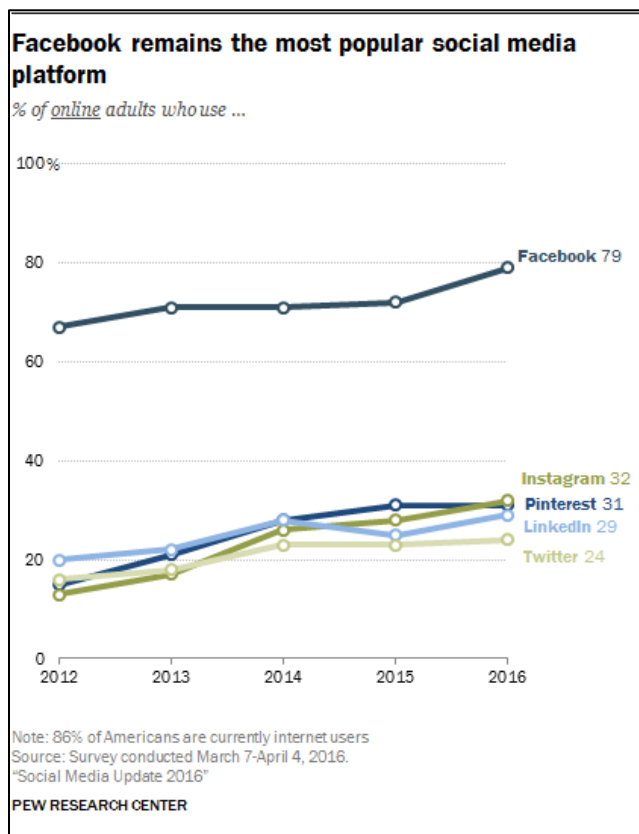


Figure 4 - Facebook remains the most popular social media platform (Greenwood, Perrin, & Duggan, 2016).

Anderson (1998) surveyed 1,300 college students in classrooms at eight academic institutions to identify how the students' use of the Internet has affected their social or academic lives. He reported that students defined high use as spending more than “400 minutes per day on the Internet” (Anderson, 1998, p. 24).

Students often lack the ability to even mentally disengage, only to discover that their preoccupation about the Internet had been interfering with other activities. In other words, the high-use group experienced disrupted sleep patterns and this group reported that they felt strong negative effects in terms of academic achievement, meeting new people, and participating in extracurricular activities (Anderson, K. J., 1998).

It is naïve to believe that the Internet has had a benign effect on our lives. The reality is that there is an urgent need to recognize and respond to the threat of Internet addiction (Nalwa & Anand, 2003). Developing a standard screening tool has been complicated by the lack of clinical trials and the non-uniformity of instruments. Sanghvi and Rai (2015) identified two screening instruments that have been developed to assess Internet addiction: Brenner's Internet Addictive Behavior Inventory (IRABI) and Young's Internet Addiction Test (IAT), although neither has emerged as a standard. The IAT appears to be valid and reliable (Sanghvi & Rai, 2015). Brenner (1997) developed a 32-item questionnaire (IRABI) for Internet usage designed to assess experiences similar to those associated with substance abuse in the *DSM-IV*. The purpose of the questions is to gauge users' experience of usage-related consequences such as time lost and to establish the difference between normal and excessive online consumption patterns (Brenner, 1997). While Brenner's and Young's tools investigate the adverse effects of Internet usage, the IAT survey can be administrated via telephone interview or electronic collection (Young, K. S., 1998). As an adaption of the *DSM-IV*'s diagnosis criteria for pathological gambling, Young's 8-item questionnaire categorized Internet addition into five unique types: cyberporn, cyberrelationships, net compulsions, information overload, and computer addiction to game playing or programming (Chak & Leung, 2004). Cyberporn is identified as an addiction to pornography. A cyberrelationship is an addiction specific to fostering primarily online

friendships. Net compulsion is an addiction to online gambling. Information overload is an impulse to Web surfing and database searches, while computer addiction is for gaming and programming (Chak & Leung, 2004).

College freshman with Internet addictions are particularly vulnerable to increased psychiatric problems as compared to non-addicted students (Ni, Chen, & Liu, 2009). Multiple journals and articles report that major depression, loneliness, and social anxiety are a manifestation of Internet addiction (Engelberg & Sjöberg, 2004). Internet addiction is primarily symptomatic of poor social skills and the inability to form tangible relationships (Cho et al., 2013a). One of the underlying causes of this type of addiction is a deficiency in seeking company and in getting socially involved (Engelberg & Sjöberg, 2004).

As a part of this study, it can be posited that the proliferation of technology has achieved a level of social acceptance that permeates every area of our lives; because of this, Internet addiction is not something that is widely recognized. To truly understand Internet addiction, it is important to recognize the framework of the biopsychosocial components related to the addictive behaviors. There is a worldwide acceptance for Internet-enabled apps and devices targeting school-aged and preschool children under the age of 9 through the use of e-readers, tablets, laptops and smart toys (Holloway, Green, & Livingstone, 2013). Marlatt, Baer, Donovan, and Kivlahan (1988) define addictive behaviors as:

a repetitive habit pattern that increases the risk of disease and/or associated personal and social problems. Addictive behaviors are often experienced subjectively as “loss of control”—the behavior contrives to occur despite volitional attempts to abstain or moderate use. These habit patterns are typically characterized by immediate gratification (short term reward), often coupled with delayed deleterious effects (long term costs).

Attempts to change an addictive behavior (via treatment or self-initiation) are typically marked with high relapse rates. (p. 224)

Addictive behaviors often start as habitual activities resulting in impulsive responses that deliver a rewarding experience where attempts to abstain are followed by reoccurrences of relapse. Lacking a universal consensus in describing whether extreme Internet activity is either problematic use or an addiction (Chakraborty et al., 2010; Sariyska et al., 2014; Yan, Li, & Sui, 2014; Zafar, 2016) complicates our ability to characterize a set of behaviors that may help to define this condition. Often, addiction problems can be seen as highly comorbid with other pathological mental disorders; it conjures up images of addicts who have lost everything. By contrast, as stated earlier, less intrusive habitual behaviors with an absence of self-regulation and a desire for gratification can be indicative of addictive behaviors. Just over a decade ago, frequent Blackberry and the “always-on-24/7” use were heralded by some as “Crackberry” (McIntyre, 2006; Turel, Serenko, & Bontis, 2008); these users described their Blackberries as merely an instrument with which to achieve efficiency and better work/life balance (Middleton, 2007). Smartphone use of today, as reported by (Oulasvirta, Rattenbury, Ma, & Raita, 2012), found a deficiency in self-regulation among mobile users who constantly check news feeds, emails and Facebook at least every 30 minutes throughout the day. This appears to imply that today’s students will particularly exhibit some predisposition of Internet addiction. In other words, higher levels of Internet addiction would have a similarly precipitous relationship among all other variables, such as higher external locus of control, higher self-disclosure, and lower emotional intelligence.

Information Disclosure

Note that this research will be using self-disclosure and information disclosure interchangeably. Farber (2004) states that Western culture has historically emphasized the importance of revealing secrets. The Catholic Church has decreed that absolution can only be obtained through the confession of one's sins before a priest. Even now, after several decades, self-disclosure is still an intensely contemporary interest (Farber, 2004). Misoch (2015) notes that "self-disclosure, which has been intensively studied since the 1970s, pertains to the process of exposing personal and intimate information" (p. 535). Self-disclosure must first begin with an understanding of the meaning of the self. According to Jourard (1971), it was a previous tranche of research that led the way to developing a "measure of real-self being." Jourard's work was considered innovative, courageous, and profoundly important in creating aspects of seminal work on the theoretical beliefs for psychotherapeutic practice (Richards, 1999). As cited by Zheng et al. (2010), social identity is based on two essential constructs: reciprocity and de-individualization (p. 3). There appears to be a relationship between what individuals are prepared to disclose and that which others have disclosed to us, and this interchange appears to be one of reciprocity when considering self-disclosure (Jourard, 1971). Reciprocity plays a critical role in forming social identity within a community (Dietz-Uhler, Bishop-Clark, & Howard, 2005). It is through the process of social validation and relationship development where mutual bonds are formed and this is often presented in the form of self-disclosure (Zheng et al., 2010). Joinson, McKenna, and Reips (2007) argue that "not all self-disclosure is equal—disclosing your season of birth is not the same as disclosing your age, which is not the same as disclosing your sexual fantasies" (p. 4). Clinical research has found that neural responses appeared to be robust when answering questions about one's self. A Harvard study by Tamir (2012) concluded that self-

disclosure was strongly associated with increased brain activity when personal experiences are derived from the innate value of communicating one's thoughts and feelings to others. McKenna, Green, and Gleaso (2002) explain that "people often have repeated interactions with those they get to know online, so that early self-disclosure lays the foundation for a continuing, close relationship" (p. 10). It is through frequent interactions online that allows someone to exchange information which facilitates a development of mutual trust.

According to Davis (2012), adolescents in Western societies consider identity as significant in understanding who one is and what one believes: "Who am I? How do I fit into the world around me?" (p. 1528). Students in 32 secondary schools in Bermuda revealed that they felt a sense of connection and belonging through online self-disclosure (Davis, 2012).

There is an increasing amount of both experimental and anecdotal data to support how Computer Mediated Communication (CMC) and normal Internet behavior can be classified as containing vast levels of self-disclosure (Joinson, 2007). Compared to face-to-face (FTF) settings, the CMC platform makes for an ideal environment where unacquainted people can engage in direct questioning, resulting in more personal and intimate self-disclosure (Schouten, Valkenburg, & Peter, 2009). Despite the risk of social humiliation or stolen personal identities, individuals still divulge their personal information in a variety of Internet forums (Attrill & Jalil, 2011). Limited information is usually communicated on initial encounters, information that is usually bound by general politeness, cultural norms, stereotypes, and social etiquettes, thus revealing little information about interpersonal rewards and costs (Altman, 1973). According to several articles, social media plays a part in the development of interpersonal relationships, and this, furthermore, has dramatically changed the way people communicate (Perbawaningsih, 2016). Interpersonal relationships are formed over time through a series of communication

exchanges requiring the nurturing of social bonds, mutual connections, and self-disclosure. To better understand these interactions during the development of interpersonal relationships, Altman and Taylor (1973) examined the interpersonal behaviors as referred to in the social penetration theory. Altman and Taylor's research was the most ambitious project to explore the interpersonal consequences of disclosure (Derlega, 1987). Altman and Taylor (1973) wrote that "social penetration theory refers to overt interpersonal behaviors that take place during social interaction, and internal subjective processes that precede, accompany, and follow overt exchange" (p. 5). Furthermore, Altman and Taylor postulate that social relationships occur as time passes, increasing social bonds through an analysis of "whole people" (Altman and Taylor, 1973). Certainly, the Internet allows an unique environment where relationships are being formed with others whom one has only just met—especially where the interaction occurs on a regular basis (McKenna, Green, and Gleaso, 2002).

We tend to view self-disclosure as a common social trait that is practiced universally by all genders and cultures. Jourard's self-disclosure questionnaire comprised of 60 items that were classified in groups of ten and within each six more general categories of information about the self that yield the following conclusions. Whites have disclosed more than Blacks have to significant people in their lives. Jourard (1971) found that "American college students have disclosed more about themselves to their parents and peers than college students tested in England, Puerto Rico, the Near East, and Germany" (p. 12).

Of the social media sites, Facebook, in particular, offers users the ability to formulate relationships by posting personal information (Perbawaningsih, 2016). Stone (2009) published the following in the *New York Times*:

Facebook promises to change how we communicate even more fundamentally, in part by digitally mapping and linking peripatetic people across space and time, allowing them to publicly share myriad and often very personal elements of their lives. Facebook's mission is for its platform to be used by everyone in the world to share information seamlessly. Facebook is trying to teach members to use privacy settings to manage their network so that they can speak discreetly only to certain friends such as co-workers or family members, as opposed to other "friends" such as bosses or professional colleagues. However, most Facebook users have not taken advantage of the privacy settings; the company estimates that only 20 percent of its members use them.

Facebook is transforming the way people interact today by making communications asynchronous. Its platform permits the ability to enable settings that allows users to initiate private and discreet conversations.

Nguyen and Campbell (2012) point out that several theories have emerged to describe increasing CMC self-disclosure in FTF conversations through Internet communications. These theories are "(a) the social identity model of deindividuation (SIDE model); (b) hyperpersonal CMC theory; (c) reduced cues theory (RCT); (d) social information-processing theory (SIP theory); and (e) media richness theory (MRT)" (p. 103). In reviewing each theory, the findings became inconclusive in terms of supporting that a relationship existed for online communications via any single theory or answering the question as to why disclosure consistently occurs more in online venues (Nguyen & Campbell, 2012).

Wei, Russell, and Zakalik (2005) write that "self-disclosure refers to individuals' verbal communication of personally relevant information, thoughts, and feelings in order to let

themselves be known to others” (p. 602). Self-disclosure is frequently discussed in terms of anonymity, which is usually found in a non-visual context. Misoch (2015) found in a qualitative study that people were willing to openly and freely engage in self-disclosure using non-anonymous media such as YouTube. Misoch (2015) defines YouTube as a medium that allows users to create video-rich content for a worldwide social network. Combined with previous empirical studies, the model shown in Figure 5 describes the characteristics of the factors that shape the process of social disclosure (Misoch, 2015). As can be seen, Figure 5 shows the factors that influence online self-disclosure, ranging from a variety of circumstances: the situation and mediated communication, channel characteristics, motivation, personal factors, and cultural criteria; the potential influences are age and gender.

Yu (2014) refers to self-disclosure on the Internet as risky behavior and less of a deviant activity, which is associated with a lack of self-control. Researchers found that consumers will disclose private and personal information in exchange for expected benefits (White, 2004). Furthermore, Facebook users consider self-disclosure as merely a byproduct of the benefits of building or maintaining social relationships and enjoying themselves (Contena, 2015).

Jiang, Heng, and Choi (2013) mention that in synchronous social interactions on the Internet, there is a bidirectional exchange of interpersonal communication involving questions and answers between a dyad. The authors revealed that during this exchange, individuals tend to overestimate their commonalities in a mutualistic relationship through mediated channels.

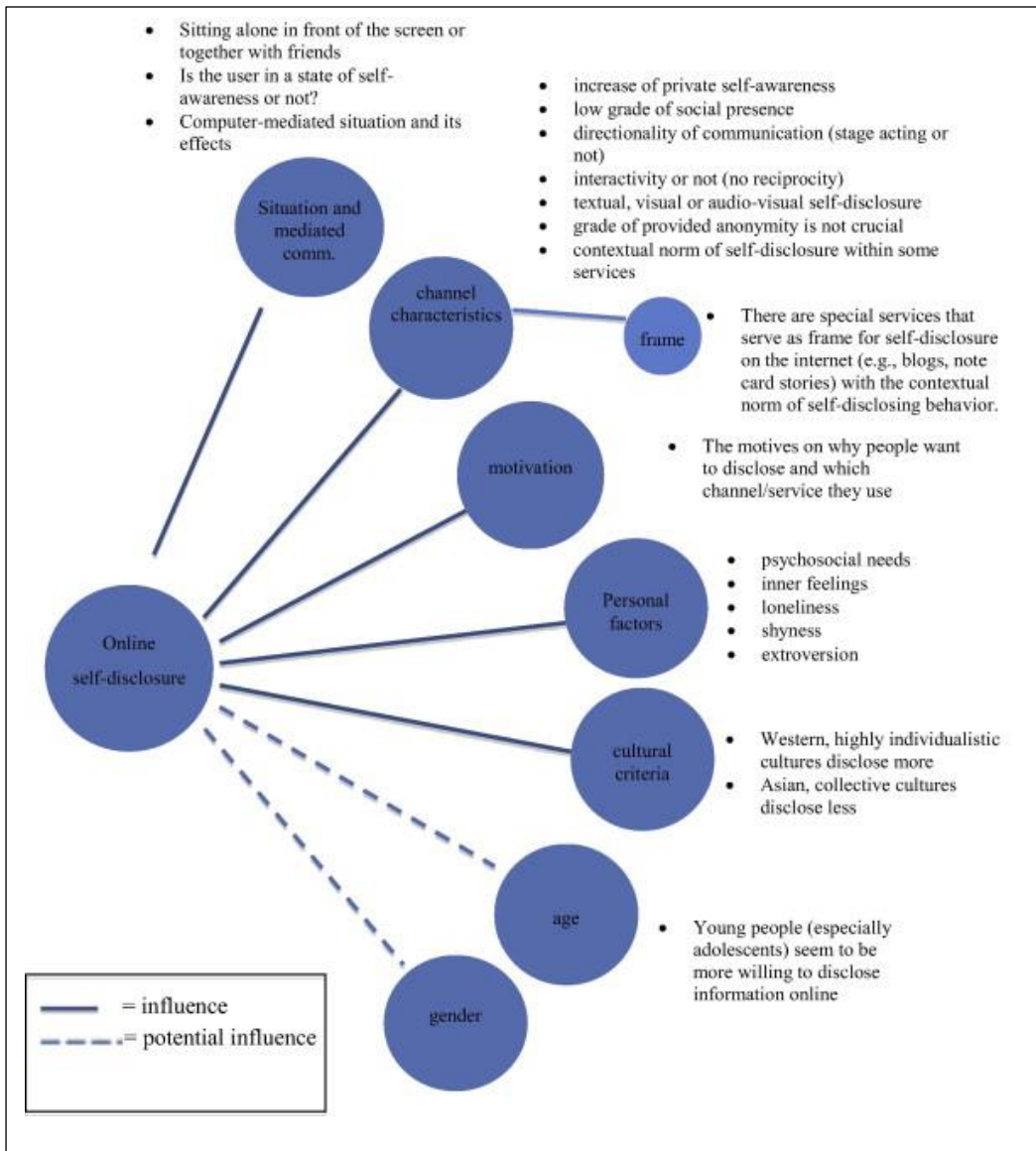


Figure 5 - Factors that influence online self-disclosure (Misoch, 2015).

Furthermore, they noted that as individuals find the relationship to be beneficial, they increase their efforts to sustain or enhance the relationship. Consequently, self-disclosure increases as individuals become aware that there is a perceived benefit from the interpersonal communication (Jiang et al., 2013).

Madden, Smith, and Vitak (2007) noted that “despite all the new forms of personal information available online, the most popular type of ‘people search’ relates to finding

someone's contact information such as an address or phone number" (p. 27). User profiles usually contain a variety of identifying information, such as a profile picture and other pictures, in addition to the individual's date of birth, place of residence, education, occupation, and relationship status (Utz, 2015).

The Computer Security Division of the Information Technology Laboratory of the U.S. National Institute of Standards and Technology National Institute of Standards and Technology (2010) provides guidelines for a risk-based approach to protecting the confidentiality of PII. The following list contains examples of information that may be considered PII (p. 2-2):

- name, such as full name, maiden name, mother's maiden name, or alias;
- personal identification number, such as a social security number (SSN), passport number, driver's license number, taxpayer identification number, patient identification number, and financial account or credit card number;
- address information, such as a street address or email address;
- asset information, such as an Internet Protocol (IP) or media access control (MAC) address or other host-specific persistent static identifiers that consistently link to a particular person or small, well-defined group of people;
- telephone numbers, including mobile, business, and personal numbers;
- personal characteristics, including a photographic image (especially of one's face or other distinguishing characteristic/s), x-rays, fingerprints, or other biometric images or template data (e.g., retina scan, voice signature, facial geometry);
- information identifying personally owned property, such as a vehicle registration number or title number and related information;

- information about an individual that is linked or linkable to one of the above (e.g., date of birth, place of birth, race, religion, weight, activities, geographical indicators, employment information, medical information, educational information, financial information).

The increased willingness to disclose information is based in part on the importance of maintaining online anonymity (Misoch, 2015). The advent of new technology such as the Internet has altered people's perception about the disclosure of personal information, in addition to the possible ramifications of such activity (Joinson & Paine, 2007). Moreover, Shin and Kang (2014) cite that online communication on the Internet has been found to have a greater negative influence than a positive one. They point out the frequency with which individuals willingly send out PII, such as personal information, personal photos, personal videos, and Internet passwords (Shin & Kang, 2016).

Initially, people tend to reveal less intimate information to allow others to get to know them before sharing more personal aspects of their lives (Altman, 1973; Ellison, Heino, & Gibbs, 2006). However, adolescents can engage in the self-disclosure of intimate exchanges with others during online communications (Davis, 2012). Online dating, in particular, offers a unique opportunity because of the asynchronous communication platform and nonverbal cues for individuals to be more selective in terms of their self-presentation (Ellison et al., 2006). Online dating sites offer several advantages such as people not needing to be in same place at the same time, thus finding someone who is similar is easier than in FTF dating; furthermore, online dating does not need the help of friends to make a connection, and as is characterized by online communication, there is a reduced awkwardness in terms of visual and auditory cues (Valkenburg & Peter, 2007).

American teens are comfortable with sharing personal information. Another Pew Research Center surveyed 16 online and in-person focus groups of teens between the ages of 13 and 17 and found that social media and mobile phones were used in the following way:

- 55% of all teens ages 13 to 17 have flirted or talked to someone in person to let them know they are interested.
- 50% of teens have let someone know they were interested in them romantically by friending them on Facebook or another social media site.
- 47% have expressed their attraction by liking, commenting, or otherwise interacting with that person on social media.
- 46% have shared something funny or interesting with their romantic interest online.
- 31% sent them flirtatious messages.
- 10% have sent flirty or sexy pictures or videos of themselves.
- 7% have made a video for them. (Lenhart, Anderson, and Smith, 2015, p. 3)

The act of posting selfies on social media sites has become a popular fad on social media sites and has garnered the fascination of the public (Barry et al., 2017). The Pew Research Center (2014) survey reported that 55% of millennials have admitted to posting a “selfie” on a social media site, while other generations are less likely to do so. Millennials’ posting activity is more than double that of Generation X, who responded to posting selfies 24% of the time (see Figure 6).

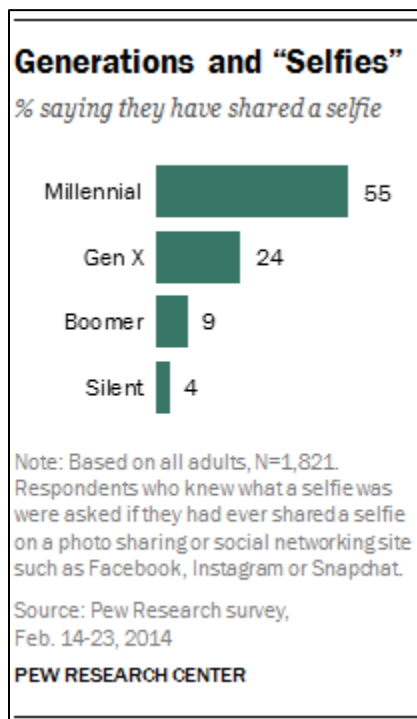


Figure 6 - Generations and selfies (Pew Research Center, 2014)

It is reasonable to think that college students who measure highly on self-disclosure will likely be related with high scores in narcissism and internal locus of control, but conversely related with emotional intelligence. Without a doubt, technology has affected us in so many ways. One area with the greatest effect on us is in our social interactions. A continuation of interactions is the formation of the underlying basis for establishing meaningful relationship. However, in the absence of trust, there is support for the notion that the amount of disclosure will be tempered, as in the case of a high external locus of control and high emotional intelligence. By far, social media has become the conduit for creating connections with others around the world. The new societal reality (especially for narcissists) is that through a few clicks, technology is used as a mechanism to instantly share things about ourselves with photos, videos, texts, and music. For many college students, social connections can be measured by the number

of likes, friend connections, or followers, where the information is not sacred but must be shared. In other words, the degree to which one is motivated to disclose varies relative to one's perceived intentions and purpose.

Chapter 3: Methodology

Statement of the Research Design and Rationale

This study consisted of descriptive correlational research. The researcher collected data to explain the impact that the locus of control, emotional intelligence (EI), and narcissism have on Internet addiction and information disclosure. The study was conducted over the fall and summer semesters, where participants completed a pen-and-paper, 70-item questionnaire regarding the personality traits of narcissism, the locus of control, and EI to determine their impact on Internet addiction and information disclosure, designed specifically for the purpose of collecting data for analysis. The results of the study were used by the researcher in the research study analysis.

Approval to conduct a human subject research was obtained from the Human Subjects Review Committee (UHSRC) which is the Institutional Review Board (IRB). See appendix A.

The results were grouped on the basis of student personality traits such as narcissism, the locus of control, EI, Internet addiction, and information disclosure. The data were analyzed using statistical and analysis tools, such as SPSS and Excel, to understand individual perceptions between each of the traits as a combined series of survey questions.

Population and Subjects

Data were collected from students in five Midwestern universities, comprising of both public and private academic institutions. The total number of participants was 132. However, it was determined that at least 10 participants were needed to be included in the study, only two universities met the criteria for a total of 114 participants. Students for this research were enrolled in a traditional post-secondary program ranging from bachelor to doctoral degrees in a variety of fields of study, as shown in Figure 7.

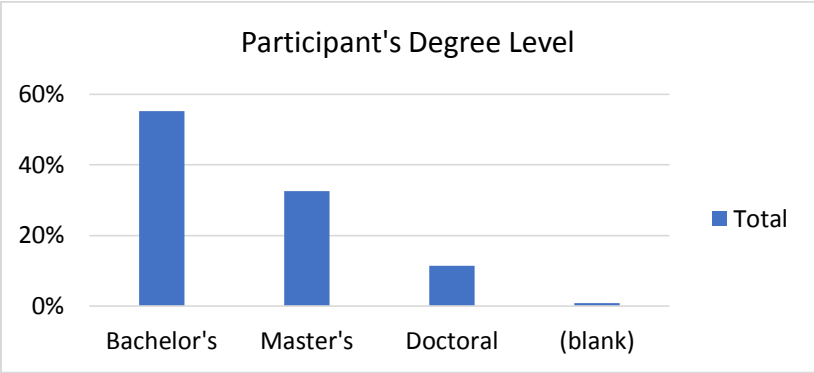


Figure 7 - Participant's degree level.

The private institution was ranked in the top tier of regional universities with roughly 4,875 students (fall 2016), with an average age of 25, with 59% of students being female and 41% male, and with 16% classified as minority students. The public institution is a comprehensive, co-educational university with approximately 21,105 students in fall 2016, offering 200 majors through five colleges, with an average age of 22.93, and a student composition of 59.3% women and 40.7% men, with 64% White students, and 24.3% classified as minority students. Figure 8 shows the percentage of the participants in each age group, with the average age being 29.29.

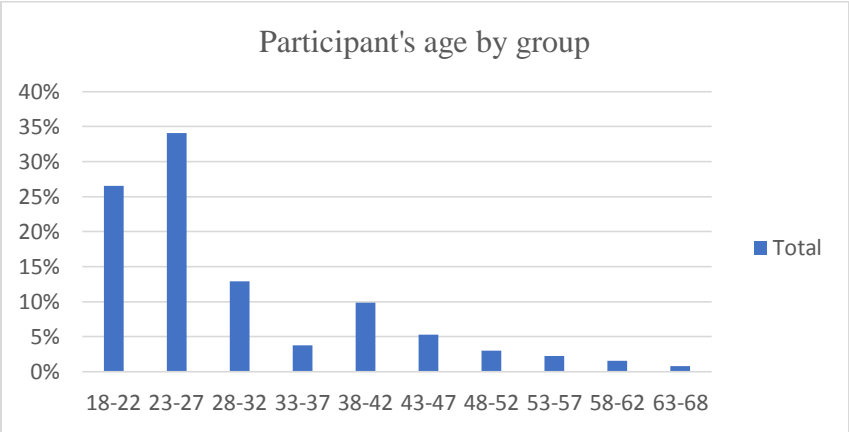


Figure 8 - Participant's age by group.

The gender of the students (as a percentage) who were surveyed is shown in Figure 9.

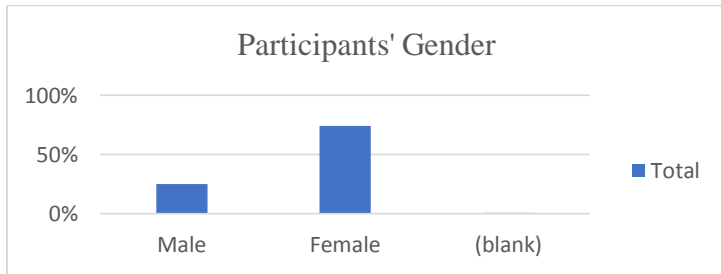


Figure 9 - Participant's gender.

Figure 10 shows the race of the students (as a percentage) taking the questionnaire, with 52.3% identifying themselves as Caucasian/White.

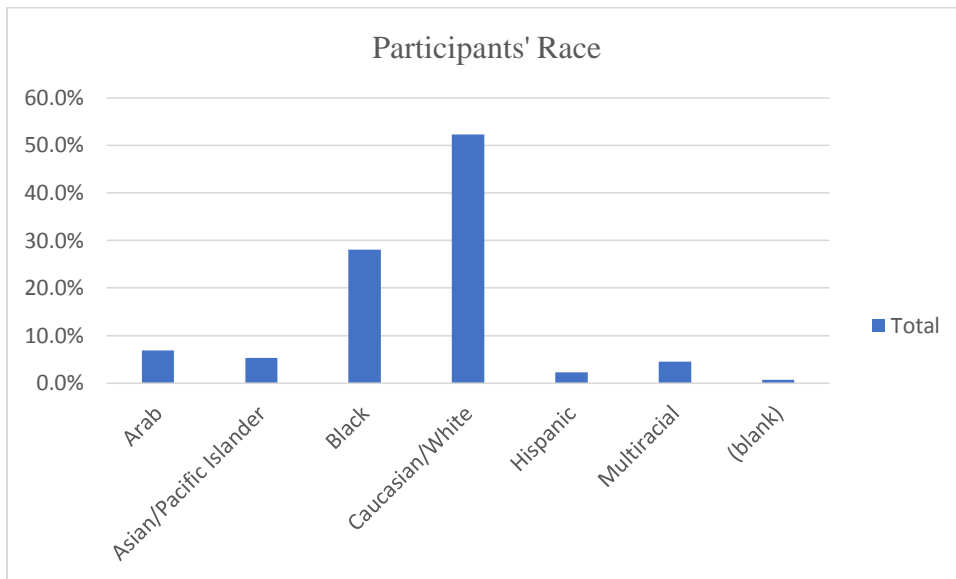


Figure 10 - Participant's race.

Fifty-five percent of the total respondents were from a private university and 45% of the respondents were from a public university (see Figure 11). Participants completed the survey in class and received no compensation for their responses.

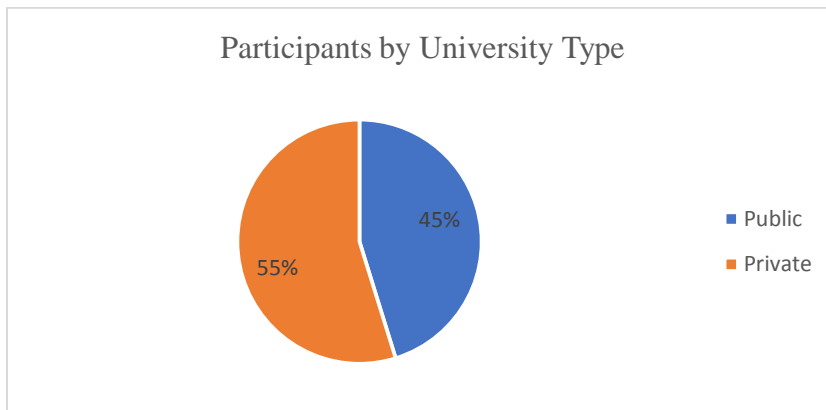


Figure 11 - Participants by university type.

Measurement

The survey instrument contained 70 items designed to collect data regarding student perceptions of EI, the locus of control, and narcissism for the purpose of measuring the impact of these aspects on Internet addiction and information disclosure. Appendix b contains screenshots of the survey instrument. The research consisted of two dependent variables, which were Internet addiction and information disclosure, and narcissism, EI, and the locus of control served as the independent variables. Reverse scoring was used to for certain items to ensure the negative items received a higher score. Additionally, the researcher's overall scoring of the scales included the following methodology:

- EIs, a higher score = stronger EI;
- locus of control, a higher score = higher external locus of control;
- narcissism, a higher score = higher narcissism;
- Internet addiction, a higher score = stronger Internet addiction and
- information disclosure, a higher score = higher likelihood of self-disclosure.

Independent Variables

There were 12 questions in the survey designed to measure the independent variable, EI. Responses were based on a 5-point scale that ranged from *Never Like Me* to *Always Like Me*, beginning at Question 17 through to Question 28. With the assistance of the research chair, Dr. Al Bellamy, questions (Bellamy, Gore, & Sturgis, 2005) were chosen to assess the level of EI among the survey respondents. Shown in Table 1 are the EI questions and the measurements by subdimension groupings.

Table 1
Emotional Intelligence Subdimension List of Questions.

Question Number	Subdimension
17, 18 & 19	Self Awareness
20 & 21	Empathy
22, 23, 24, 25, & 26	Relationship Management
27 & 28	Self-Management

Q17. Emotional Intelligence: I have a good understanding of my emotions.

Q18. Emotional Intelligence: I am good at expressing my feelings to others when they have done something that is disagreeable to me.

Q19. Emotional Intelligence: I am comfortable about sharing my emotions with others.

Q20. Emotional Intelligence: When people discuss their problems with me, I am able to feel what that person is feeling.

Q21. Emotional Intelligence: When people discuss their problems with me, I am able to understand their point of view by seeing things from their perspective.

Q22. Emotional Intelligence: I can tell when other people's feelings have been hurt.

Q23. Emotional Intelligence: I help other people feel better when they are down.

Q24. Emotional Intelligence: I am able to calm people when they display anger.

Q25. Emotional Intelligence: I am good at understanding the nonverbal (such as body motion, gestures, etc.) messages that are sent by others.

Q26. Emotional Intelligence: I am able to control my emotions.

Q27. Emotional Intelligence: I know when to express certain emotions in public and when not to.

Q28. Emotional Intelligence: I stay upset for long periods of time when something has made me upset or angry.

Questions 39 through to Question 48 were used to measure the degree of the locus of control where students selected from the best answer from a pair of statements that described their thoughts or feelings. By working with the chair, Dr. Al Bellamy, each question was selected from Rotter (1966) scale to elicit responses that would reflect our current environment.

Q39. Locus of Control:

- a) Many of the unhappy things in people's lives are partly due to bad luck.
- b) People's misfortunes result from the mistakes they make.

Q40. Locus of Control:

- a) One of the major reasons why we have wars is because people don't take enough interest in politics.
- b) There will always be wars, no matter how hard people try to prevent them.

Q41. Locus of Control:

- a) In the long run people get the respect they deserve in this world.
- b) Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

Q42. Locus of Control:

- a) The idea that teachers are unfair to students is nonsense.

- b) Most students don't realize the extent to which their grades are influenced by accidental happenings.

Q43. Locus of Control:

- a) Without the right breaks, one cannot be an effective leader.
- b) Capable people who fail to become leaders have not taken advantage of their opportunities.

Q44. Locus of Control:

- a) No matter how hard you try, some people just don't like you.
- b) People who can't get others to like them don't understand how to get along with others.

Q45. Locus of Control:

- a) I have often found that what is going to happen will happen.
- b) Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

Q46. Locus of Control:

- a) In the case of the well-prepared student, there is rarely if ever such a thing as an unfair test.
- b) Many times, exam questions tend to be so unrelated to course work that studying is really useless.

Q47. Locus of Control:

- a) Becoming a success is a matter of hard work; luck has little or nothing to do with it.
- b) Getting a good job depends mainly on being in the right place at the right time.

Q48. Locus of Control:

- a) The average citizen can have an influence in government decisions.
- b) This world is run by the few people in power, and there is not much the little guy can do about it.

Questions 65 through to Question 80 were used to measure the degree of narcissism.

Respondents chose the best answer from a pair of statements that came the closest to their feelings and beliefs. To better understand the impact of narcissism among college students in the 21st century, a 16 item paired scale, scored 1 or 2, was developed Bellamy and Avant (2017). Ames, (2006) concluded that the NPI 16-item scale was a shorter instrument that had good predictive validity, citing the reliability as $\alpha = .72$; the mean inter-item correlation = .13; loadings on the first unrotated factor ranged from .13 to .66 with the first factor capturing 19.9% of the variance; and that it correlated with the NPI-40 at $r = .90$ ($p < .001$; Ames (2006).

Q65. Narcissism:

- a) I really like to be the center of attention.
- b) It makes me uncomfortable to be the center of attention.

Q66. Narcissism:

- a) I am no better or no worse than most people.
- b) I think I am a special person.

Q67. Narcissism:

- a) Everybody likes to hear my stories.
- b) Sometimes I tell good stories.

Q68. Narcissism:

- a) I usually get the respect that I deserve.
- b) I insist upon getting the respect that is due me.

Q69. Narcissism:

- a) I don't mind following orders.
- b) I like having authority over people.

Q70. Narcissism:

- a) I am going to be a great person.
- b) I hope I am going to be successful.

Q71. Narcissism:

- a) People sometimes believe what I tell them.
- b) I can make anybody believe anything I want them to.

Q72. Narcissism:

- a) I expect a great deal from other people.
- b) I like to do things for other people.

Q73. Narcissism:

- a) People always seem to recognize my authority.
- b) Being an authority doesn't mean that much to me.

Q74. Narcissism:

- a) I am much like everybody else.
- b) I am an extraordinary person.

Q75. Narcissism:

- a) I always know what I am doing.
- b) Sometimes I am not sure of what I am doing.

Q76. Narcissism:

- a) I don't like it when I find myself manipulating people.
- b) I find it easy to manipulate people.

Q77. Narcissism:

- a) Being an authority doesn't mean that much to me.
- b) People always seem to recognize my authority.

Q78. Narcissism:

- a) I know that I am good because everybody keeps telling me so.
- b) When people compliment me I sometimes get embarrassed.

Q79. Narcissism:

- a) I try not to be a show off.
- b) I am apt to show off if I get the chance.

Q80. Narcissism:

- a) I am more capable than other people.
- b) There is a lot that I can learn from other people.

Dependent Variables

Internet addiction Questions 29 through to 38 were developed by (Bellamy & Hanewicz, 2001) consisting of a 5-point Likert scale.

Q29. Internet Addiction: I spend less time doing the things that I used to do now that I use the Internet.

Q30. Internet Addiction: Other people (i.e., friends, relatives) have complained that I spend too much time on the Internet.

Q31. Internet Addiction: Spending time on the Internet has negatively affected my academic and/or work activities.

Q32. Internet Addiction: I would give up social functions to spend time on the Internet.

Q33. Internet Addiction: I get real frustrated when I am unable to get online.

Q34. Internet Addiction: The first thing that I do when I get to where I'm currently residing is to go online.

Q35. Internet Addiction: When I am at work, I spend more time surfing the Internet than working.

Q36. Internet Addiction: I would rather be on the Internet than go to social events.

Q37. Internet Addiction: I have missed meals because I have been on the Internet.

Q38. Internet Addiction: I feel that I cannot control my desire for being on the Internet.

Questions 49 through to 64 were designed to assess the willingness of the individual to disclose personal information. The questions were a combination of the Revised Self-Disclosure Scale (RSDS; Wheelless, 1976) with a reliability of $\alpha = .79$, $M = 4.16$, and $SD = .58$, and the questions were developed in cooperation with Dr. Al Bellamy.

Q49. Information Disclosure: I disclose my residence information on the Internet.

Q50. Information Disclosure: I share information about my relationships or my problems on the Internet.

Q51. Information Disclosure: I upload a lot of photos of myself on the Internet.

Q52. Information Disclosure: I disclose my sexual activities on the Internet.

Q53. Information Disclosure: On the Internet, I often disclose my cell-phone number without hesitation.

Q54. Information Disclosure: I express my feelings and disappointments on the Internet.

Q55. Information Disclosure: I express my political beliefs and opinions on the Internet.

Q56. Information Disclosure: I often let people know my current affairs by sharing them on the Internet.

Q57. Information Disclosure: I share personal and private information about myself on the Internet.

Q58. Information Disclosure: I am completely comfortable with posting selfies and tagging my vacation activities on the Internet.

Q59. Information Disclosure: I disclose personal information on the Internet as a way to maintain and build social relationships.

Q60. Information Disclosure: My disclosing information on the Internet is completely for fun or entertainment.

Q61. Information Disclosure: On the Internet, I disclose information like my birthday because it's no big deal.

Q62. Information Disclosure: On the Internet, I disclose my private information openly and honestly because I enjoy it.

Q63. Information Disclosure: On the Internet, I disclose intimate things about myself.

Q64. Information Disclosure: I disclose my religious practices on the Internet.

Confidentiality

Surveys were distributed in class where students entered their answers using a pen and paper. All responses were voluntary and were compiled and analyzed as a group. The data did not contain any PII.

Data Analysis

The data were analyzed by using SPSS. There were 114 entries included in the dataset. Multiple responses and empty responses were coded in the data to ignore the blank responses when the data were analyzed.

The method used in this study was a correlation analysis on each of the three independent variables against each of the two dependent variables in order to forecast the relationship between the dependent and the independent variables. Scale reliability was performed by analyzing the dataset using a Cronbach alpha reliability procedure, as indicated in Table 2. All respondents' scores were summed and coding was assigned to each of the variables as follows:

- Internet addiction: TotAD
- Emotional Intelligence: TotEQ
- Information Disclosure: TotID
- Locus of Control: TotLOC
- Narcissism: TotNar

Table 2

Reliability Statistics for LOC, EI, Narcissism, Internet Addiction and Information Disclosure.

Reliability Statistics			
Researcher's Scales	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
Internet Addiction	0.837	0.842	10
Emotional Intelligence	0.706	0.739	12
Information Disclosure	0.862	0.868	16
Locus of Control	0.308	0.301	10
Narcissism	0.689	0.683	16

Surprisingly, the items chosen to measure locus of control has a low alpha of .308, this may attributed to sampling error. A scale items analysis only showed low Cronbach's alpha ranging from .197 to .321 and thus providing no appreciable increase to improve the scale's reliability. Due to LOC's low reliability scores the correlative analysis is tentative. Each question was carefully selected from Rotter's 23-item survey (Halpert & Hill, 2011) used to measure individual tendencies towards situations within their control. As a means to gather insight into impressions of today's college students, these questions were used to potentially offer data to better understand internal versus external locus of control related to chance, politics, leadership, and student involvements. Unfortunately, Rotter's scale was not designed for assess a specific domain but to generalize an individual's feelings about overall circumstances (Halpert & Hill 2011).

Chapter 4: Results

The survey results were entered into SPSS statistical software and a bivariate statistical analysis was undertaken to determine the relationship between the independent and dependent variables. All three independent variables were assessed based on their statistical significance as a predictor for each dependent variable. The dataset comprised of 114 responses. One hundred and thirty-two surveys were collected from five different Midwestern universities. To ensure that there was a good representative sample, it was determined that a minimum of 10 surveys needed to be included in the dataset. As three of the five universities did not meet our minimum requirement, a total of 17 surveys were not included. Students selected for this study were based on a convenience sample where instructors were contacted by the researcher for permission to circulate the survey.

Research Questions

Each of the three independent variables was evaluated for statistical significance to Internet addiction. The descriptive statistics are presented in Table 3.

Table 3
Descriptive Statistics for LOC, EI, and Narcissism, Internet Addiction and Information Disclosure.

	<i>N</i>	Minimum	Maximum	Mean	Std. Deviation
Internet Addiction	114	0	44	20.48	8.203
Emotional Intelligence	114	0	56	45.89	7.107
Information Disclosure	114	0	88	41.87	17.284
Locus of Control	114	0	20	14.40	2.940
Narcissism	114	0	28	19.74	5.210
Valid N (listwise)	114				

The descriptive statistics for the four Subdimension variables for emotional intelligence (EI) are presented in Table 4.

Table 4
Descriptive Statistics for Subdimensions of Emotional Intelligence (Self Awareness, Empathy, Relationship Management, and Self-Management).

	<i>N</i>	Minimum	Maximum	Mean	Std. Deviation
Self Awareness	114	5	15	11.04	2.34
Empathy	114	2	10	8.17	1.65
Relationship Management	114	11	20	16.44	2.417
Self-Management	113	2	10	6.84	1.364
Valid N (listwise)	113				

Results presented in Table 5 are the three independent variables (EI, the locus of control, and narcissism) correlated with the dependent variable, Internet addiction.

1. Is there a relationship between the EI among college students and Internet addiction?

No statistically significant relationship was found between EI and Internet addiction, $r = -.002$, $n = 114$, $p = .980$. See Table 5.

2. Is there a relationship between the locus of control among college students and Internet addiction?

Internet addiction was also not found to be statistically significantly related to the locus of control, $r = .085$, $n = 114$, $p = .368$. Refer to Table 5.

3. Is there a relationship between narcissism among college students and Internet addiction?

As presented in Table 5, no statistical relationship was found between Internet addiction and narcissism, $r = .118$, $n = 114$, $p = .210$.

Table 5

Independent Variables: LOC, EI, and Narcissism Correlation with Internet Addiction.

N = 114		
Measure	Pearson Correlation	Significance (2-tailed)
Emotional Intelligence	-.002	.980
Locus of Control	.085	.368
Narcissism	.118	.210

- Is there a relationship between each of the subdimensions of EI (self-awareness, self-management, relationship management, and empathy) among college students and Internet addiction?

As seen in Table 6, a further analysis of each EI's subdimensions show no statistical significance with Internet addiction. The values were: self-awareness, $r = -.141, n = 114, p = .136$; empathy, $r = -.011, n = 114, p = .907$; relationship management, $r = -.21, n = 114, p = .25$; and self-management, $r = .092, n = 114, p = .335$.

Table 6

Emotional Intelligence Subdimensions (Self-Awareness, Empathy, Relationship Management, and Self-Management) with Internet Addiction.

N = 114		
Measure	Pearson Correlation	Significance (2-tailed)
Self-Awareness	-.141	0.136
Empathy	-.011	0.907
Relationship Management	-.21	0.25
Self-Management	.092	0.335

- To what extent does gender moderate the relationship between the independent variables (locus of control, emotional intelligence and narcissism), and Internet addiction among college students?

Shown in Table 7 the moderator variable (male) has no statistical significance on the independent variables and Internet addiction. The values for the male moderator variable were: emotional intelligence, $r = -.105$, $n = 31$; locus of control, $r = -.182$, $n = 31$ and narcissism, $r = .044$, $n = 31$.

Table 7
Correlation Between LOC, EI and Narcissism to Internet Addiction and Information Disclosure Moderated by Gender

<i>N</i> = 114				
Measure	Internet Addiction		Information Disclosure	
	<i>n</i> = 83	<i>n</i> = 31	<i>n</i> = 83	<i>n</i> = 31
	Female	Male	Female	Male
	<i>r</i>	<i>r</i>	<i>r</i>	<i>r</i>
Emotional Intelligence	.015	-.105	-.010	.006
Locus of Control	.103	-.182	.340**	.105
Narcissism	.216	-.044	.429**	.333

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

Shown in Table 7, the moderator variable (female) has no statistical significance on the independent variables and Internet addiction. The values for the male moderator variable were: emotional intelligence, $r = .015$, $n = 83$; locus of control, $r = .103$, $n = 83$; and narcissism, $r = .216$, $n = 83$.

- To what extent does gender moderate the relationship between the independent variables (locus of control, emotional intelligence and narcissism), and information disclosure among college students?

Shown in Table 7 the moderator variable (male) has no statistical significance on the independent variables and Information Disclosure. The values for the male moderator

variable were: emotional intelligence, $r = .006$, $n = 31$; locus of control, $r = .105$, $n = 31$; and narcissism, $r = .333$, $n = 31$.

Shown in Table 7 the moderator variable (female) has no statistical significance for only one of the independent variables that is (EI) and Information Disclosure. However, females have a statistically significant correlation between narcissism and locus of control on information disclosure in comparison to males. The values for the female moderator variable were: emotional intelligence, $r = -.010$, $n = 83$; locus of control, $r = .340$, $p = .002$, $n = 83$; and narcissism, $r = .429$, $n = 83$.

7. Is there a relationship between EI among college students and information disclosure?

EI was not found (Table 8) to be statistically significantly related to information disclosure,

$r = -.002$, $n = 114$, $p = .982$.

8. Is there a relationship between the locus of control among college students and information disclosure?

The locus of control was also found to be statistically significantly related to self-disclosure,

$r = .291$, $n = 114$, $p = .002$, as seen in Table 8.

9. Is there a relationship between narcissism among college students and information disclosure?

See Table 8. The strongest correlation was between self-disclosure and narcissism, $r = .378$, $n = 114$, $p = .000$.

Table 8

Correlation between LOC, EI, Narcissism to Information Disclosure.

N= 114		
Measure	Pearson Correlation	Significance (2-tailed)
Emotional Intelligence	-.002	.982
Locus of Control	.291**	.002
Narcissism	.378**	.000

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

10. Is there a relationship between each of the subdimensions of EI (self-awareness, self-management, relationship management, and empathy) among college students and information disclosure?

Each EI's subdimensions show no statistical significance with information disclosure, refer to Table 9: self-awareness, $r = -0.104$, $n = 114$, $p = .271$; empathy, $r = -.115$, $n = 114$, $p = .222$; relationship management, $r = .099$, $n = 114$, $p = .296$ and self-management, $r = 0$, $n = 114$, $p = .997$.

Table 9

Correlation between Emotional Intelligence Subdimensions (Self-Awareness, Empathy, Relationship Management, and Self-Management) to Information Disclosure.

N = 114		
Measure	Pearson Correlation	Significance (2-tailed)
Self-Awareness	-.104	.271
Empathy	-.115	.222
Relationship Management	-.099	.296
Self-Management	0	.997

Chapter 5: Discussion

The purpose of the study was to examine the relationship between three independent variables (the locus of control, EI, and narcissism) among college students and their impact on each of the dependent variables (Internet addiction and information disclosure). The participants in this research were college students from two Midwestern universities who completed a pen-and-paper questionnaire. The collection method was an 80 question self-report survey involving 64 items where students were asked to rate their feelings and perceptions regarding various personal interactions on the Internet. Please note that the intention behind the study was to elicit responses regarding what behaviors influence interactions on the Internet and not the reasons for a respondent's choices from the list of questions.

Internet Addiction

Nowadays, human communication occurs across multiple devices and through several different mediums.

Screen Time (ST) is the aggregation of time users spend across multiple devices (DeWeese, 2014). On average, people spend 60 hours per week across these devices (Nielsen Company, 2015). Social Networking sites (SNSs) such as Twitter, SnapChat, Facebook, and Redditt lead to different interactions on the Internet. In a longitudinal study of 417 Hong Kong adolescents (high school students or graduates) over two years, gratification was seen to arise when using social media and the participants experienced unpleasant emotions when having to refrain from using such media (Leung, 2014).

This study's findings revealed an unsurprising result, in that Internet addiction had no statistically significant relationship between the dependent variable (Internet addiction) and the three independent variables (EI, the locus of control, and narcissism). The Internet is seen as a

primary and essential tool, as vital to communicating and remaining connected to social networks, friends, and family. Because of this perception, the results may imply that over the last several years, we have come to rely on the Internet as necessary for daily living.

These findings seem to support that the respondents do not perceive their Internet activity negatively. Our increasing reliance on the use of apps and the Internet has blurred our perception between what might be considered essential and unnecessary. “Unfortunately, it is becoming harder and harder to attribute problems to general use of the Internet, as opposed to the use of specific applications” (van Rooij, Ferguson, Van de Mheen, & Schoenmakers, 2017, p. 113). The respondents were asked to honestly self-identify their actions as judged from the perspective of social factors. Often the data have been collected through self-reporting mechanisms that lack the rigor of clinical trials (Chakraborty et al., 2010; Vishwanathan, Malott, Chellappan, & Doraiswamy, 2013).

Other studies, online surveys, and clinical trials have only considered the prevalence of Internet addiction without accounting for interpersonal characteristics. Other research has associated Internet addiction with more specific application usage such as gaming or social media, where the amount of time spent online, depressive symptoms, and decreasing life satisfaction of the users have been assessed (van Rooij et al., 2017). One study used the amount of time spent online to assess whether a group was found to be potentially addicted based on the average time spent on the Internet per day of between 4.3 and 4.79 hours being detrimental to other activities (Kuss, Van Rooij, Shorter, Griffiths, & van de Mheen, 2013).

As a means of communication, the Internet is a way for people to access news and to converse with family and friends. For this reason, maybe the questions used to associate with the term “Internet addiction” do not have the same meaning as they did years ago. The norm in this

age is of increasing Internet speeds and of greater demand for more access to information. Society's attitudes may change when considering excessive time spent on the Internet. Certainly, advances in mobile technology have changed the way we consciously think of what it means to access the Internet. The first mobile Internet technology was introduced in the 1990s, and it delivered packet switch-data capabilities, allowing users to send graphic-rich data over the Global System for Mobile Communications (Nubarrón, 2011). Today, all smartphones are Internet enabled without the user having to do anything and to disable this feature requires the owner going through a series of more than three steps. One problem in the way we think of Internet addiction is that there is no universally applied definition for this term (Chakraborty et al., 2010). As such, the limitation in this study of the self-reported measure is that participants can under-report their true level of activity. Using an item factor analysis to measure the locus of control indicates that a further review is required in selecting questions that would increase the Cronbach alpha score. Based on these findings, it is unclear whether Internet addiction exists among the sample population as a psychosocial characteristic or merely as a problematic issue that is associated with a particular trait.

Information Disclosure

A 2004 survey of 200,000 U.S. students concluded that today's young people view technology differently, and for most of them, the Internet serves as a means for sharing digital content—everything from their intimate and personal information, to music and images (Prensky, 2004). It is not surprising that college students have embraced a culture of sharing information.

When assessing the independent variable (information disclosure) with the three dependent variables (emotional intelligence, the locus of control, and narcissism), it was found

that one dependent variable was not statistically related, while two were. Information disclosure and EI were not statistically significantly correlated. This may be one of the few studies that has assessed the relationship between these two variables. Hogan et al. (2010) examined EI by gender-mediating the GPA. This study found that male adolescents' EI had a mediating relationship on their verbal IQs and GPAs.

The locus of control was found to be statistically significantly correlated with information disclosure. Although there is a moderate correlation between the locus of control and information disclosure, these data suggest that information disclosure is not as much of a concern among college students regardless of whether they had a strong internal or external locus of control (Lee, Chang, Lin, & Cheng, 2014).

These findings were consistent with a previous study by Lo (2010), where 80 respondents completed an online survey that found that daily interaction with SNSs was a factor in building trust while diminishing privacy concerns. Lo (2010) states that people with a high internal locus of control believe they determine their risk of privacy violations, and, on the contrary, people with a high external locus of control tend to believe that the perceived risk of sharing information is beyond their control once it has been submitted.

Perhaps the numbers reflect that in a society where information is ubiquitous, it is not surprising that we have become liberal in our sharing of information. However, the findings of a relationship between information disclosure and the locus of control were not as robust because of a low alpha score for the locus of control. As discovered by this and other research studies, people high in their locus of control are more apt to disclose information.

A statistically significant correlation was found between information disclosure and narcissism. Those high in information disclosure were also high in narcissism. The relationship

between information disclosure and narcissism exists because a person high in narcissism will probably have no difficulty sharing information about him/herself. They feel they know what is best for themselves. In contrast, other studies found that narcissism was found to be negatively correlated with the frequency of self-disclosure on Facebook (Huling, 2011; McKinney, Kelly, & Duran, 2012). Christofides, Muise, and Desmarais (2009) found the need for popularity was a trigger for disclosing information. Millennials' attitudes toward information is that disclosure provides a significant benefit in terms of the reciprocity of the information for establishing trust and friendships (Anderson & Rainie, 2010). However, supporting studies concluded that there was a positive correlation between narcissism and self-disclosure. Earlier studies like that of (Buffardi and Campbell (2008); Mehdizadeh (2010) examined how narcissism is manifested in SNSs and the use of website tools in relation to self-promotion. These were correlated. A recent study by Hawk, ter Bogt, van den Eijnden, and Nelemans (2015) reviewed how higher narcissism adolescents engaged in normal behavior for youth such as uploading photos, videos and text-based updates, and more problematic disclosures such as drinking, substance use, and/or sexual activity (p. 72). A study in Germany, Austria, and Switzerland of those aged between 18 and 63 suggested that self-promotion was significantly associated with self-disclosure (Diefenbach & Christoforakos, 2017). A research analysis of adolescents aged 12 to 22 from the Netherlands indicated a positive relationship between narcissism and Facebook self-disclosure (Krcmar, van der Meer, & Cingel, 2015). Those with high levels of narcissism sought popularity and greater admiration in the form of self-inflated promotions involving deeper self-disclosure to increase the number of likes and positive comments (Winter et al., 2014). SNSs provide a platform for self-presentation for individuals showing high levels of narcissism (Hwang, 2017; Mehdizadeh, 2010).

As stated earlier, similar studies found that women take more selfies (Bennett, 2014), and were more self-absorbed (Barnett & Sharp, 2017). Also, Lo's (2010) study where women were the majority of respondents found that high locus of control people felt they determine the risk of privacy violation. This explains why information disclosure was found to be correlated with locus of control and narcissism when using the female moderated variable.

The theoretical contribution of this study is that prior research failed to examine the influence that narcissism and locus of control has on information disclosure. Much of the previous research has examined these variables as theoretical constructs describing their relationships without empirically testing them. As such, these findings contribute to the existing body of literature by expanding on the understanding of the impact that narcissism and locus of control has on information disclosure.

Limitations

There is a hint that EI is negatively related to both outcome variables. Those high in EI are apt to be low in Internet addiction and information disclosure, and vice versa. Probably with a larger sample, these variables may become more statistically related.

Although several results in this study were different from those found in similar previous research, this study can be effectively used to support the aspects of our changing times. These inconsistencies in results might be supportive of future analyses that involve the self-reporting of Internet addiction and disclosure. As for the case of Internet use and addiction, the lack of self-regulation might suggest changing attitudes toward an understanding of habitual Internet behaviors. The research findings could make a contribution to subsequent reviews into user behavior and its relation to interactions on the Internet. This study was conducted using a convenience sampling methodology. However, as a follow-up to this research, focus groups and

new neurological scientific work would have supported or further explained the respondents' rationale in making their selections.

Chapter 6: Conclusion

College students have greater distractions than ever before. Marc (2001) reported that on average college grads spent less than 5,000 hours of their lives on reading, while over 30,000 hours are spent playing video games and watching TV. When we think of Internet addiction, Miller (2007) puts it nicely by saying, “the activities and information the Internet makes so readily available to users are addictive.” Furthermore, new research has found a link between specific regions of the brain associated with addictive activities of the Internet resulting in a pleasure seeking behavior (Miller, 2007), and Tamir (2012) found enhanced brain activity derived from disclosure about oneself.

This study sought to assess the relationship between Internet addiction and three psychosocial characteristics: EI, the locus of control, and narcissism. No relationships were found.

However, the practical implication of this study is that it found a relationship between information disclosure, and the locus of control and narcissism. The findings provide an improved understanding of the role that the locus of control and narcissism play in people’s decision to disclose information about themselves over the Internet. Hence, this research should encourage further work into developing better tools to analyze the psychosocial factors affecting the interactions among college students on the Internet.

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Appendices

Appendix A: UHSRC Approval Letter

10/1/2017

Print Window



Subject: ^_IRBNet^_^_Board^_^_Action^_^_

From: no-reply@irbnet.org

To: abellamy@emich.edu; aavant@emich.edu

Date: Tuesday, February 7, 2017, 1:57:29 PM EST

Please note that Eastern Michigan University Human Subjects Review Committee (UHSRC) has taken the following action on IRBNet:

Project Title: [980708-1] Examining the Impact that Locus of Control, Emotional Intelligence and Narcissism have on Internet Addiction and Information Disclosure among College Students
Principal Investigator: Antonio Avant, MBA, MS

Submission Type: New Project
Date Submitted: November 1, 2016

Action: EXEMPT
Effective Date: February 7, 2017
Review Type: Exempt Review

Should you have any questions you may contact Sonia Chawla at schawlaw@emich.edu.

Thank you,
The IRBNet Support Team

www.irbnet.org

Appendix B: Survey Instrument

By proceeding with this survey, you have acknowledged that you are consenting to participating in this research. You understand what you have read. If you are uncomfortable with any of the questions you may skip the question or stop at any time.

1. What is your gender?

Male

Female

2. What is your age? Please enter in box.

3. What is your primary language?

- Arabic
- English
- Spanish
- Other (please specify)

4. What degree are you pursuing?

- Bachelor's degree
- Master's degree
- Doctoral degree

5. How would you classify yourself?

- Arab
- Asian/Pacific Islander
- Black
- Caucasian/White
- Hispanic
- Multiracial

6. What is your current marital status?

- Divorced
- Married
- Separated
- Single
- Living Together

7. What is your primary computing platform?

- Apple OS
- Linux
- Windows
- Non Unix (FreeBSD, SkyOS, FreeDOS, ChromeOS, or etc)

8. How many hours do you sleep each night?

9. What types of computers do you own?

- Laptop
- Desktop
- Tablet

10. In a typical weekday, about how much time do you spend using your computer (laptop, desktop, or tablet) to access the Internet?

Hours

Minutes

11. In the past 30 days, have you used your computer (laptop, desktop, or tablet) to do any of the following activities? (Please select all that apply.)

- Send or receive email
- Manage social media accounts (e.g. Facebook, Twitter, LinkedIn, GooglePlus, Reddit, Tumblr, Snapchat, Pinterest, Instagram, or etc.)
- Entertainment (YouTube, NetFlix, Hulu, or etc.)
- Read news stories
- Upload a Selfie
- Internet Gaming
- Adult Entertainment
- I do not do any of the above activities and/or do not own a computer

12. Do you own a smartphone (Phone, Android, Windows Phone, or other phone that can check email and surf the web)?

- Yes
- No

13. In the past 30 days, have you used your mobile device (e.g. smartphone, cell phone) to do any of the following activities? (Please select all that apply.)

- Send or receive email
- Manage social media accounts (e.g. Facebook, Twitter, LinkedIn, GooglePlus, Reddit, Tumblr, Snapchat, Pinterest, Instagram, or etc.)
- Casual Entertainment (YouTube, NetFlix, Hulu, or etc.)
- Read news stories
- Upload a Selfie
- Internet Gaming
- Adult Entertainment
- I do not do any of the above activities and/or do not own a mobile device

14. In a typical weekday, about how much time do you spend using your smartphone or cell phone to access the Internet?

Hours

Minutes

15. In a typical weekday, do you use the internet most often for school, for personal reasons, or about an equal amount on both?

- A great deal more often for school
- Quite a bit more often for school
- Somewhat more often for school
- About an equal amount for school and personal reasons
- Somewhat more often for personal reasons
- Quite a bit more often for personal reasons
- A great deal more often for personal reasons

16. Where are you most often when you use the internet?

- Bookstore
- Cafe or coffee shop
- Friend's home
- Home
- Library
- Outside
- Work
- Other (please specify)

17. I have a good understanding of my emotions.

- Never Like Me
- Occasionally Like Me
- Sometimes Like Me
- Frequently Like Me
- Always Like Me

18. I am good at expressing my feelings to others when they have done something that is disagreeable to me.

- Never Like Me
- Occasionally Like Me
- Sometimes Like Me
- Frequently Like Me
- Always Like Me

19. I am comfortable about sharing my emotions with others.

- Never Like Me
- Occasionally Like Me
- Sometimes Like Me
- Frequently Like Me
- Always Like Me

20. When people discuss their problems with me, I am able to feel what that person is feeling.

- Never Like Me
- Occasionally Like Me
- Sometimes Like Me
- Frequently Like Me
- Always Like Me

21. When people discuss their problems with me, I am able to understand their point of view by seeing things from their perspective.

- Never Like Me
- Occasionally Like Me
- Sometimes Like Me
- Frequently Like Me
- Always Like Me

22. I can tell when other people's feelings have been hurt.

- Never Like Me
- Occasionally Like Me
- Sometimes Like Me
- Frequently Like Me
- Always Like Me

23. I help other people feel better when they are down.

- Never Like Me
- Occasionally Like Me
- Sometimes Like Me
- Frequently Like Me
- Always Like Me

24. I am able to calm people when they display anger.

- Never Like Me
- Occasionally Like Me
- Sometimes Like Me
- Frequently Like Me
- Always Like Me

25. I am good at understanding the nonverbal (such as body motion, gestures, etc.) messages that are sent by others.

- Never Like Me
- Occasionally Like Me
- Sometimes Like Me
- Frequently Like Me
- Always Like Me

26. I am able to control my emotions.

- Never Like Me
- Occasionally Like Me
- Sometimes Like Me
- Frequently Like Me
- Always Like Me

27. I know when to express certain emotions in public and when not to.

- Never Like Me
- Occasionally Like Me
- Sometimes Like Me
- Frequently Like Me
- Always Like Me

28. I stay upset for long periods of time when something has made me upset or angry.

- Never Like Me
- Occasionally Like Me
- Sometimes Like Me
- Frequently Like Me
- Always Like Me

29. I spend less time doing the things that I used to do now that I use the Internet.

- Agree
- Slightly Agree
- Neither Agree/Disagree
- Slightly Disagree
- Disagree

30. Other people (i.e., friends, relatives) have complained that I spend too much time on the Internet.

- Agree
- Slightly Agree
- Neither Agree/Disagree
- Slightly Disagree
- Disagree

31. Spending time on the Internet has negatively affected my academic and/or work activities.

- Agree
- Slightly Agree
- Neither Agree/Disagree
- Slightly Disagree
- Disagree

32. I would give up social functions to spend time on the Internet.

- Agree
- Slightly Agree
- Neither Agree/Disagree
- Slightly Disagree
- Disagree

33. I get real frustrated when I am unable to get on-line.

- Agree
- Slightly Agree
- Neither Agree/Disagree
- Slightly Disagree
- Disagree

34. The first thing that I do when I get to where I'm currently residing is to go on-line.

- Agree
- Slightly Agree
- Neither Agree/Disagree
- Slightly Disagree
- Disagree

35. When I am at work, I spend more time surfing the internet than working.

- Agree
- Slightly Agree
- Neither Agree/Disagree
- Slightly Disagree
- Disagree

36. I would rather be on the internet than go to social events.

- Agree
- Slightly Agree
- Neither Agree/Disagree
- Slightly Disagree
- Disagree

37. I have missed meals because I have been on the internet.

- Agree
- Slightly Agree
- Neither Agree/Disagree
- Slightly Disagree
- Disagree

38. I feel that I cannot control my desire for being on the internet.

- Agree
- Slightly Agree
- Neither Agree/Disagree
- Slightly Disagree
- Disagree



39. Which answer best describes your thoughts and feelings:

- Many of the unhappy things in people's lives are partly due to bad luck.
- People's misfortunes result from the mistakes they make.

40. Which answer best describes your thoughts and feelings:

- One of the major reasons why we have wars is because people don't take enough interest in politics.
- There will always be wars, no matter how hard people try to prevent them.

41. Which answer best describes your thoughts and feelings:

- In the long run people get the respect they deserve in this world.
- Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

42. Which answer best describes your thoughts and feelings:

- The idea that teachers are unfair to students is nonsense.
- Most students don't realize the extent to which their grades are influenced by accidental happenings.

43. Which answer best describes your thoughts and feelings:

- Without the right breaks one cannot be an effective leader.
- Capable people who fail to become leaders have not taken advantage of their opportunities.

44. Which answer best describes your thoughts and feelings:

- No matter how hard you try some people just don't like you.
- People who can't get others to like them don't understand how to get along with others.

45. Which answer best describes your thoughts and feelings:

- I have often found that what is going to happen will happen.
- Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

46. Which answer best describes your thoughts and feelings:

- In the case of the well-prepared student there is rarely if ever such a thing as an unfair test.
- Many times exam questions tend to be so unrelated to course work that studying is really useless.

47. Which answer best describes your thoughts and feelings:

- Becoming a success is a matter of hard work, luck has little or nothing to do with it.
- Getting a good job depends mainly on being in the right place at the right time.

48. Which answer best describes your thoughts and feelings:

- The average citizen can have an influence in government decisions.
- This world is run by the few people in power, and there is not much the little guy can do about it.

49. I disclose my residence information on the Internet.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

50. I share information about my relationships or my problems on the Internet.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

51. I upload a lot of photos of myself on the Internet.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

52. I disclose my sexual activities on the Internet.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

53. On the Internet, I often disclose my cell phone number without hesitation.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

54. I express my feelings and disappointments on the Internet.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

55. I express my political beliefs and opinions on the Internet.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

56. I often let people know my current affairs by sharing them on the Internet.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

57. I share personal and private information about myself on the Internet.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

58. I am completely comfortable with posting selfies and tagging my vacation activities on the Internet.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

59. I disclose personal information on the Internet as a way to maintain and build social relationships.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

60. My disclosing information on the Internet are completely for fun or entertainment.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

61. On the Internet, I disclose information like my birthday because it's no big deal.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

62. On the Internet, I disclose my private information openly and honestly because I enjoy it.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

63. On the Internet, I disclose intimate things about myself.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

64. I disclose my religious practices on the Internet.

- strongly agree
- agree
- moderately agree
- undecided
- moderately disagree
- disagree
- strongly disagree

65. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- I really like to be the center of attention.
- It makes me uncomfortable to be the center of attention.

66. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- I am no better or no worse than most people.
- I think I am a special person.

67. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- Everybody likes to hear my stories.
- Sometimes I tell good stories.

68. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- I usually get the respect that I deserve.
- I insist upon getting the respect that is due me.

69. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- I don't mind following orders.
- I like having authority over people.

70. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- I am going to be a great person.
- I hope I am going to be successful.

71. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- People sometimes believe what I tell them.
- I can make anybody believe anything I want them to.

72. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- I expect a great deal from other people.
- I like to do things for other people.

73. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- People always seem to recognize my authority.
- Being an authority doesn't mean that much to me.

74. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- I am much like everybody else.
- I am an extraordinary person.

75. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- I always know what I am doing.
- Sometimes I am not sure of what I am doing.

76. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- I don't like it when I find myself manipulating people.
- I find it easy to manipulate people.

77. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- Being an authority doesn't mean that much to me.
- People always seem to recognize my authority

78. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- I know that I am good because everybody keeps telling me so.
- When people compliment me I sometimes get embarrassed

79. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- I try not to be a show off.
- I am apt to show off if I get the chance.

80. Choose the one that comes closest to describing your feelings and beliefs about yourself.

- I am more capable than other people.
- There is a lot that I can learn from other people.