

Correlational Study between Trait Anxiety, Depression & Internet Addiction

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ABSTRACT

“Internet” is one of the most critical things in today's world, much to the point that most people who have a cell phone or other technological gadget with internet can't imagine life without it. The Internet has aided the world's growth at a much quicker pace, but how people use it differs from person to person. Excessive internet usage has been observed, which has negative consequences, which is why we conducted this research to better understand the relationship between Internet Addiction and Trait Anxiety and Depression. On 144 people aged 20 to 30, three tests were used: STAI, Becks depression test, and Internet Addiction test. People are becoming more social in virtual form but not in person as a result of increased Internet use. People are using the Internet to escape from Trait Anxiety and Depression or vice versa. Many nations have included Internet Addiction as one of their addiction types, and every country will eventually need to take it more seriously.

Keywords: *Internet, Internet addiction, Trait anxiety, Depression, IAT, STAI, Becks depression test*

Internet is very new to humans, but it has become very important part, in today's time it is impossible to image a world without internet & future seems to be more relied on the internet. The internet is the engine that propels every enterprise forward, allowing it to operate more effectively and quickly. Ken Olsen, an American engineer and technologist, several years ago said "There is no reason for any individual to have a computer in his home", he has undoubtedly been proven incorrect today, as everybody carries a modern device in their hands, not just in their houses.

The constant use of the internet, as well as its availability 24 hours a day, people are becoming addicted to the internet and it has begun to have certain negative consequences, few of them are depression, anxiety, sadness, deprived sleep, inability to follow up with commitments, isolation from others, dishonesty, mood swings, physical issues and these are just few of the side effects. Therefore, in this study we will focus on finding the correlation between Trait Anxiety, Depression & Internet Addiction.

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Understanding the variables for this research.

1.1 Anxiety

Anxiety is a sensation that people feel from time to time in multiple circumstances. Anxiety boosts a person's heart rate and respiratory rate, allowing the brain to absorb more oxygen. This will help people to react better in a difficult situation. However, anxiety becomes a concern as the level of intensity increases, and it begins to interfere with day-to-day tasks for a period of time.

These emotions are impossible to manage, and they are regarded as a serious medical condition, much like any other physical ailment like heart disease or diabetes. In certain nations, these conditions are very prevalent and pervasive psychiatric disorders. People with anxiety disorders may try to prevent conditions that cause or exacerbate their symptoms. Workplace success, schoolwork, and personal relationships can be impacted severely.

Anxiety has an uncertain origin. Genetics, brain biology and chemistry, tension, and people's surroundings can all play a part.

Symptoms

- Physical Signs: panic attacks, hot and cold flushes, racing heart, compression in the chest, fast breathing, restlessness, or feeling tense, wound up.
- Psychological Signs: immoderate fear, distress, catastrophizing, or obsessive thinking.
- Behavioral Signs: avoiding those situations that make a person feel anxious which can impact day to day activities.

Causes anxiety disorders

Combination of factors plays a role in causing anxiety, some of them are:

- Chemical imbalance: Severe or long-term stress can disrupt the chemical equilibrium that regulates human mood, and a high level of stress over time can contribute to an anxiety disorder.
- Environmental factors: Traumatic experiences & difficult environment can lead to an anxiety disorder.
- Genetics: People who have an anxiety disorder in their families are more likely to develop one themselves.
- Medical factors: Symptoms of a different illness, drug side effects, or the stress of a major surgery or a lengthy recovery
- Use or abstinence from an illegal drug: Misuse of drugs or alcohol may produce anxiety symptoms.

Types of anxiety

State Anxiety

It is the experience of unlikeable feelings, faced with specific situations, demands or a particular event. It arises when a person makes a mental picture of some type of threat. A transient emotional state marked by apprehension, stress, and fear in response to a new circumstance or behaviour. Physiological arousal and visible behavioural indications, such as anxious fidgeting, licking the mouth, and rubbing the palms of the hands on a sweater or pants, are generally correlated with state distress. The association between physiological and psychological tests of state anxiety, on the other hand, is very poor, resulting in contradictory findings. When the dangerous condition is no longer there, the individual no

Correlational Study between Trait Anxiety, Depression & Internet Addiction

longer feels nervous. As a consequence, state anxiety is a transient reaction to a perceived threat.

Trait Anxiety

Trait anxiety also arises in response to a perceived threat, but intensity is different, in the for of duration and the range of situations. It is referred as differences between people in terms of their tendency to experience state anxiety in response to the anticipation of a threat. People with this experience more intense degrees of state anxiety to specific situations. Thus, it is described as a personality characteristic than a temporary feeling. Trait anxiety started as a psychodynamic concept with little observables and repeated anxiety attacks that required Freudian defensive mechanisms to clarify. Although Spielberger's efforts strengthened the idea, there were still some major shortcomings.

In this study we are focusing on Trait Anxiety because we are not looking just at situational anxiety but an anxiety which is seen over a longer period without any situational dependency.

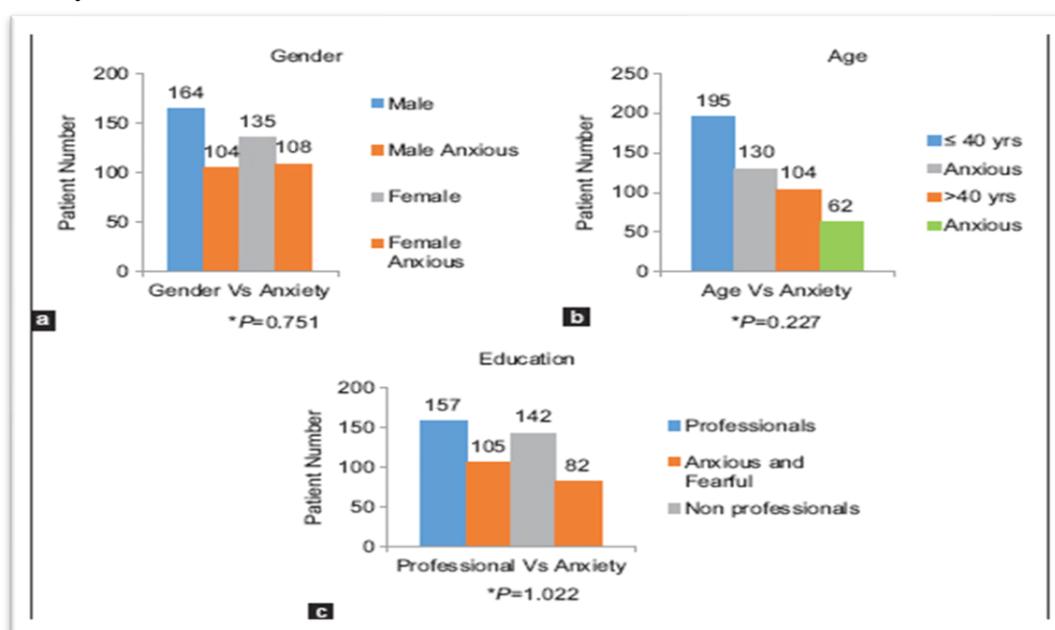


Figure 1.1: Demographic data & anxiety. (P Value <= 0.5 significant)

a) Influence of gender on anxiety. b) Influence of age on anxiety. c) Influence of education on anxiety.

1.2 – Depression

Depression is a common mental disorder that causes a person to feel overwhelmed and lose confidence in everything. However, depression is not about this; everyone feels sad, lacks interest in something, and feels demotivated at times; however, when these emotions last for an extended period of time, it is clear that it is depression. It could last a few weeks, months, or even a few years.

Depression can influence a person's life in a number of ways, from personal to professional. According to estimates, depression affects over 264 million people worldwide. Women are more likely than men to suffer from depression, and recent studies indicate that the cases of depression in children is increasing.

Correlational Study between Trait Anxiety, Depression & Internet Addiction

Depression is complicated because it can be caused by a variety of factors and affects a number of different body systems. It is the most serious because of illness in neurological and behavioural disorders. In depression some people lose weight, and others gain weight as a result of under or overeating.

Few common symptoms of depression

- Aches, pains, headaches or digestive problems
- Anxiety
- Boredom
- Difficulties with memory, concentration, or making decisions
- Excess alcohol consumption
- Feelings of worthlessness or guilt
- Low energy levels and fatigue
- Sadness or melancholy
- Sleep abnormalities
- Weight gain or weight loss

Causes of depression

Since a variety of genetic, biological, cultural, and psychological factors all play a part in the onset of depression, there is no single cause. There are some of them:

- Physical structure of the brain. Brain scans reveal that certain individuals with depression have a reduced hippocampus, which is involved in long-term memory.
- Personality: Personality traits, such as low self-esteem or being overly self-critical can lead to depression.
- Serotonin out of balance. Another factor going on in the brain that might be linked: the serotonin receptors behave differently in people with depression than they do in people who aren't depressed.
- Family history of depression. A individual with MDD who has a parent or sibling has a two- to three-fold increased risk of experiencing depression than the normal person.
- Illnesses or mental health problems: Post-traumatic stress, substance use disorders, and learning disabilities, anxiety.
- Stressful life experiences: Abuse, financial difficulties, the death of a loved one, and the lack of a career.
- Hormone changes: Menstrual periods, breastfeeding, and childbirth.
- Medications: Long term use of Sleeping pills and blood pressure medications.
- Loneliness: It can be exacerbated by factors like being cut off from family and friends, can raise the risk of depression.
- Alcohol and drugs: These elements can lead to spiral of depression.
- Environment: Issues in childhood and stressful events such as bereavement.
- Lifestyle: Not having a balanced diet, not exercising regularly, smoking, & alcohol.

Forms of Depression

Major depression

Sadness is an unavoidable aspect of the human being. When a loved one dies or when they face a life struggle, such as a divorce or a serious illness, people may feel sad or depressed. These thoughts are typically transient. Someone with a depression illness, such as major

Correlational Study between Trait Anxiety, Depression & Internet Addiction

depressive disorder, can have constant and debilitating feelings of depression for long periods of time (MDD).

Persistent depressive disorder

This category of depression, formerly known as "dysthymia," refers to a low mood that lasts at least two years but does not exceed the intensity of severe depression. Many individuals with this form of depression are able to survive on a day-to-day basis, but they also feel depressed or hopeless. Such depressive signs include improvements in appetite and sleep, fatigue, poor self-esteem, and hopelessness.

Postpartum depression

Significant and minor depressive episodes that develop during pregnancy or within the first 12 months after giving birth are classified as this form of depression (also known as postpartum depression). Postpartum depression affects one to one in every seven women who give birth, and it may have significant consequences for the women, their babies, and their families. Counseling and medicine are used to treat the problem.

Major depressive disorder with seasonal pattern

When the days shorten in the fall and winter, this form of depression occurs. Changes in the body's normal everyday cycles, the response of the eyes to light, or the role of chemical messengers such as serotonin and melatonin could all lead to a shift in mood. The most common procedure is light therapy, which entails sitting in front of a bright light source for several hours per day. Psychotherapy and medicine, which are standard therapies for depression, can also be successful.

Psychotic depression

It is a type of major depression that develops when a serious mental condition is accompanied by insanity in some way. Hallucinations (such as hearing a voice reminding you that you are no good or worthless), illusions (such as extreme feelings of worthlessness, failure, or having committed a sin), or any other kind of insanity may be the cause of the psychosis. One out of the four patients admitted to the hospital for depression suffers from psychotic depression.

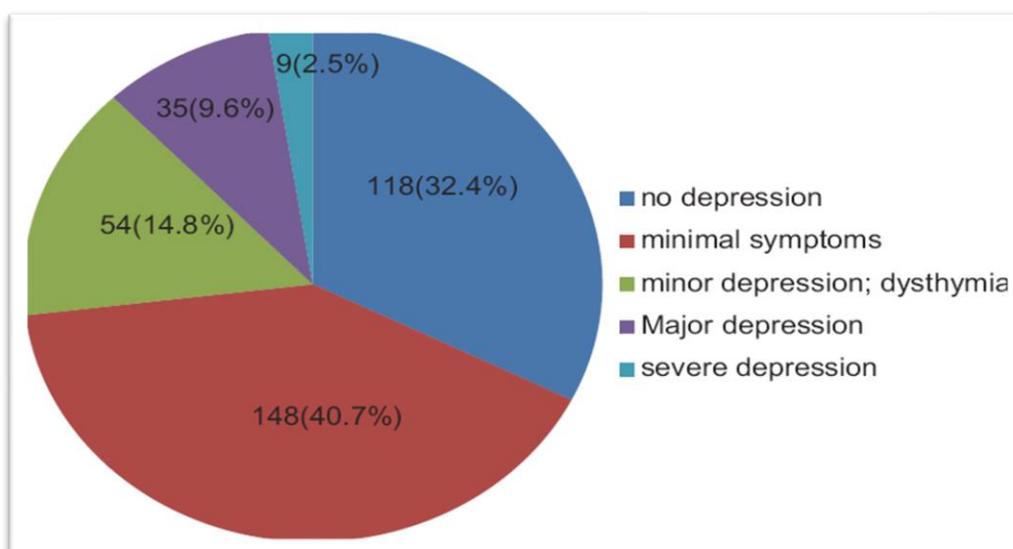


Figure 1.2: Figure depicting the prevalence of depression

Correlational Study between Trait Anxiety, Depression & Internet Addiction

1.3 - Internet addiction

The internet has become a very popular part of people's daily lives; teens and younger people use it for several purposes, including education, entertainment, social networking, and knowledge sharing. However, people are now wasting more time on the internet than is necessary. We all spend hours on our phones, tablets, and laptops, but we frequently lose track of time. However, this is how the internet is set up. There is never a shortage of information and there is always something new to investigate. Is it true that wasting so much time on the internet has a negative effect on our lives?

Internet addiction is characterised as a long-term use of the internet on mobile devices that interferes with a person's personal and professional life. It is an excessive use of the internet, but it is still unclear how much time is too much for addiction to develop. The World Health Organisation and the Diagnostic and Statistical Manual of Psychiatric Disorders do not yet consider prolonged internet usage as a condition (DSM-5).

Internet addiction is a subset of overall technology addiction. Using the Internet excessively – such as streaming videos, shopping online, or updating social media often – does not suggest that a person has Internet Addiction Disorder. The concern occurs as these behaviours tend to hinder everyday life. According to polls, males who spend too much time online tend to access pornography pages, while females who spend too much time online prefer to use chat rooms to form platonic and cybersexual relationships.

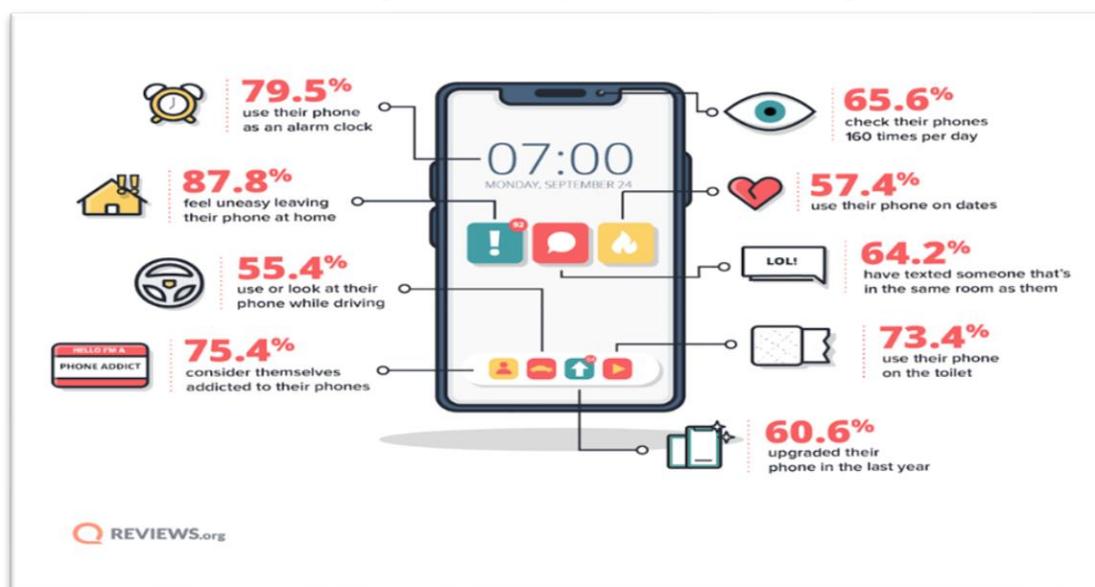


Figure 1.3- Americans & their addiction with phones

Signs of Internet Addiction (By Dr. Young)

- Meeting 5 of the criteria of the Internet Addiction Diagnostic Questionnaire (IADQ) means a person is addicted.
- Feeling preoccupied with the Internet.
- Feeling the need to use the Internet with increasing amounts of time in order to achieve satisfaction.
- Making repeatedly unsuccessful efforts to control, cut back, or stop Internet use.
- Feeling restless, moody, depressed, or irritable when attempting to cut down or stop Internet use.

Correlational Study between Trait Anxiety, Depression & Internet Addiction

- Staying online longer than originally intended.
- Jeopardizing or risked the loss of significant relationship, job, educational or career opportunity because of the Internet.
- Lying to family members, therapist, or others to conceal the extent of involvement with the Internet.
- Using the Internet as a way of escaping from problems or of relieving a dysphoric mood.

Other Symptoms Include

- Failed attempts to control behavior
- Neglecting friends and family
- Neglecting sleep to stay online
- Being dishonest with others
- Feeling guilty, ashamed, anxious, or depressed as a result of online behavior
- Weight gain or loss, backaches, headaches, carpal tunnel syndrome
- Withdrawing from other pleasurable activities

Internet addiction can be categorized into 6 parts

Internet Gaming Disorder

Gaming addiction is like other forms of addiction in several respects. People with the condition spend a lot of time playing computer games, have a heavy emotional commitment to it, and as a result, have fewer social interactions.

Gaming dysfunction, among most addictions, may have a detrimental effect on family life, marriages, employment, and school. This could irritate those who oppose games, or it could make people feel bad.

Internet Gambling Addiction

- When at least four of the following signs are present, a person may be diagnosed with a gambling addiction (clinical term: "pathological gambling"), according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), the American Psychiatric Association's classification for psychiatric disorders
- Preoccupation with gambling (e.g., reliving previous gambling encounters, arranging one's next gambling session, or figuring out how to get the money to gamble).
- In order to reach the optimal degree of excitement, people will need to invest more money.
- Several failed efforts to limit or stop gambling.
- When attempting to decrease or stop gambling activities, irritability and restlessness will be felt.
- Gambling as a means of preventing issues or boosting one's mood temporarily.
- Returning to gamble following a defeat in the hopes of recouping missed funds.
- Trying to make up time wasted or money lost while cheating by lying to family members, colleagues, bosses, and others.
- Significant problems in a relationship, at work, or in school.
- Relying on others for money to get out of a dire financial situation brought on by gambling.

Correlational Study between Trait Anxiety, Depression & Internet Addiction

Internet Pornography Addiction

- When an individual exhibits the following symptoms, they will be considered to have a porn addiction:
 - Thoughts of porn even when they are not actively watching it.
 - When they're at work or in social settings where they could be seen, they're streaming porn on their screens.
 - They are embarrassed, guilty, or depressed as a result of their pornographic exposure.
 - They continue to watch porn despite the negative effect it has had, appears to have, and will continue to have on their marriages, jobs, and personal lives.
 - When pornography isn't there, they have less sexual pleasure with their partners.
 - They keep their pornography and pornographic viewing habits hidden from their girlfriend, domestic partner, and relatives.
 - When they're told to cut down or stop watching porn, they get irritated.
 - When watching porn, they lose track of time.
 - They've attempted but failed to stop viewing pornography.

Internet Shopping Addiction

Occasional shopping binge is not the same as having a shopping obsession. Overspending or over shopping can happen to anyone but buying-shopping disorder is defined by an intense need to purchase or seek consumer products. People who suffer from buying-shopping disorder use shopping as a coping strategy to control their feelings, gaining satisfaction or comfort because of their purchases.

Internet Social Media Addiction

Social media addiction is described as the compulsive and obsessive usage of social media (Facebook, Twitter, Instagram, and Snapchat) that takes over people's life and negatively impacts their 'real life' and relationships.

Cornell Information Science conducted studies into how impossible it is for people to stop using Facebook and other social media platforms, particularly though they have a firm intention to do so. They've also assigned the inability to leave a name: "social media reversion". If a person is regularly checking their phone for social media updates, they may have a social media addiction. Feeling down because they don't have access to social media, as well as wasting more time broadcasting their activities on social media than actively doing such activities, are also red flags.

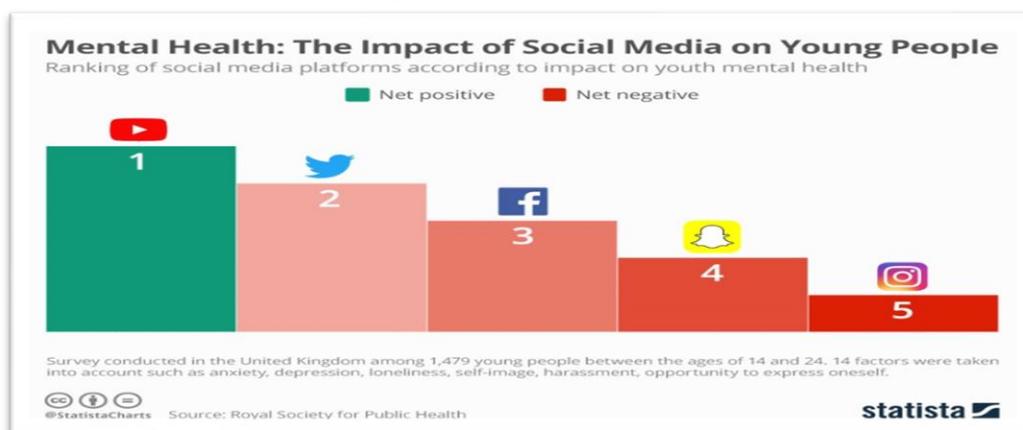


Figure 1.4: Mental Health: Impact of social media on young people

Summary

This chapter provides a summary of the findings on the relationship between Trait Anxiety, Depression and Internet Addiction. It introduces the principles used in this analysis as well as the study's meaning.

REVIEW OF LITERATURE

2.1 – Anxiety

Anxiety was distinguished from other forms of negative affect by Greek and Latin physicians/philosophers, who regarded it as a psychiatric condition. Emil Kraepelin paid close attention to the existence of extreme anxiety in manic-depressive illness, foreshadowing the DSM-5 sign of “anxious distress” in bipolar disorders.

Trait vs. state anxiety in different threatening situations by Ansiedade traço versus ansiedade estado em diferentes situações de ameaça (2017) showed that in the situations of interpersonal danger, trait anxiety (as assessed by STAI-trait and HAD-A) correlates positively with state anxiety, but not in situations of physical threat. The notion of a general anxious trait cannot yet be dismissed; merely acknowledging it would mean that certain trait anxiety scales are not properly measuring the personality trait – including the STAI-trait, which does not correspond to anxious response in physical threat circumstances, as shown by the data provided in this and other studies. It appears that trait anxiety is more likely to be multifaceted.

An overview of Indian research in anxiety disorders by J. K. Trivedi and Pawan Kumar Gupta (2010) where it was found that anxiety disorder study in India is incomplete in terms of epidemiology, phenomenology, path, effect, and management. Family studies, neuroscience, and neurobiology are among the fields of study that are underserved. The bulk of experiments have sought to reproduce Western results. Despite rapid progress in the area of psychopharmacology, India's study into anti-anxiety and antidepressant medications is dismally lacking. Furthermore, considering the fact that India is the birthplace of many of these methods, research in the fields of non-pharmacological management such as relaxation therapies, yoga, other meditation techniques, and psychotherapies is missing. The majority of study is conducted by tertiary institutions with a small sample size, which does not represent the true picture.

Disease as per ICD-9	In Lucknow center (n = 2325) (%)	At Bangalore center (n = 1578) (%)
Social phobia	0.19	0.19
SAD	0.09	0.2
GAD	0.14	0.3
Simple phobia	1.98	2.9
Agoraphobia	0.05	0.1
Panic	0.05	0.1
OCD	0.09	0.1
Conversion disorders	0.17	Not reported

Table 2.1 Prevalence of anxiety disorders in pediatric population

Correlational Study between Trait Anxiety, Depression & Internet Addiction

Matthew Garner Hanns Möhler, Dan J. Stein, Thomas Mueggler, David S. Baldwin (2009) studied Research in anxiety disorders: From the bench to the bedside, neurocognitive models of human anxiety and fMRI findings indicate that biases in emotion control and control are triggered by dysfunction in a portion of the brain (amygdala-prefrontal circuitry). Panic disorder, obsessive-compulsive disorder, social anxiety disorder, post-traumatic stress disorder, and generalised anxiety disorder have been identified as the five most significant causes with anxiety disorders. Animal models enable researchers to investigate brain-behavior relationships in order to gain a better understanding of normal and abnormal human behaviour as well as basic neuropsychobiological processes. Many animal models of fear inspection have been used to better understand the innate behavioural behaviours of mice and rats in order to establish ethologically based behavioural activities that can be used to better understand human behaviour. In patients with anxiety disorders, drug therapies and functional neuroimaging methods suggest the therapy response can be predicted. However, there is also a lot of knowledge to discover about anxiety drug development and how to best treat this condition.

2.2 – Depression

During the second millennium B.C.E., depression was first recorded in Mesopotamia. Depression was once thought to be more of a metaphysical than a physical ailment, but that perspective has changed as a result of years of research and expanded awareness on the subject. Negative unconscious thought, negative self-beliefs, and information processing errors, according to Beck, trigger depressive symptoms. Each one approaches depression in a different way. It has the potential to disrupt your regular work routine, resulting in lost time and decreased productivity. It has the ability to hurt marriages as well as cause serious health problems. Adolescents under the age of 22 are much more likely than adults over the age of 22 to experience depression.

The Experience of Depression: A Qualitative Study of Adolescents with Depression Entering Psychotherapy by Katharina Weitkamp, Eva Klein, Nick Midgley (2016) found out that adolescent depression tends to match the diagnosis criteria defined in conventional psychiatry, but with some significant variations. There seem to be several defining characteristics of how the YP felt about finding support for their issues, which could be unique to this age group. In addition to existing medical guidelines for depression, the YP did not note any problems with change in appetite or weight, but did mention high levels of irritability and aggression, adding to the knowledge base. In this study, there was a significant amount of pain. The YP in particular described feeling confused by the situation, unable to make sense of what was going on with them, feeling alone, and considering counselling only as a last resort, thinking that they could cope with their depression on their own.

Update on 2004 Background Paper, BP 6.15 Depression By Julisca Cesar & FÁraz Chavoush (2013) said that depression is a leading cause of high health-care costs and causes a huge burden of illness around the world. Europe accounts for more than a quarter of all MDD-related DALYs worldwide. In all three European regions, the burden of disease for major depressive disorder is greater than the global burden proportion. This shows that Europe suffers from a higher incidence of MDD disease than the rest of the world. MDD increased by 37% globally between 1990 and 2010 in terms of years lived with disability (YLDs). According to the global and European YLDs rankings, MDD is ranked second.

Correlational Study between Trait Anxiety, Depression & Internet Addiction

Depression – A Review by Iyer K. and Khan Z.A (2012) it was observed that depression is a severe medical disorder that has become a significant public health problem. Although depression is likely to occur as a result of a variety of causes, knowing the disorder's symptoms, potential triggers, and therapies is critical for supporting the well-being of those who are affected. There is also a need to research the progression of depressive disorders around the world in order to assess the need for and length of treatment. Studies can also look at cost-effective treatment models that can be quickly applied in primary care to successfully treat depression.

Research done by Sandeep Grover, Alakananda Dutt, and Ajit Avasthi (2010) called as “An overview of Indian research in depression”. Here they have reviewed the data on various aspects of depression, emerging from India. Observation was done on 109 out of 122 cases of internal depression 3-13 years after their index diagnosis, it was found that there was no recurrence of depression occurred in 28 cases. Forty-two cases turned to be bipolar and 21 endure unipolar characteristics. It was observed that major depressive disorder to bipolar disorder took place within three years after the index diagnosis in 77% of cases. Study performed on elderly patients with depression have reported the complete recovery in 58% of cases and 24% of cases have limited recovery with 18% registering worsen situation. So, it can be said that with proper help or by self-awareness people can overcome their depression with time. One more observation can be observed here that many of the bipolar patient suffer from depression.

2.3 Internet Addiction

Internet is very recent and yet a lot of people have just start using it, but still a 40% of world population do not use internet, almost only half of the population uses internet, but impact created by it is still huge in both positive and negative perspective.

The number of internet users has increased by 1000 percent since 2001. Shopping, gambling, conversation chats, online relationships, gaming, information-seeking, and pornography browsing are only a few of the potentially addictive behaviours available on the internet. Most people have noticed being pulled into spending more time online than they wanted, but for others, it can become an addiction.

According to a data released on Statista in 2021, the global internet penetration rate is 59%, with Northern Europe leading the way with a population internet penetration rate of 95%. The UAE, South Korea and Denmark have the highest internet penetration rates in the world. North Korea, on the other hand, ranks third in the world with almost no internet user penetration in the general public. Asia has the most internet users in 2019, with over 2.3 billion according to the most recent count. With almost 728 million internet users, Europe came in second.

In terms of internet users, China, India, and the United States lead all other nations. China has over 854 million internet users, while India has about 560 million. Huge swaths of the population of both countries remain unconnected.

Correlational Study between Trait Anxiety, Depression & Internet Addiction

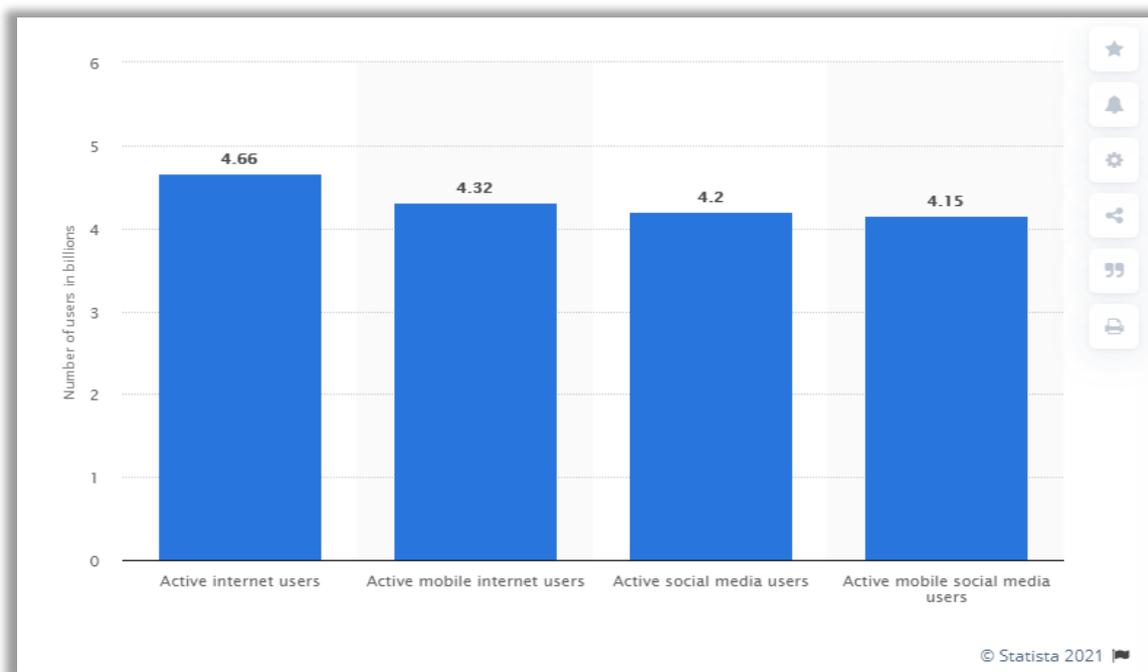


Figure 2.1: Worldwide digital population as of January 2021

It's hard to discuss the internet without mentioning social media. More than 11 new social media users join every second across the world, with a 90 percent average rise in the number of users. According to a new Canadian poll, 86% of school-aged kids in Ontario use social media on a regular basis, with 16% of them spending more than 5 hours per day on social media pages. Social networking platforms currently have an estimated 3.6 billion subscribers, and these numbers are projected to continue to rise as mobile smartphone use and mobile social networks gain momentum in previously underserved markets.

Internet use and health in higher education students: a scoping review by Hanna Rouvinen, Krista Jokiniemi, Marjorita Sormunen, Hannele Turunen, Health Promotion International (2021) resulted in the findings of this report, 45.5 percent of Kermanshah University of Medical Sciences students are addicted to the Internet. Those who use the Internet more than others can substitute low-quality social relationships for stronger relationships in real life, leading to increased loneliness and depression. The Internet may be a replacement for lives that are lacking in vitality. People who are lonely or alone may spend more time on the Internet, lowering the quality of their social relationships.

Internet addiction: Prevalence and risk factors: A cross-sectional study among college students in Bengaluru, the Silicon Valley of India (2015) with its researcher Sharmitha Krishnamurthy¹, Satish Kumar Chetlapalli². The findings of this research suggest that Internet addiction is a widespread public health problem with various risk factors and a wide range of Internet use trends in a world where the Internet is increasingly becoming an integral part of people's personal and social lives. The need of the hour is to raise public consciousness, plan public health strategies for this behavioural addiction, and do more studies to back up these claims. A variety of researchers have attempted to investigate related risk factors associated with Internet addiction around the world, and the findings of this report provide data to back up previous analysis from an Indian perspective.

Correlational Study between Trait Anxiety, Depression & Internet Addiction

International Journal of Mental Health & Psychiatry (2015) with its researcher Cheng Sun and J Koji Lum has done research on this topic on UG & PG students, where they observe IAT (Internet Addiction Test) before and after 24-hr abstinence. It was observed that many people overestimated and under estimated their addiction. Students who scored relatively low (< mean) in IAT underestimated their severity level before the abstinence, but the adjustment they made in the post 24-hr abstinence IAT was of smaller magnitude compared to those who overestimated.

Research done by Laura Widyanto, Ph.D., Mark D. Griffiths, Ph.D., and Vivienne Brunsden, B.Sc. (2010) on A Psychometric Comparison of the Internet Addiction Test, the Internet-Related Problem Scale, and Self-Diagnosis. There were 225 participants and test observed on them were IAT & IRPS (Internet-Related Problem Scale). Participants who accepted that they are internet addicts had high rating in IAT & IRPS. It was also observed that most of average time was spent on web browsing, e-mailing, and chatting. In the research it was observed that time span of Internet use was not found to be notably correlated with the IAT or IRPS factors.

2.4 - Anxiety & Depression

Depression and Anxiety refers to an array of abnormal variations in the mood of a person. These conditions originate as a result of chemical reaction in the brain. 90% of patients with anxiety disorders develop Depression. A person suffering from Depression and Anxiety generally exhibits feelings of guilt, loss of pleasure or interest, low self-esteem and loss of appetite.

Prevalence of Depression, Anxiety and Stress among Adult Population: Results of Yazd Health Study Mohsen Mirzaei, Seyed Mojtaba Yasini Ardekani, Masoud Mirzaei, and Ali Dehghani (In 2019) it was coming in view that in the Yazd Greater Region, the prevalence of depression, anxiety, and stress has risen over the last two decades. More root-cause research and ethiologic and interventional studies are required to explore the causes of this high prevalence as well as to avoid and regulate these disorders. More research is required to assess the role of potential influences like everyday stress, social media, interpersonal skills, and economic concerns.

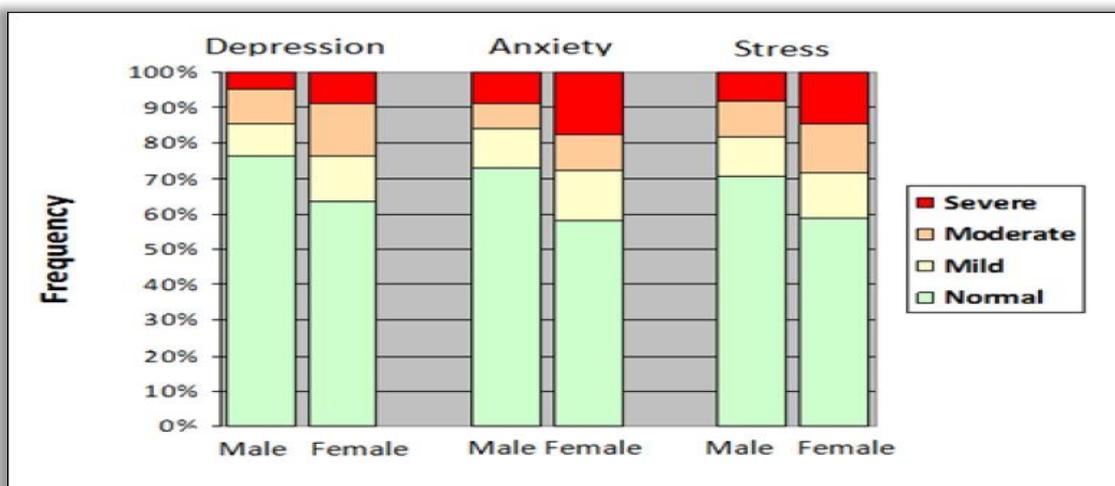


Figure 2.2: Prevalence of Age-Standardized Depression, Anxiety, and Stress by Sex in Adults Aged 20-69 Years Living in Yazd, Iran, During 2014–2015

Correlational Study between Trait Anxiety, Depression & Internet Addiction

Katherine H. Bisson (In 2017) did research on the Effect of Anxiety and Depression on College Student's Academic Performance: Exploring Social Support as a Moderator. This study shows that how can socially supporting helps college students in overall well-being. Examination was done on 93 students to understand association between anxiety, depression, social support, and academic performance. It was observed that among the group who reported having low social support, depression had a relatively positive relationship with academic accomplishments, it may be because when students don't get much social interaction and feel alone, they focus more on academics to keep their mind occupied. So, those who work with college students should look into the overall well-being of the student, as it is possible that their academic performance may not be just affected by anxiety and depression.

Anxiety and depression: toward overlapping and distinctive features by Michael W. Eysenck & Małgorzata Fajkowska (In 2017) Beck's content-specificity theory is a valuable explanatory mechanism for thinking about anxiety and depression discrepancies. The idea that nervous and depressive people have different suicidal emotions reflects variations in their underlying neural schemas is quite likely. Latest extensions of the three components of the tripartite model to four-component models (e.g., Fajkowska et al., 2017a; Renner et al., 2017) are consistent with the content-specificity theory since they put a high emphasis on the cognitive content discrepancies between anxiety and depression.

The explanatory capacity of the content-specificity hypothesis is somewhat reduced. There is a risk of circularity, for example. More precisely, it is often proposed that patterns of automatic thoughts provide key support for the presence of nervous and depressed cognitive schemas, and that these cognitive schemas are often used to "explain" the patterns of automatic thoughts.

Depression and anxiety research by Medical journal of Australia (In 2013) concluded the comorbid depression and anxiety are prevalent in general practice, affecting up to a quarter of patients. Patients with comorbidity are at a higher risk of drug abuse, have a worse approach to care, are more likely to be ill, have a higher disease load, and are more likely to access health services in general. This indicates that greater public knowledge and quality education are required to promote clinical practice and improve mental health outcomes. This means that increased public recognition and quality education are needed to improve clinical practice and improve mental health outcomes.

2.5 - Internet, Depression & Anxiety

Problematic Internet Use (PIU) with casual video games, cybersex, online shopping, piracy, social media use, and inability to regulate the amount of time spending on new devices has risen as a result of the internet's discovery.

Study of internet addiction and its association with depression and insomnia in university students (In 2020) with its researcher Jain Akhilesh, Sharma Rekha, Gaur Kusum Lata, Yadav Neelam, Sharma Poonam, Sharma Nikita, Khan Nazish, Kumawat Priyanka, Jain Garima, Maanju Mukesh, Sinha Kartik Mohan, Yadav Kuldeep S obtained in a cross-sectional sample where 954 participants who had used the internet for the previous six months were registered. The pattern of usage as well as socio demographic characteristics were reported. To evaluate internet addiction, depression, and insomnia, the Internet Addiction Test (IAT), PHQ-9, and the insomnia Severity Index (ISI) were used.

Correlational Study between Trait Anxiety, Depression & Internet Addiction

With a mean age of 23.81 (SD 3.72), 518 (60.59%) of the 954 respondents were male and 376 (39.41%) were female. 15.51 percent of the survey participants were addicted to the internet, and 49.19 percent were heavy users. A variety of factors, including graduation age, time spent on the internet every day, location of internet usage, smoking, and alcohol intake, were found to have a substantial connection with internet addiction. Addiction to the internet is on the rise among teenagers. Sex, time spent on the internet, alcohol, and nicotine both predict a higher risk of internet addiction. Online addicts and over users are most likely to suffer from depression and insomnia.

Internet Addiction and its Relationships with Depression, Anxiety, and Stress in Urban Adolescents of Kamrup District, Assam by Anku M. Saikia, Jahnabi Das, Pavel Barman,1 and Mintu D. Bharali (2019) has shown that the degree of Internet Addiction in India, and especially in Assam, is comparable. The Internet has spread to every corner of the globe, and people's reliance on it has grown, from social media to data collection to news. According to the findings of this study, there is a connection between Internet addiction and depression, anxiety, and stress. A vicious spiral of depression has been documented, with depression contributing to Internet addiction, which then again leads to depression. The authors of this paper argue that Internet addiction should be used in the next version of the DSM.

A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents Betul Keles ORCID Icon, Niall McCrae & Annmarie Grealish (2019) & this study found that the effect of social media use on the prevalence of depression, anxiety, and psychological illness among teenagers is likely to be multifactorial. It's important to understand the differences in the words used to describe the relationship. On the grounds that this assumes a socially created lie, it is safe to conclude that there is a "association" between social media use and mental health issues. However, this is not always objectively true. Rather than believing socially accepted facts, objective scholars look for similarities. Correlation is a mathematical phenomenon, not a miraculous one. Finally, there's cause, which necessitates lateral evidence. Therefore they stated that the relationship is correlational but not conclusively causative because the latter has not been sufficiently investigated in this topic.

Dr. Vera Nezhgorova, Dr. Eric. Hollander, Dr. Naomi Fineberg, Dr. Jon Grant, Dr. Sam Chamberlain, and Kyra Citron have researched on problematic use on internet (2018) named Problematic Internet Use and Its Impact on Anxiety, Depression and Addictions: Patient-Centered Approaches and Digital Applications and Interventions. It was observed that people said that once they start to look for data on their smartphone for a topic, which particularly interests them, they just cannot stop and look into it till the phone battery runs out. Immoderate use of social media can also be very harmful, particularly when adolescents join groups and online communities, which force them to do things like excessively lose weight following daily posts on social media, or go to dangerous place just to take photo. When people see others doing interesting things in life all the time, they find fault in their own life after this they try to match their lives with others by doing like others and when it is not achievable they feel low and find one's life boring which triggers their mind to become sad and depressed.

Depression, anxiety, and smartphone addiction in university students- A cross sectional study Jocelyne Matar Boumosleh, Doris Jaalouk (In 2017) found out in their research that depression and anxiety were discovered to be two separate beneficial predictors of mobile addiction. Young adults with personality type A who are stressed and depressed may lack

Correlational Study between Trait Anxiety, Depression & Internet Addiction

positive stress coping strategies and mood control strategies, making them more vulnerable to smartphone addiction.

Summary

With regards to all of the factors that are a part of this analysis, this chapter discusses studies and established literature. We looked at various papers that looked at the fields of Trait Anxiety, Depression, Internet Addiction and, as well as papers that looked at their association. While the Internet is very recent to humans, the amount of innovation that it is bringing in is unparalleled, and it has quickly become a requirement, contributing to its addiction. As a result, the aim of this research is to determine the correlation between Trait Anxiety, Depression and Internet Addiction.

Rationale Of the Study

The internet has become an integral part of human life, education, and work culture. The internet is supplying us with data that people need, as well as allowing people to gain access to a wealth of knowledge, and human development is accelerating at a rapid rate. However, like so many constructive aspects, there is also negativity.

Also, since anyone can now quickly access the internet, everyone may bring their content online, increasing competitiveness. With too much competition constantly in front of people, an individual can feel too overwhelmed to post better content than anyone else in less time. Doing a lot of work in a short amount of time and continuing to add new material on a regular basis would become very daunting, resulting in a lack of inspiration and, eventually, burnout. Because of this, it would be impossible to create new content on a regular basis, which would have a detrimental impact on web creators and their minds.

In social media sites people are having opportunity to speak with all kind of people and they can even communicate to long lost friends. In forum like YouTube, Instagram & Facebook people can share their talent quickly and get popular for their out of the box imagination. However, as people share information, they risk receiving unwelcome, inappropriate, and violent feedback, which may leave a lasting impression on them. Seeing too much criticism about themselves causes them to question their job, attitudes, and society, both of which contribute to negativity in the mind. One-third of young adults appear to be victims of cyberbullying, and recent evidence shows that it may have significant and fatal effects. Many young people have taken extreme action such as suicide as a result of cyberbullying.

Teenagers' internet use has grown as a result of the addictive and enticing gaming choices. Teenagers get a rush from playing games that contain dangerous weapons such as arms and grenades and possessing this kind of control makes them feel superior. They keep thinking about the game because they have a sense of superior strength. At the genetic, neurocircuitry, and behavioural stages, Internet gaming addiction tends to be close to other addictions, including drug abuse, according to a neuroimaging study.

METHODOLOGY

4.1 Problem and objectives

Problem

With increase in internet usage there are some positive and negative sides of it. Here we will be looking into the fact that if Internet addiction has any influence of creating Depression and Trait Anxiety into a person's life.

Correlational Study between Trait Anxiety, Depression & Internet Addiction

Objective

The goal of this research is to try to find out that if there is any relation between taken 3 variables.

- Find correlation between Internet Addiction & Depression.
- Find correlation between Internet Addiction & Trait Anxiety.
- Find correlation between Depression & Anxiety.

Variable- Trait Anxiety, Depression & Internet Addiction

4.2 Hypotheses

- 1 - Internet addiction will have a positive correlation with Depression.
- 2 - Internet addiction will have a positive correlation with Trait Anxiety.
- 3 - Depression will have a positive correlation with Trait Anxiety.

4.3 Operational definition

Trait Anxiety

The stable tendency to attend to, feel, and communicate negative feelings such as nerves, concerns, and distress in a variety of contexts is referred to as trait anxiety. This is a result of the neuroticism vs. emotional maturity personality trait.

Depression

Depression is a unextraordinary and dangerous medical condition that affects a person's mood, thinking, and behaviour. Sadness and/or a lack of pleasure in any activity are symptoms of depression. It can trigger a wide range of mental and physical symptoms, as well as a reduction in a person's capacity to cope at work and at home.

Internet Addiction

Internet addiction is distinguished by unhealthy or inappropriately regulated preoccupations, impulses or behaviours about computer or cell phone usage and internet access that lead to disability or discomfort.

4.4 Sample

Sampling Technique

Here we use two types of technique

- Snowball sampling method
- Convenient sampling method

Sampling size, nature & criteria

A total of 144 samples were taken from a representative group of people. The community is made up of people between the ages of 20 and 30, who come from various fields and come from all over India. All of the participants were given detailed instructions in textual format, and the findings were kept confidential

Methods of data collection procedure

To begin, a proper test of standardised measurements was chosen, and a google form was created so that the data collection process could be completed without social interaction due to the Corona pandemic. Snowball sampling was used to submit the google forms to people between the ages of 20 and 30, with a maximum goal of 144 samples obtained.

Correlational Study between Trait Anxiety, Depression & Internet Addiction

4.5 Research design and setting

Research done here is a quantitative study using descriptive statistics that are used to describe the basic features of the data in a study. Data is obtained by tests explained in the test/tools section by self-administrated method. People were given the tests with straightforward guidance and assurances of privacy. The collected data was subjected to a thorough statistical analysis.

There was no need for a particular area or demographic because this research involved a random population of people between the ages of 20 and 30. Because of the pandemic, tests were made available online, and data was compiled using Google Forms. Standard questionnaires were used to gather data on three related fields, and participants were given an outline of their position in the study online.

4.6 Tests/tools

Internet Addiction

The Internet Addiction Test (IAT) is a validated and dependable indicator of Internet addiction. The IAT is a 20-item 5-point Likert scale developed by Dr. Kimberly Young that assesses the magnitude of self-reported internet compulsiveness.

The Internet Addiction Test was the first reliable assessment of Internet and technology addiction. The IAT is a self-report tool for teenagers and adults. This tool can be used in assessment to obtain a well-rounded profile of the client's Internet addiction.

Psychometric Properties (Reliability, Validity, Norms)

Cronbach's alpha computed for this questionnaire was 0.889 by Frangos. The marking for this questionnaire ranges from 20–100; the higher the marks are, the greater the dependence on the internet is. It is evaluated as:

- <50: normal internet users
- 50-79: moderate addicts
- 80-100: severe addicts

Depression

The test that will be used here to find the level of depression is Beck's Depression Inventory. The Beck Depression Inventory (BDI) is a 21-item self-do questionnaire for assessing the level of depression. It is relied on the theory of negative cognitive distortions as central to depression. Twenty-one items are combined from the observations and ranked 0–3 for severity. The questionnaire is mainly self-managed although earlier it was designed to be administered by trained interviewers. It takes 5–10 min by client to answers the all questions. It was originally developed to provide a quantitative assessment of the level of depression, as it is designed to show the depth of depression, it can be used to monitor the changes over time and provide an objective measure for checking improvement and the effectiveness or further treatment methods.

Psychometric Properties (Reliability, Validity, Norms)

The overall score of the BDI-II was calculated to have a Cronbach's alpha of 0.89. The BDI-II and PHQ-9 have a good correlation ($r=0.75$), and anxiety-related measures are 0.68 and 0.71, which are both in the high range. The BDI-II is a valid instrument for assessing the severity of depressive symptoms. The results should be used to investigate the prevalence rate and treatment methods for depression.

Correlational Study between Trait Anxiety, Depression & Internet Addiction

Anxiety

This inventory test consists of 40 statements about the feelings of the participant, divided into two parts. In Part I (20 statements), volunteers are instructed to indicate the intensity of their feelings of anxiety at a particular moment (state anxiety), using scores ranging from 1 (absolutely not) to 4 (very much). In Part II (other 20 statements), volunteers describe how they generally feel (trait anxiety) by reporting the frequency of their symptoms of anxiety, again using scores ranging from 1 (hardly ever) to 4 (often). The total score of each part may range between 20 and 80, with higher scores indicating higher levels of anxiety. A validated Portuguese version of the STAI was used¹⁹ to assess state anxiety (Part I, STAI-state) and general trait anxiety (Part II, STAI-trait).

The test that will be used in this research for anxiety is State-Trait Anxiety Inventory (STAI). It is a commonly used to check the level of trait and state anxiety. For this research we will focus on trait anxiety and we will be using only trait anxiety form, it is because trait anxiety is a part which is developed inside a person's mental state with time and stays for long time whereas state anxiety happens during a particular situation only.

Psychometric Properties (Reliability, Validity, Norms)

Cronbach's alpha values range from 0.38 to 0.89, indicating a high degree of internal accuracy, with a Cronbach's alpha of 0.86 for the overall ratings. The correlation coefficients between test and retest are extremely important. The intraclass correlation coefficient (ICC=0.39 to 0.89) seems to be high. There is a high degree of sensitivity and accuracy to medication outcomes. Nearly half of the time, there is a high degree of substantial difference between baseline and post-treatment ratings (control subjects). The STAI is a secure, valid, and clinically sensitive instrument.

4.7 Data analysis

Parametric studies are appropriate for determining the relationship between Internet addiction, depression, and anxiety.

Parametric Test:

In statistics, a parameter refers to a feature of a population, as opposed to a metric, which refers to a feature of a sample. A parametric statistical test allows assumptions about the population parameters and distributions from which the data are collected. The methodology of correlation is used to investigate the association between two quantitative, continuous variables. Nonparametric tests have less predictive ability than parametric tests. With nonnormal continuous data, parametric tests can work well.

SPSS:

SPSS (Statistical Kit for the Social Sciences) is a scalable and adaptable application that can accommodate a wide variety of statistical activities. SPSS software is commonly used in a variety of fields and is accessible through all computer pools. It's important to remember that SPSS isn't the only statistical programme available; if you choose a job that allows you to deal with numbers, you'll likely come across a variety of others. Stata and SAS are two more often used mathematical sets (and there are many others).

Pearson correlation coefficient:

Pearson's Correlation Coefficient(r) is a calculation of how strong the relationship between the two variables is. The test statistic Pearson's correlation coefficient tests the statistical interaction, or association, between two continuous variables. Since it is based on the

Correlational Study between Trait Anxiety, Depression & Internet Addiction

method of covariance, it is known as the best method for calculating the correlation between variables of interest.

Pearson correlations are only suitable for quantitative variables (including dichotomous variables). The linear correlation coefficient, abbreviated as "r," describes the degree of relationship between two variables. Since it predicts the relationship between two variables, it is also known as the Cross-correlation coefficient.

Summary

This chapter covered the testing methods as well as the different measures used in the study, as well as their psychometric properties. The sampling method was also presented, as well as the methods such as SPSS and Pearson Correlation Coefficient.

RESULTS AND DISCUSSION

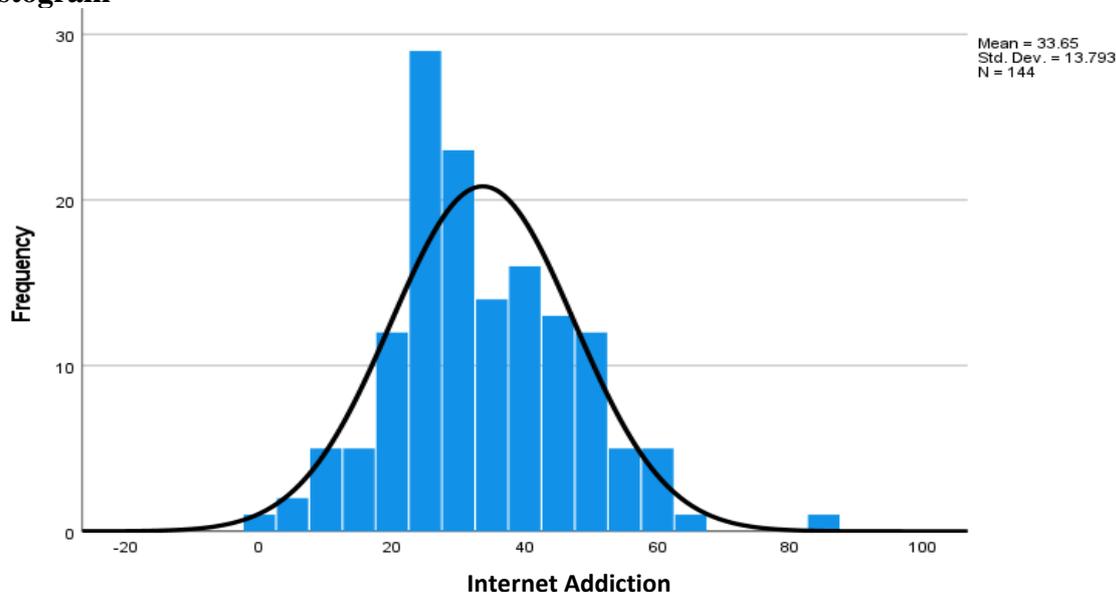
5.1 Statistics

The frequency table and the histograms of variables: Internet Addiction, Depression & Trait Anxiety for the collected samples are shown below.

Table 5.1: The frequency table of variables name Internet Addiction, Depression & Trait Anxiety

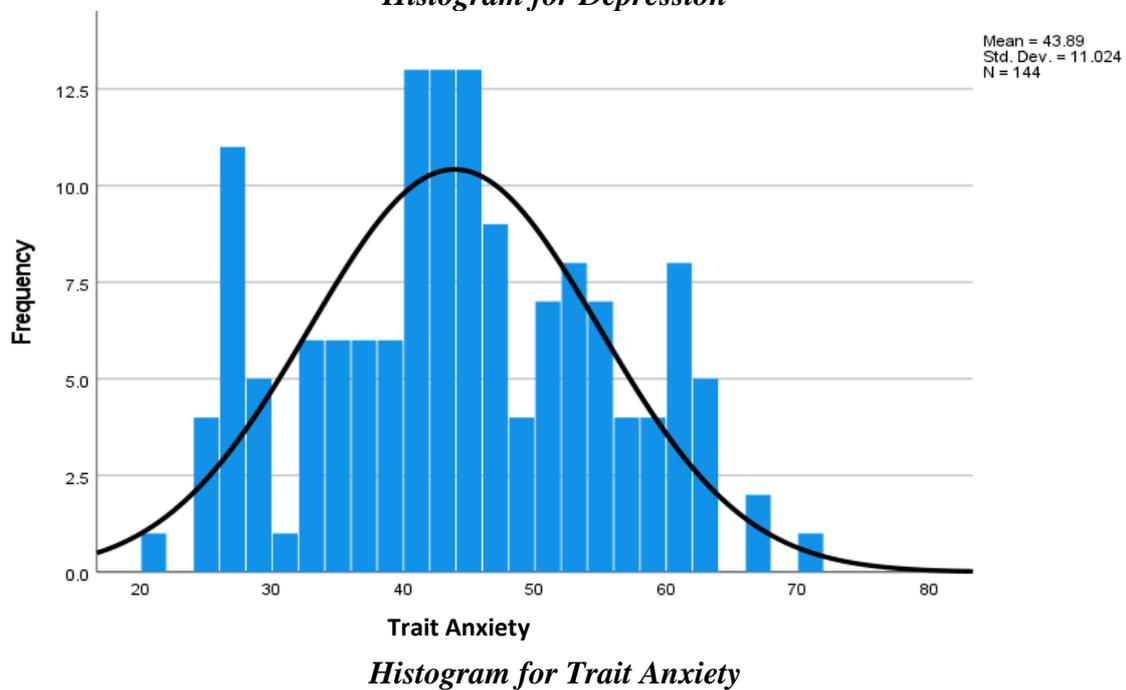
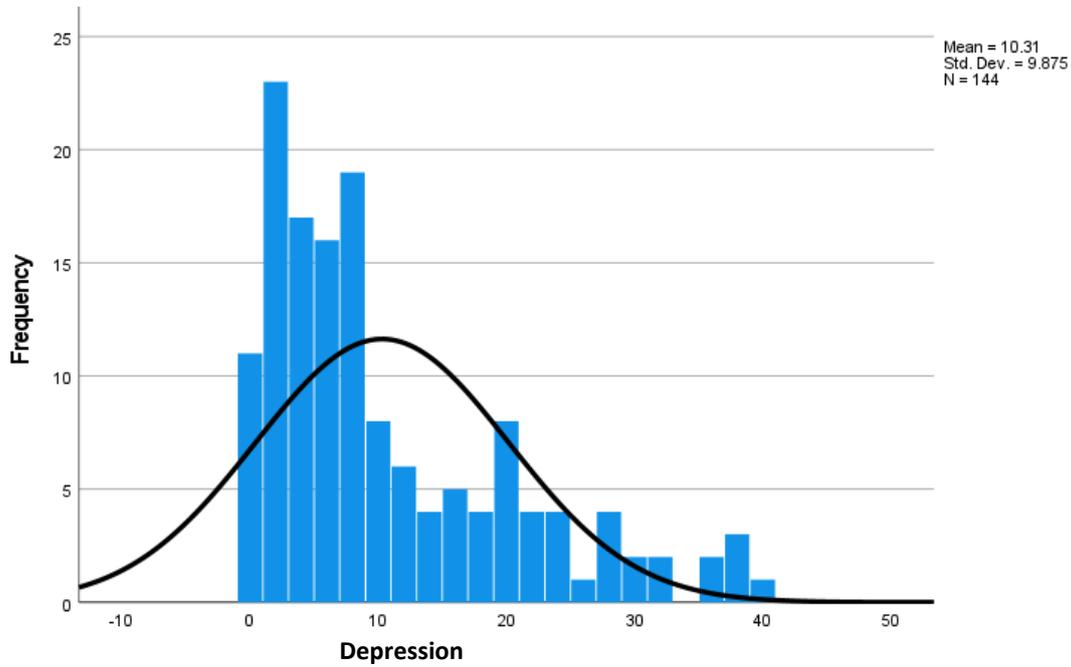
Variables	Internet Addiction	Depression	Trait Anxiety
Mean	33.65	10.31	43.89
Median	32.00	7.00	43.50
Mode	23	1	44
Std. Deviation	13.793	9.875	11.024
Skewness	.389	1.161	.054
Std. Error of Skewness	.202	.202	.202
Kurtosis	.428	.555	-.664
Std. Error of Kurtosis	.401	.401	.401

Histogram



Histogram for Internet Addiction

Correlational Study between Trait Anxiety, Depression & Internet Addiction



5.2 Correlation table

The findings and inferential statistics derived from SPSS are explained in this chapter. The correlation coefficients were determined after a correlational analysis.

Table 5.2: Correlation between studied variables name Internet Addiction, Depression & Trait Anxiety

Variables	Internet Addiction	Depression	Trait Anxiety
Internet Addiction	1	.457**	.514**
Depression	.457**	1	.802**
Trait Anxiety	.514**	.802**	1

** . Correlation is significant at the 0.01 level (1-tailed).

Correlational Study between Trait Anxiety, Depression & Internet Addiction

- Product moment correlation between dimensions of Internet Addiction, Depression, and Trait Anxiety are seen in the table above.
- Internet Addiction was shown to be positively with Depression, with a coefficient of .457 Correlation is significant at the 0.01 level of confidence.
- Internet Addiction and Trait Anxiety is positively correlated, and the coefficient is .514 significant at 0.01 level of confidence.
- Depression is positively correlated with Trait Anxiety and the coefficient is .802 significant at 0.01 level of confidence.

5.3 Multiple Regression

- **Prediction of Internet Addiction, Depression & Trait Anxiety**

Here we have used regression analysis to see which variables predicted Internet Addiction, Depression, and Trait Anxiety.

- **Regression analysis**

This research not only investigates the relationship between Internet addiction, depression, and anxiety, but it also forecasts how one variable can influence the other.

Internet Addiction

Table 5.3: Internet Addiction variable predicted by Depression.

Predictor variable	Adjusted R square	Beta	Sig.	dF	F	Sig.
Depression	.203	.457	.000	1	37.467	.000b

Table 5.4: Internet Addiction variable predicted by Trait Anxiety.

Predictor variable	Adjusted R square	Beta	Sig.	dF	F	Sig.
Trait Anxiety	.259	.514	.000	1	50.877	.000b

Depression

Table 5.4: Trait Anxiety variable predicted by Depression & Internet Addiction

Predictor variable	Adjusted R square	Beta	Sig.	dF	F	Sig.
Depression	.640	.802	.000	1	255.097	.000b

Linear Regression was used, and it was discovered in SPSS that Depression and Trait anxiety would predict Internet Addiction by 20.3 % and 25.9 %, respectively.

Linear Regression was carried out and it was found in the SPSS that Depression can be predicted by 64.0 % by Trait Anxiety.

DISCUSSION

Discussing all the three hypotheses:

Hypothesis one stating that “Internet addiction will have positive correlation with Depression” is accepted ($r = .457, p \leq 0.01$). It is clear from this that people who have a high degree of Internet use are more likely to be Depressed. Many studies cited in this paper claim that people waste too much of their everyday time on the Internet. It has been observed that people spend around 5-6 hours per day on average, particularly during the

Correlational Study between Trait Anxiety, Depression & Internet Addiction

Covid-19 Pandemic. Study of internet addiction and its association with depression and insomnia in university students (2020) says that in their research the 15.51 percent female of the survey participants were addicted to the internet, and 49.19 percent were heavy users. A number of factors were discovered to have a significant relationship with internet addiction, including graduate age, time spent on the internet every day, place of internet access, smoking, and alcohol consumption. Addicts and heavy users of the internet are most likely to suffer from addiction and insomnia. Since young minds have more spare time on their hands, and especially if their parents are not involved in their lives, children will try to find more opportunities to communicate with others and chat, and the internet is the fastest and easiest way to do so. During Covid-19 isolation from the outside world causes a sense of alienation, and to fill the gap, people look for ways to pass the time. In the paper that we have seen “Internet use and health in higher education students: a scoping review” has clearly stated that “People who are lonely or alone may spend more time on the Internet, lowering the quality of their social relationships”. In this case of loneliness, people turn to social media, Netflix or any other internet consumption method to pass the time, and as a result, people lose track of time, which leads to insomnia, which leads to poor health, and this cycle lasts for days without being noticed. Also, as Internet users see glamour pictures of other people have fun at exciting occasions, they want to believe that their lives are dull, which changes their mindset and can lead to depression.



Figure 5.1: Cycle of Internet usage & Depression.

Hypothesis Two stating that “Internet addiction will have positive correlation with anxiety” is accepted ($r = .514$, $p \leq 0.01$). With this finding, we can conclude that people who use the Internet extensively are more likely to suffer from Trait Anxiety. Addicts to the Internet spent the most of their time online watching content, browsing social networks, and text messages. People check their mobile phones from the beginning of the day to the end of the day because it has become one of the most important items in today's world, and the lack of a cell phone at any moment can lead to fear of losing details. Internet addiction can also have a negative impact on one's family, professional, and academic achievements. When a person is constantly on their internet, particularly on social media, news, or gaming feeds, there is still something new to see until the current feed is over, and so separating from mobile phones or internet devices becomes impossible at that time because the human mind does not want to interrupt the new feeds, resulting in more time spent on the internet and less time spent on actual work. With the fear of losing details on new feeds out and pending work, the human mind can begin to experience strain on both ends, which may contribute to long-term trait anxiety. The Internet was created to address a variety of issues, and it has made our lives simpler and easier. But, there are vast amounts of data available on the Internet, and people's fascination with staying linked and updated at all costs has created a significant issue.

Correlational Study between Trait Anxiety, Depression & Internet Addiction

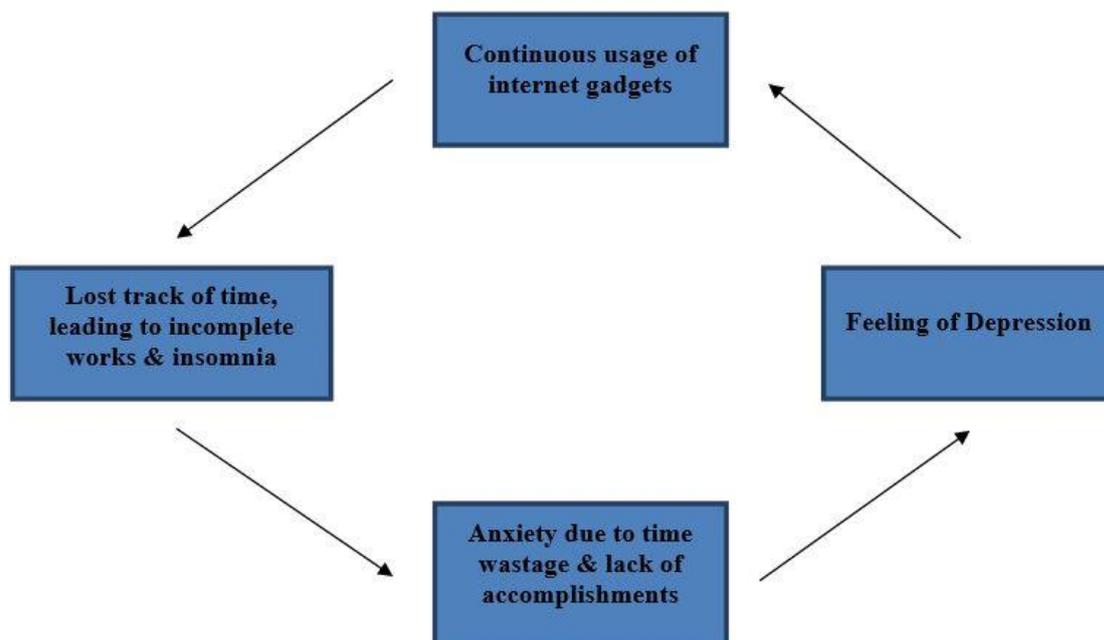


Figure 5.2: Cycle of Internet usage, Loss of time, Anxiety & Depression.

Hypothesis Three stating that “Depression will have positive correlation with Trait Anxiety” is accepted ($r = .802$, $p < 0.01$). It is well accepted in the field of psychology that a person who suffers from Trait Anxiety has a nearly 90% risk of having depression, and this study confirms this. Both of these situations are distinct, but they often occur together or one after the other. Like other 2 hypothesis in this research this also have a cyclic pattern. There is not much research to determine which happens first, although there is evidence that one can contribute to the other, and that if both Depression and Trait Anxiety are present, the condition can get more severe. Anxiety may occur due to Major depressive disorder. It is also possible that depression can be triggered by an anxiety disorder, such as generalized anxiety disorder, panic disorder or separation anxiety disorder. According to David Fainman in research paper: Examining the relationship between anxiety disorders and depression, there are also some neurobiological relation between them- Blunted cortisol response to adrenocorticotrophic hormone (ACTH), blunted growth hormone (GH) response to clonidine, and blunted thyroid-stimulating hormone (TSH) and prolactin responses to thyrotropin releasing hormone (TRH) are all normal findings in both depressive and anxiety disorders (especially panic). To explain the relation: when an individual becomes nervous, they begin to have problems, then they feel bad for themselves when they are upset. If they are unable to overcome, they begin to believe that they have failed, which may lead to depression.

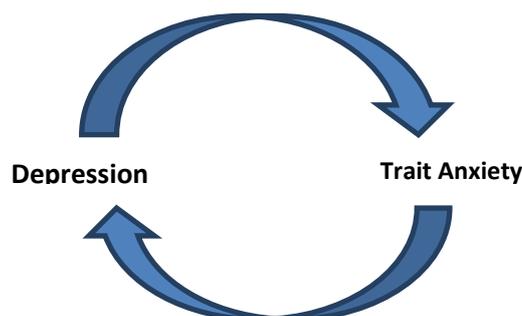


Figure 5.3: Cycle of Depression & Trait Anxiety

Correlational Study between Trait Anxiety, Depression & Internet Addiction

Discussing all the predicted & predictors variables relation

This research aims to predict Trait Anxiety, Depression, and Internet Addiction as well as discover relationships between them. To better explain the relationship between the variables, linear regression was used. Internet Addiction was the predicted variable (dependent variable, DV) and Trait Anxiety, Depression were the predictors (Independent variables, IV). Depression was the predicted variable (dependent variable, DV) and Internet Addiction, Trait Anxiety were the predictors (Independent variables, IV). Trait Anxiety was the predicted variable (dependent variable, DV) and Depression, Internet Addiction were the predictors (Independent variables, IV).

Internet Addiction predicted by the predictors Depression, Trait Anxiety

Internet Addiction is predicted at 20.3 % and 25.9 % by Depression & Trait Anxiety respectively. That explains that in a population of 100 people, nearly 20 people with Internet Addiction will have Depression, and nearly 26 people with Internet Addiction will have Trait Anxiety.

Depression predicted by the predictors Trait Anxiety

Depression is predicted at 64.0 % by Trait Anxiety. That explains that in a population of 100 people, nearly 64 people with Depression will have Trait Anxiety.

Summary

Results were statistically refined, and interpretations were made using correlation techniques and regression in this chapter. The association between Trait Anxiety, Depression, and Internet addiction was calculated using inferential statistics.

CONCLUSION AND IMPLICATIONS

In this paper exploration about the correlation between trait anxiety, depression, and internet addiction has been done.

Hypotheses

- 1 - Internet addiction will have a positive correlation with Depression.
- 2 - Internet addiction will have a positive correlation with Trait Anxiety.
- 3 - Depression will have a positive correlation with Trait Anxiety.

Methods of data collection

Data was collected during the Covid-19 Pandemic Period, so a proper test of standardised measurements was chosen, and a google form was developed to allow the data collection process to be performed without the need for social contact. With a target of 100 samples, snowball and convenient sampling method were used to distribute Google forms to people aged 20 to 30, with a total of 144 samples collected with considerable effort. To guarantee that the form reaches a wider audience, the use of social media was introduced. The answers were recorded on excel sheets after the samples were collected for later calculations SPSS was used.

CONCLUSION

This research on finding the correlation between the variables Trait Anxiety, Depression & Internet Addiction has helped to understand that there is a positive relation between all the three variables.

Correlational Study between Trait Anxiety, Depression & Internet Addiction

The output of having a positive correlation explains that in today's time if a person is depressed and anxious then the probability of them developing Internet addiction is 20.3 % and 25.9 % respectively and that if a person is an internet addict there is possibility of them developing depression or anxiety.

This data was collected during the Covid-19 pandemic, which suggests that this was a period where people were more likely to use the internet due to social isolation and the availability of more free time. Due to increased internet use, there is a lack of time monitoring, which is one of the primary causes that can lead to anxiety and depression in long run.

It is not just people's fault; the internet is designed in such a manner that people would find it impossible to remain away from it, or if they use the internet, they would find it impossible to shut down their internet-connected devices due to the internet's ability to provide new data every millisecond.

Governments from all countries should be aware of the effect that internet addiction is creating, especially on young minds, since they are the world's future. The first step in this direction is to incorporate internet addiction and its subcategories into the DSM.

Implications

This study will aid subsequent studies in recognising that Trait Anxiety, Depression, and Internet Addiction are both interconnected and positively correlated. As the number of users using the internet continues to rise, there is a risk that more people will be drawn to it than is necessary, fuelling the cycle of other internet-related disorders. This analysis can be used to promote further research and findings so that future evidence can be compared. Data can change over time, allowing for comparisons.

Limitations and Future Suggestions

Limitation

- The limitations of the study include smaller sample size.
- Participants were not explicitly known to the researcher due to the snowball strategy and online data collection.
- Cross sectional study.
- Not including qualitative research technique owing to research constraints.
- Internet is vast & question can be added related to particular area to define area of addiction.
- During Covid-19 pandemic online data connection.
- Due to Covid- 19 people were already anxious, depressed and internet usage was at its.
- Working people whose work are continuous on laptops or PCs, there internet usage is high but there is no better way to measure different category of usage.
- Respondents may not feel compelled to have correct and truthful responses.
- Survey participants may be unable to have responses that portray themselves in a negative light.

Future suggestions

- Selecting participants who believe that they are internet addicts might help in better evaluation, because people who use the internet constantly, even throughout the day, don't think it wrong and won't respond correctly.

Correlational Study between Trait Anxiety, Depression & Internet Addiction

- Internet Addiction and its relationship with other psychological disorders can be studied.
- Using more variable might helping in understanding other disorder having relation with internet addiction.
- Selecting particular type of internet addiction will help understanding in evaluating particular area of internet addiction and it's relation with particular demographic of participants.
- Anxiety & Depression can be measured in particular area to understand triggers.
- The data collected are actually from people aged 20 to 30, but responses from a younger demographic would have had different inputs.
- Study on personal acceptance of Internet Addiction before & after IAT, data through IAT can be studied. People don't feel that they are addicted to internet & until they understand about this, they will not be able to work on it. More awareness regarding Internet Addiction is required.

REFERENCES

- Alavi SS, Alaghemandan H, Maracy MR, Jannatifard F, Eslami M, Ferdosi M. (2010) Impact of addiction to internet on a number of psychiatric symptoms in students of Isfahan universities, Iran, 2010. *Int J Prev Med* 3:122-7.
- Arruda, J. (2019, October 9). Online Gambling Addiction. *Carrier Clinic*. <https://carrierclinic.org/2019/08/09/online-gambling-addiction/>
- Bisson, Katherine H., "The Effect of Anxiety and Depression on College Students' Academic Performance: Exploring Social Support as a Moderator" (2017). *Digital Commons @ ACU, Electronic Theses and Dissertations*. Paper 51
- Caplan, G. *Principles of Preventive Psychiatry*; Basic Books: Oxford, UK, 1964; ISBN 0422982709.
- Caplan, S. E. (2002). Problematic Internet use and psychosocial well-being: Development of a theory-based cognitive-behavioral measurement instrument. *Computers in Human Behavior*, 18(5), 553-575. doi:10.1016/S0747-5632(02)00004-3
- Çardak M. (2013) Psychological well-being and internet addiction among university students. *Turk Online J Educ Tech* 12.
- Chou C, Hsiao MC. (2000) Internet addiction, usage, gratifications, and pleasure experience—The Taiwan college students' case. *Comput Educ* 35:65-80.
- Correa, G. (2019, August 13). Canadian Government Cites CannTrust Marijuana Facility for Violating Regulations. *Addiction Center*. <https://www.addictioncenter.com/news/2020/01/shopping-addiction-online-shopping/>
- Dargahi H, Razavi SM. (2007) Internet addiction and its related factors: A study of an Iranian population. *Payesh* 6:265-52.
- Di Fabio, A.; Kenny, M.E. From decent work to decent lives: Positive Self and Relational Management (PS&RM) in the twenty-first century. *Front. Psychol.* 2016, 7, 361. [CrossRef [PubMed]]
- Editorial Team. (2020, April 1). SOCIAL MEDIA ADDICTION. Time to Log Off. <https://www.itstimetologoff.com/digital-addiction/social-media-addiction-2/>
- Eysenck, M. W., & Fajkowska, M. (2017). Anxiety and depression: toward overlapping and distinctive features. *Cognition and Emotion*, 32(7), 1391–1400. <https://doi.org/10.1080/02699931.2017.1330255>
- Fernández-Villa, T., Molina, A. J., García-Martín, M., Llorca, J., Delgado-Rodríguez, M., & Martín, V. (2015). Validation and psychometric analysis of the Internet Addiction

Correlational Study between Trait Anxiety, Depression & Internet Addiction

- Test in Spanish among college students. *BMC Public Health*, 15(1), <https://doi.org/10.1186/s12889-015-2281-5>
- GBD 2017 Disease and Injury Incidence and Prevalence Collaborators. (2018). Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*. DOI.https://www.researchgate.net/publication/273769453_Depression_-_A_Review
- Hull, M. (2021, January 12). Internet Addiction Statistics. *The Recovery Village Drug and Alcohol Rehab*. <https://www.therecoveryvillage.com/process-addiction/internet-addiction/related/internet-addiction-statistics/>
- Iyer, K., & Khan, Z. A. (2012, April 1). Depression – A Review. *ResearchGate*.
- James, A., James, G., Cowdrey, F., Soler, A. and Choke, A. (2013) Cognitive behavioural therapy for anxiety disorders in children and adolescents, *The Cochrane Database of Systematic Reviews* Jun 03; Vol. 6.
- Jeddy, N. (2018, January 1). Dental anxiety and influencing factors: A cross-sectional questionnaire-based survey Jeddy N, Nithya S, Radhika T, Jeddy N - *Indian J Dent Res*. *Indian Journal of Dental Research*. <https://www.ijdr.in/article.asp?issn=0970-9290;year=2018;volume=29;issue=1;spage=10;epage=15;aulast=Jeddy>
- Keles, B., McCrae, N., & Grealish, A. (2019). A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. *International Journal of Adolescence and Youth*, 25(1), 79–93. <https://doi.org/10.1080/02673843.2019.1590851>
- Kenny, M.E.; Hage, S.M. The next frontier: Prevention as an instrument of social justice. *J. Prim. Prev.* 2009,30, 1–10. [CrossRef] [PubMed]
- Kimberly S. Young. Internet Addiction (1998): The Emergence of a New Clinical Disorder. *Cyber Psychology & Behavior*. 237-44.
- Leal, P. C., Goes, T. C., da Silva, L. C. F., & Teixeira-Silva, F. (2017). Trait vs. state anxiety in different threatening situations. *Trends in Psychiatry and Psychotherapy*, 39(3), 147–157. <https://doi.org/10.1590/2237-6089-2016-0044>
- Lee, E. H., Lee, S. J., Hwang, S. T., Hong, S. H., & Kim, J. H. (2017). Reliability and Validity of the Beck Depression Inventory-II among Korean Adolescents. *Psychiatry Investigation*, 14(1), 30. <https://doi.org/10.4306/pi.2017.14.1.30>
- Leonard, J. (2018, July 16). What is gaming disorder? *Medical NewsToday*. <https://www.medicalnewstoday.com/articles/322478>
- Mirzaei, M., Yasini Ardekani, S. M., Mirzaei, M., & Dehghani, A. (2019). Prevalence of Depression, Anxiety and Stress among Adult Population: Results of Yazd Health Study. *Iranian journal of psychiatry*, 14(2).
- NHS Greater Glasgow & Clyde, Young Scot, Snook & Mental Health Foundation (2013) Project 99: Exploring internet-based approaches to support young mental health in Greater Glasgow & Clyde [online].
- Parker, W. (2020, December 11). Identifying the Warning Signs and Symptoms of a Pornography Addiction. *Verywell Mind*. <https://www.verywellmind.com/breaking-pornography-addictions-1270612>
- Quek, K. F., Low, W. Y., Razack, A. H., Loh, C. S., & Chua, C. B. (2004). Reliability and validity of the Spielberger State-Trait Anxiety Inventory (STAI) among urological patients: a Malaysian study. *The Medical journal of Malaysia*, 59(2), 258–267.
- Soriano, K. (2021, February 16). Depression Types, Causes, Symptoms, Statistics, & Treatment. *Psycom.Net - Mental Health Treatment Resource Since 1996*. <https://www.psycom.net/depression.central.html>

Correlational Study between Trait Anxiety, Depression & Internet Addiction

- Soule L, Shell W, Kleen B. Exploring Internet addiction (2002): Demographic characteristics and stereotypes of heavy internet users. *J Comput Info Syst* 44:64-73.
- Sun C, Koji Lum J (2016) When to Survey? Influences of a 24-hour Internet Abstinence on Self-evaluations of Internet Overuse Assessed using Internet Addiction Test (IAT). *Int J Ment Health Psychiatry* 2:1.
- Swaminath G. (2008) Internet addiction disorder: Fact or Fad? Nosing into Nosology. *Indian J Psychiatry* 50:158-60.
- Team, S. (2021, January 21). Depression statistics 2021. The Checkup. <https://www.singlecare.com/blog/news/depression-statistics/>
- Tiller, J. W. G. (2012). Depression and anxiety. *The Medical Journal of Australia*, 1(4), 28–31. <https://doi.org/10.5694/mjao12.10628>
- Widyanto, L., Griffiths, M. D., & Brunsten, V. (2011). A Psychometric Comparison of the Internet Addiction Test, the Internet-Related Problem Scale, and Self-Diagnosis. *Cyberpsychology, Behavior, and Social Networking*, 14(3), <https://doi.org/10.1089/cyber.2010.0151>
- Xiuqin H, Huimin Z, Mengchen L, Jinan W, Ying Z, Ran T. (2010) Mental health, personality, and parental rearing styles of adolescents with Internet addiction disorder. *Cyberpsychol Behav Soc Netw* ;13:401-6.
- Yadav, K., Jain, A., Sharma, R., Gaur, K., Yadav, N., Sharma, P., Sharma, N., Khan, N., Kumawat, P., Jain, G., Maanju, M., & Sinha, K. (2020). Study of internet addiction and its association with depression and insomnia in university students. *Journal of Family Medicine and Primary Care*, 9(3), 1700. https://doi.org/10.4103/jfmpe.jfmpe_1178_19
- Young KS. (1996a, August). Internet addiction: The emergence of a new clinical disorder. Poster presented at the 104th American Psychological Association Annual Convention, Toronto, Canada.

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Conflict of Interest

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