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An Effectiveness of Self Instructional Module on Knowledge Regarding Effects of Computer Vision among Office Staff Working in Selected Organization of B.V.V. Sangha Bagalkot

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Abstract:- Computers have now become basic and essential desktop equipment in every organization. Just because of its smaller size and affordable prices, the computer is widely using in office, college, universities and home. With online training, trading and office work, the use of personal computers (PCs) are growing exponentially.[1] Computer-related job opportunities are offering color full salary and the wide nature of scope for this profession attracts many people into this field.

➢ ***Objectives***

- **To assess the knowledge regarding effects of computer vision among office staff.**
- **To assess the effectiveness of self instruction module on knowledge regarding effects of computer vision among office staff.**
- **To find out the association between post test knowledge scores regarding effects of computer vision and their selected socio demographic variables.**

➢ ***Hypothesis***

- **H_1:- There will be significant relationship between pre test and post test knowledge score of office staff.**
- **H_2:- There is a significant association of post-test level of knowledge scores with selected demographic variables.**

➢ ***Methods***

An evaluative approach with one group pre-test, post-test design was used. The sample consisted of 30 office staff workers. They were chosen by convenient sampling technique of Non probability type. The study was conducted at B.V.V.SANGHA Bagalkot. The data was collected before and after administration Self instructional module. Structured knowledge questionnaire was used to collect data. A structured self instructional module was developed to assess the knowledge regarding effects of computer vision among office staff working at selected organization of B.V.V.SANGHA Bagalkot.

➢ ***Results***

The findings of the study concluded that office staff workers had inadequate level of knowledge regarding selected computer vision. The self instructional module was effective in improving the knowledge of the office staff workers.

➢ ***Interpretation and Conclusion***

The findings of the study concluded that office staff workers had inadequate knowledge regarding computer vision. The SIM was highly effective in improving the knowledge of office staff workers regarding effects of computer vision.

I. INTRODUCTION

The computer technology has its own pros and cons, the majority of these issues are related to health. The increased use of computers in the workplace has brought about the development of a number of health concerns. Many individuals who work at a computer video display terminal reports a high level of job related complaints and symptoms including ocular discomfort, muscular strain and stress. The level of discomfort appears to increase with the amount of video display terminal uses. Visual discomfort and related symptoms occur in video display terminal workers must be recognized as a growing health problem. [1]

Effects of Computer Vision also referred to as Digital Eye Strain, is a condition resulting from focusing the eyes on a computer or other display device for protracted, uninterrupted periods of time.6 Some symptoms of computer vision include headaches, blurred vision, neck pain, fatigue, eye strain, dry eyes, irritated eyes, double vision, vertigo/dizziness, and difficulty refocusing the eyes. These symptoms can be further aggravated by improper lighting conditions i.e. glare or bright overhead lighting or air moving past the eyes.[7]

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In the twenty-first century, computers have become almost as ubiquitous as the humble pen and paper in many people's daily life. There are approximately six computers per thousand population with an installation of 18 million personal computers and their number is increasing all the time. The computer is a vital tool in every dimension However, the long period of working at computer as most people do, can cause musculoskeletal problems, eyestrain, and overuse injuries of the hands and wrists which can be reduced or eliminated with proper workstation design improved posture.[2]

II. RESEARCH METHODOLOGY

The study is aimed to evaluate the effectiveness of self instructional module on knowledge regarding effects of computer vision among office staff working in selected organizations of B.V.V.Sangha's Bagalkot.**Research approach: As** evaluative approach using pre-test (O_1) and post-test (O2) without a control group was adopted for this study in order to accomplish the objectives. **Research design:** A one group pre-test post-test experimental design has been used to attain the objectives of the present study. **Independent variable:** In this study the self instruction module on computer vision on office staff was independent variable. **Dependent variable**: In this study knowledge of office staff regarding computer vision was dependent variable.**Socio-demographic variables:** In this study the socio demographic variable such as age in years, gender, and religion, and monthly income, exposure to computer monitor, work experience and in service education related to effects of computer vision. **Setting of the study:** The study was conducted in office staff those who are working with computers in selected organizations at B.V.V.Sangha's Bagalkot. **Populations:**-The accessible population of the study is the office staffs those who are working in the selected organizations at B.V.V.Sangha's Bagalkot.**Sample:** The same for the present study composed of 30 office staff those who are working with computer at selected organization at B.V.V.Sangha Bagalkot.**Sampling Technique:**Sampling defines the process of selecting the group of people or other elements with which to conduct the study. Convievent technique method was adopted to select the samples for the present study based on inclusion criteria. **Development and description of the tool**:The data collections technique was structured knowledge questionnaire keeping in this mind structured knowledge questionnaire was selected and developed on effects of computer vision. The tool was prepared on the bases of objective of the study. **Reliability of the tool** :This is done by critically evaluating questions based on difficulty index and discriminative index. The reliability index was r= **0.87** r: Reliability co-efficient of the half test.**Data collection :**After obtaining the prior permission from the principal of Sajjalashree Institute of nursing sciences and formal permission from Dean of HSK hospital Navanagar Bagalkot Karnataka the main study was conducted. The main study was conducted from 27-1-19 to 30-1-19 among 30 subjects; the subject was selected by sampling technique. The investigator given self introduction explained the purpose of the study, subject's willingness to participate in the study was ascertained. The subjects are assured anonymity and confidentiality of the information provided by them and written informed consent was obtained. The pre test knowledge questionnaire was administered, which was followed by SIM, which was followed by the post test after 3 days. The data collection process was terminated after thanking the Subjects for their participation and co operation. The data collection was then compiled for data analysis.

III. RESULTS

This chapter deals with the analysis and interpretation of data collected to evaluate the Effectiveness of self instructional module on knowledge regarding effects of computer vision

Among office staff working with computers at different organization of Bagalkot .

A. Presentation of Data

To begin with, data was entered in a master sheet, for tabulation and statistical processing. The findings were presented under following headings.

- *Section I:* Description according to socio –demographic variables of office workers.
- *Section II:* Assessment of levels of knowledge of office staff regarding effects of computer vision.
- *Section III:* Mean and standard deviation for the knowledge of office staff worker regarding effects of computer vision in pre test and post test.
- *Section IV:* Comparison of pre test and post test knowledge on effects of computer vision among office staff
- *Section V:* Association of the demographic variables of office staff with their knowledge scores.

- *Section I: Description of socio-demographic characteristics of study subjects.*

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Variable	category	No. of subject	% of subjects
Age group in year	21-30 year	24	80%
	31-40 year	3	10%
	41+ year	3	10%
Gender	Male	16	53%
	Female	14	46%
Religion	Hindu	16	53%
	Christian	6	20%
	Muslim	8	26%
Year of work experience	1-5year	11	36%
	6-10year	9	30%
	11-15year	5	16.6
	16+year	5	16.6
Hours of daily exposure to computer monitor	0-2hrs	4	13.3%
	3-4hrs	6	20%
	5-6 hrs	12	40%
	More than 6 hrs	8	26.6%
Monthly income	Less than 15000/-	11	36%
	150001/-to 20000/-	7	23%
	l20001/-to 25000/-	5	16%
	25000/- Above	7	23%
Attended services	Yes	17	56%
	No	17	43%
	Total	180	694.1%

Table 1:- Frequency and percentage distribution of socio demographic of characteristics of study subjects. (N=30)

➢ *Section I: Description according to demographic variables (N=30)*

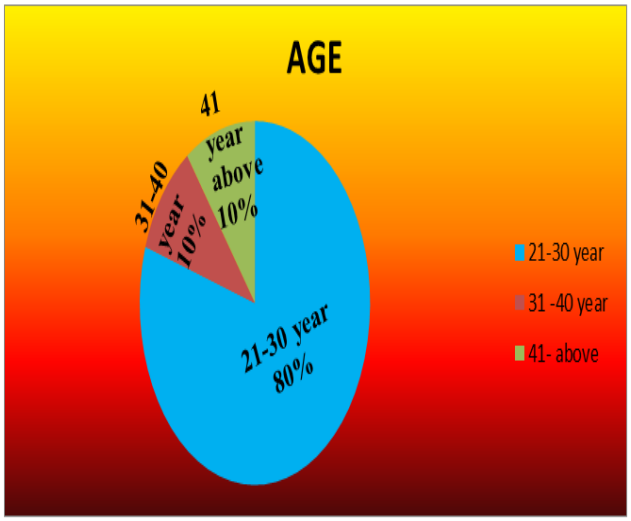

Fig 1:- Pie diagram representing distribution of Subjects by age

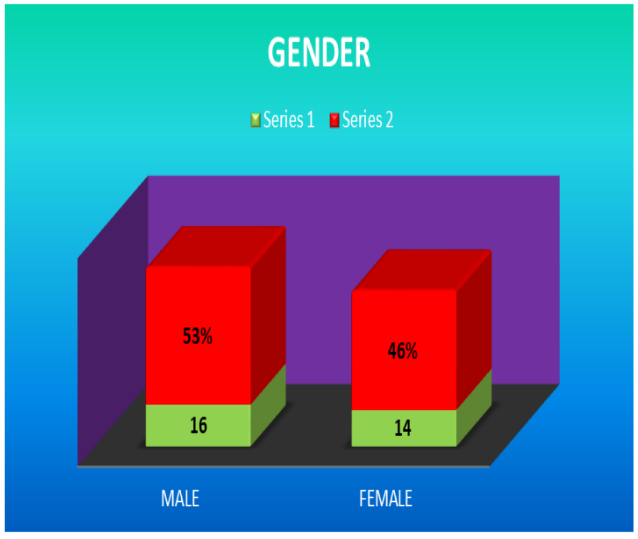

Fig 2:- Column diagram representing distribution of Subjects by sex

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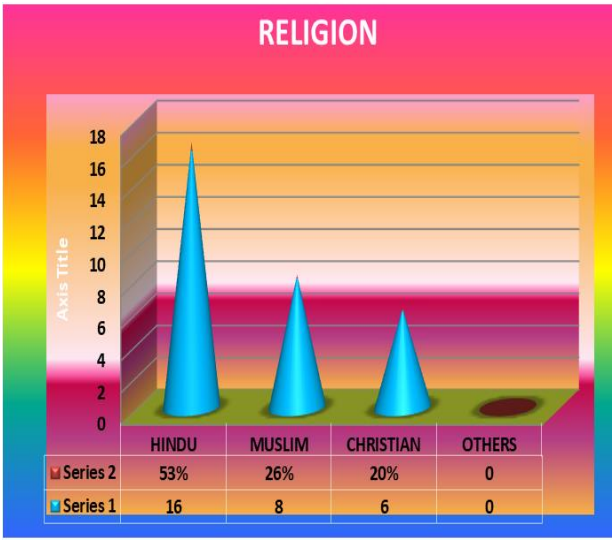

Fig 3:- Cylindrical diagram representing distribution of Subjects by religion

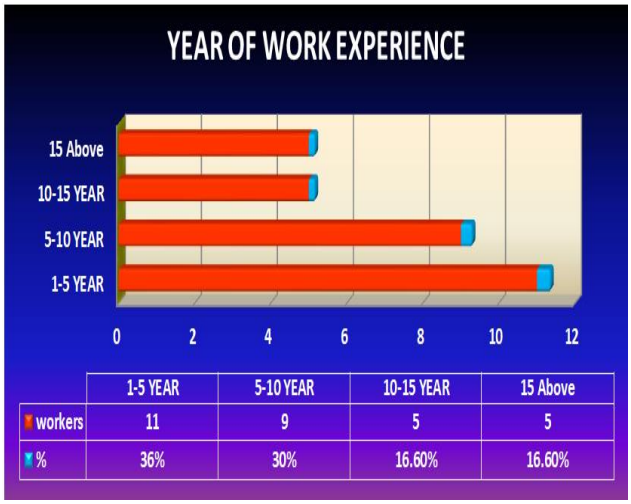

Fig 4:- Bar diagram percentage wise distribution of study subject according to their years of experience

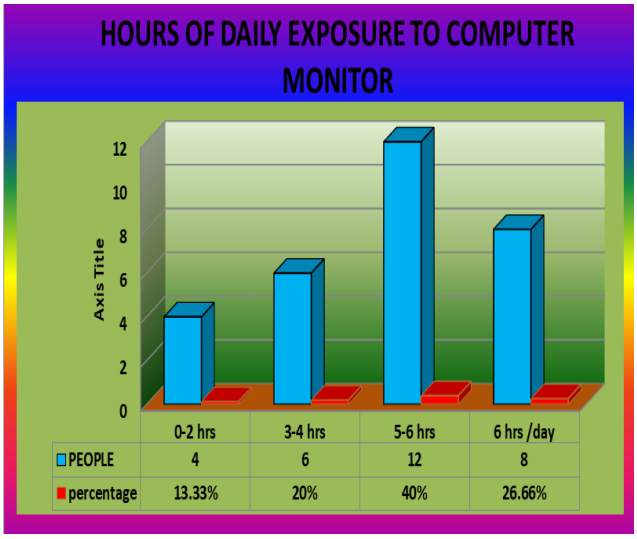

Fig 5:- Column diagram presenting distribution of the study hours of daily exposure to computer

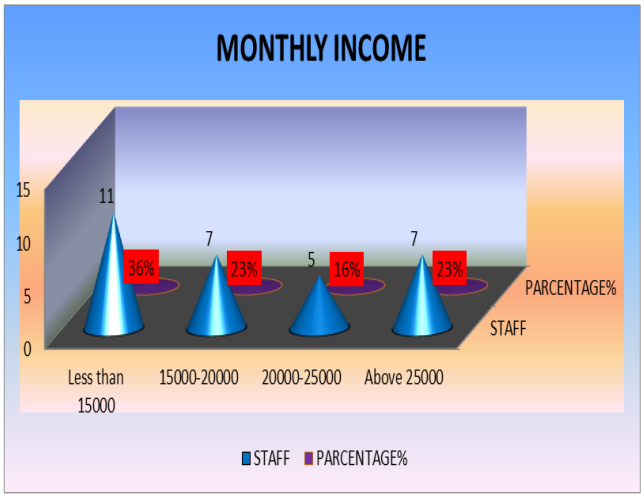

Fig 6:- Cone diagram depicts the percentage distribution of the study based on their monthly income

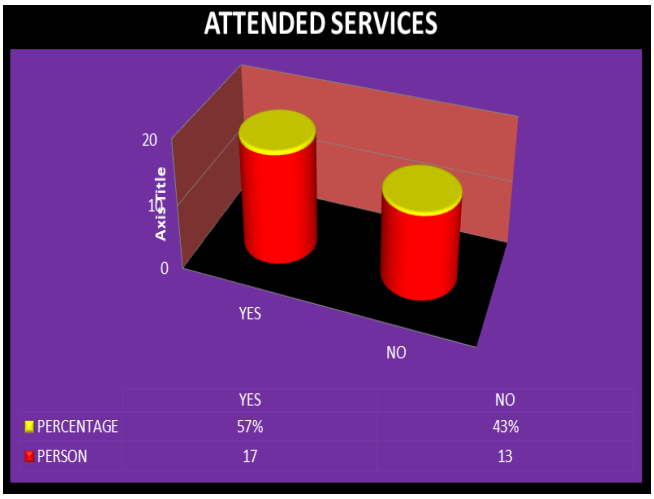

Fig 7:- cylinder diagram depicts the percentage distribution of study subjects by in-service education attended on effects of computer vision

➢ *Section-II: Assessment of levels of knowledge of office staff regarding effects of computer vision.*

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TEST	LEVEL OF KNOWLEDGE	FREQUENCY	PERCENTAGE %
PRE TEST	Very poor	9	30%
	Poor	20	66.6%
	Good	1	3.3%
	Very good	0	0.0
	Excellent	0	0.0
	Total	30	100.0
POST TEST	Very poor	0	0.0
	Poor	0	0.0
	Good	11	36.3%
	Very good	11	36.3%
	Excellent	8	26.6%
	Total	30	100.0

Table 2:- Assessment of level of knowledge of office staff in pre test and post test (N=30)

Categorization of the Office staff on the basis of the level knowledge was done as: Score 0-6 very poor knowledge 7-12 poor knowledge,13-18 good knowledge, 19-24 very good knowledge and 24-30 excellent knowledge.

The finding revealed that the majority 3.33% of office staff had good knowledge, 66.6% had poor knowledge and 30% of office staff had very poor knowledge regarding effects of computer vision. in pre test, where as in post test majority 36.3% had very good knowledge and 26.6 % percent had excellent knowledge and only 36.6 % had good knowledge.

- *Section-III: Mean and standard deviation for the knowledge in pre test and posttest*

Effects of computer vision in pre test and post test

Area wise analysis	Max. Score	Pre test		Post test	
		Mean	Std. Dev,	Mean	Std. Dev
Total knowledge	30	8.4	2.31	20.6	6.3

Table 3:- Mean and standard deviation for the knowledge of office staff regarding

In per test the mean obtained by the office staff is 8.4 and SD is 2.31 regarding Effects of computer vision. But in the test mean is 20.6 and SD is 6.3 regarding effects of computer vision . The mean difference in pre test and post test on knowledge regarding effects of computer vision among office staff is 12.2.

Section –IV: Comparison of pre test and post test knowledge regarding effects of computer vision among office staff.

Test	Mean	Std. Dev	Mean Diff	SD Diff	Paired t-value
Pre test	8.4	2.31	-12.2	-3.9	12.38
Post test	20.6	6.3			

Table 4:- Comparison of pre test and post test of knowledge scores by student paired t-test. (N=30 *p<0.001)

Form the above table it is evident that the calculated "t" value is 12.38. the Calculated p value at 0.001 level of significant is 0.000 thus it indicates that the alternative hypothesis is accepted. So there is a significant difference between the pre test and post test knowledge scores. Therefore the self instructional module is effectively increasing the knowledge level of office staff. Thus the $\mathbf{H_1}$ stated is **accepted.**

Comparison of pre test and post test of knowledge score of office staff regarding effects of computer vision. (N=30)

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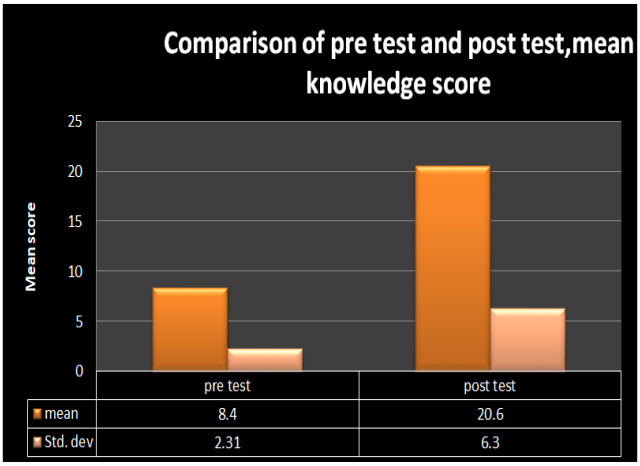

Fig 11:- The bar diagram shows the percentage comparison of knowledge score of office staff regarding effects of computer vision in pre test and post test

➢ *Section-V: Association between the knowledge score of office staff on effects of computer vision and selected socio-demographic variables.*

To find out the association between the knowledge scores of office staff regarding effects of computer vision with selected socio –demographic variables research hypothesis was formulated.

- *H_2: There will be a significant association between the Post test knowledge score of office staff regarding effects of computer vision and selected socio-demographic variables.*

The hypothesis was tested using chi-square test.

Category	Level of pre test knowledge score					Chi-square	DF	P-value
	Very poor	Poor	Good	Very good	Excellent			
Age group in years								
21-30 year	0	2	7	8	7	0.397	1	0.842
31-40 year	0	0	0	2	1			
40+ year	0	0	1	1	1			
Gender								
Male	0	1	3	7	5	0.532	1	0.818
Female	0	1	2	5	6			
Religion								
Hindu	0	0	6	5	5	0.670	1	0.796
Christian	0	0	2	2	2			
Muslim	0	0	1	4	3			
Year of work experience								
1-5 year	1	1	3	4	2	1.16	1	0.28
6-10 year	0	1	3	2	3			
11-15 year	0	0	0	2	3			
16+ years	0	1	1	2	1			
Hours of daily exposure to computer								
0-2 hrs	0	1	1	1	1	0.271	1	0.603
3-4 hrs	1	0	1	2	2			
5-6 hrs	0	1	2	5	6			
More 6 hrs	1	0	1	4	2			
Monthly income								
Less than 15000/-	0	0	3	5	3	0.615	1	0.804
15000/-to 20000/-	0	1	2	3	1			
20000/-to 25000/-	0	0	0	2	3			
Above 25000/-	0	0	2	3	2			
Attended any in service education								
Yes	1	1	2	5	6	0.144	1	0.705
No	1	2	2	5	5			
Total	2	3	4	10	11			

Table 5:- Association between the pre test knowledge score of office staff and socio demographic variables

Table-5 shows that there is a significant association the knowledge score of office staff regarding effects of computer vision with religion and monthly income. The calculated p-value of age, gender, marital status, years of work experience, hours of daily exposure to computer and in-service education attended are higher the valve of significance 0.05. So there is no significant association between the pre test knowledge score regarding effects of computer vision with selected socio demographic variable such as age, gender, marital status, years of work experience, hours of daily exposure to computer and in-service education attended.

SUMMARY

The focus of this study was to evaluate the effectiveness of self instructional module on knowledge regarding effects of computer vision among office staff working with computer in selected organization of B.V.V.SANGHA at Bagalkot. Majority of office staff were willing to participate in the study. They gave free and frank responses regarding effects of computer vision. The study was based on General System Theory. It provides a comprehensive systematic framework to assess the knowledge of the office staff. Further, the conclusion drawn on the basis of the study.

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