



## CORRELATES OF INTERNET ADDICTION AND CAREER DECISION MAKING SELF-EFFICACY AMONG COLLEGE STUDENTS

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### ABSTRACT

Internet usage provides a constant source of information, education and entertainment, social networking and educational purposes but its excessive use among the students is of much concern. Nowadays, the developing rate of organizations, professions, competitions and careers impose greater cognitive and emotional challenges to college students who have to make career decisions. Thus, the quality of career decision making self-efficacy (CDMSE) assumes considerable importance. Career decision-making self-efficacy ascertains adolescent's perceived confidence (self-efficacy) in their ability to plan and implement career related tasks in the educational environment.

From the reviews of previous studies it was evident that students self-efficacy and internet usage were highly correlated. In this line, the present study was conducted to investigate the relationship between Internet usage and Career decision making self-efficacy among college students in Chennai city. For this purpose Career decision making self-efficacy tool by Taylor and Betz (1983) and Internet addiction test (1998) by Kimberly Young was used to collect the data. For this purpose data was collected from 72 students in the age group 16-18 years from privately managed colleges through purposive sampling method. Both descriptive and inferential statistics were be used to analyse the collected data. From the results it was found that there exist a negative correlation between Internet addiction and career decision making self-efficacy of adolescents. It was concluded that Internet addiction would affect the career decision making self-efficacy of the adolescents which in turn would hamper their career development process.



**KEYWORDS:** College students, Career Decision Making Self-Efficacy, Internet Addiction, Chennai City .

### INTRODUCTION

Most students use their smart phone with Internet as a functional tool to perform their personal goals in everyday-life and many cannot imagine living without the Internet in education or private life. Youth (i.e., between 18 and 24 years old) were more susceptible to internet addiction than elderly people (Soule, Shell & Kleen,2002). Internet usage in college students are particularly recognized as a social problem whereas, this generation depends heavily on the internet for learning, social activities and leisure (Jones & Fox, 2009). They tend to have less cognitive control capabilities and boundary setting skills (Liu & Potenza, 2007) are more vulnerable to media influences and internet addiction (Strasburger, Wilson & Jordan, 2009; Casey, et al., 2005). Students suffer from a loss of psychological control over their Internet use resulting in personal agony, symptoms of psychological dependence, and

many unpleasant consequences such as social problems , educational /work difficulties (Young, 1998a; Beard and Wolf, 2001).This phenomenon is often referred to as Internet addiction. Young (1996) gave the first scientific description of a young man who developed severe psychosocial problems due to his excessive Internet use.

The main criteria to diagnose a person with internet addiction (APA,2013) are as follows :obsession with Internet games; withdrawal symptoms of irritability, anxiety, or unhappiness ; development of tolerance ; unsuccessful attempts to regulate the behavior ; loss of interest in other activities ;continued excessive use despite knowledge of psychosocial problems ; cheating others regarding the quantity of time spent on gaming ;use of this behavior to flee or relieve a negative mood; endangering/losing a significant relationship/job/educational opportunity.

Brand, Young & Laierr (2014) have pointed out that certain Neuropsychological functions are related to internet addiction. It has been found that certain prefrontal functions in particular executive control functions are related to symptoms of Internet addiction i.e unsuccessful attempts to control behavior.

Nowadays, the developing rate of organizations, career choices, demands, competitions and careers impose greater cognitive and emotional challenges to college students who have to make career decisions. Thus, the quality of career decision making self-efficacy (CDMSE) assumes considerable importance (Hackett, 1995). Taylor & Betz, (1983) defines Career decision-making self-efficacy as an individual's beliefs about his or her abilities to make a career decision There has been a significant amount of research regarding career decision-making self-efficacy and it has been associated with a wide range of career development and personal outcomes.

The concept of career decision making self-efficacy, is often deliberated in career development literature (Andrews et al., 2014). For example, career decision-making self-efficacy is related to career indecision and decision-making difficulties ( Coon, 2008; Guay et.al, 2006), styles of career decision making (Niles, Erford, Hunt, & Watts, 1997), lower levels of career maturity (Conkel Ziebell, 2010; Lee, 2007) and career identity (Betz et al., 1996). Being addicted to the Internet seems to lead to a vicious negative cycle, in which individuals receive temporary gratification every time they use online, making them want to go online more to seek this gratification (Hall & Parsons, 2001). It may lead to depressive and socially anxious feelings (Morgan & Cotten, 2003). Moreover Cognitive misrepresentations due to internet addiction leads to self-doubt, low self-efficacy, and negative self-appraisal.\*\*\*\*\* From the review of literature it was evident that most of the studies concentrated on CDMSE levels of college students related to career related and demographic variables, there is little research to be found in terms of internet addiction. Hence this study aimed to find the relationship between internet addiction and CDMSE of college students.

## REVIEW OF THE LITERATURE

There are different scientific terms in use when referring to an overuse of the Internet, such as Internet addiction (Young et al., 2011), compulsive Internet use (Meerkerk et al., 2006, 2009, 2010), Internet-related addictive behavior (Brenner, 1997), Internet-related problems (Widyanto et al., 2008), problematic internet use (Caplan, 2002), and pathological Internet use (Davis,2001). According to (Davis2001) lack of social support in real life and feelings of social isolation or loneliness are main causative factors to the development of internet addiction.

Mahamid and Berte ( 2018a, 2018b) explored , about the purpose of using the internet and found that more than 47% of students were engaging in addictive patterns of internet use, with social media being the highest ranked category of student internet activity compared to use for academic tasks or business opportunities Internet usage and its significant negative effects on adolescence and early adulthood showed an increase in negative social comparison, reduction of real social activities, and an increase in symptoms of social withdrawal, depression and anxiety (Odaci 2011). Excessive internet use/addictive patterns of use was found to be highly and negatively correlated with perceived self-efficacy of the undergraduate college students. Furthermore self-efficacy is known to be a risk factor in both symptoms of depression and suicidal ideation, further research into this relationship may

be important in devising interventions to both reduce internet addiction and increase self-efficacy during the critical life period of late adolescence (Betre, Mahamid & Affounae (2019).

A number of studies have investigated the negative relationship between internet addiction and self-efficacy Kim and Davis (2009); Odaci (2011); Lee et al. (2001)

Irena et al. (2010).

Sari and Aydin (2015) examined the role of self-efficacy in adolescent internet addiction and found that general self-esteem, social self-efficacy, family-home self-esteem, and total self-esteem were significantly and negatively correlated with internet addiction.

Taylor and Betz (1983) posited that low career decision-making self-efficacy could impede exploratory behavior and the development of decision-making skills, and thus may be predictive of career indecision (Hackett 1995). Moreover Chui (2007) also reported that career decision-making self-efficacy predicts career decision making process, their ability to make a decision, their career exploration behaviors, their performance goals, and their career identities. Students with higher levels of career decision-making self-efficacy were better ready to make career decisions, participated in additional career exploration, had higher performance goals, and had a far better sense of their career identities. A higher self-efficacy perception can also inspire the individual to be more determined in, and passionate about their career activities whereas a lower self-efficacy perception can cause one to easily give up or be less willing to persist when faced with obstacles (Bandura (1997). Gender and ethnic differences were not found for CDMSE of adolescents (Henis 2000)

## RESEARCH OBJECTIVES

- To find the level of internet addiction among college students
- To find the level of career decision making self-efficacy among students
- To find the relationship between internet addiction and career decision making self-efficacy among students
- To find the influence of age, gender, parental educational status, Hours spent on internet on internet addiction and career decision making self-efficacy among students.

## OPERATIONAL DEFINITION

**Internet addiction** is characterized by excessive or poorly controlled preoccupations, urges or behaviours regarding computer usage and Internet access that lead to impairment or distress.

**CDMSE** - an individual's degree of belief that he or she can successfully complete tasks necessary to making career decisions.

**College students** - a student enrolled in a college or university who is learning under the supervision of a certified teacher in order to qualify for a degree in education.

## Hypotheses framed

H1: There will be no significant gender difference exist in internet addiction among students.

H2: There will be no significant gender difference exist in CDMSE among students.

H3: There will be no significant difference in internet addiction among students in terms of age, gender, parental educational status, Hours spent on internet.

H4: There will be no significant difference in CDMSE among students in terms of age, gender, parental educational status, Hours spent on internet.

H5: There will be no significant relationship between internet addiction and CDMSE among adolescents.

## Tools used

1. Semi-structured questionnaire that contained details of demographics, educational qualification, purpose of using the internet (by choosing among the options like education, entertainment, gaming and social networking like face book, whats app etc), money spent per month for using internet, place of access to internet (home, browsing center, or smart phone) and the average duration of use per day

were used to gain knowledge about the participant's internet usage. Prior to administration of tools all the participants were informed about purposes of the study.

2. The Internet Addiction Test (IAT; Young, 1998) was used to know the level of internet addiction. The tool consist of 20-items presented in 5-point Likert scale that measures the severity of self-reported compulsive use of the internet. The sum of the scores of 20 items gives the total internet addiction score ranging from 20 to 100. According to Young's criteria, total Internet addiction Test (IAT) scores 20-49 represent average users with complete control of their internet use, scores 50-69 represent over-users with frequent problems caused by their internet use, and scores 70-100 represent internet addicts with significant problems caused by their internet usage.

3. CDMSE (Taylor & Betz, 2012) - The 25-item CDSE-SF (Betz & Taylor, 2012) is a shortened version of the 50-item CDSE (Betz & Taylor, 2012), which is typically used as a unidimensional measure. The five factors include skills in developing an accurate self-appraisal, gathering occupational information, goal selection, making plans for the future, and problem solving. Respondents indicate their level of confidence in carrying out specific behaviors associated with the five competency areas using a 5-point Likert-type response format with endpoints of 1 = no confidence at all to 5 = complete confidence. This gives a possible range for the 25 items of 25-125, with higher scores indicating higher levels of confidence. Tool measures the five sub scales of CDMSE namely self-appraisal, gathering occupational information, goal selection, making plans for the future, and problem solving.

**Sampling:** students in the age group between 16-22 years were selected from privately managed schools and colleges. Quasi experimental research design was adopted for the current study and purposive sampling technique was used to collect the data.

**Statistical Analysis:** Descriptive statistics like percentage, mean, standard deviation and inferential statistics like Pearson product moment correlation test and 't' tests and anova tests were used to test the null hypothesis.

## RESULTS AND DISCUSSION

**Table 1 showing the descriptive statistics of the students**

Variable	Group	Frequency(N)	Percent (%)
Gender	Male	17	23.6
	<b>Female</b>	<b>55</b>	<b>76.4</b>
Age	16-18years	7	9.7
	<b>18-20 years</b>	<b>31</b>	<b>43.1</b>
	20-22years	17	23.6
	22years & above	17	23.6
Father's education	Non graduates	32	44.4
	<b>Graduates</b>	<b>40</b>	<b>55.6</b>
Mother's education	Non graduates	36	50
	Graduates	36	50
Hours spent on Internet usage	0-1hours	10	13.9
	0- 2Hours	8	11.1
	0-3 hours	25	34.7
	<b>3 Hours &amp;above</b>	<b>29</b>	<b>40.3</b>
Average money spent on using internet	<b>0-500 Rs</b>	<b>48</b>	<b>66.7</b>
	500-1000Rs	16	22.2
	100-1500Rs	6	8.3
	1500Rs &above	2	2.8

Access to internet	<b>Smart phone</b>	<b>69</b>	<b>95.8</b>
	Laptop	3	4.2
Purpose of using Internet	Entertainment	21	29.2
	<b>Social media</b>	<b>36</b>	<b>50</b>
	Education	9	12.5
	Career related	6	8.3

From the table 1 it was evident that 76.4% of respondents were female and the remaining 23.6% of them were male. Average ages of the respondents were 18-20 years. With regard to father's educational status 44.4% of them were non-graduates, 55.6% of them were graduates and the remaining 15% were post-graduates. Whereas 50% of the mothers were non-graduates and the remaining 50% were graduates. Majority of the respondents (40.3%) of them uses internet for more than 3 hours per day and also the money spent for using the internet approximates to five hundred rupees per month as reported by 66.7% of the respondents. Results indicated that the major source of internet usage was through smart phone (95.8%) and the purpose of using the smart phone was to use social media(50%) like whatsapp, facebook, instagram etc. Next to social media usage Many of them uses for entertainment purpose like watching movie, listening to songs, you tube etc. Miserably the internet usage by the college students related to education and career related activities were only limited i.e 12.5% and 8.3% respectively.

**Table 2 showing the mean, standard deviation and 't' value of Internet addiction and CDMSE among students**

Variable	Gender	N	Mean	SD	t'	Sig. (2-tailed)
Internet addiction	Male	17	47.35	10.43	3.509	.001*
	Female	55	36.95	10.76		
CDMSE	Male	17	87.47	29.29	0.251	0.81NS
	Female	55	88.87	16.41		

In order to investigate the difference between male and female students with regard to internet addiction and CDMSE, t-test was performed. Table 2 reveals that the adolescent boys and girls differ significantly in their internet usage. This means boys use the internet for social networking, education and entertainment purpose more than the girls. Hence, the hypothesis H1 was rejected. These findings concur with that of Hill and Argyle (2003) but not with Hamburger and Artzi (2000). More over it was found that gender difference does not in the CDMSE of college students since the 'p' value is greater than 0.05. This result is in accordance with the study conducted by (Henis 2000). Hence, the hypothesis H2 was accepted.

**Table 3 showing the influence of age, no of hours spent on internet, Purpose of using internet on CDMSE**

Variable	Groups	Sum of squares	df	Mean square	F	Sig
Age	Between Groups	384.352	3	128.117	.312	.816
	Within Groups	27905.523	68	410.375		
	Total	28289.875	71			
No of hours spent on internet	Between Groups	854.661	4	213.665	.522	.720
	<b>Within Groups</b>	27435.214	67	409.481		
	Total	28289.875	71			
Purpose of using the internet	Between Groups	2834.62	4	708.66	1.87	.127
	Within Groups	25455.25	67	379.93		
	Total	28289.88	71			

Analysis of variance was calculated to find the difference in mean value of CDMSE among the groups based on age, number of hours spent on internet and purpose of using the internet. From the results it was evident that there is no significant difference (P values is greater than 0.05) in CDMSE among the groups based on age, number of hours spent on internet and purpose of using the internet. Hence the Hypothesis H4 was accepted.

**Table 4 showing the influence of age, no of hours spent on internet, Purpose of using internet on Internet addiction**

Variable	Groups	Sum of squares	df	Mean square	F	Sig
Age	Between Groups	301.052	3	100.351	.750	.526
	Within Groups	9100.267	68	133.827		
	Total	9401.319	71			
No of hours spent on internet	Between Groups	1653.716	4	413.429	3.575	.011*
	Within Groups	7747.603	67	115.636		
	Total	9401.319	71			
Purpose of using the internet	Between Groups	398.778	4	99.695	.742	.567
	Within Groups	9002.541	67	134.366		
	Total	9401.319	71			

Analysis of variance was calculated to find the difference in mean value of Internet addiction among the groups based on age, number of hours spent on internet and purpose of using the internet. From the results it was evident that there is no significant difference (P values is greater than 0.05) in internet addiction among the groups based on age, and purpose of using the internet. Hence the Hypothesis H3 was accepted. However results shows that the number of hours spent on internet usage

significantly influence Internet addiction there the P value is  $0.011 (< 0.05)$ . The students using the smart phones for three hours and above are addicted to Internet usage compared to other groups who were using less than 3 hours, less than 2 hours and one hour respectively.

**Table 5 showing the correlation between Internet addiction and CDMSE of the Students.**

Variable	N	Mean	SD	'r' value	Sig. (2-tailed)
Internet addiction	72	88.54	19.96	-0.318	0.006*
CDMSE		39.40	11.51		

Pearson product moment correlation was used to find the relationship between Internet addiction and CDMSE. Table shows the 'r' value to be -0.318 which indicates a negative correlation between Internet addiction and CDMSE. Since the 'p' value is  $0.006 (< 0.05)$  indicates a significant correlation. Hence the hypothesis H5 was accepted. This implies that CDMSE is high for the students when their internet addiction is less and vice versa. The results of the present study are in accordance with the study conducted by Odaci, (2011), which indicates a high and negative correlation exist between academic self-efficacy and Internet addiction.

Students with higher levels of CDMSE were better able to make career decisions, career exploration, had higher performance goals, and had a better sense of their career identities (Chui, 2007). In addition to that Bandura (1997) stated that an Individual with higher self-efficacy perception are more determined in, and passionate about their career activities whereas a lower self-efficacy perception can cause one to easily give up or be less willing to persist when faced with career difficulties. Hence students must be made aware about the ill effects of internet addiction and its impact on CDMSE which plays an important role in predicting career decision making process.

## CONCLUSION

- Gender difference exist in internet addition among students but not in CDMSE, male college students were revealed more internet addiction than female college students
- Educational status of parents, age, Purpose of using the internet doesn't influence the CDMSE and internet addiction of college students. However number of hours spent on the internet usage predicts the addictive nature of the College students
- Internet addiction and CDMSE were negatively correlated, this implies that college students with lesser internet addiction had high CDMSE.

## LIMITATION OF THE PRESENT STUDY

1. The present study was restricted to college students in Chennai District Only.
2. Only a small number of samples were taken for the study, large sample might provide a statistically strong relationship between the Internet addiction and career decision making self-efficacy (CDMSE). Thus, it would be important to carry out study which includes different level of college students, varying socioeconomic levels and their relationships to internet usage and career decision-making self-efficacy

## RECOMMENDATIONS

Based on the results of this study, career counsellors, school counsellors and academicians are instructed to consider the effect of internet addiction on career decision-making self-efficacy levels of under graduate college students. The negative effects, should be taken into consideration with interventions that help overcome this dependency of internet usage. Similarly, positive effects of internet usage should also be highlighted and integrated into psycho-educational interventions.

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**REFERENCES**

- Andrews, L. M., Bullock-Yowell, E., Dahlen, E. R., & Nicholson, B. C. (2014). Can perfectionism affect career development? Exploring career thoughts and self-efficacy. *Journal of Counseling & Development*, 92(3), 270–279. doi:10.1002/j.1556-6676.2014.00155.x
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman.
- Beard, K. W., and Wolf, E. M. (2001). Modification in the proposed diagnostic criteria for Internet addiction. *Cyberpsychol. Behav.* 4, 377–383. doi:10.1089/109493101300210286
- Berte, D, Z., Mahamid,F,Z., & Affouneh,S.(2019). Internet Addiction and Perceived Self-Efficacy Among University Students. *International Journal of Mental Health and Addiction* .https://doi.org/10.1007/s11469-019-00160-8
- Betz, N. E., Klein, K. L., & Taylor, K. M. (1996). Evaluation of a short form of the career decision-making self-efficacy scale. *Journal of Career Assessment*, 4, 47 –57. doi:10.1177/ 106907279600400103
- Brand, M., Young , K ., & Laier, C.,2014. Prefrontal control and internet addiction –A theoretical model and review of neuro psychological and neuro imaging findings .*Frontiers in human neuro science*.doi.10.3389/fnhum.2014.003375.
- Caplan,S.E.(2002).ProblematicInternetuseandpsychosocialwell-being:developmentofatheory-basedcognitive-behavioralmeasurementinstrument.Comput. Human Behav. 18,553–575. doi:10.1016/S0747-5632(02)00004-3
- Casey, B. J., Tottenham, N., Liston, C., & Durston, S. (2005). Imaging the developing brain: What have we learned about cognitive development? *Trends in Cognitive Sciences* ; 9, 104-110.
- Chui, Y. H. (2007). Career decision making self-efficacy and outcome expectations in secondary student school-to-work transition (Unpublished doctoral dissertation). Chinese University of Hong Kong, Shatin, Hong Kong.
- Conkel Ziebell, J. L. (2010). Promoting viable career choice goals through career decision-making self-efficacy and career maturity in inner-city high school students: a test of social cognitive career theory (Unpublished doctoral dissertation). University of Minnesota, Minneapolis, MN.
- Coon, K. L. (2008). Predicting career decision-making difficulties among undergraduate students: The role of career decision making self-efficacy, career optimism and coping (Unpublished doctoral dissertation). Southern Illinois University, Carbondale, IL
- Davis, R. A. (2001). A cognitive-behavioral model of pathological Internet use. *Comput. Human Behav.* 17,187–195. doi:10.1016/S0747-5632(00)00041-8
- Guay, F., Ratelle, C. F., Senécal, C., Larose, S., & Deschênes, A. (2006). Distinguishing developmental from chronic career indecision: Self-efficacy, autonomy, and social support. *Journal of Career Assessment*, 14, 235–251. doi:10.1177/1069072705283975
- Hackett, G. (1995). Self-efficacy in career choice and development. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 232–258). New York, NY: Cambridge University Press.
- Hall, A. S., & Parsons, J. (2001). Internet addiction: college student case study using best practices in cognitive behavior therapy. *Journal of Mental Health Counseling* ; 23, 312-327.
- Henis , R. (2000).Career Exploration and Career Decision-Making Self-Efficacy Amongst Adolescents: Individual and Contextual Factors. Career Exploration and Career Decision-Making Self-Efficacy Amongst Adolescents: Individual and Contextual Factors Rae Henis A Thesis submitted in partial fulfilment of the requirements fo r the degree of Master of Arts in Psychology, Massey University, 2000
- Irena, S., Norman, H., & Xiaobin, H. (2010). Time on the Internet at home, loneliness, and life satisfaction: evidence from panel time-diary data. *Computers in Human Behavior*, 26(10), 329–338. https://doi.org/10.1016/j.chb.2009.11.002.
- Jones, S., Fox, S.(2009) Generations Online in 2009. Pew Internet & American Life Project, 2009.
- Kim, H. H., & Davis, K. E. (2009). Toward a comprehensive theory of problematic internet use: evaluating the role of self-esteem, anxiety, flow, and the self-rated importance of internet activities. *Computers in Human Behavior*, 25, 490–500. https://doi.org/10.1016/j.chb.2008.11.001.



- Lee, C. M. M. (2007). Career maturity, career decision making self-efficacy, interdependent self-construal, locus of control and gender role ideology of Chinese adolescents in Hong Kong (Unpublished doctoral dissertation). Hong Kong Baptist University, Kowloon, Hong Kong.
- Lee, S. B., Lee, K. K., Paik, K. C., Kim, H. W., & Shin, S. K. (2001). Relationship between internet addiction and anxiety, depression, and self efficacy in middle and high school students. *Korean Neuropsychiatry Assoc*, 40(6), 1174–1184.
- Liu, T., & Potenza, M. N. (2007). Problematic Internet use: Clinical implications. *CNS Spectrums* ;12(6), 453-466.
- Lo Presti, A. (2009). Snakes and ladders: Stressing the role of meta-competencies for post-modern careers. *International Journal for Educational and Vocational Guidance*, 9, 125–134. doi:10.1007/s10775-009-9157-0
- Mahamid, F. A., & Berte, D. Z. (2018a). Social media addiction in geopolitically at-risk youth. *International Journal of Mental Health and Addiction*, 17(1), 102–111. <https://doi.org/10.1007/s11469-017-9870-8>.
- Mahamid, F. A., & Berte, D. Z. (2018b). Portrayals of violence and at-risk populations: symptoms of trauma in adolescents with high utilization of social media. *International Journal of Mental Health and Addiction*. <https://doi.org/10.1007/s11469-018-9999-0>.
- Meerkerk, G. J., Van Den Eijnden, R. J. J. M., Franken, I. H. A., and Garretsen, H. F. L. (2010). Is compulsive Internet use related to sensitivity to reward and punishment, and impulsivity? *Comput. Human Behav.* 26,729–735. doi:10.1016/j.chb.2010.01.009
- Morgan, C., & Cotten, S. R. (2003). The relationship between Internet activities and depressive symptoms in a sample of college freshmen. *Cyber Psychology and Behavior* ; 6, 133-142.
- Niles, S. G., Erford, B. T., Hunt, B., & Watts, R. H. (1997). Decision-making styles and career development in college students. *Journal of College Student Development*, 38(5), 479–488
- Odaci, H. (2011). Academic self-efficacy and academic procrastination as predictors of problematic internet use in university students. *Computers in Education*, 57(7), 1109–1113. <https://doi.org/10.1016/j.compedu.2011.01.005>.
- Strasburger, V. C., Wilson, B. J., Jordan, A. B. (2009). *Children, Adolescents, and the Media* (2nd edn). Sage.
- Sari, S., & Aydin, B. (2015). Internet addiction among adolescents: the role of self-esteem. *Procedia-Social and Behavioral Sciences*, 15(2), 3500–3505. <https://doi.org/10.1016/j.sbspro.2011.04.325>.
- Soule L, Shell W, Kleen B. Exploring Internet addiction: Demographic characteristics and stereotypes of heavy internet users. *J Comput Info Syst* 2002;44:64-73.
- Taylor, K. M., & Betz, N. E. (1983). Applications of self-efficacy theory to the understanding and treatment of career indecision. *Journal of Vocational Behavior*, 22, 63-81.
- Widyanto, L., Griffiths, M. D., Brunnsden, V., and McMurrin, M. (2008). The psychometric properties of the Internet-related problems scale: a pilot study. *Int. J. Ment. Health Addict.* 6, 205–213. doi:10.1007/s11469-007-9120-6.
- Young KS. Internet addiction: The emergence of a new clinical disorder. *Cyberpsychol Behav* 1998;1:237-44.
- Young, K. S. (1998a). *Caught in the Net: How to Recognize the Signs of Internet Addiction – And a Winning Strategy for Recovery*. New York, NY: John Wiley & Sons, Inc.
- Young, K. S., Yue, X. D., and Ying, L. (2011). “Prevalence estimates and etiologic models of Internet addiction,” in *Internet Addiction*, eds K. S. Young and C. N. Abreu (Hoboken, NJ: John Wiley & Sons), 3–18.