

Assessing the Impact of Mobile Phone Exposure on Aggression in Early Childhood

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ABSTRACT

This study uses an ex-post facto research design to examine the connection between mobile phone dependency and aggression in school-going adolescents aged 7 to 12 years in Srinagar, Jammu and Kashmir, India. A sample of 120 adolescents, comprising 60 boys and 60 girls, was chosen through convenience sampling, and data were gathered via questionnaires. The study utilized the Internet Addiction Test (Young, 1998) and the Aggression Scale (Buss & Perry, 1992). Results indicated a significant positive correlation between internet addiction and different aspects of aggression. Further, regression analysis showed that internet addiction significantly predicted aggression levels. Gender differences were notable only in the anger dimension of aggression. The study highlights the critical role of understanding the relationship between mobile phone addiction and aggression among young adolescents, with implications for intervention and future research. However, given the small sample size and reliance on self-reported data, the findings are exploratory, and future research with stronger methodologies is recommended.

Keywords- Mobile Exposure, Children Psychology, Aggression, Internet, Excessive Use.

I. INTRODUCTION

Concern over "Internet addiction" is on the rise, and it poses serious threats to teenagers' cognitive, social, and emotional development. Internet addiction is defined by Shaw and Black (2008) as obsessive or excessive internet use that disrupts everyday life or causes suffering. While the internet offers many advantages, teens face new developmental obstacles due to its extensive usage. These hurdles include identity formation conflicts, difficulties regulating their emotions, and a loss in academic performance.

India now has the second-largest internet user base in the world, with over 560 million users, with forecasts to reach 650 million by 2023. Concerns over the internet's potential to influence teenage behavior, especially violence, are growing as more people have access to it. In this context, aggression is particularly worrisome, as described by Bandura (1973) and Volavka (2002) as conduct meant to damage others. Teens are likely to imitate actions they see online, which implies

that using the internet, especially on social media and gaming platforms, might encourage violent conduct.

Bandura's Social Learning Theory of Aggression (1973) states that teenagers may pick up aggressive actions from those they see. Although studies have linked internet addiction to increased aggressiveness (Yen et al., 2007), it is still unclear exactly how these two things are related. It's unclear if aggressiveness stems from internet addiction or if hostility already present causes one to use the internet more. Comprehending this dynamic is essential to creating successful interventions.

Empirical studies in this field are still few despite findings connecting increased screen usage to emotional dysregulation and violence. According to Anderson and Bushman's (2002) General Aggression Model, aggressive behavior is influenced by both personal characteristics and external factors. Given the complexity of both occurrences, this study aims to explore the connection between teenage aggressiveness and dependence on mobile phones.

II. CONTRIBUTION

It is essential to comprehend the connection between violent conduct and internet usage trends in a multicultural nation such as India. Teens who play violent video games and participate in competitive online communities may take extreme measures to succeed. Overuse of the internet can also interfere with academic obligations and impede progress in general. Concerns about "internet addiction," especially among teenagers aged 7 to 12, have been heightened by the increase in unrestrained internet use. This age group is particularly vulnerable because of things like having too much idle time, having easy access to the internet through schools, having less parental supervision, and using the internet as a coping method for social or academic stress.

In the Indian context, a thorough study is lacking despite heightened awareness of these challenges. To close this gap, this study looks at the prevalence of internet addiction and how it relates to violent actions, especially those from emotional instability. The results have significant ramifications for programs that encourage teens to use the internet responsibly, lessen violence, and improve emotional regulation. To support children's moral growth and promote responsible digital citizenship, these insights can also assist educators, school counselors, and legislators in recognizing early warning signals and putting appropriate intervention tactics into place.

III. AIM

The purpose of this study is to investigate and evaluate the connection between aggressive behavior and internet addiction among teenagers enrolled in school. Its main goal will be to pinpoint the elements that go into this connection and any possible effects on their social and emotional health.

IV. OBJECTIVES

1. To investigate the relationship between aggressive behavior and internet addiction in teenagers enrolled in school.
2. To assess the impact of internet addiction on the degree and manifestation of aggressive behavior in teenagers enrolled in school.
3. To look at how gender affects teenage violence and internet addiction frequency and trends.

V. HYPOTHESES

1. Among male teenagers, internet addiction will positively connect with aggressiveness and its dimensions.

2. In female teenagers, there will be a favourable correlation between aggressiveness and its dimensions and internet addiction.
3. Male teenage internet addiction will have a major impact on the degree, manifestation, and dimensions of violence.
4. Anger's dimensions and degree of manifestation in female teens will be greatly impacted by internet addiction.
5. Adolescent males and females will differ significantly in terms of aggressive behavior and internet addiction.

VI. METHOD

Sample and Research Design

Adolescents from private schools in Srinagar, Jammu, and Kashmir, India, participated in the study. One hundred twenty individuals, 60 of whom were female and 60 of whom were male, between the ages of 7 and 12, made up the sample. A convenience sample was used to choose the participants. To look into the relationship between these teenagers' internet addiction and aggressiveness, the study used an Ex Post Facto research approach.

Data Collection Procedure

The distribution of questionnaires to children, who filled them with parental assistance, was approved by the schools. Students were notified of their freedom to withdraw from the research at any moment, and participation was completely voluntary. Anonymity and confidentiality were ensured, and the data obtained were only utilized for research reasons.

Psychological Assessment Tools

1. Young's Online Addiction Test (IAT): Young (1998) created this assessment instrument to gauge online addiction. The 20 items of the IAT are rated on a 5-point Likert scale, with the option "does not apply" to "always." The validity of the IAT as a dependable indicator of internet usage and associated issues has been established.
2. The BPAQ, or Buss-Perry Aggression Questionnaire: The BPAQ (Buss & Perry, 1992) was used to evaluate aggressiveness. It consists of 29 questions rated on a 5-point Likert scale, where 1 represents "extremely uncharacteristic of me" and 5 represents "Extremely characteristic of me". The BPAQ assesses four dimensions of aggression namely physical, verbal, angry, and hostile and has a proven reliability and an excellent validity.

Statistical Analysis

The following methods were employed to examine the data:

1. To investigate the connection between internet addiction and aggressiveness, use the Pearson Product Moment Correlation.

2. To find out if levels of aggressiveness may be predicted by internet addiction, use linear regression analysis.
3. Gender differences in internet addiction and hostility are compared using Independent Samples t-tests.

VII. RESULTS

Table 1: Descriptive Statistics of Internet Addiction and Various Dimensions of Aggression Among School-going Adolescents, Categorized by Gender.

Variable	Gender	N	Mean	Std. Deviation	Std. Error Mean
Internet Addiction	Male	60	38.92	18.72	2.01
	Female	60	39.48	18.83	1.98
Physical Aggression	Male	60	16.34	9.01	1.15
	Female	60	15.67	8.92	1.07
Verbal Aggression	Male	60	11.21	4.39	0.54
	Female	60	10.89	4.15	0.51
Anger	Male	60	9.76	3.43	0.44
	Female	60	10.21	4.02	0.50
Hostility	Male	60	8.89	4.01	0.52
	Female	60	8.75	2.92	0.37
Total Aggression	Male	60	44.22	14.89	1.92
	Female	60	43.74	14.57	1.82

A sample of 120 children, ages 7 to 12, provided data in 2024. The mean scores for internet addiction for men (M = 38.92, SD = 18.72) and girls (M = 39.48, SD = 18.83) are similar. In terms of aggressiveness, females scored marginally higher in verbal aggression (M = 10.89, SD = 4.15) than men (M = 11.21, SD = 4.39), whereas males had somewhat higher mean scores for physical

aggression (M = 16.34, SD = 9.01) than females (M = 15.67, SD = 8.92). There were no discernible gender differences in the mean scores for hostility, rage, or general aggressiveness. These findings highlight the importance of comprehending gender-related patterns in these behaviours and provide significant new insights into teenage internet addiction and aggressiveness.

Table 2: Pearson Product Moment Correlations between Internet Addiction and Dimensions of Aggression Among Male School-Going Adolescents

Dimensions of Aggression	N	r
Physical Aggression	60	0.792**
Verbal Aggression	60	0.458**
Anger	60	0.871**
Hostility	60	0.531**
Total Aggression	60	0.135

Note: The correlation coefficients were statistically significant at the 0.01 level (**).

Table 2 demonstrates a strong correlation between male teenage internet addiction and violence. The associated hypotheses are supported by the results, which show a high positive association between internet addiction and many aggressiveness dimensions, including physical aggression, verbal aggression, and rage. The

theory for this dimension was rejected, nonetheless, as there was no discernible link between internet addiction and animosity. These results are in line with earlier studies by Kim et al. (2002), which contend that increased internet use may increase impulsive and aggressive behavior.

Table 3: Pearson Product Moment Correlations between Internet Addiction and Dimensions of Aggression Among Female School-Going Adolescents

Aggression Type	N	Mean Correlation (r)	Std. Deviation	Std. Error Mean
Physical Aggression	60	0.804**	0.037	0.004
Verbal Aggression	60	0.462**	0.029	0.003
Anger	60	0.518**	0.032	0.003
Hostility	60	0.483**	0.026	0.003
Total Aggression	60	0.849**	0.042	0.005

Note: The correlation coefficients were statistically significant at the 0.01 level (**).

The relationships between several characteristics of violence and internet addiction are displayed in Table 3 for a sample of sixty teenage girls. All characteristics of violence and internet addiction are significantly positively correlated, as indicated by the mean correlation coefficients (*r*). In particular, there is a correlation between increased internet addiction and a larger

propensity for hostility and verbal, physical, and general violence. These results highlight the possible link between internet addiction and aggressive behaviors in female teenagers, highlighting the need for more investigation and focused intervention techniques to address these issues.

Table 4: Linear Regression Analysis Predicting Aggression among Male School-Going Adolescents

Variables	t	Beta	F	P (Sig)	R Square
Physical Aggression	9.34	0.791	94.72	.000	0.621
Verbal Aggression	3.80	0.431	13.45	.001	0.184
Anger	5.26	0.569	26.18	.000	0.312
Total Aggression	8.92	0.752	75.67	.000	0.569

The findings of a regression study evaluating the impact of internet addiction on several sub-dimensions of aggressiveness in male teenagers are shown in Table 4. The R-squared values show the percentage of variance in each aggressiveness dimension that may be attributed to internet addiction. In particular, 61.6% of the variation in physical aggressiveness, 17.7% in verbal aggression,

30.4% in rage, and 55.3% in overall aggression was explained by internet addiction. Because there was no discernible correlation between the animosity factor and internet addiction, it was eliminated. These findings imply that among male teenagers, internet addiction is a powerful predictor of verbal, physical, and overall violence.

Table 5: Linear Regression Analysis Predicting Aggression among Female School-Going Adolescents

Variables	t	Beta	F	P (Sig)	R Square
Physical Aggression	10.23	0.809	110.34	.000	0.657
Verbal Aggression	3.95	0.459	15.89	.000	0.214
Anger	4.68	0.528	23.46	.000	0.279
Hostility	4.42	0.481	19.32	.000	0.239
Total Aggression	11.42	0.842	145.56	.000	0.721

The findings of a regression study examining the impact of internet addiction on several sub-dimensions of aggressiveness in female teenagers are presented in Table 5. The percentage of variance in each aggressiveness dimension explained by internet addiction is shown by the R-squared values. In particular, 63.3% of the variation in verbal aggressiveness, 20.1% in physical aggression,

26.4% in rage, 22.4% in hostility, and 69.1% in overall aggression was explained by internet addiction. These results highlight the significance of treating online addiction in intervention techniques aimed at lowering violent behaviors in this group by suggesting that internet addiction is a strong predictor of aggressiveness levels among female adolescents.

Table 6: Independent Sample T-test Results Indicating the Difference Between Means of Males and Females on Internet Addiction and Aggression

Variables	Gender	N	Mean	Std. Deviation	T Value	Sig
Internet Addiction	Male	60	38.92	18.72	0.112	0.819
	Female	60	39.48	18.83	0.112	0.819
Physical Aggression	Male	60	16.34	9.01	0.759	0.430
	Female	60	15.67	8.92	0.759	0.430
Verbal Aggression	Male	60	11.21	4.39	0.440	0.240
	Female	60	10.89	4.15	0.440	0.240
Anger	Male	60	9.76	3.43	1.194	0.031
	Female	60	10.21	4.02	1.194	0.031
Hostility	Male	60	8.89	4.01	0.325	0.310
	Female	60	8.75	2.92	0.325	0.310
Total Aggression	Male	60	44.22	14.89	0.289	0.946
	Female	60	43.74	14.57	0.289	0.946

The findings of independent sample t-tests comparing the characteristics of aggressiveness and internet addiction in male and female teenagers are presented in Table 6. The results show that there are no appreciable variations in physical aggressiveness or internet addiction between the two groups. On the other hand, there was a noteworthy distinction in the mean anger ratings between males and females ($p = 0.031$), with the former showing higher mean scores. According to this research, women may be more likely than men to repress their anger. The lack of substantial gender differences in other characteristics of aggressiveness highlights the need for individual-specific therapies instead of generalized gender-based categorizations.

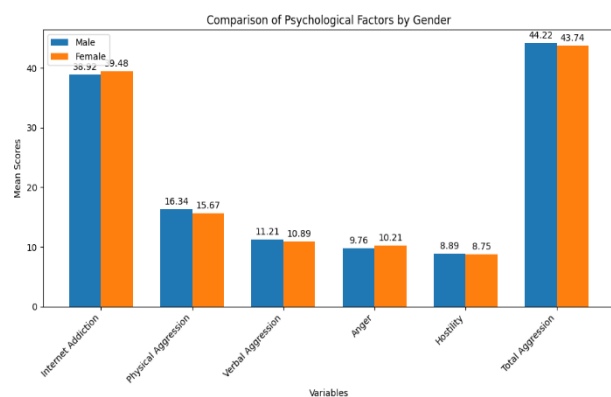


Figure 1: Comparing the mean scores of psychological factors between males and females

The results obtained from Table 6 are depicted in Figure 1, which is a bar graph that compares the mean scores of male and female participants for internet addiction, physical aggression, verbal aggression, rage, hostility, and overall aggressiveness. Only the difference in anger levels approached statistical significance, with females scoring somewhat higher than males in terms of physical and verbal violence and internet addiction.

VIII. CONCLUSION

The study's findings show a substantial correlation between internet addiction and several aggressive behaviors among teenage males and females attending school. Anger, verbal aggressiveness, and physical violence were all positively correlated with internet addiction in male teenagers. Anger, hostility, physical violence, verbal aggression, and general aggressiveness were all positively correlated with internet addiction in female teenagers.

Multiple characteristics of aggressiveness are predicted by internet addiction, according to regression research. In particular, up to 61.6% of the variation in physical violence, 17.7% in verbal aggression, 30.4% in rage, and 55.3% in overall hostility in male teenagers was explained by internet addiction. Up to 63.3% of the variation in physical aggressiveness, 20.1% in verbal

aggression, 26.4% in rage, 22.4% in hostility, and 69.1% in overall aggression was predicted for female adolescents.

In the rage dimension, there were also notable gender differences found, with females exhibiting higher degrees of anger suppression than males. Other aggressiveness variables linked to internet addiction did not show any appreciable variations, either. These results emphasize the complex connection between teenage internet addiction and aggressiveness, highlighting the necessity for specialized therapies. Subsequent investigations have to delve further into the fundamental mechanisms behind these correlations and pinpoint efficacious approaches to tackle internet addiction and its possible impact on violent conduct.

SCOPE OF STUDY

This study investigates the relationship between internet addiction and aggression among school-going adolescents in Srinagar, Jammu and Kashmir. It aims to provide a comprehensive understanding of how varying dimensions of internet use influence aggressive behaviors, with particular attention to gender differences. The scope encompasses several key areas:

1. **Target Population:** The study focuses on school-going adolescents aged 7 to 12 years, a critical developmental stage where patterns of behavior are formed and can significantly impact future interactions.
2. **Dimensions of Internet Addiction:** The research assesses multiple facets of Internet addiction, including time spent online, types of online activities (e.g., gaming, social media), and the psychological implications associated with excessive use.
3. **Aggression Measurement:** The study evaluates various dimensions of aggression, such as physical aggression, verbal aggression, anger, and hostility, allowing for a nuanced understanding of how internet addiction correlates with these behaviors.
4. **Gender Differences:** The analysis emphasizes the differences in internet addiction and aggression between male and female adolescents, recognizing the need for gender-sensitive approaches to understanding behavioral patterns.
5. **Implications for Interventions:** The findings aim to inform educators, parents, and policymakers about the potential risks associated with internet addiction and its link to aggressive behavior. This will guide the development of targeted interventions designed to promote healthier online habits and emotional regulation strategies among adolescents.
6. **Future Scope:** The study highlights the need for further research to explore the causal relationships between internet addiction and aggression, as well as the long-term implications of these behaviors on adolescents' mental health and social interactions.

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