

# The Complex Relationship Between the Internet Overuse and Empathy

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**Abstract:** *The purpose of the present study was to determine whether Internet overuse was associated with empathic ability in college students. Besides numerous benefits of Internet use, the virtual environment brings various risks in every age group. The Internet is very significant in the everyday activities of children and youth and professional involvements considering their developmental characteristics. A total 100 participants (39 males and 61 females; mean age of 21.06 years) completed Empathy Quotient (EQ), Young's Internet Addiction Test (IAT). Of these 100 subjects, 87 were categorized as over-users. There was no significant difference in EQ total score between the over-user group and the average user group. The over-user group stayed longer in cyberspace than the average user group. EQ score was measured to determine the relation between the two factors.*

**Keywords:** empathy quotient, empathy, Internet overuse

## 1. Introduction

The Internet has become highly accessible over the past decades. It has extended our informational and interactive capacities. However, widespread use of Internet has emerged a new entity of mental disorder called problematic Internet use (PIU). PIU can be defined as the "use of the Internet that creates psychological, social, school, and/or work difficulties in a person's life." That being said the internet has a major influence over the youth and can cause them to be desensitized to various issues and factors. Internet addiction is not yet an officially recognized mental disorder. Researchers have formulated diagnostic criteria for Internet addiction, but it is not included in the Diagnostic and Statistical Manual of Mental Disorders. Internet gaming disorder was newly included in Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) in Conditions for Further Study.

The cognitive dimension of empathy centers on understanding of others' behavior and emotions. The emotional dimension refers to one's ability to experience others' emotional states. The common assumption is that exposure to real-life violence dulls empathy for other, direct evidence for such effects of exposure to real-life violence is very limited. Early studies of young children exposed to child abuse, neglect, and domestic violence documented the children's lower levels of empathy (Main and George 1985), but a more recent investigation found no association between childhood exposure to domestic violence and empathy in adolescence. Another possibility, which has not yet been investigated thoroughly, is that there may be a relationship between exposure to internet and empathy.

Empathy is an ability to attribute mental state to another person. It entails an appropriate cognitive response in the observer to other person's mental state. It plays a key role in social understanding. Normally, developed empathic ability is crucial for social and interpersonal relationship.

Results from previous studies have suggested that empathic ability might be associated with Internet use. Cyber-bullies have demonstrated lower empathic responses compared with their controls. Time spent in computer/smartphone/video game has been found to be negatively associated with empathic ability. Besides, narcissism characterized by the lack of empathy has been shown to be a major cause of social network services use. It is also well known that Internet addiction shares a substantial number of characteristics with substance addiction in which low empathy has been reported. Considering that the Internet is an integral part of social and professional life, it is necessary to understand the fundamental reasons for its use. Technology brings various benefits in everyday life including gathering information, easier communication and learning in general.

Melchers obtained evidence of a negative relationship between internet addiction and empathy, as evidenced by self-reported empathy and problematic internet use scores. PIU may be comorbid with other psychiatric states, especially depression and Depressed individuals show reduced awareness of others' emotion, impaired emotion recognition. Hence, comorbid depression and anxiety may be influential confounding factors in the present study. Therefore, the purpose of this study was to determine Internet usage of young college in their 20s and identify those engaging in Internet overuse. Their empathic abilities were also evaluated to determine the influence of Internet use on empathic abilities.

## 2. Review of Literature

The introduction of affordable personal computers, the growth of Internet access and its rising popularity have led to concerns over its excessive use. If performed in a maladaptive pattern and high frequency, Internet use could lead to psychological, family, academic or work dysfunction. The first reports regarding excessive use of computers date back to the 1970s, and by the 1980s it was reported that computer games might have an addictive potential. However, it was not until the 1990s that the Internet was considered as a tool that could lead to addiction.

The first to suggest an addiction to the Internet was the New York psychiatrist Ivan Goldberg. In 1995, he elaborated a symptom list for what he called 'Internet Addiction Disorder', similar to the criteria for substance dependence from the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV). In the US, a serious research pioneer in the field is Dr Kimberley Young who first published a case study regarding a 43-year-old woman addicted to email (Young 1996). This was followed by the first pivotal Internet addiction study (Young 1998b) which collected approximately 600 cases of people who suffered problems in their everyday life offline because they were unable to control Internet use.

Based on empirical data, Young (1999) view Internet addiction as an umbrella term for a wide variety of behaviors and impulse control problems that can be divided into five subtypes:

- Cybersexual addiction - compulsive use of adult websites for cybersex and cyberporn;
- Cyber-relationship addiction - over-involvement in online relationships;
- Net compulsions - obsessive online gambling, shopping or day-trading;
- Information overload - compulsive web surfing or database searches;
- Computer addiction - obsessive computer game playing.

Internet-addiction, impulsivity and psychological distress among 150 Kashmir university students were studied by Kawa and Shafi (2015). More internet-addiction, impulsivity and psychological distress experienced by male university students than girls. Internet-addiction found significant positive relationship among psychological distress and impulsivity in university students. In addition, the findings signifying that urban students are less practiced internet and lesser psychological distress and higher internet-addiction and psychological distress found in countryside students. Nalwa and Anand (2004) "among school children 16-18 years old in India. Two groups were identified-dependents and non-independents. Significant behavioral and functional usage differences were revealed between the two groups. Dependents were found to delay other work to spent time online, lose sleep due to late night logons and feel life would be boring without internet by dependents were greater than

those of non-dependents. On the loneliness measure, significant differences were found between the two groups, with the dependents scoring higher than the non-dependents.

American Psychiatric Association has defined the different symptoms of internet addicts. Internet addicts have some symptoms are like as unpleasant and dysfunction. There are seven criteria for diagnosis internet addiction. Patience, Withdrawal Symptoms, all person use internet more than expected time, constant desire to control the behaviour, disburse significant time for topic allied to the internet, excessive use of internet reducing social, occupational, recreational activities of adolescents. Every person knows that internet is also bad and wide area but still they use. There are large number of people are using internet for pornography and gambling. Excessive use of internet has negative impact on life. Excessive use of internet creates some problematic behaviour. Person who uses excessive internet showed psychological symptoms attention deficit hyperactivity disorder, depression, self-esteem and isolation. Internet addict showed some personality characteristics and traits like as impulsivity sensation and novelty seeking and aggression behaviour. When compared to internet addict and non-addict. Addicts had problematic behaviour or psychological problem. It is observed that overuse of internet provoke anxiety and displaying problematic gambling behaviour.

The term 'empathy' was coined over one hundred years ago by Titchener, an adaptation of the German word *Einfühlung* (Wispé, 1986). According to Stotland and colleagues, discussions of empathy may even date back to "the beginnings of philosophical thought" (Stotland, Matthews, Sherman, Hansson, & Richardson, 1978). The distinction between empathy and sympathy has been described as "feeling as and feeling for the other", respectively (Hein & Singer, 2008). For example, when perceiving sadness in another, empathy will cause sadness in the observer while sympathy will involve feelings of said emotion.

Conceptualizing empathy and related concepts with greater clarity can also benefit practitioners. For example, discussion suggests differences between practitioners' and researchers' conceptualizations of empathy, perhaps explaining the widespread implementation of empathy treatment programs for offenders, despite a lack of research evidence for doing so. Future research could examine the differences in how researchers and practitioners define empathy and related concepts, and examine what exactly practitioners wish to change/develop in offenders. For example, it might be that perspective taking is a greater treatment need than empathy.

Humans can feel empathy for other people in a wide variety of contexts: for basic emotions and sensations such as anger, fear, sadness, joy, pain and lust, as well as for more complex emotions such as guilt, embarrassment and love. It has been suggested that empathy is the process that prevents us from doing harm to others and motivates altruistic behavior. An absence of empathy is what characterizes psychopaths who hurt others without feeling guilt or remorse (Blair, 2003).

Preston and de Waal (2002) proposed a neuro-scientific model of empathy, suggesting that observation or imagination of another person in a particular emotional state automatically activates a representation of that state in the observer with its associated autonomic and somatic responses.

### 3. Method

#### Sample

The population of interest for this study are all adults who are currently pursuing their college degree including both bachelor's and master's students. The population that is accessible to this study consists of students who were studying in India. Convenient sampling was chosen for inclusion in the study. This resulted in a sample size of 100 people consisting of 39 males and 61 females. The majority of participants were female. The average age of the participants was 21.06 years.

#### Measures

All of the tools were administered as part of an online survey. Two measures used were:

- 1) The Empathy Quotient (60 item version) by S. Baron-Cohen and S. Wheelwright, (2004). EQ was developed as a survey with the goal to assess emotional empathic ability. It is composed of 60 questions, including 40 questions of empathy items to assess empathic ability and 20 questions of filler/control items. EQ can be divided into 3 specific categories: Cognitive Empathy, Emotional Reactivity, and Social Skills. There are four response options: 'strongly agree', 'slightly agree', 'slightly disagree', 'strongly disagree'. 'Definitely agree' responses score two points and 'slightly agree' responses score one point on half the items, and 'definitely disagree' responses score two points and 'slightly disagree' responses score one point on the other half.
- 2) The Internet Addiction Test (IAT) by Young, 1998. It is a 20-item scale that measures the presence and severity of Internet dependency among adults. Dr. Kimberly Young, a professor at St. Bonaventure University and director of the Center for Internet Addiction Recovery, developed the IAT to assess symptoms of Internet addiction and compulsivity in a variety of test settings. The questionnaire consists of 20 statements. After reading each statement carefully, based upon the 5-point Likert scale, please select the response 0, 1, 2, 3, 4 or 5 which best describes you. If two choices seem to apply equally well, circle the choice that best represents how you are most of the time during the past month. Be sure to read all the statements carefully before making your choice. The statements refer to offline situations or actions unless otherwise specified. According to Young, total score of 40 points or higher signifies the assumption of problematic Internet use that could influence everyday life while total score of 70 points or higher signifies the assumption of severe Internet addition.

#### Procedure

An online survey was created consisting of three sections. The first sections take basic information of the participant, the second section contains the internet addiction test (IAT) and the final section contains empathy quotient. The survey was distributed online and participants were requested to read and fill it carefully. Instructions for each test were as follows:

#### The Internet Addiction Test

*"The following questionnaire consists of 20 statements. After listening to the statement carefully, based upon the 5-point Likert scale, please select the response (0, 1, 2, 3, 4 or 5) which best describes you. On the low side, 0 indicates the statement is Not Applicable to your life, 1 indicates that the statement is something that you rarely engage in, 2 indicates that the statement is something that you occasionally engage in, 3 indicates that the statement is something you frequently engage in, 4 indicates that the statement is something you often engage in, and 5 indicates that the statement is something that you always engage in. If two choices seem to apply equally well, circle the choice that best represents how you are most of the time during the past month. Be sure to read all the statements carefully before making your choice. The statements refer to offline situations or actions unless otherwise specified."*

#### The Empathy Quotient

*"Below is a list of statements. Please read each statement carefully and rate how strongly you agree or disagree with it by selecting your answer. There are no right or wrong answers, or trick questions. If two choices seem to apply equally well, circle the choice that best represents how you are most of the time during the past month. Be sure to read all the statements carefully before making your choice."*

#### Statistical analysis

All statistical analyses were performed using SPSS. Pearson correlation was used to determine the relationship between EQ score and measured variable. 87 of the participants were categorized as over users, however there was no substantial difference in the scores between regular users and over users.

### 4. Results and Discussion

As seen in table 1.1, the sample of 100 students was taken. The mean age was 21.60 whereas the mean of internet addiction score and empathy quotient was 55.12 and 43.30 respectively. To find the association of the two variables – Pearson correlation was done.

**Table 1:** Descriptive Statistics for Study Variables

	N	Minimum	Maximum	Mean score	Std. Deviation
Age	100	18	30	21.60	2.243
Internet addiction	100	20	88	55.12	14.948
Empathy quotient	100	16	71	43.30	9.163

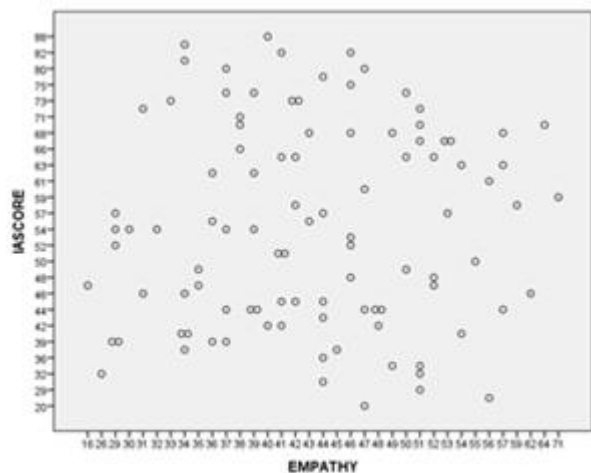
As seen in the table 1.2 below, Two-tailed  $p$  (.700) > 0.05 thus the  $P$  value was not considered statistically significant.

Graph plots the scores of all participants revealing that there was no significant correlation between excessive immersion in Internet and empathy. Lack of empathic impairment in Internet overuse in the present study was inconsistent.

**Table 2: Correlations for Study Variables**

		IASCORE	Empathy quotient
IA Score	Pearson Correlation	1	.039
	Sig. (2-tailed)		.700
	N	100	100
Empathy	Pearson Correlation	.039	1
	Sig. (2-tailed)	.700	
	N	100	100

The study conducted on college students both bachelors and masters. The average age of the participants was 21.6. As seen in Table 1, The mean score for internet addiction test and empathy quotient were 55.12 and 43.30 respectively. As seen in the table 2 below, Two-tailed p (.700) > 0.05 thus the P value was not considered statistically significant. Graph plots the scores of all participants revealing that there was no significant correlation between excessive immersion in Internet and empathy. Lack of empathic impairment in Internet overuse in the present study was inconsistent.



**5. Conclusion**

Results of this study revealed that there was no significant correlation between excessive immersion in Internet and empathy. A number of previous studies on the relationship between empathy and PIU have viewed excessive Internet use as a maladaptive and self-regulatory strategy. In fact, psychological traits that could severely hinder social interactions have been mostly reported in Internet users for online gaming. However, with the current data of this research no noteworthy link has been found.

Limitations in this study were that the usage pattern of internet consumption was not focused upon. With it a more intensive depth could be found about internet overuse behaviour. The research was conducted during COVID-19 lockdown which might have affected the internet usage

patterns since more have turned to online mode for college. Therefore, those who were classified as Internet over-user in this study might have a low level of addiction that does not impact daily lives even though they found themselves problematic users. Although many previous studies have regarded individuals with IAT score of more than 40 points as Internet addicts as in this study, there are clear limitations in applying IAT scores in decisions to label the presence of clinical problem.

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