Effect of Internet Addiction on Aggression and Attention Span In Adolescents: Empirical Investigation

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Abstract:

Nowadays, internet use and over use is very common among adolescents. This could be a kind of behavioural addiction in which adolescents could have many behavioural problems like temperament issues or they find difficulty sustaining their focus on certain important tasks. Symptoms of internet addiction affect emotional behavioural problems and attention focus in some aspects. This study aims to assess the effect of internet addiction on adolescent's aggression and attention span. The study was conducted on adolescent males and females. The consent form, socio-demographic, Internet addiction test, Child Behaviour Checklist (CBCL), and The Digit Memory Test was used for the collection of data. The behaviour and attention span of 60 adolescents were assessed. T-test and correlational analysis had been used. The results indicated significant relationship between internet addiction, behavioural problems, and attention concentration. Thus, if an individual has an internet addiction, then adolescents' behaviour and attention span will be affected significantly. Internet addiction is related to emotional behavior problems and reduced focus in life. This study will be helpful in developing management plans for adolescents to reduce behavioral problems and increase attention concentration by professionals. There is a strong need to develop research projects to examine these variables among the adolescents and also a need to train this population to healthy use of technology.

Key Words: Internet addiction, behavioral problems, aggression, attention, attention span.

Introduction: Any kind of behavioral addiction is just a reaction of impulsivity and compulsion. As we know addiction is a behavior that we cannot control whether we don't want to do, and the behavior produces short-term reward Also, we can define this it's nonsubstance addiction like binge-watching, internet addiction, video games, online shopping, and other impulsive or compulsive behavior. This behavior urges the need to use

of internet on a computer, or any screen like a TV or mobile. Excessive internet use interferes with responsibilities they neglect or avoid household chores. Internet addiction use also changes behavior or increases aggressiveness and resentful verbal outbursts at others when they question leaving the screen or try to take away their time from using the Internet use on mobile or computer. Excessive Internet use interferes with real life like interpersonal relationship, study, work, and health Also excessive Internet use impair academic and poor integration in extracurricular activities or those who are using the Internet respond to confusion, and frustration around the computer. Also, the disadvantages of Internet use make students visit irrelevant websites, engage in gossip or chatting, communicate with Internet buddies, and play interactive online games at the price of productive activity.

However, the internet can be used as a tool for information seeking, education, and socializing. But when it becomes addictive and affects the personality of the individual, it spoils daily routines like studies, household chores, physical activity, and sports.
Studies also indicate that the youth population is most vulnerable to internet addiction (Kuss et al. 2013). Internet Addiction also has been associated with poor academic performance (Huang & Leung, 2009). Kendall (1998) describes internet addiction as "psychological dependence." Of the total internet addicts surveyed, Young (1996) found that fifty-three percent reported severe relationship problems.

Internet Addiction: In Internet compulsion also called Internet addiction persons spend a lot of working hours at the computer or laptop. They are unable to withstand strong urges to use the computer or" surf the Web" because of their repeated and continuous patterns of use. Internet users may be drawn to specific websites that satisfy their needs (such as those for shopping, sex, and interactive games, for example). Online gaming disorder, a condition that refers to people who regularly use the Internet to play games to the point where it interferes with social interactions and work performance, is proposed for further study in DSM-5.

According to online surveys, 4 to 10 % of users fit the definition of" Internet addiction," which includes having at least five of the following symptoms:(1) preoccupation with the Internet, (2) staying online longer than originally intended (3) increasing the amount of time spent online, (4) moodiness or depression (5) failure to cut back on use with accompanying restlessness,; (6) lying to hide the extent of Internet usage; and (7) running the risk of losing a job, relationship, or other opportunities due to Internet use. Young created the first screening tool for Internet Addiction Diagnostic Questionnaire in 1998. It was a straightforward yes / no question that was used for online surveys, phone interviews, and self-evaluation.

Behavioral Problems: Adolescents who develop a habit or compulsion of internet addiction are more likely to experience behavioral issues. These may include skipping meals, staying up late, eating meals in front of the computer, having strained relationships with family and friends, displaying aggressive behavior, and feeling that life is dull and

empty without an internet connection. Excessive internet use can lead to increased psychosocial and psychological harm. Online games offer a means for players to assume a fictional persona in a virtual realm, allowing them to freely interact with strangers and escape from reality.

Attention problem: Attention and concentration plays a very important role in individual's life**.** Either it is for study or for work-related. Nowadays it is very difficult to imagine life without using the internet. Students or adolescents use the internet for study, and to seek help with any kind of information without paying any charges, however excessive use of the internet or focusing on the screen negatively reflects on adolescent's attention.

Literature review: Nowadays internet use is very common. Each and day-to-day life it's an important thing for doing most of people's work. But it also has some drawbacks like unwillingly wasting our time.

Rajeswari & Lenin (2019 examined and compared   Internet usage and aggressive behavior of standard of IX students. By using a simple random sampling technique, the sample of 282 9th standard students studied in government and private schools of Tirunelveli district. Scores obtained from Internet usage scale- A self-made tool by researcher and Aggression scale- they found that male students had more Internet usage than female students but the finding revealed that there is no association between Internet usage and aggressive behavior.

Sharma and De Sousa, (2017) in an overview of Internet Addiction in adolescents. The review summarizes the causative factors, models, and types of internet addiction along with the methods used in its management. However, this review does not overall summarize the basic models of internet addiction and looks at the management approach from a clinician as well as teacher and parent perspective.

Ikhar, Khushbu, Tanuja, Poonam, Pratiksha and Prawartan (2021) examined the correlate the Level of Internet Dependence and Associated Behavioral Problems among the preschool children in the Selected Urban Area of Wardha District. A non-probability Convenience sampling was used and included 100 preschooler children from the Gajanan Nagar (Arvi Naka) selected area of the Wardha district. They found that there is an association between internet dependence and behavioral problems.

Sonia, and Smith(2014) made research review on harms experienced by child users of online and mobile technologies: The nature, prevalence, and management of sexual and aggressive risks in the digital age. Their review examined the evidence for aggressive and sexual harms associated with online and mobile content, contact, and conduct, with a focus on minors (under 18 years old). The findings are; that the risks of cyberbullying, contact with strangers, sexual messaging ('sexting'), and pornography generally affect fewer than one in five adolescents.

Asma, Raja and, Assad Rahman (2022**)** investigated the relationship between internet addiction and aggression among teenagers. Sample (n=200, age 15-19 years) was selected

from different schools and colleges in Haripur city. They found in the study that there is a positive relationship between Internet Addiction and Aggression.

Menon, Shanker, Narayanan, Lakshmi, and Kahwaji, Taha (2018), conducted the study of Internet Addiction a research Study of College Students in India. The purpose of the study is a preliminary investigation of the extent of internet addiction in a management institute in India. The sample was 300 students (first, second-, and third-year students). The finding is that there is a high degree of correlation between age and internet addiction with older students being more addicted to the Internet than younger students.

Aim of the study: This study aims to evaluate the impact of internet addiction on adolescents' aggression and attention span.

Objectives:

1) To assess the effect of internet addiction on aggression among adolescents.
2) To compare aggression and attention span among adolescents with internet addiction
3) To determine the relationship between aggression and internet addiction among single adolescents and adolescents with siblings
4) To compare the aggression of males and females with internet addiction.

Hypotheses:

1) There will be no significant relationship between aggression and internet addiction among adolescents.
2) There will be no difference in the level of aggression and attention span among adolescents with internet addiction.
3) There will be no significant relationship between aggression and internet addiction among single adolescents and adolescents with siblings.
4) There will be no significant differences in males and females on aggression with having internet addiction.

Methodology Design: A cross-sectional research design was used for the current study.

Sample: A purposive sampling method was used for the current research with 60 adolescents (30 male and 30 female).

Tools:
1. Socio-demographic Details: The researchers gathered socio-demographic information using a self-prepared proforma that they created. This information included details such as age, gender, education level, religion, marital status, employment status, income, and family type.

2. Internet Addiction Test: This questionnaire consists of 20 statements with each item being rated on a 5-point scale from 0 to 5 and maximum score of 100 points. The higher the score is, the higher is the severity of your problem. Scores ranging from 0 to 30 are considered normal for internet usage. Scores of 31 to 49 indicate a mild level of internet addiction, while scores of 50 to 79 reflects a moderate level. Scores of 80 to 100 indicate a severe dependence on the internet. The reliability measure using Cronbach's Alpha ranged between.54 and 82, and the scale was also found to have good validity. The reliability measure using Cronbach's Alpha ranged from .54 to .82, and the validity of the scale was also found to be good. Studies conducted in India also reported high reliability (Krishnamurthy &Chetlapalli, 2013).

3. Child Behavior Checklist (CBCL): The Child Behavior Checklist (CBCL) is a widely used questionnaire for assessing behavioral and emotional problems, often used for diagnostic screening. The CBCL measures problems associated with eight different categories on a syndrome scale: anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, attention problems, rule-breaking behavior, and aggressive behavior. In this research, the CBCL is used to assess aggression among adolescents with internet addiction. There were 113 question in CBCL which were scored on a three-point Likert scale (0=absent, 1=occurs sometimes, 2=occurs often). , and is suitable for youth aged 6 to 18 years.. Reliability and validity measures indicate good stability over time. One-week test-retest reliability for CBCL 6 to 18 years of age ranged from .80 to .94, while the 2-week test-retest reliability for TRF ranged from .60 to .95. Long-term stability of the CBCL/618 was assessed in a study of low birth weight children, with stabilities ranging from .43 to .82 over a period of one to two years. The stability of the TRF was also satisfactory over a 2-month interval, except for Somatic Complaints.

Internal Consistency within the data was commonly reported to be strong across all variations, as the scales were developed using factor analysis methods.

Two parents rate their child on the CBCL/6-18, with high agreement obtained on externalizing behavior scales. The reliability of these ratings ranges from moderate to high with the highest agreement occurring on scales assessing externalizing behavior.

4. The Digit Memory Test: One of the primary tools created to assess one's verbal working memory, general intelligence, attention, and cognitive functioning is the Digit Sequence test which was originally designed as an integrated part of the Wechsler Intelligence Scale. In the current research, this test was used to assess attention span.

Procedure: Participants taken in this study were from different age groups and gender The purpose of the research was informed to them. The data was collected from the self-rated questionnaires, and consent forms were distributed to participants through various offline

copies with the instruction to rate and description of the study. The instructions for collecting information were followed as per their respective manuals. The data was collected and segregated according to inclusion criteria of study to obtain the results.

Ethical considerations:

1) The participants were assured that confidentiality would be maintained, and the details of participants would not be disclosed in the dissertation or subsequent publications without seeking written permission.
2) Informed consent was taken from all the participants.
3) The participants were informed they could contact the investigator if they needed psychological help.
4) Permission to use questionnaires was taken from all respected authors.

Result:

Table : 1 Sociodemographic details

Variable	Sub-category	Number	Percentage
Age (Years)	10-14	26	41.3
	15-18	34	54.0
Gender	Male	30	47.6
	Female	30	47.6
Socio-Economic status	Low	2	3.2
	Middle	49	77.8
	High	9	14.3
Family type	Single adolescent	37	58.7
	Siblings	23	38.6

Table 1: It shows that 26 adolescents (41.3%) belongs to the age range of 10-14 years and 34 adolescents (54.0%) belongs to the age range of 15-18 of total data sample were present. In gender, 30 males, 30 females, and the percentage for males is 47.6% and females are 47.6%. In Socioeconomic status low is 2 which is 3.2%, the middle is 49 which is 77.8%, and the high is 9 which is 14.3%. In the Family type, single adolescents are 37 and having siblings 23 the percentage of single adolescents is 58.7% and siblings are 38.6%.

Table 2: Correlation of score on Internet addiction and Aggression among adolescents

Variable	Internet Addiction	N
Aggression	.562**	60

**significant at 0.01 level

The purpose of the correlation was to evaluate the connection between internet addiction and aggression in teenagers. According to the data presented in table 2, there is a notable and positive correlation between internet addiction and aggression in adolescents. The table indicates that the correlation coefficient for internet addiction is r=.562**, which is statistically significant at the 0.01 level. The correlation has been found to be   significant and the strength of the correlation is medium (Cohen, 1988).

Therefore, the null hypothesis is rejected as the findings demonstrate a significant correlation between these two variables.

Table 3 Frequency of aggression and attention span of adolescents with internet addiction.

Variable	Sub-category	Number	Percentage
Internet Addiction	Not Applicable	00	-
	Rarely	00	-
	Occasionally	00	-
	Frequently	10	15.9
	Often	16	25.4
	Always	34	54.0
Aggression	Not true	17	27.0
	Somewhat	20	31.7
	Very true	23	36.5
Attention	Span	33	52.4
	Deficit	27	42.9

Table 3 shows It shows that in internet addiction, 15.9% of participants frequently used the internet, 25.4% of participants often used the internet, and 54.0% always used the internet. 27% of participants didn't report getting aggressive, 31.7% of participants somewhat reported being aggressive, and 36.5% of participants always reported being aggressive. 52.4% of participants reported having no difficulty sustaining attention, and 42.9% of participants had difficulty sustaining attention.

Table 4:- Correlation of score on aggression and internet addiction among single adolescents and siblings.

Variable	Internet Addiction	N
Family Type	-.869**	60

*** Significant at .05 level.*

Table 4 displays findings that reveal a notable inverse relationship between family structure and internet dependency. The data implies that the correlation between family type and internet addiction measures at r = -.869**, with *p<.01. Consequently, this suggests the rejection of the third null hypothesis within the research study.

TABLE 5:- Comparing the t-test scores of male and female having internet addiction.

Measures	Variable	N	Mean	SD	t
Internet addiction	Males	30	4.4	.73	.673
	Females	30	4.3	.80	
Aggression	Males	30	1.1	.81	.314
	Females	20	1.0	.82	

t-test was used to see the differences between males and females in aggression. The analysis of the sample shows there is no significant gender difference among male and female adolescents with internet addiction. Hence, the null hypothesis is accepted.

Discussion: Although we cannot fully protect adolescents from internet use, but we can prevent adolescents from their risk factors. The research was undertaken to investigate the Effect of Internet addiction on adolescents. The study hypothesized that "There will be no significant effect of internet addiction on aggression among adolescents" and the findings reject the stated hypothesis. This means that internet addiction has a significant effect on the aggressive behavior of adolescents. Payal Sharma & Avinash De Sousa (2016) also found in their study that Internet addiction is defined as the compulsion to engage in an activity or substance, despite the negative impact on one's well-being. It involves both physical and psychological dependence.

The findings reject the second hypothesis "There will be no difference in the level of aggression and attention span among adolescents with internet addiction." As the result shows that there is a difference in the level of aggression, 17 participants mild level of aggression, 20 participants had a moderate level of aggression, and the majority level of participants (23) reported aggression to internet addiction. As research also means that if adolescents use excessive screen time, then their aggression increases but it does not have any effect on the attention span of the sample. The scale Digit memory test was used and adolescents were able to easily get a score of 7 so the attention span was intact. (Fisoun et al., 2012; Mehroof & Md., 2010; Polman et al., 2007) also found in their study that the higher scores of an individual's Internet addiction, the higher level of aggression. Internet addiction did have a direct influence on aggression). The Social Learning Theory suggests that individuals can adopt violent behaviors and become desensitized to online violence, leading to increased aggression.

The findings reject the third null hypothesis that "There will be no significant relationship between aggression and internet addiction among single adolescents and siblings". The result of the study shows a significant negative correlation between family

type and internet addiction. It indicates that adolescents with internet addiction and family structure will have an effect on her/his aggression.

The findings support the fourth hypothesis that "There will be no significant difference in males and females on aggression when having internet addiction" It means that gender differences are not found among males and females with internet addiction.
These inconsistent findings can be explained based on possible differences in methodology used, tools, target population, and the nature of the research design longitudinal versus cross-sectional. Personality as a moderator variable can be one of the factors for these inconsistent findings

Conclusion and Clinical implications: The study concludes that Aggressive behavior and attention focus both are associated with Internet addiction in any adolescent. if an individual has an internet addiction, then adolescents' behavior and attention span will be affected significantly. Internet addiction is related to emotional behavior problems and reduced focus in life. This study will be helpful in developing management plans for Adolescents to reduce behavioral problems and increase attention concentration by professionals.

Acknowledgement: The author sincerely expresses the gratitude to the participants who gave their willingness to participate in the research.

Conflict of Interest: There is no conflict of interest in the current research work.

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