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Effectiveness of Structured Teaching Programme Regarding Internet Addiction and its Effects on Life Style of the Adolescents

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ABSTRACT

Internet has become an essential part of our daily life, especially among adolescents and youth. The internet and mobile technology became very important for educational as well as social purpose among adolescents but in most of the cases it's becoming obsession and producing negative effects on the other aspects of their life. Quantitative research and a quasi experimental approach with pre test and post test design in a single group were used. Total 108 samples were selected by using multistage stratified random sampling technique. The pilot study was conducted in one private school of Bhopal, Madhya Pradesh w.e.f 1st January 2019 to 30th March 2019, which will be excluded from the main study. The data was collected by using Self Structured Questionnaires in English language with application of "Ludwig Von Bertalanffy's General System Theory" Answering questions took about 15-20 minutes. The STP was administered and it took 45 minutes. The tool was found to be feasible to collect required information. The pretest mean was 9.75 with standard deviation of 3.43464 and post test mean was 12.68 with standard deviation of 4.70960. The T value was 6.136 and P value was 0.0001. The reliability of pilot study tool was 0.810 which shows that tool was reliable. The knowledge score was significantly associated with gender (Chi Sq 8.613 with P value 0.013), religion (Chi Sq 15.917 with P value 0.44), class (Chi Sq 31.108 with P value 0.001) and area of living (Chi Sq 6.449 with P value 0.040). Adolescents knowledge regarding Internet Addiction and its effects on life style was found to be significantly increased after the implementation of STP. Overall, at 0.05 level of significance the calculated P value ($p < 0.0001$) indicates that STP was effective.

KEYWORDS: Effectiveness, Structured Teaching Programme (STP), Internet Addiction (IA), Effects, Life style and Adolescents.

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INTRODUCTION

Internet has become an essential part of our daily life. It is being used extensively throughout the world, especially among adolescents and youth. Its problematic use is associated with various psychological symptoms.¹ Internet is used for education, entertainment, social networking, and information sharing.²

Internet-related behavior is often described as IA, Internet Addiction Disorder (IAD), internet pathological use, or internet dependency.³ The prevalence of IA varies from 1.5% to 25% in different populations.⁴ Surveys have shown a prevalence of 0.3-0.7% in the general population.⁵ A recent study reported a prevalence of 0.7% among Indian adolescents.⁶

Since the mid-1990s, IA has been proposed as a new type of addiction and mental health problem, similar to alcoholism and compulsive gambling.⁷ IAD is characterized by preoccupation with internet, need to spend long periods online, repeated attempts to reduce internet use, suffering withdrawal symptoms when reducing internet use, time management problems, environmental distress, deception regarding time spent online, and mood modification through internet use.⁸

Research suggests that Problematic Internet Use (PIU) is associated with decline in the size of social circle, depression, loneliness, lower self-esteem and life satisfaction, sensation seeking, poor mental health, and low family function.⁹ PIU is also associated with anxiety and stress.¹⁰ It has been found that paranoid ideation, hostility, anxiety, depression, interpersonal sensitivity, and obsessive compulsive average scores are higher in people with high internet addiction scores than those without internet addiction.¹¹ Studies also showed a negative impact of internet addiction on psychological well-being of students.¹²

Considering the enormous use of internet among adolescents, it is important to analyze the internet addiction among adolescents. Besides using internet for information, education, and training they are a vulnerable group on account of the time they spend on the internet. The aim of the present study was to assess the effectiveness of STP regarding internet addiction and its effects on life style of the adolescents.

MATERIALS AND METHOD

The pilot study was conducted in one private school (Ideal school in Panjabi bag) Bhopal, Madhya Pradesh w.e.f 1st January 2019 to 30th March 2019. The school which was included in the pilot study will be excluded from the main study. A Pre experimental one group pre test post test research design was used in the study. Total 106 samples were selected by using multistage stratified random sampling technique. The inclusion and exclusion criteria were followed during selection of the subjects. The data was collected by using Self Structured Questionnaires in English language among adolescents (Age 13-17 years). Answering questions took about 15-20 minutes. The Structured Teaching Programme was administered and it took 20-30 minutes. The tool was found to be feasible to collect required information. The subjects responded well to the Self Structured Questionnaires and they did not experience any difficulty in understanding the questions. Pilot study has been completed and tool was found to be reliable for conducting the further study. The reliability of the pilot study was 0.810. The Conceptual Framework based on “Ludwig Von Bertalanffy’s General System Theory” (1968).

TOOLS

The tools used in the study were as follows:

The Self Structured Questionnaires prepared in English & Hindi both the languages. The tool divided into three sections.

Section (A) dealt with socio demographic data of the participants. It comprises of total twelve questions.

Section (B) dealt with questionnaires based on the knowledge regarding internet addiction. It comprises of total thirteen questions.

Section (C) dealt with questionnaires based on the knowledge regarding effects of internet addiction on the life style of adolescents. It comprises of total eight questions.

The minimum score is zero and the maximum is twenty one. Scoring between one to seven considered as having poor knowledge, scoring between eight to fourteen comes under the category of average knowledge and those who score between fifteen to twenty one are having good knowledge.

Poor: 1-7 ($\leq 33.33\%$)

Average: 8-14 (33.4-66.6%)

Good: 15-21 ($\geq 66.7\%$)

DATA COLLECTION PROCEDURE

The pilot study was conducted in Ideal school, Panjabi bag, Bhopal, Madhya Pradesh w.e.f^{1st} January 2019 to 30th April 2019. The school which was included in the study will be excluded from the main study. A Pre experimental one group pre-test post-test research design was used in the study. Total 108 samples (adolescents age 13-17 years) were collected by using multistage stratified random sampling technique. The inclusion and exclusion criteria were followed during selection of the subjects. The data was collected by using Self Structured Questionnaires in English language. Answering questions may take about 20-30 minutes. The STP was administered and it took 15-20 minutes. The subjects responded well to the Self Structured Questionnaires and they did not experience any difficulty in understanding the questions. Pilot study has been completed and tool was found to be reliable for conducting the further study. The reliability of pilot study was 0.810.

RESULTS

Table 1 Demographic details of participants. (n=108)

S.No.	Demographic Variable	Content	Frequency	Percentage (%)
1.	Age (years)	13 years	18	16.66
		14 years	18	16.66
		15 years	33	30.55
		16 years	21	19.47
		17 years	18	16.66
2.	Gender	Male	43	39.8
		Female	65	60.2
3.	Religion	Hindu	79	73.1
		Muslim	18	16.7
		Sikh	03	2.8
		Christian	03	2.8
		Others	05	4.6
4.	Class	7 th	18	16.7
		8 th	18	16.7
		9 th	18	16.7
		10 th	18	16.7

		11 th	18	16.7
		12 th	18	16.7
5.	Educational qualification of father	Profession or Honours	13	12.0
		Graduate	45	41.7
		Intermediate or diploma	01	0.9
		High school certificate	23	21.3
		Middle school certificate	21	19.4
		Primary school certificate	05	4.6
	Educational qualification of mother	Profession or Honours	09	8.3
		Graduate	35	32.4
		Intermediate or diploma	04	3.7
		High school certificate	27	25.0
		Middle school certificate	24	22.2
		Primary school certificate	04	3.7
		Illiterate	05	4.6
6.	Occupation of father	Legislators, Senior	16	14.8

		officials & Managers		
		Professionals	23	21.3
		Technicians and Associate Professionals	19	17.6
		Clerks	02	1.9
		Skilled Workers and Shop & Market Sales Workers	25	23.1
		Skilled Agricultural & Fishery Workers	05	4.6
		Craft & Related Trade Workers	03	2.8
		Plant & Machine Operators and Assemblers	11	10.2
		Elementary Occupation	03	2.8
		Unemployed	01	0.9
	Occupation of mother	Professionals	17	15.7
		Technicians and	01	0.9

		Associate Professionals		
		Skilled Workers and Shop & Market Sales Workers	01	0.9
		Plant & Machine Operators and Assemblers	02	1.9
		Elementary Occupation	02	1.9
		Housewife	85	78.7
7.	Total monthly family income	>126,360	09	8.3
		63,182-126,356	01	0.9
		47,266-63178	08	7.4
		31,591-47262	15	13.9
		18,953-31589	29	26.9
		6327-18949	41	38.0
		>=6323	05	4.6
8.	Area of your living	Urban	102	94.4
		Rural	06	5.6
9.	Family type	Nuclear	75	69.4
		Joint	33	30.6
10.	Place of residence	Hostel	04	3.7

	(Present)			
		Home	104	96.3
11.	How many brothers and sisters you have	Brother	10	9.3
		Sister	56	51.9
		Both	31	28.7
		Nil	11	10.2
12.	Type of device you use	Smart phone	99	91.7
		Laptop	01	0.9
		Normal keypad mobile	08	7.4

Table 2 Frequency and percentage distribution of participants according to the Kuppuswamy’s socio-economic status scale.

Socioeconomic Class	Score	n=1080	
		Frequency	Percentage (%)
Upper Middle (II)	16- 25	73	67.59
Lower Middle (III)	11- 15	32	29.62
Upper Lower (IV)	5-10	03	2.77
Total		108	100.0

Table 2 Regarding the Kuppuswamy’s socio-economic status scale indicated that majority 73 (67.59%) were from Upper Middle (II) Class, 32 (29.62%) belonged to Lower Middle (III) Class, 03 (2.77 %) were from Upper Lower (IV).

Table 3 Pretest knowledge regarding internet addiction of participants. (n=108)

Knowledge regarding Internet Addiction	Frequency	Percentage(%)
Poor	26	24.1%
Average	71	65.7%
Good	11	10.2%
Total	108	100%

Table 3 Indicates that pretest knowledge regarding internet addiction prior to the administration of STP around 26(24.1%) of the participants had poor knowledge, majority 71 (65.7%) had average knowledge and only 11(10.2 %) had good knowledge.

Table 4 Post test knowledge regarding internet addiction of participants

Knowledge regarding Internet Addiction	Frequency	Percentage(%)
Poor	13	12.0
Average	62	57.4
Good	33	30.6
Total	108	100%

Table 4Indicates that the post test knowledge regarding internet addiction prior to the administration of STP around 13(12.0%) of the participants had poor knowledge, majority 62 (57.4%) had average knowledge and only 33(30.6 %) had good knowledge.

Table 5 Comparison of pre test and post test knowledge level of adolescents regarding internet addiction.

Knowledge regarding Internet Addiction	Mean	N	Std. Deviation	T value	P value
Pre Test	9.7500	108	3.43464	6.136	<0.0001*
Post Test	12.6852	108	4.70960		

Table 5 Depicts that pre test mean (before administration of STP) 9.7500with standard deviation of 3.43464 and post test mean (after administration of STP) was 12.6852 with standard deviation of 4.70960 .The T value was 6.136 with P value <0.0001* the reliability of pilot study tool was 0.810 which shows that tool is reliable.

Table 6 Association between pre test level of knowledge regarding internet addiction & its effects on life style of the adolescents with Gender. (n=108)

Gender	Pre Test Knowledge regarding Internet Addiction			Total	Chi sq	P value
	Poor	Average	Good			
Male	10	33	0	43	8.613	0.013*
	23.3%	76.7%	0.0%	100.0%		
Female	16	38	11	65		
	24.6%	58.5%	16.9%	100.0%		
Total	26	71	11	108		
	24.1%	65.7%	10.2%	100.0%		

Table 6 Reveals that the pre test knowledge score was significantly associated with the Gender (Chi Sq 8.613 with P value 0.013*)

Table 7 Association between pre test level of knowledge regarding internet addiction & its effects on life style of the adolescents with their religion. (n=108)

Religion	Pre Test Knowledge regarding Internet Addiction			Chi sq	P value
	Poor	Average	Good		
Hindu	37	41	78	15.917	0.044*
	47.4%	52.6%	100.0%		
Muslim	7	7	14		
	50.0%	50.0%	100.0%		
Sikh	4	4	8		
	50.0%	50.0%	100.0%		
Christian	5	3	8		
	62.5%	37.5%	100.0%		
Total	53	55	108		
	49.1%	50.9%	100.0%		

Table 7 Reveals that pre test knowledge score was significantly associated with the religion (Chi Sq 15.917 with P value 0.44*)

Table 8 Association between pre test level of knowledge regarding internet addiction & its effects on life style of the adolescents with their class. (n=108)

Class	Pre Test Knowledge regarding Internet Addiction			Total	Chi sq	P value
	Poor	Average	Good			
7 th	3	15	0	18	31.108	0.001*
	16.7%	83.3%	0.0%	100.0%		
8 th	4	14	0	18		
	22.2%	77.8%	0.0%	100.0%		
9 th	1	11	6	18		
	5.6%	61.1%	33.3%	100.0%		
10 th	6	7	5	18		
	33.3%	38.9%	27.8%	100.0%		
11 th	5	13	0	18		
	27.8%	72.2%	0.0%	100.0%		
12 th	7	11	0	18		
	38.9%	61.1%	0.0%	100.0%		
Total	26	71	11	108		
	24.1%	65.7%	10.2%	100.0%		

Table 8 Indicates that the pre test knowledge score was significantly associated with the class (Chi Sq 31.108 with P value 0.001*).

Table 9 Association between pre test level of knowledge regarding internet addiction & its effects on life style of the adolescents with their area of living.

(n=108)

Area of your living	Pre Test Knowledge regarding Internet Addiction			Total	Chi sq	P value
	Poor	Average	Good			
Urban	22	69	11	102	6.449	0.040*
	21.6 %	67.6%	10.8%	100.0%		
Rural	4	2	0	6		
	66.7 %	33.3%	0.0%	100.0%		
Total	26	71	11	108		
	24.1 %	65.7%	10.2%	100.0%		

Table 9 Indicates that pre test knowledge score was significantly associated with the area of your living (Chi Sq 6.449 with P value 0.040*).

DISCUSSION

The overall prevalence of IA (representing moderate and severe addiction) was 19.85%, which is in accordance with most studies that have assessed internet addiction using Young's IAT. A study on university students in India reported a prevalence of 18.88%.¹³Internet addiction is more common in males than in females, which corroborates with the finding of previous studies.¹⁴Many studies have suggested that internet addiction is associated with loneliness, depression, anxiety, stress, and low self-esteem and life satisfaction.¹⁵These findings are in accordance with the previous studies stating that there is a strong association between psychiatric symptoms and internet addiction.¹⁶There is a need for future studies with randomized controlled trial study design and a largersample for better generalizability of the findings. Furthermore, adolescent children of substance user and non substance user parents can be compared on a similar basis. To understand the efficacy of the psychosocial intervention, it is essential to incorporate long term follow up studies.Despite its limitations of small sample size and restricted research design with no control group, the study had provided more omnipresent results in terms of intervention in this vulnerable group of adolescents.

In the study regarding gender revealed that majority 562(52.0%) of adolescents were male and 518 (48%) were female. This study findings are in line with the study conducted by **Goel V et al (2015)** concluded that male adolescents had more internet user than female ones.¹⁷ The study findings also supported by **Upadhyay P at el (2017)** which revealed that 805 (70%) were male and 345 (30%) females internet users.¹⁸ Males were more addicted to the internet than the female. Similar finding shown the study by **Sharma A et al (2014)** that males were more addicted to the internet than the female.¹⁹ The study findings are in line with the study conducted by **Ozden et al (2011)**.²⁰

In the current study majority 688(63.7%) of adolescents belonged to Hindu religion where as similar findings were shown in the study of **Kadam S et al (2016)** that majority 27(54%) belonged to Hindu religion.²¹

In the study majority 1050 (97.2%) of adolescents lived in urban area and only 30(2.8%) lived in rural area. The findings are in line with the study conducted by **Yan Chen et al (2016)** which revealed that from urban (9.3%) areas more students than the rural (8.2%) were having Internet Addiction Disorder (IAD). In the study majority 1077 (99.7%) of participants resided in home.²²

In the present study all the classes from 7th to 12th standard had equal number of adolescents that were 180(16.7%) in each class. In the line with standard of class similar classes students were taken by **Yan Chen et al (2016)** in his survey among 5249 students from 7th to 12th standard in China.

Significant (0.0020*) association were found between pre test knowledge regarding internet addiction and its effects on life style of the adolescents and class.

In the present study the demographic characteristics of the participants shows that majority 33(30.55%) belonged to age of 15 years and 21 (19.47%) were from the age of 16 years. Similar finding highlighted by **Abdrbo A et al (2017)** where female high school adolescent's average age was 16.88 years.²³ The researcher has come across the other study conducted by **Arthanari S et al (2017)** where students belonged to the age group of 17-19 years.²⁴ This study findings are in line with the study conducted by **Upadhyay P at el (2017)** showed that mean age of subjects was 15.46 years. The study findings also supported in systematic review by **Gangwar G et al (2016)** revealed that adolescents specially the age group of 13-19 years adolescents are affected by internet addiction.²⁵

In the study regarding gender revealed that majority 65(60.2%) of adolescents were female and 43 (39.8%) were male which was contrary to the findings by **Goel V et al (2015)** concluded that male adolescents had more internet user than female ones. The study findings also supported by **Upadhyay P at el (2017)** which revealed that 805 (70%) were male and 345 (30%) females internet users. Males were more addicted to the internet than the female. Similar finding shown the study by **Sharma A et al (2014)** that males were more addicted to the internet than the female. The study findings are in line with the study conducted by **Ozden et al (2011)**.

In the current study majority 79(73.1%) of adolescents belonged to Hindu religion where as similar findings were shown in the study of **Kadam S et al (2016)** that majority 27(54%) belonged to Hindu religion.

Significant (0.44*) association were found between pre test knowledge regarding internet addiction and its effects on life style of the adolescents and religion.

In the present study all the classes from 7th to 12th standard had equal number of adolescents that were 180(16.7%) in each class. In the line with standard of class similar classes students were taken by **Yan Chen et al (2016)** in his survey among 5249 students from 7th to 12th standard in China.

Significant (0.001*) association were found between pre test knowledge regarding internet addiction and its effects on life style of the adolescents and class.

In the study regarding the educational qualification of fathers of the participants revealed that majority 45 (41.7%) were graduate and regarding the educational qualification of mothers of the participants also revealed that majority 35(32.4%) were qualified up to graduate.

In the study majority 25 (23.1%) adolescent's fathers were Skilled Workers and Shop & Market Sales Workers. In the current study majority 85(78.7%) were housewives where as similar findings were shown in the study of **Panthri K (2020)** that majority 50 (83%) were housewives.²⁶

In present study regarding the monthly family income revealed that majority 41 (38.0%) families income was between Rs6327/- to Rs 18949/- almost similar findings were shown in the study of **Panthri K (2020)** that majority 53 (88%) were having Monthly Family Income between Rs 5000/-to Rs 15000/-.

About the Kuppuswamy's socio-economic status scale indicated that majority 73 (67.59%) were from Upper Middle (II) Class.

In the study majority 102 (94.4%) of adolescents lived in urban area and only 06 (5.6%) lived in rural area. The findings are in line with the study conducted by **Yan Chen et al (2016)** which revealed that from urban (9.3%) areas more students than the rural (8.2%) were having IAD (Internet Addiction Disorder). In the study majority 1077 (99.7%) of participants resided in home.

Significant (0.040*) association were found between pre test knowledge regarding internet addiction and its effects on life style of the adolescents and area of living.

Findings of the study revealed that majority 75(69.4%) of adolescents were from nuclear family, contrary to the findings by **Yan Chen et al (2016)** revealed that IAD was more in single child living with single parents.

Findings of the study revealed that majority 104 (96.3%) of adolescents were staying in home.

In the present study majority 56 (51.9%) adolescents had sister, contrary to the findings by **Yan Chen et al (2016)** revealed that IAD was more in single child families and specially male students. But similar finding were shown in the study of **Panthri K (2020)** that majority 49(82%) adolescents were having siblings.

In the present study majority 99 (91.7%) were using smart phones. The study findings are supported by the report on media statistics by **Conrad B (2016)** which revealed that 60% children uses internet to play games or used apps on cell phone, iPod and tablet.²⁷

In present study findings indicated that pre-test knowledge regarding internet addiction and its effects on life style of the adolescents were significantly (0.013*) associated with Gender, significantly (0.044*) associated with religion, highly significant (0.001*) with class and significantly associated with area of living (0.040*). The study conducted by **Kayastha B et al (2018)** came out with the similar findings that demographic variables like age, class, and occupation of fathers have significant associations with both internet addiction and impact of internet addiction.²⁸

The study findings indicate that pre test knowledge regarding internet addiction prior to the administration of STP 26(24.1%) participants had poor knowledge, 71(65.7%) had average knowledge

and only 11(10.2%) had good knowledge this findings are in line with the study conducted by **Indhuja J (2016)** stated that in pre test 58.33% the adolescents had inadequate knowledge 41.67% had moderate knowledge regarding the health hazards of electronic devices²⁹ as well as this study findings are in line with study conducted by **Shettigar D et al (2013)** revealed that 46% of adolescents had poor knowledge, 48% had average and 6% had good knowledge³⁰ and on the other hand **Panthri K (2020)** revealed regarding consequences of internet addiction among adolescents that(75%) had average knowledge, (23%) had good knowledge whereas only (2%) had poor knowledge.

The study findings indicate that post test knowledge regarding internet addiction after administration of STP 13(12.0%) had poor knowledge, majority 62 (57.4 %) had average knowledge and 33 (30.6%) had good knowledge this findings are in line with the study conducted by **Indhuja J (2016)** stated that in posttest 56.67% of the adolescents had adequate knowledge and 43.33% had moderate knowledge regarding health hazards of electronic devices.

In the present study finding regarding comparison between pre test and post test knowledge of participants reveals highly significant (<0.0001*) difference this findings are almost similar to the study conducted by **Kadam S et al (2016)** stated that there were significant (<0.0005*) difference between pre test and post test knowledge of participants.

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