

A cross sectional study of internet addiction among college students in Bangalore

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Abstract

Background: There has been an explosive growth in the use of internet in the last decade. Internet addiction adversely affects lives by causing physical, psychological, and social problems. In developing countries 30% of the people below 25 years age group are internet users. Study focused on understanding the pattern of internet usage among bachelors and masters degree students and its relationship with the socio-demographic factors, self-esteem, and satisfaction with life.

Objectives: 1. To assess the prevalence and severity of Internet Addiction among representative college students in Bangalore. 2. To correlate internet addiction with other socio-demographic factors. 3. To study the association between Internet Addiction, Self Esteem and Satisfaction with Life **Materials and Methods:** A cross sectional study was conducted on a sample of 300 MBBS, Engineering, and other undergraduate degree students, for a period of 6 months using a socio demographic proforma and self-reporting questionnaires namely IAT, RSES, modified Kuppaswamy's scale and SWLS. The data collected was analysed with chi square and Pearson correlation coefficient, student's "t" Test, and standard deviation. **Results:** 35% of students were found to have Internet addiction. Of the 35%, 74.33%, were mildly addicted, 23.89% moderately addicted while 1.77% found to be severely addicted. There is no variation in the prevalence or severity of IAD depending on gender. SES does not have a significant influence in prevalence or severity of IAD. Low self-esteem and dissatisfaction with life were found to be more prevalent in addicts. Conclusion: Internet addiction is associated negatively with self-esteem and satisfaction with life. Intervention programs should be developed to prevent Internet addiction among adolescents and young adults, especially in schools and colleges where adolescents spend most of their time.

Key Words: Internet Addiction, Adolescents, Self-esteem, Satisfaction

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INTRODUCTION

The internet has become essential part of everyday life all over the world¹ and its use has increased significantly among young people, not only in India but also worldwide in the last decade. The term "Internet addiction" was

proposed by Dr. Ivan Goldberg in 1996 for pathological compulsive Internet use^{1,2}. The Internet addiction Disorder (IAD) is best considered a compulsive-impulsive spectrum disorder consisting of at least three subtypes: excessive gaming, sexual preoccupations, and e-mail/text messaging. All the variants share the following four components: 1) Excessive use, 2) Withdrawal, 3) Tolerance and 4) Negative repercussions. As many of the features of IAD are like those of pathological gambling, pyromania and kleptomania; IAD has been cautiously included in the appendix of the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders.³ As per Young, the types of internet addiction are: Cyber-sexual addiction, Cyber-relationship addiction, Net compulsions, Information overload, and Computer addiction⁴. Around the world, IAD has produced negative impact on the academic, relationship, financial, and occupational aspects of many

lives^{5,6,7}. Internet addiction is associated with psychomotor agitation, anxiety, craving,⁸ depression, hostility, substance experience,⁹ preoccupation, loss of control, withdrawal, impairment of function, reduced decision making ability¹⁰ or constant online surfing despite negative effects on social and psychological welfare^{11,12}. In studies that focus on younger people, prevalence estimates range from 0.9%^{13,14,15} to 38%¹⁶. There are a few emotional factors also related to college students' internet addiction^{17,18}. Of which the most remarkable are depression, low self-esteem, 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 individuals and the people around them, was associated with an increase in the frequency of depression^{19,20,21,22}. It may also contribute to anxiety and stress²³. The aim our study is to determine the pattern, prevalence, and adverse effects of internet addiction among young adults.

MATERIALS AND METHODS

A cross-sectional and descriptive study was done. Of those who consented for the study, 100 students from each college were selected by consecutive sampling technique. Sample size was 300 and the duration of study was six months.

Inclusion Criteria

1. Age groups of 18 to 25 years
2. Access to the Internet
3. Minimum 6 months of Internet usage
4. Written and informed consent

Exclusion Criteria

1. Outside specified age group
2. Less than 6 months of internet usage
3. Students who have not given written consent

Measures/ Instruments

The Internet Addiction Test:

It is a 20-item scale rated on a 5-point likert scale.⁽²⁴⁾⁽²⁵⁾ A score range of (0-30) indicate person has no addiction and is in full control, (30-49) average user or mild addiction, (50-79) frequent problems related to internet usage or moderate addiction and (80-100) severe addiction or internet use significantly interferes with the user's life.

Satisfaction with Life scale:

There are 5 statements and agreement, or disagreement indicated by 1-7-point scale, 1=strongly disagree and 7=strongly agree. Scores range from 5 to 35, dividing into 7 categories extremely satisfied to extremely dissatisfied. Scores between 15 and 35 are within normal range; scores below 15 suggest dissatisfaction.

Rosenberg self-esteem:

Developed by Rosenberg (1965) is by far the most widely used, reliable and valid measure of global self-worth. It uses 10 item-scale with 4 options for each item. The scores ranges from 0 to 30. Scores between 15 and 25 are within normal range; scores below 15 suggest low self-esteem.

Modified Kuppaswamy Scale - 2012⁽²⁶⁾:

It includes education, occupation of the head of the family, monthly income of the family in rupees the socio-economic classes. Scoring is as follows: (1) Upper: 26 -29 (2) Upper Middle: 16 - 25 (3) Lower Middle: 11- 15 (4) Upper Lower: 5 - 10 (5) Lower: < 5.

Procedure: Ethical approval was obtained from the principal of the Medical, Engineering, and Degree Institutes. The students filled in the questionnaire in a self-reporting format. A Socio demographic proforma was used to collect the basic demographic details of the sample. Data was analysed using SPSS-19.0 version. Frequencies, chi square and Pearson correlation coefficient were used to determine the prevalence of IA and the relation between IA and other variables.

OBSERVATION AND RESULTS

Table 1: PREVALENCE OF INTERNET ADDICTION

TOTAL SAMPLE	FREQUENCY	PERCENTAGE
IA	105	35
INA/ NIA	195	65
TOTAL	300	100

Table 2: THE INFLUENCE OF SES ON SEVERITY AND DIFFERENT LEVELS OF INTERNET ADDICTION

SES	UPPER	UPPER MIDDLE	MIDDLE	UPPER LOWER	TOTAL
MILD	40	28	6	3	77
MODERATE	20	3	2	1	26
SEVERE	0	2	0	0	2
TOTAL	60	33	8	4	105

PEARSON CHI SQUARE: 3.62 P Value : 0.306

Table 3: SELF ESTEEM: PERCENTAGE AND FREQUENCY IN SEVERITY AND DIFFERENT LEVELS OF INTERNET ADDICTION

SELF ESTEEM	NORMAL	LOW	Total
MILD	46	31	77
MODERATE	14	12	26
SEVERE	0	2	2
TOTAL	60	45	105
PEARSON CHI SQUARE: 2.99 P Value :0.224			

Table 4: SATISFACTION WITH LIFE: FREQUENCY AND PERCENTAGE IN INTERNET ADDICTS AND INTERNET NON-ADDICTS

SWL	NORMAL	LOW	Total
IA	60	45	105
INA/NIA	150	45	195
TOTAL	210	90	300
PEARSON CHI SQUARE: 12.7 P Value : 0.0001			

Table 5: SATISFACTION WITH LIFE: FREQUENCY AND PERCENTAGE IN SEVERITY AND DIFFERENT LEVELS OF INTERNET ADDICTION

SWL	NORMAL	LOW	Total
MILD	46	31	77
MODERATE	14	12	26
SEVERE	0	2	2
TOTAL	60	45	105
PEARSON CHI SQUARE: 2.99 P Value : 0.224			

Table 6: T-TEST SHOWING MEAN AVERAGE SCORE OF SELF ESTEEM IN ADDICTS V/S NON-ADDICTS

	Internet	N	Mean	Std. Deviation
SELF ESTEEM	IA	105	15.94	5.85
SUBSCALE	INA/NIA	195	18.50	5.02

The P value of 0.0001 indicates a statistically significant difference between internet addicts and non addicts in the level of self-esteem.

Table 7: T-TEST SHOWING MEAN AVERAGE SCORE OF SATISFACTION WITH LIFE IN ADDICTS V/S NON-ADDICTS

	Internet	N	Mean	Std. Deviation
SATISFACTION WITH	IA	105	21.50	11.15
LIFE SUBSCALE	INA/NIA	195	26.04	9.38

The P value is 0.000227 indicated a statistically significant difference between the internet addicts and non addicts in their SWL scores.

Table 8: THE CORRELATION BETWEEN IAT SCORE, RSE AND SWL SUBSCALE IN TOTAL SAMPLE

		IAT SC	RSE SC	SWL SC
IAT SC	Pearson Correlation	1	.183	.168
	P Value		.001	.003
	N	300	300	300
RSE SC	Pearson-Correlation	.183	1	.932
	P Value	.001		.000
	N	300	300	300
SWL SC	Pearson Correlation	.168	.932	1
	P Value	.003	.000	
	N	300	300	300

CHI SQUARE: 0.183; 0.168; P VALUE: less than 0.005

P value of less than 0.005 indicates a statistically significant difference between different groups and shows a correlation between IA, self-esteem, and satisfaction with life in the total sample.

DISCUSSION

Internet addiction is characterized by excessive or poorly controlled preoccupations, urges or behaviours in using internet that lead to functional impairment or distress. Prevalence estimates vary widely. Studies have utilized various methods to identify internet addicts, and have used numerous terms such as compulsive computer use²⁷, internet dependency²⁸, problematic internet user²⁹, pathological internet use³⁰ and internet addiction². It fits³¹ DSM-IV-TR definition of a mental disorder, described as a "clinically significant behavioural or psychological syndrome that is associated with present distress or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom". Whether it is valid as a distinct disorder or is part of a larger behavioural syndrome is still not clarified^{17,32}. Psychiatric co-morbidity is common, particularly mood, anxiety, low self-esteem, impulse control, and substance use disorders. Aetiology is unknown, but probably involves psychological, neurobiological, and cultural factors. In this study out of a sample of 300 undergraduate students, 33%(99) were males while 67% (201) were females, 50% (150) belong to upper socioeconomic status, 36% (108) belong to upper middle SES, 9% (27) belong to middle SES, 5% (15) belong to upper lower SES, and 0% belongs to lower SES. Chakraborty *et al.*,³³ 2010 reviewed the fast-growing literature on Internet addiction found that the overall prevalence of Internet addiction was around 0.3% to 38%.^{33, 34,35,36} The prevalence of IAD in this study was reported to be 35% (105 of 300 scored above 30 on the Young's IAT) which is within range of previously reported studies but moderately higher when compared to recent studies in India³⁸, China³⁹, Italy⁴⁰, and Nigeria⁴¹ which were found to be ranging from 3.3% - 6%. In this study, of the 105 addicted, 77(73.3%) were mildly addicted, 26(24.7%) were moderately addicted while only 2(2%) scored greater than 80 were found to be severely addicted to the Internet. It is found to be more when compared to a study done on medical students in Iran^{42,43} Thus, the results regarding the prevalence and severity of IAD can vary widely and are difficult to compare, due to minimal uniformity of the definitions employed or assessment methods used, differences in Internet access, recruitment methodology, the exact age bracket studied, and the definitions utilized. Out of the 105 addicted 40 were males while 65 were females of which 27 males and 50 females were mildly addicted, 12 males and 14 females were moderately addicted while 1 male and 1 female were severely addicted. It was found that there is no variation in the prevalence or severity of IAD in gender. It is similar to that reported by Whang LS-M, Lee S, Chang G.,⁴⁴ Greenfield DN,⁴⁵ Pallanti S, Bernardi S Leonardo Q⁴⁶ which reported no difference in prevalence or severity of

IA in different gender: Of the previous studies Ha *et al.*,⁴⁷ Leung L.⁴⁸, Kim *et al.*⁴⁹ found a female preponderance, while the rest found a male pre-ponderance. IAD appears to have a male preponderance based on data from the community and online surveys, as well as clinical samples. This could be due to minimal uniformity of the definitions employed or assessment methods used or as the studies were conducted were not age matched and comprised of sample with regional differences. In this study, of the 105 addicted 60 belonged to an upper SES, 33 to upper middle SES, 8 to middle SES and 4 to an upper lower SES while, none from lower SES. Of the 60 in upper SES, 40 were mildly addicted, 20 moderately addicted while none were severely addicted. Of 33 from the upper middle SES 28 were mildly addicted, 3 were moderately addicted while 2 were severely addicted. Of 8 from the Middle SES, 6 were mildly addicted, 2 were moderately addicted while none were severely addicted. Of 4 from upper lower SES 3 were found to be mildly addicted, 1 moderately addicted while none were severely addicted to the internet. It was reported that SES does not have a significant influence in prevalence or severity of IAD. This finding is more or less consistent to reports in US, Hungary and Finland wherein it was found to be unlikely that Internet addiction can occur in poorly developed countries where the availability of computers and Internet access are limited, except perhaps among those in the academic, business or government circles, or among the elite^{50,51,52}. Multivariate analysis showed young age, male gender, higher educational achievement, and financial stress to be positively associated with "problematic Internet use"^{53,54}. In this study, 70% (210) didn't have any signs of low self-esteem while 30% (90) were having signs of low self-esteem of which, 50% (45) of them with low self-esteem were in the non-addicted group while 50% (45) belonged to the addicted group. Of the 105 addicted 60 did not show any signs of low self-esteem. Of the 45 with low self-esteem 31 are mildly addicted while 12 moderately addicted and 2 were severely addicted. Low self-esteem was found in 42.8% of addicts while only in 23.07% of non addicts. In this study it was found that the prevalence of low self-esteem is more in IA, but not directly proportional to the severity of IA. Recent studies on internet addiction demonstrated that Internet addiction related positively to decrease in social interactions, depression, loneliness, and related negatively to self-esteem^{10,19}. So, it can be said that this finding is consistent with other studies that have found a negative relationship between self-esteem and Internet addiction^{19,21,22,29,55}. In our study 70% (210) were satisfied with life while 30% (90) were not satisfied, of which 50% (45) of them who were not satisfied were in the non-addicted group while 50% (45) belonged to the addicted group. Of the 105 addicted 60 did not show any signs of

dissatisfaction. Of the 45 with dissatisfaction 31 were mildly addicted while 12 moderately addicted and 2 were severely addicted. Dissatisfaction was found in 42.8% of addicts while only in 23.07% of non addicts. In this study it was found that the prevalence of dissatisfaction is more in IA, but not directly proportional to the severity of IA. So, it can be said that this finding is consistent with other studies that have found a negative relationship between satisfaction with life and Internet addiction.^{19,21, 22, 55}. Also, supportive data can be found in the studies of depressed individuals, dissatisfied individuals and individuals with low self-esteem who are more likely to engage in internet use^{55, 29}. Internet addiction related negatively to self-esteem and satisfaction with life. Findings have demonstrated that there are significant relationships among IA, self-esteem and satisfaction with life which were found to be compatible with previous studies. This could be explained by S E Caplan's²⁹, model of problematic internet use, which inferred that lonely and depressed individuals may develop a preference for online social interaction, leading to negative outcomes associated with their Internet use and Davis's model³⁰ by which pathological internet use is both developed and maintained by maladaptive cognitions. Shapira *et al.*⁵⁶, suggested the importance of future research to further delineate this problem. As stated above, Internet-addiction disorders may result from the excessive use of the Internet rather than from the independent addiction disorders that have yet⁵⁷ to be classified as psychiatric diseases⁵⁸. For example, the relatively lesser scores of self-esteem and satisfaction with life, in IA's would be useful in determining optimal clinical counselling and interventions for adolescents. Yet, there is no official psychiatric diagnosis of an Internet addiction, it remains to be seen whether this type of addiction will be incorporated into formal diagnosis classification systems. Several limitations of the study should be noted, to provide direction for future research. Firstly, a self-administered questionnaire was used, so there was no possibility of identifying false reports. Secondly, replication of this study for targeting other student populations should be made to generate a more solid relationship among constructs examined in this study, because generalization of the results is somewhat limited. Thirdly, as co relational statistics were utilized no definitive statements can be made about causality. The Internet's effects on our psychological health remain understudied.⁵⁹ The patients continue to present with symptoms born out of the digital age, and their symptoms are changing as the technology evolves to make a device that to many is like a new appendage. Future studies should explore the possibility of gender differences in components of Internet addiction, such as gaming, e-mail, chatting, shopping, information retrieval etc. Given the dramatic

changes that our society is undergoing because of the Internet revolution, it behoves us to try understanding the effects on lives of the people.

CONCLUSION

Internet use plays significant role in the acquisition of information and the sharing of knowledge. This requires further studies on the various psychological characteristics of adolescents related to the negative aspects and the physiological features causing Internet addiction.

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REFERENCES

1. Nalwa K AA. Internet addiction in students: a cause of concern. *Cyberpsychology and behavior* 2004 July; 6(6).
2. I. G. Internet addiction disorder. [Online]; 1996 [cited 2007 May 7. Available from: URL:<http://www.cog.brown.edu/brochure/people/duchon/humor/internet.addiction.html>.
3. Association. AP. Diagnostic and statistical manual of mental disorders. 4th ed., text rev. Washington, DC; 2000.
4. Young KS. Internet Addiction A New Clinical Phenomenon and Its Consequences. *American Behavioral Scientist* 2004 December; 48(1).
5. Chien Chou MCH. Internet addiction, usage, gratification, and pleasure experience: the Taiwan college students' case. *Computers and Education* 2000 January 14; 35: p. 65-80.
6. Griffiths MD. Does Internet and computer "addiction" exist? Some case study evidence. *Cyberpsychology and Behavior* 2000; 3(2).
7. KS. Y. Internet Addiction: The emergence of a new clinical disorder. *Cyberpsychology and Behavior* 1998; 3(1): p. 237-244.
8. Giovanni Ferraro PD(BCPD,ADPD). Internet Addiction Disorder: An Italian Study. *CYBERPSYCHOLOGY and BEHAVIOR* 2007 November 2; 10.
9. Ko CH,YJY,CCCa. Tridimensional personality of adolescents with internet addiction and substance use experience. *Canadian Journal of Psychiatry* ; 51.
10. Ko CH,YJY,CCCa. Gender differences and related factors affecting online gaming addiction among Taiwanese adolescents. *Journal of Nervous and Mental Disease* 2005; 193.
11. Shaw M,andBDW. Internet addiction: Definition, assessment, epidemiology, and clinical management. *CNS Drugs* 2008; 22.
12. Tao R,HX,WJ,ZH,ZY,andLM. Proposed diagnostic criteria for Internet addiction. *Addiction* 2010;105.
13. Deepak Goel ASaRK. A study on the prevalence of internet addiction and its association with psychopathology in Indian adolescents. *Indian J Psychiatry* 2013 May 7; 55(2): p. 140-143.
14. Young KS. Internet addiction: The emergence of a new clinical disorder. *CyberPsychology and Behavior* 1998; 1: p. 237-244.
15. Yoo HJ CSHJea. Attention deficit hyperactivity and Internet Addiction. *Psychiatry Clinical Neuroscience* 2004; 58: p. 487-94.

16. L. L. Net-generation attributes and seductive properties of the internet as predictors of online activities and internet addiction. *Cyberpsychology and Behavior* 2004; 7: p. 333-48.
17. Griffiths MD. Internet addiction: Does it really exist? In: Gackenbach, J. (Ed.). *Psychology and the Internet: Intrapersonal, interpersonal, and transpersonal applications* 1998; p. 61-75.
18. Kandell JJ. Internet addiction on campus: The vulnerability of college students. *CyberPsychology and Behavior* 1998; 1: p. 11-17.
19. Kraut R, LV, PM, KS, MT, and SW. Internet paradox: A social technology that reduces social involvement and psychological well being? *American Psychologist* 1998; 53: p. 1017-1031.
20. Kraut R, KS, BB, CJ, HV, and CA. Internet paradox revisited. *Journal of Social Issues* 2002; 58: p. 49-74.
21. McKenna KYA, and BJA. Plan 9 from cyberspace: The implications of the Internet for personality and social psychology. *Personality and Social Psychology Review* 2000; 4: p. 57-75.
22. Nie NH, HDS, and EL. Internet use, interpersonal relations, and sociability: A time diary study. In B. Wellman and C. Haythornthwaite (Eds.). *The internet in everyday life*. 2002; p. 215-243.
23. Egger O, RM. *Internet behavior and addiction*. Zurich, Swiss Federal Institute of Technology; 1996.
24. Young K. Caught in the net: how to recognize the signs of internet addiction and a winning strategy for recovery 1998.
25. Young K. Caught in the net: how to recognize the signs of internet addiction and a winning strategy for recovery 1998.
26. Beck AT, SRA, and BGK. *Manual for the revised Beck Depression Inventory*. San Antonio: TX: Psychological Corporation 1996.
27. Young K PMOJea. Cyber-disorders: the mental health concern for the new millennium. *Cyberpsychology and Behavior* 2000; 3: p. 475-9.
28. Black DW BGSS. Clinical features, psychiatric comorbidity, and health-related quality of life in persons reporting compulsive computer use behavior. *Journal Clinical Psychiatry* 1999; 60: p. 839-43.
29. Treuer T FZPJ. Internet addiction associated with features of impulse control disorder: is it a real psychiatric disorder? *J Affective Disorder* 2001; p. 66: 283.
30. SE. C. Relations among loneliness, social anxiety, and problematic internet use. *Cyberpsychology and Behavior* 2007 April; 10(2).
31. Black DW BGSS. Clinical features, psychiatric comorbidity, and health-related quality of life in persons reporting compulsive computer use behavior. *Journal Clinical Psychiatry* 1999; 60: p. 839-43.
32. Beck AT, SRA, and GMG. Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review* 1998; 8: p. 77-100.
33. Belsare T GGBD. Compulsive computer use. *American Journal of Psychiatry* 1997; p. 154: 289.
34. Aboujaoude E KLGNea. Potential markers for problematic internet use: a telephone survey of 2,513 adults *CNS Spectrums* 2006; 11(10): p. 750-5.
35. Spitzer RL WJGM. *Structured clinical interview for DSM-IV*. New York, New York State Psychiatric Institute; 1994.
36. Christenson GA FRdZMea. Compulsive buying: descriptive characteristics and psychiatric comorbidity. *Journal of Clinical Psychiatry* 1994; 55: p. 5-11.
37. AAntonio Bruno GSLCGPRAZMRAM. Prevalence of Internet Addiction in a Sample of Southern Italian High School Students. *International Journal of Mental Health and Addiction* 2014 April.
38. Christenson GA FRdZMea. Compulsive buying: descriptive characteristics and psychiatric comorbidity. *Journal of Clinical Psychiatry* 1994; 55: p. 5-11.
39. Christenson GA FRdZMea. Compulsive buying: descriptive characteristics and psychiatric comorbidity. *Journal of Clinical Psychiatry* 1994; 55: p. 5-11.
40. Christenson GA FRdZMea. Compulsive buying: descriptive characteristics and psychiatric comorbidity. *Journal of Clinical Psychiatry* 1994; 55: p. 5-11.
41. Christenson GA FRdZMea. Compulsive buying: descriptive characteristics and psychiatric comorbidity. *Journal of Clinical Psychiatry* 1994; 55: p. 5-11.
42. Ghassemzadeh L SMMA. Prevalence of internet addiction and comparison Internet addicts and non-addicts in Iranian high schools. *Cyberpsychology and Behavior* 2008; 11: p. 731-3.
43. Eisa Nasiri MRJVSKaAAH. Survey the Prevalence of Internet Addiction and its Influential Factors in Persian College Student in 2011. *Middle-East Journal of Scientific Research* 2011; 10(1): p. 50-53.
44. L. L. Net-generation attributes and seductive properties of the internet as predictors of online activities and internet addiction. *Cyberpsychology and Behavior* 2004; 7: p. 333-48.
45. Hall AS, PJ. Internet Addiction: College Student Case Study Using Best Practices in Cognitive Behavior Therapy *Journal of Mental Health Counseling* 2001 October.
46. Yeon Mi Ha WJH. Gender differences in Internet addiction and its association with psychological health among adolescents using a national web-based survey. *International Journal of Mental Health and Addiction* 2014 October; 12(5): p. 660 - 669.
47. Wen Ii ELG, MOH. Family factors in Internet addiction among Chinese youth - A Review of English and Chinese Language Characters. *Computers in human behavior* 2014 Feb; 31: p. 393 -411.
48. Johansson A GK. Internet addiction: characteristics of a questionnaire and prevalence in Norwegian youth (12-18 years). *Scand J Psychol* 2004 July; 45(3): p. 223-9.
49. Johansson A GK. Internet addiction: characteristics of a questionnaire and prevalence in Norwegian youth (12-18 years). *Scand J Psychol* 2004 July; 45(3): p. 223-9.
50. Belsare T GGBD. Compulsive computer use. *American Journal of Psychiatry* 1997; p. 154: 289.
51. Wen Ii ELG, MOH. Family factors in Internet addiction among Chinese youth - A Review of English and Chinese Language Characters. *Computers in human behavior* 2014 Feb; 31: p. 393 -411.
52. Wen Ii ELG, MOH. Family factors in Internet addiction among Chinese youth - A Review of English and Chinese Language Characters. *Computers in human behavior* 2014 Feb; 31: p. 393 -411.
53. L. L. Net-generation attributes and seductive properties of the internet as predictors of online activities and internet addiction. *Cyberpsychology and Behavior* 2004; 7: p. 333-48.
54. Wen Ii ELG, MOH. Family factors in Internet addiction among Chinese youth - A Review of English and Chinese Language Characters. *Computers in human behavior* 2014 Feb; 31: p. 393 -411

55. Pallanti S BSLQ. The shorter PROMIS questionnaire and the internet addiction scale in the assessment of multiple addictions in a high-school population: prevalence and related disability CNS Spectrums 2006; 11(12): p. 966-74.
56. Young K. Caught in the net: how to recognize the signs of internet addiction and a winning strategy for recovery 1998.
57. Park SK KJCC. Prevalence of Internet addiction and correlations with family factors among South Korean adolescents 2008; 43: p. 895-90.
58. Siomos KE DEBDea. Internet addiction among Greek adolescent students. Cyberpsychology and Behavior 2008; 11: p. 653-7.
59. Ghassemzadeh L SMMA. Prevalence of internet addiction and comparison Internet addicts and non-addicts in Iranian high schools. Cyberpsychology and Behavior 2008; 11: p. 731-3.

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