

A CORRELATIONAL STUDY OF ADULT DEPRESSION AND INTERNET ADDICTION

¹Dr. Masaud Ansari, ²Touseef Malik, ³Dr. Subooh Yusuf, ⁴Dr. Kanchan Dixit

¹²⁴Assistant Professor, ³Adjunct faculty

¹⁴Department of Psychology, ²Department of Teacher Education, ¹²³⁴Department of Psychology

¹²³⁴Gandhi Mahavidyalaya, Orai, Jalaun, Uttar Pradesh, ³International American University, U.A.E

Abstract—This study examined the relationship between internet addiction and depression among male and female students, revealing mild depression and moderate addiction levels overall. Correlational and t-test analyses assessed links between depression and Young's Internet Addiction Test dimensions (Time/Control, Social/Emotional, Excitatory/Compensatory, Adverse Outcomes), plus gender differences. Key Results; weak positive correlations emerged (males: $r=0.106-0.239$; females: $r=0.063-0.337^*$, significant for Time/Control and Adverse Outcomes at $p=0.05$), rejecting no-relationship hypotheses. Males showed higher addiction ($t=2.75$, $p=0.01$) but similar depression to females ($t=1.26$, $p=0.20$), partially supporting low severity claims. Findings indicate a bidirectional addiction-depression cycle, with gender-specific risks (male addiction proneness, female control vulnerabilities), aligning with prior work by Young (1998) and Hendrick (2010). Gender-tailored screenings and digital wellness programs are recommended for Indian college settings.

Index Terms—Internet Addiction, Depression

I. Rationale

In terms of the study's sample, the adult group was chosen. They want to have fun in every way possible since this is the extreme age of zeal. They spend more time using a variety of societal resources to keep their emotional balance. Internet is one of them, no doubt; it has a number of merits but simultaneously we have to admit its demerits also. It is the sole source that combines all of the pertinent and unrelated information. However, it can have far-reaching negative effects that impact a person's interpersonal, social, professional, psychological, and physical well-being, friends, family, and hobbies. Since spending too much time online frequently leads to retreat from social activities, family, friends, and interests, family and social life are likely to suffer the most. Poor study habits and poor academic performance in school and college might result from internet addiction. Additionally, it plays a significant role in the decline of moral and cultural values. The majority of adults' time is spent browsing various websites, especially social networking sites. The only people who can impart cultural and moral values to kids rather than the internet itself are parents, teachers, and other elders. Because of this, researchers were interested in examining internet addiction and depression in the aforementioned age range.

The current study's topic is "Depression and Internet Addiction among Adults: A Correlational Study." Depression is the main issue facing adults, and internet addiction is a significant contributing factor. More precisely, those with depressed symptoms are a concern for society. Additionally, it has an impact on the person's mental, physical, social, emotional, and spiritual well-being, which is followed by a lack of interest in life events.

"Wellbeing" is a difficult concept to define. Many people believe they understand this concept until they are asked to define or explain it and then asked how they would quantify it. A value judgment, an objective,

subjective, and continuum state ranging from illness to wellness, and a utopian (rarely attainable) state have all been used to characterize wellbeing. The associated ideas of wellness, well-being, and quality of life add to the uncertainty around health.

II. Internet

The internet is growing in popularity as a medium for networking and information sharing. Its size and user base are growing at an incredible rate worldwide. The advantages of the internet have been extensively studied and include managing finances, planning holidays, staying in touch with friends, determining educational needs, and more. Despite the benefits of the internet, research on the drawbacks of excessive use is expanding (Frangos & Frangos, 2009). By making knowledge more accessible to everyone and fostering relationships with people worldwide, the Internet has greatly simplified life. But technology has also caused many individuals to spend excessive amounts of time in front of computers, to the point where it takes center stage in their lives. An addiction to computers or the Internet may result from this.

III. Internet Addiction

Kimberly Young initially described internet addiction as a new illness in 1996. Numerous studies have examined the various aspects of this illness since then. Dr. Ivam Goldberg coined the term "internet addiction" to describe pathological compulsive internet usage. This phrase has been used to characterize problematic excessive or maladaptive internet use. Similar to other addictions, internet addiction is often referred to as pathological internet usage in a form of impulsive control. Because they lack social scale, people utilize the internet to evade problems in their life (Aslanbay, 2006). Internet addiction is defined by Morahan, Martin, and Schumacher (2000) as "intensive internet use and, according to them, not being able to control this usage harms an individual's life seriously."

According to Davis (2001), "Internet addiction as a psychiatric state comprising of maladaptive thoughts and pathological behaviours."

According to Young (2007), "Internet addiction as new and generally unknown clinical disorder that is able to affect user's control aptitude of online usage so that it causes rational, professional and social problems".

Excessive usage of computers or the Internet is known as an addiction. In fact, it is listed as a disorder that requires more investigation in the most recent edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V). The Department of Adult Psychiatry at Poland Medical University conducted a study that was published on the National Centre for Biotechnology Information website. The study revealed that Internet addiction was considered to be quite common and popular among young people, particularly those who were only children. In actuality, one in four kids suffers from an Internet addiction. This is a concerning statistic that requires immediate attention.

IV. Major types of Internet Addictions

1. An excess of information. Overuse of the internet results in less time spent with family and less productivity at work.
2. Obsessions. Overspending and issues at work are frequently caused by spending too much time on internet hobbies like gaming, stock trading, gambling, and even auctions.
3. Addiction to online relationships. Relationships in real life may be destroyed if people use social networking sites excessively to build relationships instead of spending time with friends or family.

V. Emotional Symptoms of Online Addiction

Online addicts often exhibit the following symptoms:

Anxiety and feelings of guilt Depression, dishonesty, euphoria when in front of a computer, inability to stick to a schedule, lack of sense of time, isolation, defensiveness, avoiding work, and agitation.

VI. Physical Symptoms of Online Addiction

A person who spends a lot of time on a computer may exhibit the following symptoms:

Headaches and Backaches Gaining or losing weight; sleep disturbances; carpal tunnel syndrome; blurred or strained eyesight

VII. Short-Term and Long-Term Effects of an Online Addiction

Weight gain, neglected obligations, and incomplete activities are all short-term consequences of an internet addiction. Physical symptoms like backache, neck pain, carpal tunnel syndrome, and visual issues from gazing at a screen are more common long-term impacts. Additionally, it might result in bankruptcy, particularly if the time spent online is devoted to gaming, gambling, and shopping.

In addition to being reliant on the Internet, Oberlin College of Computer Science discovered that addicts may experience techno-stress, which is the internalization of computer functions like faster time and flawless outcomes. Additionally, social disengagement may result from feeling more comfortable communicating with others online than in person.

VIII. Depression

In common parlance, the term "depression" refers to a variety of conditions, from a somewhat apparent and transient mood decline to a severely debilitating and potentially fatal illness. In our daily lives, the term "depression" is frequently used to describe feelings of melancholy, grief, and unhappiness brought on by bad experiences or occurrences.

Most of us are able to resume our regular activities after a few days or weeks, but if these depressive feelings and other symptoms make it difficult for us to get through the day and if the symptoms persist for more than a few weeks, we may have depression. Clinically, depression is referred to by a number of interchangeable terms: Unipolar depression, clinical depression, major depression, or major depressive disorder. In actuality, depression is a set of symptoms that might be interpreted as a symbolic indication that a person's capacity to maintain a healthy psychological equilibrium is compromised.

"A depression is a state of mind or more specifically, a mental disorder, characterized by lowering of the individual's vitality, his mood, his desires, hopes, aspirations and of his self-esteem. It may range from no more than a mild feeling of tiredness and sadness to the most profound state of apathy with complete, psychotic disregard for reality"(Mendelssohn, 1963).

According to Kausar (2014), "Depression is an emotional state marked by great sadness and apprehension, feeling of worthlessness and guilt, withdrawal from others, loss of sleep, appetite and sexual desires, loss of interest and pleasure in usual activities."

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), depression is characterized by emotions of melancholy, hopelessness, and helplessness.

IX. Review of Literature

Bill Hendrick (Feb. 4, 2010) state that internet users who are compulsive about going online and have more social interactions in virtual worlds than the real one may be depressed.

Kimberly, Young, and Robert (1998) discovered that people who develop an Internet addiction have higher levels of depression. Internet addiction disorder (IAD) is currently more often known as problematic Internet use (PIU), according to Moreno et al. (2013), and compulsive Internet use (CIU), according to Meerkerk (2009). According to Shapira et al. (2003) and Young (2004), internet addiction (IA) can be broadly characterized as a maladaptive obsession with and excessive impulsive use of the Internet that significantly impairs everyday functioning and produces discomfort. Interest in IA as a possible clinical disorder has increased significantly in recent years, despite the fact that it is still a relatively new construct with much disagreement over its conceptual label, operational definition, and diagnostic criteria (Aboujaoude, 2010, Bernardi and Pallanti, 2009, Block, 2008, Byun et al., 2009, Douglas et al., 2008, and Weinstein and Lejoyeux, 2010).

Similar to other addictions, internet addiction causes emotional, familial, academic, financial, and professional issues. Overuse of the Internet damages relationships in real life. People who are addicted to the Internet spend more time alone, spend less time with actual people, and are frequently perceived as socially uncomfortable. The amount of time spent online can lead to arguments. Internet addicts may try to hide how much time they spend online, which leads to mistrust and disruption of previously solid relationships.

Some people who are addicted to the Internet may establish online personas or accounts that allow them to change who they are and act like someone else. People who have low self-esteem, feelings of inadequacy, and fear of rejection are most likely to start living a secret life. Clinical issues of anxiety and depression are caused by such unfavorable self-concepts.

Withdrawal symptoms like anger, depression, relief, mood swings, anxiety, fear, impatience, sorrow, loneliness, boredom, restlessness, procrastination, and upset stomach are common among those who try to stop using the Internet. Physical pain or health issues including Carpal Tunnel Syndrome, dry eyes, backaches, severe migraines, irregular eating patterns (such skipping meals), neglecting personal hygiene, and sleep disturbances can also result from an Internet addiction. The first person to publish a thorough case study on problematic Internet use was psychologist Young (1996). Within three months of learning about chat rooms, her “patient zero,” a 43-year-old homemaker with a “content home life and no prior addiction or psychiatric history,” was spending up to 60 hours a week online. She claimed that when she was in front of the computer, she felt excited, and when she logged off, she felt sad, nervous, and agitated. She said that she was addicted to the medium “like one would to alcohol.” After buying a home computer, she stopped participating in social events, neglected domestic tasks, and grew distant from her husband of 17 years and her two teenage kids within a year. Based on self-report, 41.4% of Internet “addicts” and 15.8% of non-problematic users in Bakken’s general-population survey reported experiencing depression in the 12 months before to the study. Alcohol and substance misuse, anxiety, and sleep difficulties were also more prevalent (38.6% vs. 26.4%, 36.4% vs. 5%, and 13.6% vs. 1.1%, respectively) (Aboujaoude, 2010). Adult patients with problematic Internet use were interviewed in-person for two US case studies. Using the Diagnostic Interview Schedule, Black et al. (1999) evaluated 21 participants and discovered that the lifetime prevalence of major depression and mood disorders was 15% and 33%, respectively. Additionally, 19% had a lifetime diagnosis of anxiety illness and 38% had a lifetime substance use disorder.

X. Objectives

1. To study the relationship between depression and different dimensions of internet addiction among male and female students.
2. To examine the difference of internet addiction among male and female students.
3. To examine the difference of depression among male and female students.
4. To study the levels of depression as well as internet addiction among male and female students.

XI. Hypotheses

1. There is no relationship between depression and different dimensions of internet addiction among male and female students.
2. There is no difference of internet addiction among male and female students.
3. There is no difference of depression among male and female students.
4. There are low levels of depression as well as internet addiction among male and female students.

XII. METHODOLOGY

SAMPLE

There were 100 respondents—50 men and 50 women—who took part in the survey. The sample was taken from Aligarh Muslim University in the Aligarh district using a practical sampling approach. They were between the ages of 20 and 25.

Tools

Beck Depression inventory

The second edition of the Beck Depression Inventory (BDI) Beck, Steer, and Brown created the Beck Depression Inventory 2nd (1996). It has been demonstrated that this self-report scale may record depression levels. There are 21 items in the BDI-2nd edition, and each response is rated from 0 to 3. The cutoff points are 0–13 for minimal depression, 14–19 for mild depression, 20–28 for moderate depression, and 29–63 for severe depression. More severe depressed symptoms are indicated by higher overall scores. The Hamilton Depression Rating Scale and the BDI-II have a favorable correlation (Pearson $r = 0.71$). Additionally, it was demonstrated that the test had good internal consistency ($\alpha = .91$) and a strong one-week test-retest reliability (Pearson $r = 0.93$).

Internet addiction test

The data was gathered using an internet addiction test created by Dr. Kimberly Young in 1995. According to her, a score of 20–39 indicates an average Internet user who has total control over their usage, a score of 40–69 indicates frequent issues brought on by internet use, and a score of 70–100 indicates serious issues. The most thorough investigation on the psychometric qualities of the YIAT20 was conducted by Widyanto and Mcmurram. A factor analysis of the test identified six components that accounted for 68% of variances: 1. Salience; 2. Excessive use; 3. Neglecting work; 4. Anticipation; 5. Lack of control; and 6. Neglecting social life. Salience is the most dependable of these criteria, with strong concurrent validity and online consistency ($\alpha = 0.82$). With correlations ranging from $r = 0.62$ to $r = 0.226$, the six factors were all strongly associated with one another (Pearson's r).

Procedure

Before distributing the questionnaires, a good connection was built with each responder. They were then instructed to carefully read the instructions on the surveys and provide their answers in order to finish the depression and internet addiction questionnaires. It took 15 to 20 minutes for participants to provide their full answers. Every responder was informed that their responses would be kept private, used exclusively for research, and their identities would be protected. Lastly, surveys were gathered from them and manually scored, with special thanks.

Statistical Analyses

Pearson's correlation was used to examine the association between sadness and online addiction as well as various aspects of the internet addiction test in order to fulfill the research objectives. Additionally, the mean differences between depression and internet addiction as well as its dimension among adult males and females were examined using the t-test.

Result and Discussion

Table-1 displays correlations between depression and several aspects of internet addiction in both the male and female groups.

CORRELATIONS				
Internet Addiction Male				
	Time or Control	Social or Emotional	Excitatory or Compensatory	Adverse Outcomes
Depression Male	.239	.106	.166	.206
Depression Female	.288*	.174	.063	.337*

Table 1 shows a weak but positive correlation between depression in the male group and Time or Control ($r=.239$), Social or Emotional ($r=.106$), Excitatory or Compensatory ($r=.166$), and Adverse Outcomes ($r=.206$). It implies that depression rises in tandem with an increase in internet addiction and vice versa. Additionally, Table 1 shows that depression in the female group had a significant positive correlation with Time or Control ($r=.288^*$, $p=0.05$) and Adverse Outcomes ($r=.337^*$, $p=0.05$), but an insignificant positive correlation with Social or Emotional ($r=.174$) and Excitatory or Compensatory ($r=.063$). It implies that depression rises in tandem with an increase in internet addiction and vice versa. Therefore, hypothesis '*There is no relationship between depression and different dimensions of internet addiction among male and female students.*' rejected.

The provided Table-1 data reveals weak positive correlations between depression and various dimensions of internet addiction, suggesting a bidirectional link where higher addiction levels coincide with elevated depression symptoms. These findings align with psychological research indicating that while correlations are modest, they hold statistical importance, particularly when significant at $p=0.05$.

Weak positive associations exist across all dimensions: Time/Control ($r=0.239$), Social/Emotional ($r=0.106$), Excitatory/Compensatory ($r=0.166$), and Adverse Outcomes ($r=0.206$), none reaching significance. This implies a modest tendency for depression to rise alongside internet overuse in males, possibly reflecting broad impacts like poor impulse control or negative life consequences from addiction. Such patterns match studies where males show higher internet addiction prevalence but weaker ties to depression compared to females.

Significant positive links appear with Time/Control ($r=0.288^*$, $p=0.05$) and Adverse Outcomes ($r=0.337^*$, $p=0.05$), alongside non-significant ones for Social/Emotional ($r=0.174$) and Excitatory/Compensatory ($r=0.063$). In females, depression escalates notably with loss of time control and harmful outcomes from addiction, indicating gender-specific vulnerabilities such as emotional dysregulation from excessive use. These r values, though weak (<0.4), reject the null hypothesis of no relationship, warranting caution against over interpreting causation.

The bidirectional rise in depression and addiction underscores a vicious cycle, where addiction exacerbates depressive symptoms via social isolation or stress. Gender differences highlight stronger effects in females for control-related dimensions, supporting targeted interventions like gender-sensitive programs addressing self-esteem and sleep. Limitations include correlation's inability to prove causality; future longitudinal studies could explore mediators like resilience.

Table-2 displays the mean difference in internet addiction between the male and female groups.

INTERNET ADDICTION					
Groups	N	Mean	SD	t-value	Sign.
Male	50	58.48	14.675	2.75	0.01
Female	50	41.62	12.683		

According to Table 3, there is a significant difference between males and females regarding internet addiction (t -value 2.75, $p=0.01$). Consequently, the premise that “*there is no difference in internet addiction among male and female students*” is disproved.

The t -value of 2.75 surpasses the critical threshold for significance at $p<0.01$ (two-tailed), confirming a meaningful difference between groups. Effect size, can be inferred as moderate given the p -value in likely equal- N student samples. This aligns with meta-analyses showing males’ greater risk due to gaming or escapism patterns.

Males often score higher on addiction scales from prolonged, uncontrolled use, contrasting females’ relational or compensatory motives. The $p=0.01$ level strengthens reliability, reducing Type I error risk to 1%. This finding echoes prior studies on adolescents where hormonal or socialization factors amplify male vulnerability.

Such differences advocate gender-tailored interventions, like time-management apps for males or social reconnection for both. Findings challenge gender-neutral addiction models, urging culturally sensitive policies in Indian educational settings. Future research may compute Cohen's d for practical effect magnitude and explore mediators like academic stress.

Table-3 displays the mean difference in depression between the male and female groups.

DEPRESSION

Groups	N	Mean	SD	t-value	Sign.
Male	50	18.90	10.195	1.26	0.20
Female	50	13.84	7.479		

Table four indicates that the t-value is insignificant (t-value 1.26, $p=0.20$), it means that male and female are insignificantly different about internet addiction. Consequently, the hypothesis that “*there is no difference in depression among male and female students*” is proved.

The t-value of 1.26 falls well below the typical significance threshold ($p<0.05$), with $p=0.20$ suggesting a 20% chance of observing this difference by random variation alone. This non-significance implies that any apparent gender gap in depression scores is likely due to sampling error rather than a true population difference.

Unlike the gender disparity observed in internet addiction (Table 2, $t=2.75$, $p=0.01$), depression appears more evenly distributed, aligning with studies where depression prevalence equalizes in young adults due to shared stressors like academics. This contrasts with Table 1's correlations, where females showed stronger links between addiction dimensions and depression, yet overall levels remain similar. Possible explanations include cultural factors in Indian student populations, where both genders face comparable academic pressures mitigating baseline differences.

The lack of gender differences supports universal rather than sex-specific depression screening in educational settings. It reinforces a focus on shared risk factors like internet addiction over gender alone. Future studies could explore subgroups or include covariates like age to uncover hidden variances, while acknowledging power limitations if sample sizes were modest.

Table-6 displays the prevalence of depression and internet addiction in the male and female groups.

INTERNET ADDICTION (IA) AND DEPRESSION

Male IA	Male Depression	Female IA	Female Depression
58.48	18.9	41.61	13.84
Moderate	Mild	Moderate	Mild

A careful examination of the data reveals that both men and women have minor depression and a moderate internet addiction. However, it is evident that men are more likely than women to suffer from depression and internet addiction. Therefore, the hypothesis “*There are low levels of depression as well as internet addiction among male and female students.*” is partially approved.

Present research findings shows that Males and females display mild depression symptoms, suggesting subclinical levels not requiring immediate clinical intervention but signaling preventive needs. Moderate internet addiction in both groups reflects habitual overuse without severe impairment, consistent with prior tables’ weak correlations (e.g., $r=0.239$ max for males). This balanced severity aligns with young adult norms under academic stress, where addiction fuels emotional strain without crossing diagnostic thresholds.

Males show elevated tendencies toward both depression and addiction compared to females, echoing Table 3's significant addiction gap ($t=2.75$, $p=0.01$) despite Table 4's non-significant depression difference ($t=1.26$,

$p=0.20$). This implies males' higher baseline risk—possibly from escapism via gaming—drives a compounded effect, while females' correlations (Table 1) link addiction more selectively to control loss. Such trends reflect socialization differences: males' solitary use patterns amplify isolation-linked depression.

Findings advocate gender-aware monitoring, like male-focused digital detox programs alongside universal coping workshops. The mild-moderate profile supports early intervention in Indian colleges to curb escalation, integrating addiction screening with depression checks. Limitations of the study include reliance on self-reports; longitudinal tracking could clarify if males' tendencies predict chronicity.

Prior studies robustly reinforce the current findings by establishing a consistent link between internet addiction and depression, mirroring the weak positive correlations observed across genders in Tables 1-4.

Young and Rodgers (1998) found higher depression levels among internet addicts using the Zung Depression Inventory, directly supporting the bidirectional rise in depression with addiction dimensions like Time/Control and Adverse Outcomes.

Hendrick (2010) linked compulsive online socializing—replacing real interactions—to depressive symptoms, aligning with moderate addiction and mild depression in both genders here. These echo the present study's mild-moderate patterns, where addiction subtly elevates depression without severe impairment.

Shapira et al. (2003), Young (2004), and others define IA as maladaptive overuse causing distress, matching the current dimensions (e.g., Social/Emotional, Excitatory/Compensatory) and real-life relational harms.

Young's 1996 case study illustrates withdrawal (depression, anxiety) and isolation, akin to males' higher addiction propensity despite similar depression levels. Aboujaoude (2010) and Black et al. (1999) report elevated depression (41.4% vs. 15.8%) and comorbidities in addicts, bolstering subclinical findings and gender trends.

Literature notes male predominance in addiction (as in Table 3), with depression risks from escapism, while females show relational vulnerabilities—consistent with Table 1's stronger female correlations. Consequences like family disruption, low self-esteem, and physical issues validate implications for student interventions. Overall, these studies contextualize the modest effects, urging inclusion of IA in diagnostics amid definitional debates.

XIII. Conclusions

The study confirms low levels of depression and moderate internet addiction among male and female students, with males showing higher vulnerability, partially supporting the initial hypothesis while rejecting null assumptions of no gender differences in addiction or correlations with depression.

Weak positive correlations (e.g., $r=0.239$ males, $r=0.288^*$ females for Time/Control) indicate a bidirectional link between internet addiction dimensions and depression, significant in females for control loss and adverse outcomes [prior tables]. Males exhibit significantly higher addiction ($t=2.75$, $p=0.01$), but depression levels are comparable across genders ($t=1.26$, $p=0.20$), reflecting subclinical severity amid academic stress.

These patterns align with Young's framework (1998, 2004), where maladaptive internet use fosters isolation, withdrawal, and depression, as seen in case studies and prevalence data (41.4% depression in addicts). Gender trends echo male escapism risks and female relational sensitivities, reinforcing emotional toll without diagnostic thresholds.

XIV. Suggestions

Suggestions based on these findings emphasize preventive, gender-sensitive strategies to address moderate internet addiction and mild depression in students.

There may be mandatory digital wellness workshops in colleges, teaching time management and screen-time limits to curb addiction's Time/Control dimension. Pair with coping skills training for academic stress, targeting the bidirectional addiction-depression cycle evident in weak correlations like $r=0.288^*$ for females.

For males, who show higher addiction ($t=2.75$, $p=0.01$), recommend gaming-focused detox apps and peer support groups to counter escapism patterns. Females, with stronger links to adverse outcomes ($r=0.337^*$, $p=0.05$), benefit from self-esteem and relational skills sessions addressing emotional vulnerabilities.

Students should adopt routine, universal screening using validated tools like Young's Internet Addiction Test alongside depression scales during college orientations, despite no overall gender depression gap ($t=1.26$, $p=0.20$). Advocate campus policies like Wi-Fi curfews and counseling integration to foster real-world interactions over virtual ones.

Conduct longitudinal studies to test causality beyond correlations, incorporating effect sizes and Indian cultural factors. Explore mediators like resilience or family dynamics to refine interventions for subclinical cases.

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