



PREVALENCE RATES OF INTERNET ADDICTS BEFORE AND AFTER YOGA PRACTICES USING YOUNG'S SCALE

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Abstract: Since 1996, many studies are carried out on Kimberly S Young's 8 and 20 questionnaires. But there were no primary treatment methods in correcting the prevalence and socio-demographic rates of internet addiction cases. In this study, we hypothesized that yoga is a skilled tool to tackle internet addiction. The aim is to evaluate prevalence rates of internet addiction during the pre-post yoga practices among the school and college going students in Bhopal city of Madhya Pradesh, India. A package of yoga techniques are developed for addressing the internet addict cases. Both quantitative and qualitative analysis is carried out in this paper. A cross sectional sample size of 299 cases comprising of school, college students are selected for our studies. To evaluate the addiction cases, we have used Young's 20 item questionnaire. Our hypothesis is proved to be significant with 't' value 71.14 with p value 0.0001. We found 3 categories of prevalence rates viz; shift users from pre yoga 3.2 % to post 92.03% increase, while mild users reduced from 25.91% to 7.90 during pre and post yoga and final category often users from 73.58% to 0% users and there are no severe cases. Based on findings we may conclude that there is a significant reduction in the internet addicts in addicted cases. The present paper's pre yoga, data are compared with the surwase *et al.* results where percentage varied from 90 to 99%, mild, normal, moderate cases. A comprehensive study is required to carry out the clinical studies combine with yoga.

Key words: Internet addiction, Yoga, prevalence rate.

Introduction: Internet addiction is a newly emergent disorder with the discovery of 1 x 1 sq. Mm grain size¹ computer at the cost of Rs.7/-

only by IBM computers has enhanced the problem of addiction more all world over, little known about the effect of internet. Internet user base in India is expected to reach between 450-465 million by June 2017, up from 432 million on December 2016², with over 460 million internet users, India is the second largest online market, ranked only behind China. By 2021², we expect an equal number of internet addicts in India. "Technological addiction can happen to

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anyone”, said Holland Haiis³ who describes technology as “the new 21st century addiction”. As per WHO⁴, the addiction is considered as the continuous use of stimulation, which often causes cravings when it is absent subjectively. Two important addicts in principle are either substance addiction and the other is “behavioural addiction such as internet addiction or mobile addiction^{5,6}.” The internet is a neutral device to carry on research work among academics and others⁷. It is a very well recognized channel for exchange of information, social networking, academic research, entertainment, communication, commerce etc. At present, the use of internet and its outcomes or outputs has become a controversial, tricky and complex issue⁸. On the other hand, it is a most important and useful tool for a modern man but people have become victim or a servant of computer or caught in the internet web like a spider web of the same technology. And this is called internet addiction. The side effects of internet addiction are related to suicidal tendencies and with a variety of psychiatric disorders⁹ such as stress, anxiety, depression etc. Majority of college students misuse internet for enjoyment, time pass, games, movies, prone and sexual prohibited items and rarely for their education purpose. Kimberly S Young⁷ has proposed five types of internet addiction such as computer game addiction, surfing addiction, net compulsions, cyber sexual addiction, and cyber-relationship addiction. The college students have invariably become the victims of this technology called internet addiction technology. This led to involvement of mental health experts to discuss in great detail about the problem of internet addiction. The study carried out by Sharma et al. (2016)¹⁰, internet addiction was found to be significant ($p < 0.05$) in males, prolonged users, and younger age of exposure to internet and high socioeconomic status than their counterparts. Another study of Goel (2013)¹¹, brings about the ill effects of excess use of internet leading to

addiction and be vigilant about psychopathology. India’s premier institute National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore has started India's first technology de-addiction centre, SHUT Clinic¹² (Service for Healthy Use of Technology). Stern (1999)¹³ article asserts the misuse of computers. The work of Gedam (2016)¹⁴ brings about significant differences in some of the parameters of internet use pattern and psychopathology among the control and internet addicts. Aydm&San (2011)¹⁵ showed that self-esteem were significant and negatively correlated with internet addiction. In the study of Kuss¹⁶, a holistic perspective was developed based on the clinical picture of internet use, also provided a comprehensive overview of clinical studies.

A technical manual¹⁷ is developed by Young’s and Abreu for developed from therapeutic point of view by addictive use of the internet. Taking this manual as a reference guide, Surwase^{etal}¹⁸ carried out studies on Prevalence of Internet Addiction and its effect on Mental Health among collage going students in Nanded city of Maharashtra with a sample size of 287. The studies throw many challenges to evolve a comprehensive approach in combining awareness and good practices of using internet services. Another study by Patil *et al*¹⁹ on the prevalence and pattern of internet addiction was conducted in 488 medical students in Nagpur, Maharashtra. There results show that prevalence of internet addiction by using Young’s 3.68% with male predominance indicates that internet addiction is growing problem. Prevalence rate of mild users was 34.83%. Arthanari *et al.*²⁰ also conducted the study on prevalence & determinants of internet addiction among Indian adolescents. There results were found to have a significantly higher odds’ for internet addiction. In this direction, we carried out pre and post Yoga studies as a primary treatment measure. As a primary treatment measure, it is used as a complimentary measure of treatment. Yoga²¹, as

discovering dysfunctional perception and cognition, is found in Hindu texts, in Buddhist Mahāyāna works, as well as Jain texts. Originally, yoga²¹ can harmonize the body and soul together, in union. Since high-stress levels, unregulated lifestyle among students are main contributors towards internet addiction, this integrated yoga program with its comprehensive holistic approach may serve as a promoter for healthy and wealthy use of technology.

The problem noticed in all the above studies shows that there are no studies carried out on effect of yoga on internet addicts. We found in the above studies is in treatment of different prevalent rates of addicts. We undertook in this study on one of the challenges faced by the college students viz; how internet addiction leads to poorer mental health and how this could be overcome through yoga techniques. We undertook 299 samples in Bhopal city of Madhya Pradesh, India. We faced many problems in interviewing the collage going students. Convincing the students that he is not an addict was the biggest issue in our diagnostic study. Instead of using the word addiction, we used the word “Caught in the Net”²³ so that the students felt psychologically easier. Accordingly, the problem statement is stated.

Problem Statement: The problem may be stated as how to create self-awareness using the Kimberly S Young’s diagnostic study questionnaire¹⁷ among the college students in maintaining the mental health and avoid internet addiction issues?. It may further be enumerated as when we approached the college students they are not aware of the burden of addiction issue and were not willing to accept to fill the questionnaire. The Young’s diagnostics have to be applied and convince the student community that they have become addicts unknowingly. Many college students face the problems of excessive internet usage and so much immersed that they are inattentive and have become addicts of the online computer system. Hence, a hypothesis has been proposed as;

Hypothesis: “Yoga (independent variable) is a skilled tool to avoid Internet Addictions (dependent variable)”.

Yoga is an independent entity defined in the form of independent variable as a means of balancing and harmonizing the body–mind addictions²⁴. Balancing act may be carried out through practices of Shatkarma (cleansing processes), sukshamavyayama (Pawanmuktasana series-I), asana (body postures), pranayama (yogic breathing), yoganidra (Yoga sleep) and meditation. Swami Sivananda Saraswati²⁴ of Rishikesh explained yoga as consonance between thought, feeling and deed.

The aim of this study is to enable the students to practice yoga methods as a primary treatment of internet addicts by creating self-awareness and improving physical and mental health.

Materials and Methods: Young’s questionnaire was administered to 301 subjects and out of which 299 subjects were considered and could be analysed among the college and school students. The study was carried out in Barkatullah University, Nutan collage, Kendriya Vidyalaya No.2 in Bhopal city. The age group of the students varied in the range from 16-22 years. They were studying in B.Sc., Engineering, XI and XII classes. The study was carried out for a period of 3 months from December–February 2017-18. The socioeconomic profile details of the students are illustrated in Table 1. The socioeconomic status shows that the majority of the parents of the students belong to the average middle class society with an average monthly income ranging from Rs.20,000 - 40,000/- per family. It may further be noted that about 50% of the students were residing in the hostel. The mean age of the students was 19 years. Among these students 168 (56.18%) were females and 131 (43.85%) were males.

Table 1: Pattern of distribution of participants according to Socio-economic profile characteristics

Characteristics	No. of study subjects (N=299)	Percentage (%)
Age		
16-18 Years	114	38.12
19-20 Years	106	35.45
>20 Years	79	26.42
Gender		
Male	131	43.81
Female	168	56.18
Year of study		
11th and 12th	79	26.42
B.Sc. and B.E. (I, II & III Year)	201	67.22
M.B.A.	19	6.35
Place of stay		
Own house	89	29.76
Hostel	147	49.17
Rent	63	21.07
Socioeconomic status		
Upper (I)	79	26.42
middle (II)	175	58.53
Lower (III)	45	15.05

We made use of Young’s pre-validated, pre-tested, structured questionnaire. All questionnaires were distributed to the participants in campus and were collected onsite after 30minutes. The questionnaires were anonymous and self-administered. The questionnaire contained two parts:

1. Socio economic information as given in table 1.
2. Young’s Internet Addiction Test (YIAT)¹⁷

YIAT was applied to qualify for the prevalence of Internet addiction. It is a 20-item questionnaire measured on the six-point scale. After all the questions have been answered, numbers for each response are added to obtain a final score. Prevalence is defined in the range; shift users 0-30 points, mild users 31-49 points,

often user’s 50-79 points, and severe 80-100 points.

Results

Data was entered and analysed with the help of SPSS package. Descriptive statistics of the data are shown in Table 3. The pre and post data prevalence rates are found to be significant at 0.0001 with a t value of 71.14.

Table 3: Descriptive Statistics

Mean	Standard Deviation	SEM	Df	t-value	Significance level
2.645	0.6097	0.0598	298	71.14	0.0001

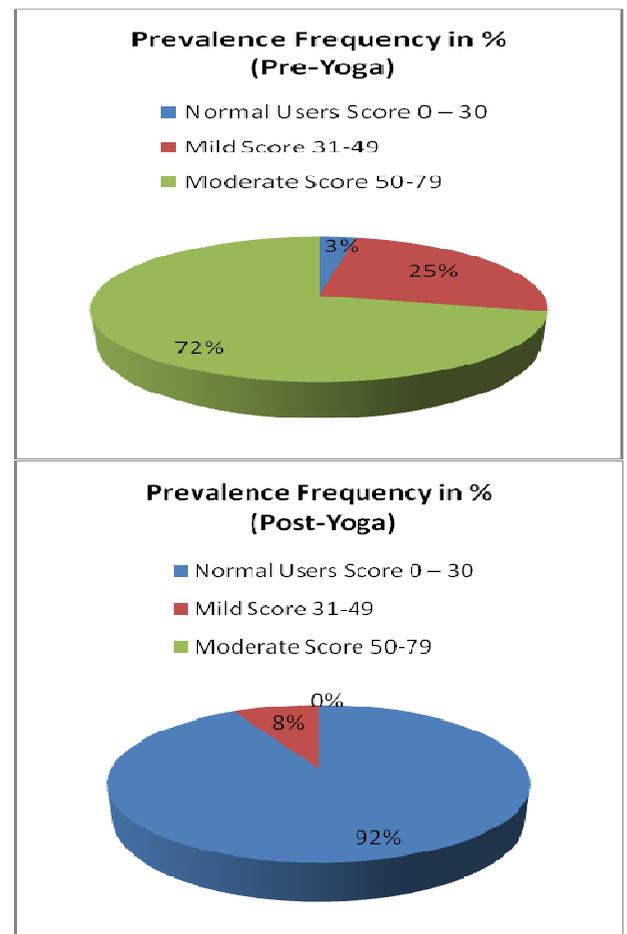


Fig 1. Pie chart showing pre and post data - Prevalence Rates of Internet addiction with and without Yoga

In the figure, prevalence rates shown with percentages. According to the pie chart we found 3 categories of prevalence rates viz; shift users from pre yoga 3.2 % to post 92.03% increase, while mild users reduced from 25.91% to 7.90 during pre and post yoga and final

category often users from 73.58% to 0% users and there are no severe cases. Prevalence rate of internet addicts were compared by Paired sample t-Test without and with Yoga practices. The yoga package schedule developed for internet addicts is shown in Table 2.

Table 2: Yoga package²³ schedule for internet addict

YOGA INTERVENTION		TIME FRAME FOR 3 MONTHS			
Yoga techniques	Sub-types of Yoga techniques	1-29 Days (1 st Month)	30-59 Days (2 nd Month)	60-90 Days (3 rd Month)	Time duration (1.30 hours)
Purification processes	JalaNeti: (Nasal Cleansing through Water)	once a week	Twice a week	03 times in a week (1,3,5 th day)	10 minutes
	Kapalbhati: (purification and vitalization of the frontal lobes)	20-30 strokes/day	30-40 strokes/day	40-60 strokes/day	5 minutes
	Trataka: (blink less gazing)	1-2 minutes only	2-3 minutes only	3-5minutes only	05 minutes
Warm-up technique	Sun Salutation (For full body warm-up)	3 rounds	3-7 rounds	8-10 rounds	3 minutes
Minorjoints exercises	Series-I; Anti-rheumatic group	Repeat 3 times each practice	Repeat 5 times each practice	Repeat 8-10 times each practice	05 minutes
Body postures	1. Camel pose	Hold for few second	With 15 sec. holding	With 30 sec. holding	30 second
	2. Back stretching pose	Hold for few second	With 15 sec. holding	With 30 sec. holding	30 second
	3. Halfspinal twisting pose	Hold for 10 second	With 20 sec. holding	With 30 sec. holding	30 second
	4. Inverted pose	Hold for few second	With 15 sec. holding	With 30 sec. holding	30 second
	5. One lagged prayer pose	Hold for 15 second	With 30 sec. holding	With 45 sec. holding	45 second
	6. Crocodile Pose	Hold for 30 second	With 60 sec. holding	With 90 sec. holding	90 second
Yogic Breathing	Alternate nostril breathing	1:1:1 (5- 10 rounds)	1:2:2 (5-10 rounds)	1:4:2 (5-10rounds)	5-8 Minutes
Meditation	On own breath & Self-awareness	3 minutes	3-5 minutes	8-10 minutes	10 minutes
Relaxation Technique	Yoga sleep	10 minutes	15 minutes	30 minutes	30 minutes

Discussion: From this study, it is learnt that inter addicts could be given primary treatment along with Young’s diagnostic and clinical methods. Self-awareness creation is the main benefit derived from this study. It may be seen from the prevalence rate of the average users has

increased from 3.2% to 92.04 % (see the figure) before and after use of yoga and thus proving the creation of self-awareness among the addicts. This also finds in tune with Young’s questionnaire qualitatively as shown in Table 4.

Table 4: Qualitative assessment of the yoga experience by participants

Questions	Qualitative indicators
1. How often do you find that you stay on-line longer than you intended?	Feel energized.
2. How often do you neglect household chores to spend more time on-line?	Concentration through yoga.
3. How often do you prefer the excitement of the Internet to intimacy with your partner?	Love.
4. How often do you form new relationships with fellow on-line users?	Feeling better with one self.
5. How often do others in your life complain to you about the amount of time you spend on-line?	Discrimination power.
6. How often do your grades or school work suffers because of the amount of time you spend on-line?	Feeling more relaxation at school.
7. How often do you check your email before something else that you need to do?	Practicing yoga.
8. How often does your job performance or productivity suffer because of the Internet?	Focusing on quality development.
9. How often do you become defensive or secretive when anyone asks you what you do on-line?	Feeling of oneness.
10. How often do you block out disturbing thoughts about your life with soothing thoughts of the Internet?	Feeling same.
11. How often do you find yourself anticipating when you will go on-line again?	No anticipation with yoga practice.
12. How often do you fear that life without the Internet would be boring, empty, and joyless?	Joyful through meditation.
13. How often do you snap, yell, or act annoyed if someone bothers you while you are on-line?	Feeling cool head.
14. How often do you lose sleep due to late-night log-ins?	Feeling relaxed all time and more with yoganidra.
15. How often do you feel preoccupied with the Internet when off-line, or fantasize about being on-line?	Oneness feeling with online or offline.
16. How often do you find yourself saying “just a few more minutes” when on-line?	Maturity with self-awareness.
17. How often do you try to cut down the amount of time you spend on-line and fail?	Feeling equally with cut down or without cut down.
18. How often do you try to hide how long you’ve been on-line?	Become transparent in sharing.

19. How often do you choose to spend more time on-line over going out with others?	Equally.
20. How often do you feel depressed, moody or nervous when you are off-line, which goes away once you are back on-line?	Regular practice with yoga avoids moodiness and depression.

As shown in Table 4, relaxation, feeling, love, self-energized etc. becomes important qualitative factors in defining answers to the Young's questionnaire. The mild percentage users have reduced from 25% to 8% (see the figure) after the practice of yoga. The moderate addicts prevalence rate 70% have totally reduced to zero percentage.

Quantitatively, the association between pre and post yoga results is compared with Surwase *et al.*¹⁸ internet addiction and GHQ 12 data. We found our hypothesis is significant with OR3.47 with p value 0.0001 and their OR value 2.28 with p value at 0.01.

The implication of the study on yoga and if, incorporated in daily life it will have immense physical, emotional and spiritual well-being. It mental, emotional, psychic and spiritual²¹. The effects of yogic practices during and after performance are currently being researched by scientists and doctors around the world. Their results show that asanas, pranayamas, yognindra and meditations are a potent means to restore and maintain physical and mental health²². At a time when the world seems to be at a loss, rejecting past values without being able to establish new ones, yoga provides a means for people to find their own way of connecting with their true selves. In this respect, yoga is far from simply being physical exercises. It is an aid to establishing a new perception of what is real, what is necessary, and how to become established in a way of life which embraces both inner and outer realities²⁴.

Conclusions: Internet has become an integral part of our life and hence the addicts ratio too. To some extent, we tried in this paper to show that because of yogic physical and mental exercises, the prevalence rates of the addicts could be brought down and increase the non-addict average number using the Young's 20

item questionnaire. Further it may be seen that the moderate internet addicts have reduced to zero percentage by getting switch over to other productive works and thus increase in their carrier performance. Apart from yogic interventions, we still need further research work on a comprehensive policy frame to educate the public on the symptoms of internet addiction and provide intervention mechanisms.

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