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## Analysis of the extent of relation between internet addiction, anxiety and eating attitude among children

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### Abstract

The present research study was conducted to analyze the extent of relation between internet addiction, anxiety and eating attitude among children. The research was conducted in Chandigarh and Mohali. The sample consisted of 40 subjects. There were 20 girls and 20 boys studying in 9<sup>th</sup> standard in the Schools of Chandigarh and Mohali. These 40 students were given the Internet Addiction Test (IAT) by Dr. Kimberly Young. As per the result of the test, they were categorised into two groups- Internet addicts-Group A. And non-addicts-Group B. Later, these two groups were compared on the basis of the anxiety level and eating attitude to find out the relation among the three variables. Spence Children's Anxiety Scale was used to assess the Anxiety level and Binge Eating Scale (BES) was given to the subjects to assess their Binge eating attitude. The tools used in the study were Internet Addiction Test (IAT) by Dr. Kimberly Young, Spence Children's Anxiety Scale and Binge Eating Scale. It was reported that Group had significantly high level of anxiety, and that they outnumbered in the scores of Binge Eating Scale as compared to Group B. Thus, it could be concluded that although technology plays a capricious role in human life, yet it's appropriate and restricted access is mandatory to abate the personality hazards among children.

**Keywords:** Internet Addiction, Anxiety, Eating Attitude

### 1. Introduction

In the present scenario when the world is facing so much competition, Internet plays a capricious role in life of students aiding in success provided it is accessed in an appropriate quantity as well as quality. Anxiety is a normal part of childhood, and every child goes through phases. A phase is temporary and usually harmless. But children who suffer from an anxiety disorder experience fear, nervousness, and shyness, and they start to avoid places and activities. Binge eating behaviour has been closely associated with anxiety and internet addiction. The Internet is a widely recognized channel for information exchange, academic research, entertainment, communication and commerce Widyanto & Griffiths, 2006 <sup>[1]</sup>. In the scientific literature, several terms have been proposed to describe pathological Internet use: Internet addiction, cyberspace addiction, Internet addiction disorder, online addiction, Net addiction, Internet addicted disorder, pathological Internet use, high Internet dependency, problematic Internet use and others. Widyanto and Griffiths, 2006 <sup>[2]</sup>. Internet addiction disorder is nowadays recognized as a new syndrome among psychologist research nucleus and has provided a fresh area of research Kim *et al.*, 2005; Amiel & Sargent, 2004; <sup>[4, 5]</sup> points out that excessive and ill use of the internet will result in the withdrawal of the individual from friends, family, and lead to behavioural or personal disorders indicated that some users have reported internet- related problems similar to addiction, and research reports reveal that excessive use of the internet has resulted in social, psychological and occupational injury. Davis (2001) <sup>[3]</sup> believes that internet use is not only an addictive behaviour but also forms a collection of recognition and behaviour factors that leave people prone to addiction leading to a negative effect on the individual's life. The internet is a new tool that is evolving into an essential part of everyday life all over the world and its use increases especially among young people. In spite of the widely perceived merits of this tool, psychologists and educators have been aware of the negative impacts of its use, especially the over or misuse and the related physical and psychological problems. One of the most common of these problems is internet addiction. This problem is a raising phenomenon affecting people with varying frequency around the world and has produced negative impacts on the academic, relationship, financial,

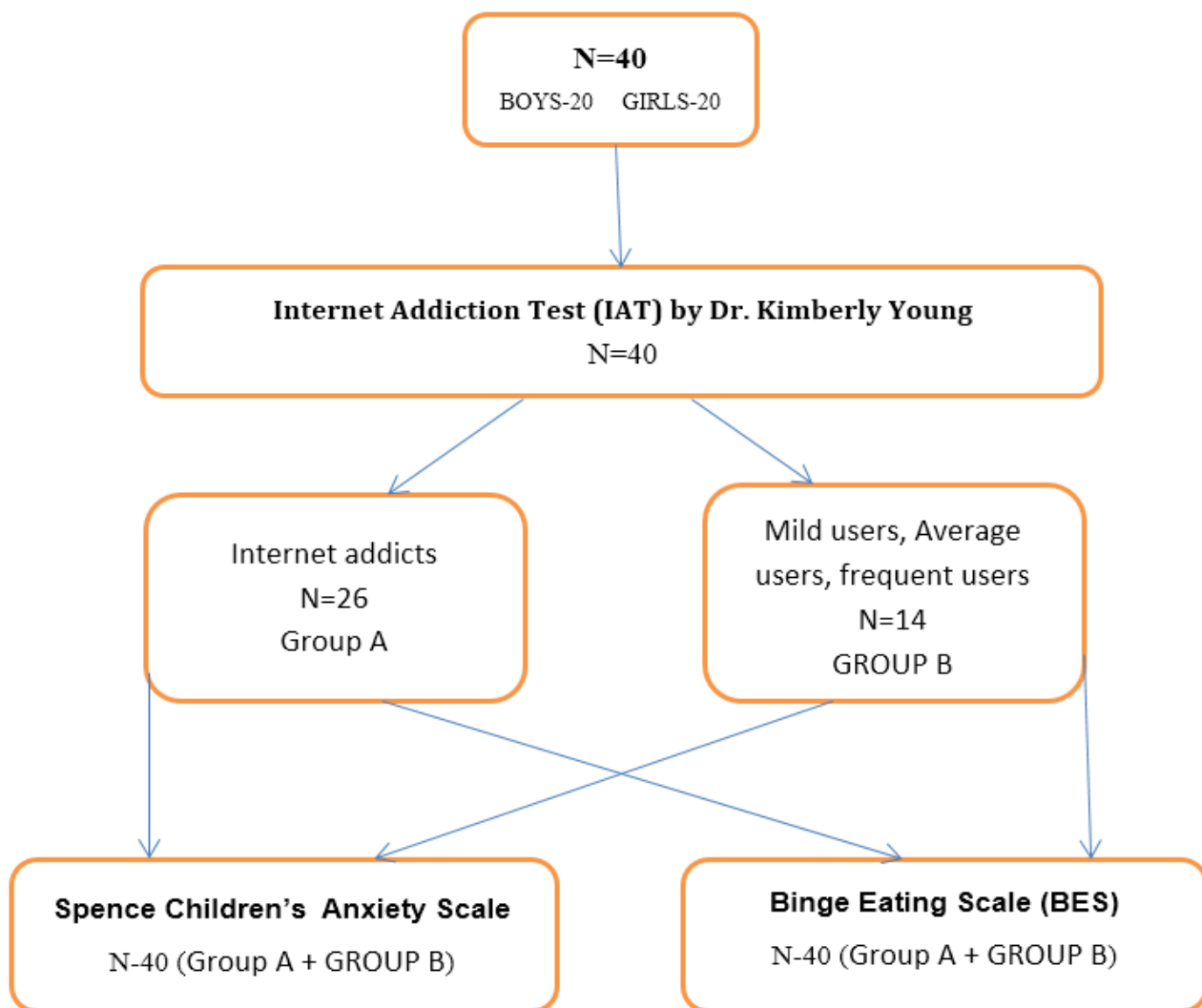
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and occupational aspects of many lives. Internet addiction is typically characterized by psychomotor agitation, anxiety, craving, depression, hostility, substance experience, preoccupation, loss of control, withdrawal, impairment of function, reduced decision-making ability, and constant online surfing despite negative effects on social and psychological welfare. Research on internet addiction demonstrated that the greater use of the internet is associated with some social and psychological variables such as, declines in the size of social circle, depression, loneliness, lower self-esteem and life satisfaction, sensation seeking, poor mental health, and low family function. The excessive growth of the internet has had a huge influence on psychological research in understanding its role in emotional states and there has been increased interest in the addictive potential of the internet. The authors report that there are a number of emotional factors which may be related to college students' internet addiction. Among these factors the most remarkable are depression, anxiety, and stress. Research on internet addiction and depression demonstrated that the overuse of the internet, which results in a disruption of the normal lives of an individual and the people around him, was associated with an increase in the frequency of depression. Because, excessive internet use can displace valuable time that people spend with family and friends, which leads to smaller social circles and higher levels of loneliness and stress. Other conclusions of excessive usage have been documented as

neglect of academic, work, and domestic responsibilities, disruption of relationships, social isolation, and financial problems. Internet addiction also may contribute to anxiety and stress. In the present study, efforts are made to recognize the extent to which these three variables are related so as to formulate the solutions for the same.

**2. Method**

The present study aimed at analyzing. The research was conducted in schools of Chandigarh and Mohali. Random Sampling was proceeded to select the sample which consisted of 40 subjects. There were 20 girls and 20 boys studying in 9<sup>th</sup> standard in the Schools of Chandigarh and Mohali. These 40 students were given the Internet Addiction Test (IAT) by Dr. Kimberly Young. As per the result of the test, 26 students were found to be Internet addicts labeled as Group A. However, 14 were found to be non-addicts, who were Mild users/Average users/ frequent users, termed as GROUP B. Later, these two groups were compared on the basis of the anxiety level and eating attitude to find out the relation among the three variables- internet addiction, anxiety and BINGE eating attitude among children. Spence Children's Anxiety Scale was used to assess the Anxiety level and Binge Eating Scale (BES) was given to the subjects to assess their Binge eating attitude.



**Fig 1:** Sampling Procedure3

**2.1 Tools used in the study**

**2.1.1 Internet Addiction Test (IAT) by Dr. Kimberly Young**

Internet Addiction Test (IAT) is a reliable and valid measure of addictive use of Internet, developed by Dr. Kimberly Young. It consists of 20 items that measures mild, moderate and severe level of Internet Addiction.

**2.1.2 Spence Children’s Anxiety Scale**

The scale consists of 44 items; of which 38 reflect specific symptoms of anxiety and 6 relate to positive, filler items to reduce negative response bias. Of the 38 anxiety items, 6 reflect separation anxiety, 6 social phobia, 6 obsessive compulsive problems, 6 panic/3 agoraphobia, 6 generalized anxiety/overanxious symptoms and 5 items concern fears of physical injury. Items are randomly allocated within the questionnaire. Children are asked to rate on a 4 point scale involving never (0), sometimes (1), often (2), and always (3), the frequency with which they experience each symptom. The instructions state "Please put a circle around the word that shows how often each of these things happen to you. There are no right and wrong answers". There are six positively worded filler items. Subjects were asked to rate the degree to which they experience each symptom on a 4-point frequency scale.

**2.1.3 Binge Eating Scale (BES)**

The BES is a 16-item questionnaire assessing the presence of certain binge eating behaviors which may be indicative of an eating disorder.

**2.2 Participants**

The research was conducted in Chandigarh and Mohali. The sample consisted of 40 subjects. There were 20 girls and 20 boys studying in 9<sup>th</sup> standard in the Schools of Chandigarh and Mohali. These 40 students were given the Internet Addiction Test (IAT) by Dr. Kimberly Young. As per the result of the test, 26 students were found to be Internet addicts labeled as Group A. However, 14 were found to be non-addicts, who were Mild users/Average users/ frequent users, termed as GROUP B. Later, these two groups were compared on the basis of the anxiety level and eating attitude to find out the relation among the three variables- Internet Addiction, Anxiety and Binge Eating Attitude among children. Spence Children’s Anxiety Scale was used to assess the Anxiety level and Binge Eating Scale (BES) was given to the subjects to assess their Binge eating attitude.

**2.3 Actual administration of the tests**

The first step included sample selection and then, rapport was formed with the subjects. Instructions were given and they were asked to answer honestly.

**2.4 Scoring**

Scoring was done as per the manuals of the tests.

**2.5 Statistical Analysis**

Once the data was obtained, it was coded, tabulated and analyzed, keeping in mind the objectives of the study. Appropriate statistical tools were used to draw meaningful inferences. The statistical tools used in the present study are given in Table1

**Table 1:** Statistical tools used for analysis of data

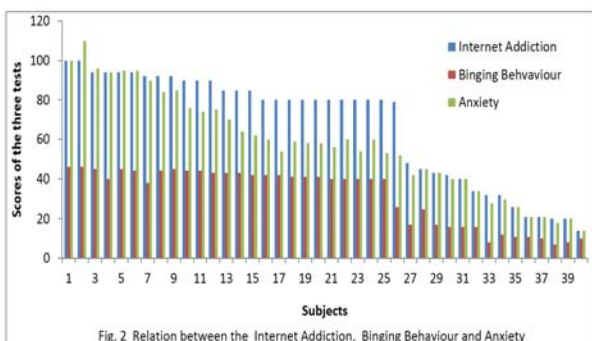
S. No.	Statistical tools	Formula	Purpose
1.	Mean (x)	$X = \Sigma X/N$ where, X = Variable N = No. of sample	To find out the average scores of variable used in the study.
2.	Percentage (%)	$\% = X/N \times 100$ where x = Derived score n = total score	To find the distribution of subjects with regard to various variables of the study.
3.	Standard Deviation (S.D.)	$\sigma = \sqrt{\Sigma x^2 / N}$ Where X = Deviation from actual mean X = mean. X = variable. N = number of samples.	To find out deviation from the man scores of the variables.
4.	Standard error of mean (S.E)	$S.E = \sigma/n$ Where $\sigma = S.D.$ n= number of observations	To find out the degree to which the mean is effected by the error of measurement and sampling.
5.	‘t’ test	$t = \frac{(x1-x2) / S}{\sqrt{n1n2/n1 + n2}}$ where x1 = mean of 1 <sup>st</sup> sample x2 = mean of second sample S = combine S.D. n1 = number of observations in 1 <sup>st</sup> sample. n2 = number of observations in 2 <sup>nd</sup> sample	To compare the average score of any two groups or to find out whether the mean of the two samples vary significantly from each other.

### 3. Results and Discussion

**Table 2:** Scores of Internet Addiction Test, Spence Children’s Anxiety Scale and Binge Eating Scale N=40

S No	Before Grouping	After Grouping	
	Internet Addiction Score	Spence Children’s Anxiety Score	Binge Eating Score
1.	100	46	100
2.	100	46	110
3.	94	45	96
4.	94	40	94
5.	94	45	95
6.	94	44	95
7.	92	38	90
8.	92	44	84
9.	92	45	85
10.	90	44	76
11.	90	44	74
12.	90	43	75
13.	85	43	70
14.	85	43	64
15.	85	42	62
16.	80	42	60
17.	80	42	54
18.	80	41	59
19.	80	41	58
20.	80	41	58
21.	80	40	56
22.	80	40	60
23.	80	40	54
24.	80	40	60
25.	80	40	53
26.	79	26	52
27.	48	17	42
28.	45	25	45
29.	43	17	43
30.	42	16	40
31.	40	16	40
32.	34	16	34
33.	32	8	28
34.	32	12	30
35.	26	11	26
36.	21	11	21
37.	21	10	21
38.	20	7	18
39.	20	8	20
40.	14	10	14

The selected 40 subjects were given the Internet Addiction Test (IAT) by Dr. Kimberly Young. As per the result of the test, 26 students were found to be Internet addicts labeled as Group A. However, 14 were found to be non-addicts, who were Mild users/Average users/ frequent users, termed as GROUP B. Later, these two groups were compared on the basis of the anxiety level and eating attitude.



**Table 3:** Scores of Internet Addiction Test, Spence Children’s Anxiety Scale and Binge Eating Scale of Group A

N=26			
S No	Internet Addiction	Binging Behaviour	Anxiety
1.	100	46	100
2.	100	46	110
3.	94	45	96
4.	94	40	94
5.	94	45	95
6.	94	44	95
7.	92	38	90
8.	92	44	84
9.	92	45	85
10.	90	44	76
11.	90	44	74
12.	90	43	75
13.	85	43	70
14.	85	43	64
15.	85	42	62
16.	80	42	60
17.	80	42	54
18.	80	41	59
19.	80	41	58
20.	80	41	58
21.	80	40	56
22.	80	40	60
23.	80	40	54
24.	80	40	60
25.	80	40	53
26.	79	26	52

**Table 4:** Scores of Internet Addiction Test, Spence Children’s Anxiety Scale and Binge Eating Scale of Group B

N=14			
S No	Internet Addiction	Binging Behaviour	Anxiety
1.	48	17	42
2.	45	25	45
3.	43	17	43
4.	42	16	40
5.	40	16	40
6.	34	16	34
7.	32	8	28
8.	32	12	30
9.	26	11	26
10.	21	11	21
11.	21	10	21
12.	20	7	18
13.	20	8	20
14.	14	10	14

**Table 5:** Scores of Internet Addiction Test

Internet Addiction Test	Scores	Group-A (N=26)	Group B (N=14)	Total (N=40)
Mild user	0-20	0	0	0
Average user	20 – 49	0	14	14
Frequent user	50 – 79	1	0	1
Addicted to internet access	80 – 100	25	0	25

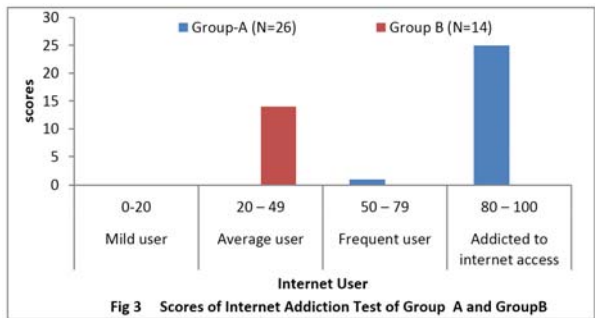


Fig 3 Scores of Internet Addiction Test of Group A and Group B

Table 5 and Fig 3 reveal that 25 subjects of Group A were Addicted to Internet and one of them was frequent user while all those in Group B were average users.

Table 6: Scores of Binge Eating Scale (Group A and Group B)

Binge Eating Behaviour	Scores	Group-A (N=26)	Group B (N=14)	Total (N=40)
Non-binging	less than 17	0	14	14
Moderate binging	18-26	1	0	1
Severe binging	27 -46	25	0	25

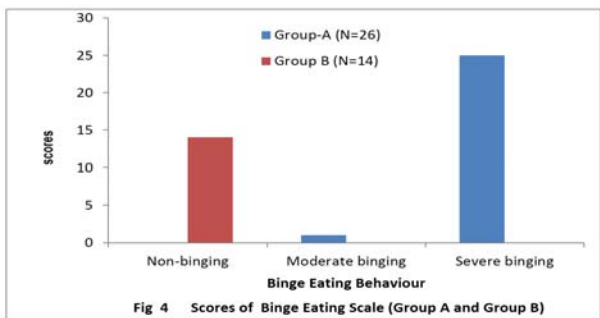


Fig 4 Scores of Binge Eating Scale (Group A and Group B)

Table 6 and Fig 4 depict that 25 subjects of Group A had Severe Binging Behaviour, one of them was moderate in Binging behaviour while all those in Group B had shown Non-binging behaviour.

Table 7: Scores of Spence Children’s Anxiety Scale of Group A and Group B

Anxiety Level	Scores	Group-A (N=26)	Group B (N=14)	Total (N=40)
Low anxiety	less than 60	8	14	22
High anxiety	61-112	18	0	18

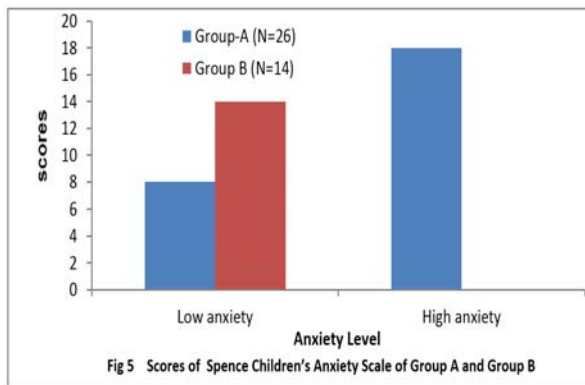


Fig 5 Scores of Spence Children’s Anxiety Scale of Group A and Group B

Table 7 and Fig 5 illustrate that 8 subjects from Group A had low anxiety and 18 of them had high anxiety level. In contrast, all those in Group B had low anxiety.

Table 8: Mean, SD, SEM and t-value of Internet Addiction between Group A and Group B

Internet Addiction	N	Mean	SD	SEM	t-value	Level of significance
Group A	26	86.76	6.93	1.36	19.5	Highly Significant
Group B	14	31.28	11.08	2.96		

Table 8 describes that subjects of Group A had significantly high Internet Addiction than the subjects of Group B.

Table 9: Mean, SD, SEM and t-value of Binging Behaviour between Group A and Group B

Binging Behaviour	N	Mean	SD	SEM	t-value	Level of significance
Group A	26	41.73	3.87	0.76	20.2	Highly Significant
Group B	14	13.14	4.93	1.32		

Table 9 depicts that subjects of Group A had significantly high Binging Behaviour than the subjects of Group B.

Table 10: Mean, SD, SEM and t-value of Anxiety between Group A and Group B

Anxiety	N	Mean	SD	SEM	t-value	Level of significance
Group A	26	72.84	17.69	3.47	8.25	Highly Significant
Group B	14	30.14	10.51	2.81		

Table 10 shows that subjects of Group A had significantly high level of Anxiety than the subjects of Group B.

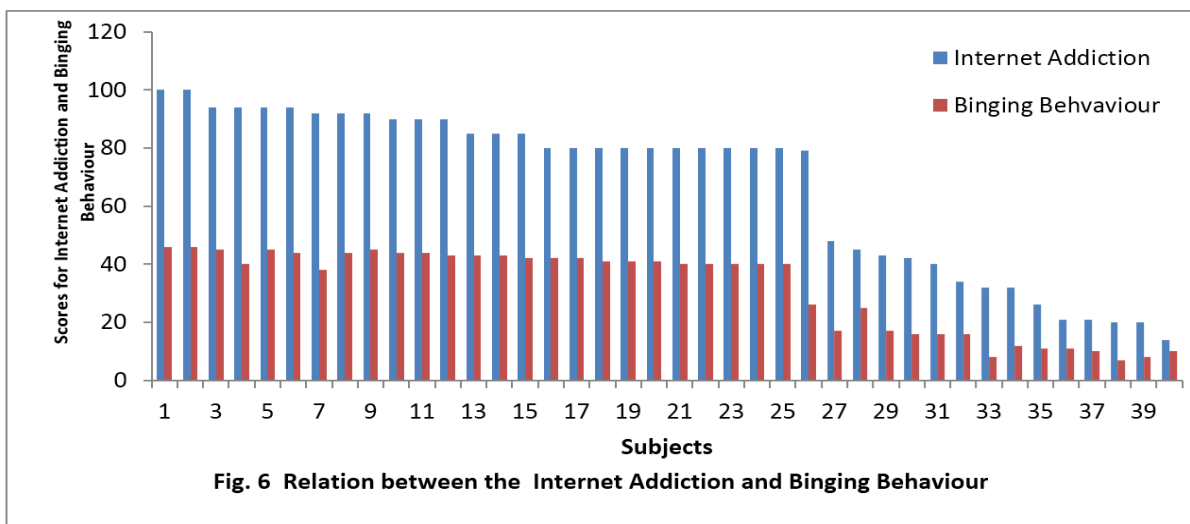
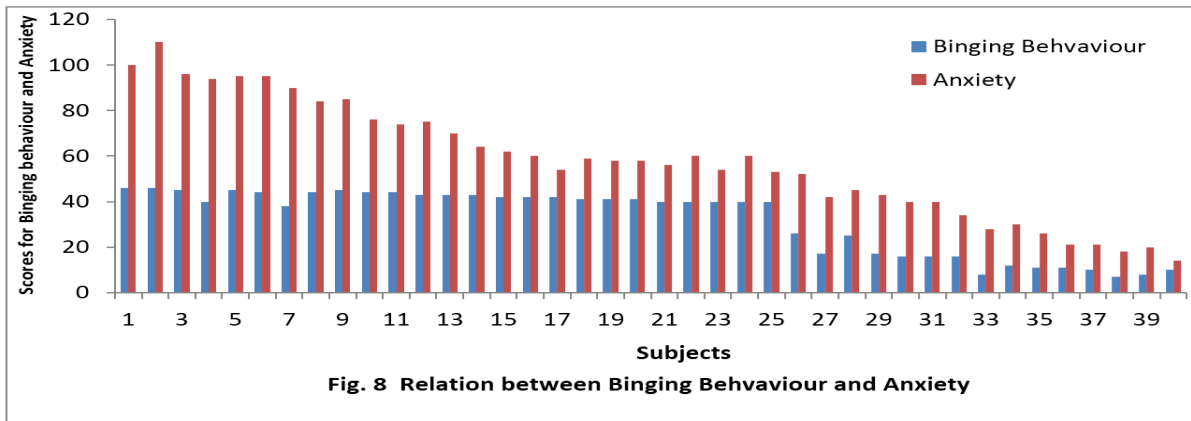
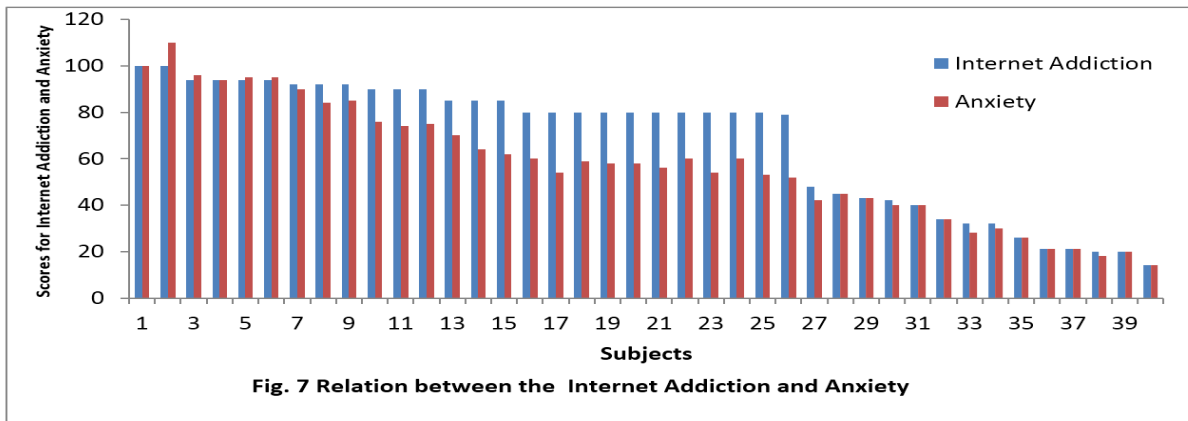


Fig. 6 Relation between the Internet Addiction and Binging Behaviour



**4. Conclusion**

In the end it can be concluded that It was evaluated that the mean of Anxiety level was significantly higher in Group A than in Group B. It was further witnessed that the mean of Binging Behavior was significantly higher in Group A as compared to that of Group B. the results clearly indicated that those who are excessively inclined and addicted to the internet are likely to exhibit higher anxiety level and they are more prone to higher extent of binging.

**5. Acknowledgement**

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