A Pre-experimental Study to Determine the Effectiveness of Selected Nursing Intervention (SNI) on Adverse Effect of Internet Usage Regarding Knowledge and Attitude among the Selected College Students at Salem, India

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Abstract

Rapid growth and easy access to the Internet have facilitated its influence on the day today life. Apart from the numerous benefits of this technological tool, the problem of overuse and the resulting 'Internet Addiction' is becoming increasingly apparent. College students represent a particularly vulnerable group for problematic Internet use, so it is necessary for the college students to improve the knowledge and attitude regarding the adverse effect of internet usage. The purpose of the study was to determine the effectiveness of Selected Nursing Intervention (SNI) on adverse effect of internet usage. A Quantitative, evaluative approach and a pre-experimental one group pre test –post test, research design was used. A sample of 60 subjects were selected from Ganesh arts and science college, Salem by non- probability, convenient sampling technique. For Conceptual framework, Modified Peplau's Interpersonal relationship Theory was used. The tools used were self administered questionnaire to assess the knowledge regarding adverse effect of internet usage and Likert scale to assess the attitude regarding adverse effect of internet usage. On day 1 demographic variables and pretest were assessed. Followed by SNI was given to each sample. SNI includes definition of internet addiction disorder, healthy and unhealthy internet use, risk factors for internet addiction, Warning signs of problematic internet usage, self-help tips for breaking internet dependence, and issues related to internet compulsion. Explanation was given about how to read and use the SNI. Doubts were clarified. Post test was conducted on 15th day. The findings showed that the post-test mean percentage score of knowledge and attitude was higher than the pre-test mean percentage score of knowledge and attitude among the samples. The calculated paired 't' value for knowledge and attitude were $t_{59}=5$ and $t_{59}=6$ respectively. These values were higher than the table value 2.02 at $p<0.05$ level of significant. There was no significant association between the pre-test level of knowledge score and their selected demographic variables like age ($\chi^2 =2.17$), gender ($\chi^2 =0.264$) and area of lodging ($\chi^2 =0.182$). The study revealed that the Selected Nursing Intervention (SNI) was effective to improve the knowledge and attitude on adverse effect of internet usage among the students in a selected college at Salem.

Introduction

"Knowledge is power; it is essential for healthy adjustment in life and self-awareness."

By the turn of the century, information, including access to the Internet, will be the basis for personal, economic, and political advancement. The popular name for the Internet is the information superhighway. Whether you want to find the latest financial news, browse through library catalogs, exchange information with colleagues, or join in a lively political debate, the Internet is the tool that will take you beyond telephones, faxes, and isolated computers to a burgeoning networked information frontier.

The Internet has greatly changed the way people to communicate today. Many Internet terms have become part of people's everyday language and e-mail has added a whole new means through which people can communicate. So the internet became a part of people's living because of its importance (Kimberlee, 2010).

Internet is largely seen as one of the world's biggest technology platform. It is a source of knowledge, entertainment, brand building, commerce, education and much more. However, Internet, which has over the years changed the way we live, work and communicates, also has a darker side: Addiction. Internet addiction has been a headache for several Asian countries.

According to the survey done by Internet and Mobile Association of India (2005), in the 26 cities that covered 65,000 persons in 16,500 households, has shown 1.6 million school children use the internet for about 322 minutes a week and about 3.4 million college students use the internet about 433 minutes a week.

There is a need to understand the association between the socio-demographic factors and internet addiction among adolescents and there may be a desirable change in their lifestyle if preventive aspects are focused. (www.pewinternet.org).

Rapid growth and easy access to the Internet have facilitated its influence on the way of life. Aside from the numerous benefits of this technological tool, the problem of overuse and the resulting 'Internet Addiction' is becoming increasingly apparent. College students represent a particularly vulnerable group for problem Internet use. Moreover, frequent interpersonal and academic conflicts, and physical health-threatening risks related to problem Internet use were found. While men reported more Internet-related problems overall, women were more likely to attempt to cut back or stop their Internet use. (www.livestrong.com).

Now a day the problematic internet usage among teenage population and younger adults are high, so it is responsibility inside the researcher to raise the hand against this problematic behavior that present among this population by making them aware of the adverse effect of internet usage.

Statement of problem

A Pre-Experimental Study to Determine the Effectiveness of Selected Nursing Intervention (SNI) on Adverse Effect of Internet Usage Regarding Knowledge and Attitude Among the Selected College Students at Salem".

Objectives

1. To assess and compare pre-test and post-test knowledge on adverse effect of internet usage among the samples.
2. To assess and compare pre-test and post-test attitude on adverse effect of internet usage among the samples.
3. To find association between pre-test level of knowledge on adverse effect of internet usage among the samples with their selected demographic variables: Age, gender and area of lodging.

Hypotheses (Level of significance at P<0.05)

H_1: The mean post-test knowledge score is higher than the mean pre-test knowledge score on adverse effect of internet usage among samples.

H_2: The mean post-test attitude score is higher than the mean pre-test attitude score on adverse effect of internet usage among samples

H_3: There is significant association between the pre-test level of knowledge score of samples and their selected demographic variables: Age, gender, and area of lodging.

Materials and Methods

In this study a quantitative, evaluative research approach with pre-experimental one group pre test and post test research design was used. Conceptual frame work, Modified Peplaus Interpersonal Relationship Theory was

used. The study was conducted at Ganesh arts and science college, Salem. After getting permission from concern authority the researcher started the data collection. 60 samples were selected by adopting non-probability convenient sampling technique, based on the inclusion criteria and obtained written consent from each sample. On day 1, pre-test was conducted by using self structured questionnaire and Likert scale to assess the knowledge and attitude level. On the same day, SNI (booklet) was issued to each sample. SNI includes introduction, definition of internet addiction disorder, healthy and unhealthy internet use, risk factors for internet addiction, Warning signs of problematic internet usage, self-help tips for breaking internet dependence, and issues related to internet compulsion, explained about how to read and use the SNI. Followed that doubts were clarified and post test was conducted on day 15.

Results and Discussion

Data analysis and interpretation

Section-i: distribution of samples based on the demographic variables

This section shows the analysis of demographic variables of the samples according to the frequency and percentage distribution which includes age, gender, group, and type of accommodation, mode of internet use and area of lodging. Among 60 samples 30(50%) were male and 30(50%) were females. Regarding age group among samples, 30(50%) belongs to 18-19 years, and 30(50%) belongs to 20-21 years. Regarding the group based on the course which the samples belongs to, 30(50%) samples were B.com and 30(50%) samples were B.Sc. In type of accommodation 14(23.33%) of the samples were accommodated in hostel and 46(76.66%) of them were day scholars (Table 1).

Regarding mode of internet usage 18(30%) of them were using mobile phone, 22(36.66%) of them were using mobile phone, 12(20%) of them were using personal desktop and 8(13.33) of them were using internet cafe. About the area of lodging, 17(28.33%) samples belongs to urban, 31(51.66%) samples belong to semi urban and 12(20%) sample belongs to rural.

Section-ii: analysis and comparison of pretest and post test knowledge score

This section deals with the details of analysis on regard to pre-test score and post test score of knowledge which

were measured through the self-administered questionnaire on adverse effect of internet usage among the samples.

Figure 1 shows that among 60 samples in pretest 4(9.10%) samples had adequate knowledge, 35(63.61%) samples had moderate knowledge and 21(27.29%) had inadequate knowledge.

In posttest 20(40.09%) samples had adequate knowledge, 35(54.56%) samples had moderate knowledge and 5(5.35%) samples had inadequate knowledge. The above score was interpreted by fixing the scale of 75% and above as adequate, 50% – 74% as moderate and below 50% as inadequate knowledge.

Therefore from the above diagram it can be interpreted that posttest level of knowledge was higher than pretest level of knowledge.

Section- iii: comparison of mean pretest and mean post test knowledge score

This section deals with analysis and comparison of mean pretest and mean posttest knowledge score on adverse effect of internet usage among samples. Also the hypothesis was analyzed to know the level of significant at $P<0.05$ level.

Hypothesis H_1

The mean post-test knowledge score is higher than the mean pre-test knowledge score on adverse effect of internet usage among samples.

Null Hypothesis $H_{0(1)}$

There is no significant difference between the mean pre-test and mean post-test knowledge score on adverse effect of internet usage among samples.

In order to test the hypothesis the researcher used paired 't' test. Table 2 shows the finding.

Table 2 shows that, the overall maximum possible score for self administered questionnaire on adverse effect of internet usage was 20. The mean pretest knowledge score of self administered questionnaire was 11 and standard deviation of 2 and it was found to be increased to mean post test knowledge score of 13 and the standard deviation 2.

The statistical significance was assessed by comparing the mean pretest and posttest knowledge score on adverse effect of internet usage among the samples. The paired 't' value was found to be higher than the table value at p<0.05 level of significance i.e. the calculated value 't' value '5' is higher than the table value '2.02'. Hence the hypothesis H_1 was accepted and null hypothesis $H_{0(1)}$ was not accepted, which means that the Selected Nursing Intervention(SNI) on adverse effect of internet usage is found to be effective.

Section–iv: analysis and comparison of pretest and posttest attitude score

This section deals with the details of analysis with regard to pretest attitude score, percentage and posttest attitude score, percentage by using 4-point Likert scale before and after implementation of SNI to the samples.

Figure 2 shows that among 60 samples in pretest 16(26.66%) had favourable attitude and 44(73.33%) had unfavourable attitude.

Among 60 samples in posttest 38(63.33%) of them had favourable attitude and 22(36.66%) had unfavourable attitude. The above score was interpreted by fixing the scale of, below 50% as unfavourable attitude score, and 50% and above as favourable attitude score.

Therefore from the above diagram it can be interpreted that post test level of attitude is higher than pre test level of attitude.

Section- v: comparison of mean pretest and mean posttest attitude score

This section deals with analysis and comparison of pretest and posttest attitude score on adverse effect of internet usage among samples. Also the hypothesis was analysed to know the level of significant at P<0.05 level.

Hypothesis H_2

The mean posttest attitude score is higher than the mean pretest attitude score on adverse effect of internet usage among samples.

Null hypothesis $H_{0(2)}$

There is no significant difference between mean pretest attitude score and the posttest attitude score on adverse effect of internet usage among samples.

Mean, Standard deviation, Range and Mean Score Percentage, Paired Mean Difference and Paired 't' value of Pre-Test and Post-Test attitude score on adverse effect of internet usage among samples

Table 3 show that the overall maximum possible scores for Likert scale on attitude regarding adverse effect of internet usage among samples is 48. The mean pretest score was 22 with standard deviation 4 and the mean score percentage was 45.88%, it was found to be increased to the mean posttest attitude score percentage to 54.16% with mean 26 and standard deviation 5.

The statistical significance was assessed by comparing the mean pretest and posttest attitude score on adverse effect of internet usage among samples.

The paired 't' value were found to be significant than the table value at p<0.05 level of significance i.e. the calculated value 't' value is (6) higher than the table value (2.02). Hence the hypothesis (H_2) was accepted and null hypothesis $H_{0(2)}$ was not accepted, which means that the Selected Nursing Intervention (SNI) on adverse effect of internet usage found to be effective

Section-iv: association between the pretest level of knowledge score on adverse effect of internet usage among samples and their selected demographic variables: age, gender and area of lodging

It was associated by using chi-square test. The cross tabulation analysis was employed effectively and results of chi-square analysis were observed.

Data presented in table 4 shows that chi-square value ($\chi^2 = 2.17$) is less than the table value (5.99) which indicates that there is no significant association between knowledge about adverse effect of internet usage among samples and their age.

Data presented in table 4 shows that chi-square value ($\chi^2 = 0.264$) is less than the table value (5.99) which indicates that there is no significant association between knowledge about adverse effect of internet usage among samples and their age.

Data presented in table 4 shows that chi-square value ($\chi^2 = 4.19$) is less than the table value (9.49) which indicates that there is no significant association between knowledge about adverse effect of internet usage among samples and their area of lodging.

Table.1 Frequency and percentage wise distribution of samples based on their demographic variables

n=60

S.no	Demographic variables	Frequency (f)	Percentage (%)
1.	Gender		
a)	Male	30	50
b)	Female	30	50
2.	Age in years		
a)	18-19	30	50
b)	20-21	30	50
3.	Group		
a)	B.A	0	0
b)	B.com	30	50
c)	B.Sc	30	50
4.	Type of accommodation		
a)	Hostel	14	23.33
b)	Day scholar	46	76.66
5.	Mode of internet use		
a)	Mobile phone	18	30
b)	Laptop	22	36.66
c)	Personal desktop	12	20
d)	Internet cafe	8	13.33
6.	Area of lodging		
a)	Urban	17	28.33
b)	Semi urban	31	51.66
c)	Rural	12	20

Table.2 Mean, Standard deviation, Range and Mean Score Percentage, Paired Mean Difference and Paired 't' value of Pre-Test and Post-Test knowledge score on adverse effect of internet usage among samples

n=60

S. No	Knowledge on adverse effect of internet usage.	Max. possible score	Mean	SD	Range	Mean%	Paired 't' value
1.	Pre test	20	11	2	6-15	55	
2.	Post test	20	13	2	8-18	65	5

* Significant at $P<0.05$ Level; $t_{59}=2.02$; df = 59

Table.3 Mean, Standard deviation, Range and Mean Score Percentage, Paired Mean Difference and Paired 't' value of Pre-Test and Post-Test attitude score on adverse effect of internet usage among samples

n=60

S. No	Attitude on adverse effect of internet usage.	Max. possible score	Mean	SD	Range	Mean%	Paired 't' value
1.	Pre test	48	22	4	15-31	45.88	
2.	Post test	48	26	5	16-34	54.16	6

*Significant at p<0.05 level; t_{59} = 2.02; df = 59

Table.4 Chi-square value on pre-test level of knowledge score and their Selected Demographic Variables

n=60

Sl.no	Variables	Chi-square values	df	Table value	Level of significant
01	Age in years	2.17[NS]	2	5.99	NS
02	Gender	1.33[NS]	2	5.99	NS
03	Area of lodging	2.11[NS]	4	9.49	NS

df- degree of freedom, NS-Not significant; P<0.05 level of significance

Figure.1 Bar diagram shows the percentage wise distribution of samples based on the level of pretest and posttest knowledge on adverse effect of internet usage among samples
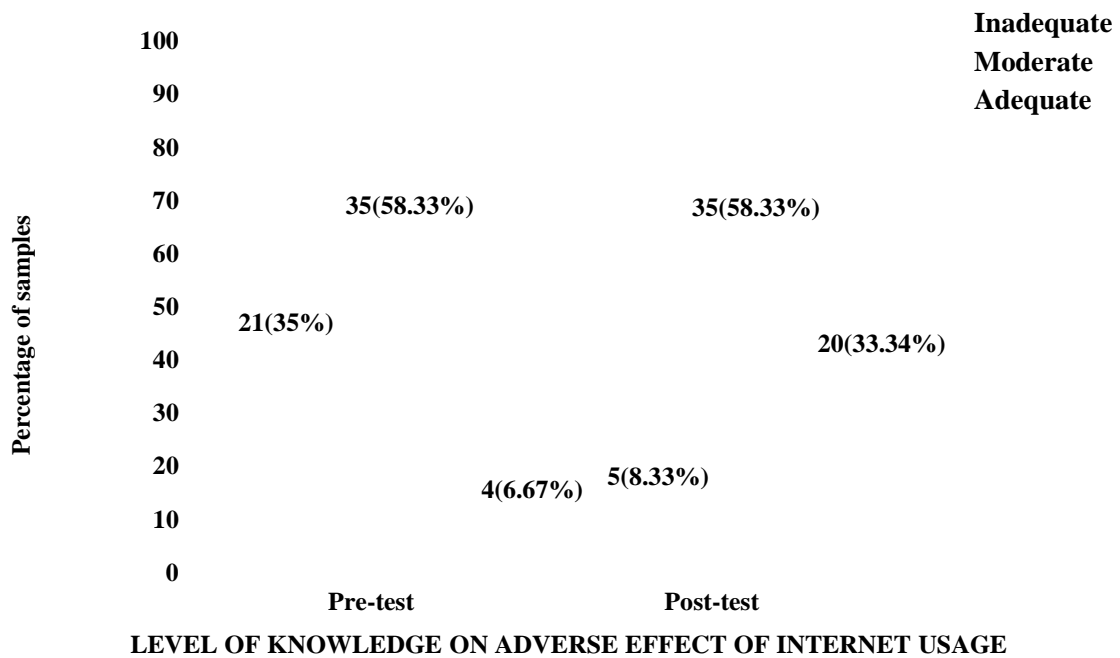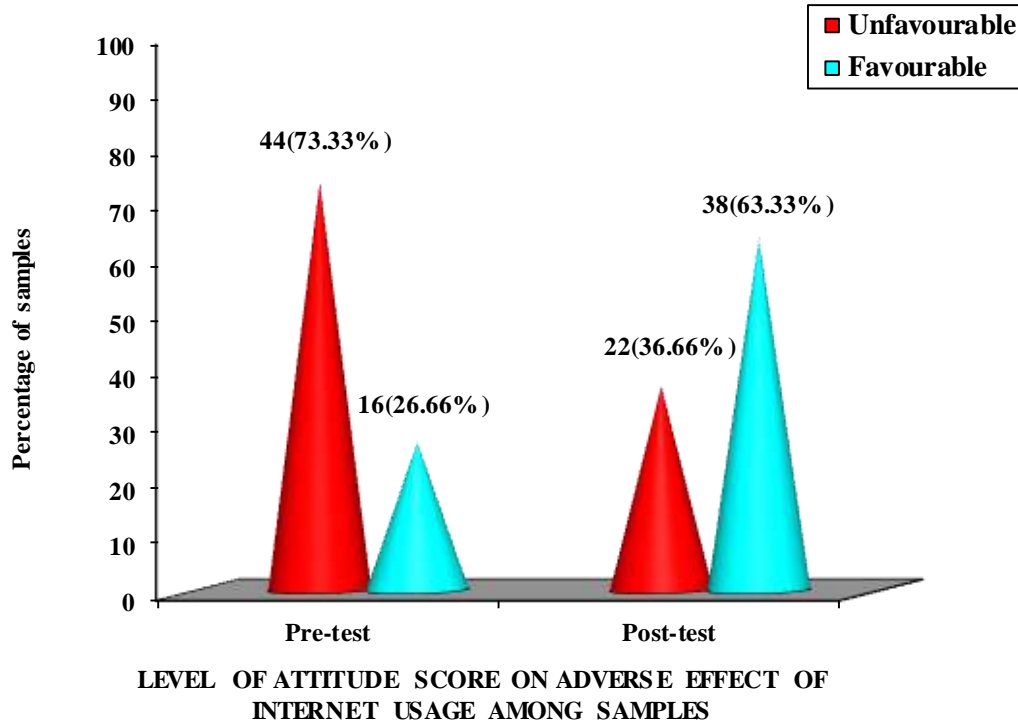
Figure.2 Cone diagram shows the percentage wise distribution of samples based on the level of pretest and posttest attitude score on adverse effect of internet usage among samples

Recommendations

Based on the findings and limitations of the present study, the researcher offered some suggestions for further research.

1. Large sample size could be included to generalize the findings.
2. Similar studies can be conducted in various settings.

In conclusion, Selected Nursing Intervention (SNI) was effective in promoting the knowledge and attitude regarding adverse effect of internet usage among the samples. It was found there was no significant association between the pretest level of knowledge score and selected demographic variables.

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