

## Excessive Use of Internet and Development of Anorexia Nervosa Tendency in Adolescents

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### ABSTRACT

*Excessive internet use causes many types of psychological problems in adolescents such as social fears, aggression, lack of self-awareness, lack of communication skills, eating disorder etc. The main purpose of this research is to identify the impact of excessive use internet on the tendency of anorexia in adolescence. The level of internet addiction and gender has been included as an independent variable; while anorexia condition included as a dependent variable. The purposively sample of 60 boys and 60 girls have been selected form the schools of Gandhinagar city of Gujarat state. The level of internet addiction and symptoms of anorexia were measured by Internet Addiction Test develop by Young and Anorexia Test developed by Vijaya Lakshmi Chouhan and Aditi Banerjee respectively. Hypotheses were tested by applying F test for the 2x2 factorial design. Results indicate that high level of internet addiction impacts the food habit of adolescence resulting anorexia and the gender differences also significantly found indicating that the girls have high condition of anorexia tendency than boys.*

**Key Words:** Excessive Use of Internet, Anorexia Nervosa, Adolescents

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### Introduction

Adolescence is marked by physical, mental, and emotional changes from all stages of life. One of the most talked about issues at the moment is the unbelievable use of the Internet. The widespread use of the Internet, especially among adolescents, has led to a growing number of negative behaviors in adolescents. Excessive use of internet also causes some physical and mental disorders in individuals such as nomo phobia, phantom vibration syndrome, eating disorder, anorexia nervosa etc. Recent researches showing that people with internet addiction are more likely to have anorexia.

Anorexia nervosa is characterized by the individual's refusal to maintain minimally normal body weight, an intense fear of gaining weight and significant disturbance in the perception of the shape or size of the body. According to APA (2013) anorexia nervosa is an eating disorder characterized by persistent dietary restriction and

an intense fear of weight gain despite maintenance of a low body weight. Patients with the restricting type accomplish weight loss primarily through dieting, fasting or excessive exercise. To be diagnosed with anorexia nervosa according to the DSM-5 TR, the following criteria must be met:

1. Restriction of energy intake relative to requirements leading to a significantly low body weight in the context of age, sex, developmental trajectory, and physical health.
2. Intense fear of gaining weight or becoming fat, even though underweight.
3. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight.

Tao and Liu (2009) concluded that relationship between internet dependence and eating disorders appears to exist. Females and male internet

dependents rated themselves with significantly higher symptomatic aspects of eating disorders than control groups. Female and male internet dependents showed significantly higher psychological characteristics related to eating disorders than control groups.

Sener and Ozkaya (2023) investigated the relationship between social media addiction and orthorexia nervosa in adult individuals who applied to obesity polyclinic. The incidence of orthorexia nervosa was higher in obese individuals who scored higher on social media addiction scale. Sharing on social media can have an impact on the body image and diet. Informing obese individuals is important in protecting against popular trends in social media and possible eating disorders.

There is evidence that signs and symptoms can manifest on social media, wherein both harmful and beneficial content is shared daily. Ramirez et al. (2021) studied characterize Spanish-speaking users showing anorexia signs on Twitter through the extraction and inference of behavioral, demographical, relational, and multimodal data. By using the transtheoretical model of health behavior change, they focus on characterizing and comparing users at the different stages of the model for overcoming anorexia nervosa, including treatment and full recovery periods. They mapped the signs of AN to social media context. The features and patterns identified provide a basis for the development of detection tools and recommender systems.

Chesley and Eric (2023) reported in their study that adolescents increasingly use the internet as a primary source for health information. Web sites related to anorexia nervosa are providing a venue for dispensing information on nutrition, techniques to lose or gain weight, motivation, and links to other related sites. A study conducted by Khan (2021) suggest that there is no significant

association between social networking addiction and anorexia nervosa.

Sauve et al. (2024) suggests that a profile of social networking marked by a problematic, prolonged and passive use, is associated with more severe symptomatology in adolescent girls with anorexia nervosa. Sablaturova, Gottfried and Blinka (2021) find out partial correlation between eating disorders symptoms and excessive internet use ( $r=0.36$  for boys and  $r=0.29$  for girls) after controlling for the internalizing and externalizing of problems. Internalizing and externalizing problems were positively associated with eating disorders symptoms, while excessive internet use was only associated with externalizing problems.

The prime of this study was to identify the impact of excessive use of internet in the development of anorexia nervosa tendency in Adolescents. The investigation also planned to identify the gender impact on the development of the tendency of anorexia nervosa. The interaction effect of use of internet and gender has been also noticed by using factorial design.

### Objectives

The prime objectives of the study are as under:

1. To identify the impact of use of internet on condition of anorexia tendency in adolescent.
2. To identify the impact of gender on condition of anorexia tendency in adolescent.
3. To identify the combine effect of gender and use of internet on condition of anorexia tendency in adolescent.

### Hypotheses

The following hypotheses were tested to fulfill the objectives of the study:

1. There will be no significant difference between adolescent of mild and excessive internet users on condition of anorexia tendency.

2. There will be no significant difference between boys and girls adolescent on condition of anorexia tendency.
3. There will be no significant difference among the interactive effects of use of internet and gender on condition of anorexia tendency.

### Sample

The purposive sample of the study was comprised of total 120 boys and girls adolescent having mild and excessive use of internet with categorized in 2x2 factorial design. The distribution of adolescent in the group of mild or excessive use of internet was decided through the score achieved on Internet Addiction Test developed by Young.

### Tools

#### 1. Internet Addiction Test

To identify excessive or mild use of internet the Internet Addiction Test (IAT) developed by Dr. Kimberly Young (1998) was used. It comprises 20 items rated in a five-point Likert scale (from 1 - not at all, to 5 - always). As with the first diagnostic questionnaire, this measurement is derived from the DSM-IV criteria for pathological gambling and alcoholism and it

measures the extent of individual's problems due to the Internet use in daily routine, social life, productivity, sleeping patterns, and feelings. On the basis of the total score obtained on the test, the individual is placed into one of three categories: average online user (from 20 to 39) who has a full control of his or her usage; experiences frequent problems because of excessive Internet use (from 40 to 69); or has significant problems because of Internet use (from 70 to 100). Gujarati version of the IAT was used for collecting the data. The highest score of the IAT obtained 100 and lowest can be 20. The test-retest reliability of the scale was 0.82. The content and convergent validity and internal consistency of the IAT was 0.88 and bisection 0.72. This scale is meant for adolescents and adults.

2. **Anorexia test (AT):** The test was developed by Dr. Chauhan and Banerjee Aditi in the year 2004. The 30 items were confined to different categories as: 1) Food avoidances, 2) medical complications, 3) body of figure consciousness, 4) psychological factors. It was conducted on the adolescent of age group 15-18 years. Reliability coefficient or temporal stability coefficient or temporal constancy was very high 0.97.

### Result and Discussion

**Table 1: Analysis of variance for condition of anorexia tendency in relation to use of internet and gender**

Variables	Sum of Squares	DF	Mean Squares	F	Sig.
Use of Internet	221.4	1	221.4	15.08	0.01
Gender	452.4	1	452.4	30.81	0.01
Use of Internet & Gender	29.01	1	29.01	1.97	N. S
SS <sub>W</sub>	1702.99	116	14.68	--	--
SS <sub>T</sub>	2405.8	119	--	--	--

**Table 2: Mean of condition of anorexia tendency reported by various groups of adolescents**

Variable	Group	N	Mean Score	F- Value	Significant Level
Use of Internet	Mild	120	5.60	15.08	0.01
	Excessive	120	8.32		
Gender	Boys	120	5.02	30.81	0.01
	Girls	120	8.90		
Use of Internet & Gender	Boys having mild use of internet	30	3.16	1.97	Non-significant
	Girls having mild use of internet	30	4.88		
	Boys having excessive use of internet	30	6.87		
	Girls having excessive use of internet	30	8.03		

Table 1 shows that F- value 15.08 indicates significant effect on condition of anorexia tendency in adolescents in relation to use of internet. Table 2 evidently shows that the mean score (M=8.32) of excessive internet users on anorexia tendency is higher than that of mild internet users (M=5.60). A review paper by Hinojo-Lucena et. al (2019) on confirmation of the link between Problematic Internet Use (PIU) as a predictor of eating disorders leads to a new line of research in studies on the development of eating disorders in childhood, adolescence and young adulthood. The population most at risk are university students. Preventive measures should therefore be introduced at lower educational stages. Mohammad Johari et al (2024) identified the relationship of internet addiction with food choice motives and the risk of eating disorders among young adults in Malaysia and the findings indicated that two-thirds of young adults had no risk of eating disorders, while one-third were at risk of eating disorders. The young adults who were moderately to severely addicted to the internet, 43.8% of them were also at risk of eating disorders.

Table 1 also indicate that gender has notable impact on the development of condition of anorexia tendency in adolescents. The that F-value 30.81 indicates significant impact on condition of anorexia tendency in adolescents in regards to gender. It can be understood from table 2 that the mean score (M=8.90) of girl

adolescence on anorexia tendency is higher than that of boy adolescents (M=5.02). Epidemiological studies have shown that Anorexia Nervosa (AN) and Bulimia Nervosa (BN) are more common among females than males. Striegel at el. (2009) examined gender differences in prevalence of eating disorder symptoms including body image concerns (body checking or avoidance), binge eating, and inappropriate compensatory behaviors and found that among the 3,714 women and 1,808 men who responded, men were more likely to report overeating whereas women were more likely to endorse loss of control while eating. Although statistically significant gender differences were observed, with women significantly more likely than men to report body checking and avoidance, binge eating, fasting, and vomiting etc. George Hsu (1989) claimed that eating disorders of anorexia nervosa and bulimia nervosa are more common among women than men because more women are dieting to control their weight. Other contributory factors that serve to intensify women's struggle to control their weight and shape, such as adolescent turmoil, poor body concept, and role confusion, are also reviewed.

As table no.1 the interaction effect between use of internet and gender variable on anorexia nervosa tendency among adolescents is found to be non-significant (F= 1.97). However, the mean score reported by the four groups as indicated in

table 2, girls having excessive use of internet reported high mean score ( $M=8.03$ ) on anorexia nervosa tendency than that of other three groups namely boys having mild use of internet ( $M=3.16$ ), girls having mild use of internet ( $M=4.88$ ) and boys having excessive use of internet ( $M=6.87$ ). This also alarming sign for girls who have excessive use of internet because the results indicates that an excessive use of internet by an adolescence girls leads her the high risk of condition anorexia nervosa tendency which is very harmful for her physical health. Sablaturova et al. (2021) provides evidence that, during adolescence, eating disorders symptoms and excessive internet use are related and have a tendency to occur together. Also, they are related even when controlled for their shared underlying psychological factors, namely the emotional and attentional/behavioral difficulties.

### Conclusion:

1. Use of internet plays a significant role in the development of tendency for anorexia nervosa in adolescent and excessive internet users have high tendency towards condition of anorexia tendency than that of mild internet users.
2. Gender of an adolescent is also an important factor for developing tendency for anorexia nervosa in adolescent because adolescent girls exhibit high tendency towards condition of anorexia tendency than that of adolescent boys.
3. Girls having excessive use of internet during adolescence have high risk of the occurring the condition of anorexia nervosa tendency.
4. To change the tendency towards anorexia nervosa in adolescents an intervening program is needed for adolescents which should be handled under the supervision of counsellor.
5. An awareness program also needed at school and community level to control such tendency particulars in girls.

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