A Study to Assess the Effectiveness of Self Instructional Module on Knowledge and Practice Regarding Prevention of Problems Among Professional Computer Users

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Abstract: **A study to assess the effectiveness of self-instructional module on knowledge and practice regarding prevention of problems among professional computer users was carried out for partial fulfillment of the requirement for the award of Master of Nursing at Maharashtra University of Health Sciences, Nasik.**

Keywords: **self-instructional module, professional computer users**

1. Introduction

A. Problem statement

"To evaluate the effectiveness of self-instructional module on knowledge and practice regarding prevention of problems among professional computer users."

B. Objectives of the study

1) To assess the knowledge and practice regarding prevention of problems among professional computer users.
2) To compare the effectiveness of self-instructional on knowledge and practice regarding prevention of problems among professional computer users.

C. Hypothesis

H0: There is no significant difference in the level of knowledge and practice among professional computer users after administration of self-instructional module.

D. Introduction

"Computers are magnificent tools for the realization of our dreams, but no machine can replace the human spark of spirit, compassion, love and understanding." -Louis Gerstner

"DZUB-NON TRUL-PAR – Tibetan word for computer translate it as finger pressing magic picture" (Bob Brill). 'A computer 'can be defined as the combination of computer hardware, display screen, keyboard and/or mouse or other important devices. The one intervention that has had the greatest impact on our lives in modern time is the computers. It has now become basic and essential desktop equipment in almost every establishment. But the human computer interface is not free from health hazards. The computer work station typically encompasses the computer and the work station furniture such as the desk, chair, footrest, any equipment used.

In the twenty first century, computers have become almost as the humble pen and paper in many people's daily life.

In the past three decades computers have significantly changed the working environment, simplifying and speeding many tasks across many work areas.

Computers are an integral part of life and no longer need specialized training for use. In every sphere of life the dependence on computer is ever increasing. Computers have become an essential tool for much based occupation.

Along with smaller size and affordable prices, there has been the advent of the internet. This has ensured that people use this technology either at their place of work or at home. Worldwide, approximately 90 million adults use computers regularly.

With online training, trading and office work, the use of personal computers is growing exponentially. Worldwide PC's in use surpassed 1.6B in 2011 and should reach 2.45B in 2016. Worldwide PC's in use per capita reaches 23% in 2011 and is forecasted to reach 33% in 2016. Total worldwide computer in use was 1.67B units in 2011 and is projected to reach 2.55B in 2016. It had taken 27 years to reach 1 billion computers in use and market researchers say it will take only 5 years to reach the next billion.

In almost all offices, colleges, universities and homes today, the computers are becoming common place items. Computer related job opportunities are offering colourful salary and the wide nature of scope for this profession attracts many people into this field.

2. Background of the study

Computer use is widespread in workplace and at home, with up to 25% of people reported to use a computer for more than 50% of their working day. Over the past decade there has been a rapid increase in computer use, with worldwide personal computer shipments doubling from 25 million in 1990 to 57 million in 1995.

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60

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India has been in the forefront of the cyber world with IT industries developing into a major service provider. Among these, Bangalore has the highest number of software companies in India, hence called the Silicon Valley of India.

According to the survey done in Mumbai to estimate the prevalence of computer related health problems among software professionals shows that the prevalence of any type of computer related morbidity in software professionals was 178(89%). The proportion of visual, musculoskeletal and stress was found to be 67%, 63% and 44% respectively.

It is estimated that today at least 75% of all jobs involve some level of computer use, this means 3 quarter of workforce are being exposed to numerous health problems, the same can be said of students and educators who do not go through any day without access to a computer for an academic work. So it's crucial to identify and resolve these problems sooner rather than later in an effort to reduce if not eradicate these problems.

The result from the research shows that neck and upper extremity repetitive stress injury is prevalent among Bank workers. This is in concordance with a research by Lacerda et al, (2005) who reported the prevalence and association of upper extremity repetitive stress injury symptoms among bank workers in Northeast Brazil.

3. Research methodology

A. Introduction

This chapter deals particularly with methodology adopted by the investigator to conduct the study undertaken. It includes research approach, research design, identification of target and accessible population, sampling technique, sample size, inclusive and exclusive criteria (samples), tool preparation, feasibility of the study, pilot study, validity, reliability, data collection and methods of data collection.

B. Research design

According to Polite and Hunglar, research design is an overall plan as in how to obtain answer to the question being studied and how to handle some of the difficulties encountered under research process.

In this study Pre Experimental research design, one group pre-test post-test (quasi experimental) design was chosen.

Pre-test was administered with means of structured questionnaire (depicted as O1) and then self-instructional module is given (depicted as X), a post test was conducted using the same structured questionnaire (depicted as O2).

The study design is depicted as:
- Pre-test Intervention Post-test
- (Self-instructional module)
- O1 X O2

C. Criteria for sampling

Inclusion criteria

a) Professionals who use computer continuously for minimum 3 hours or maximum 6-8 hours.
b) Professionals using computer, who are available during the period of data collection.
c) Professionals who are in the age group of 20-45 years.
d) Professionals who are willing to participate in the study.

Exclusion criteria

a) Professional computer users who are suffering from the other systemic diseases such as diabetes, hypertension, cardio-vascular disorders, arthritis etc.

4. Result

The results shows that there was significance difference between pretest and post test knowledge score in relation to knowledge regarding prevention of problems among professional computer users.

In pre-test score mean is 5.88, standard deviation is 1.698 and in post test score mean is 9.8, standard deviation is 0.404. Table t value is 2.01 and calculated table value is 17.171 at 0.05 level which is significant.

Similarly, a significant difference between pre test and post test practice score in relation to practice regarding prevention of problems among professional computer users was also observed.

In pre-test score mean is 12.14, standard deviation is 3.194 and in post test score mean is 19.78, standard deviation is 0.418. Table t value is 2.01 and calculated table value is 16.687 at 0.05 level which is significant.

The figure stated clearly represents that there is increase in the level of score in post test in comparison to pre test.

Thus the self-instructional module was effective.

5. The major findings of the study

The following are the major findings of the study:

The study was conducted with 50 professional computer users which were selected on the basis of non-probability convenient sampling.

The analysis shows that 60% of the subjects were of the age group 25-30 years, 24% were of the age group 20-25 and 16% were of 30-40 years. The majority of the subjects were male comprising of 54% of sample population and remaining 46% were females who all work with computers at their work place. In the study 36% were unmarried, 38% married, 2% divorcee and 24% were singles. On the basis of time spend on computers per day it was found that 16% of the samples spend upto 3 hours, 44% spend 3-5 hours,28% spend 6-8 hours and 12% spend more than 8 hours on computers. There were 42% of diploma holders, 38% degree holders and 20% post graduates in the study. As per the work experience it was revealed that 52% of the professionals had 2-4 years of experience, 30% had 0-1 year of experience and 18% had 6-11 years of experience. It was found that 100% of the samples worked in private institutions.

Assessing the existing level of knowledge and practice of the

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61

professional computer users regarding prevention of problems due to computer use.

The pre test of professional computer users shows that they have less knowledge regarding the problems caused due to computer use and also lacked in the practices to be followed to avoid those problems. This indicates the need for imparting necessary education and information on prevention of problems among professional computer users and to promote health and to prevent problems and its complications.

Effectiveness of Self Instructional Module (SIM) on knowledge and practice regarding prevention of problems among professional computer users.

There was a significant difference between pre-test and post-test, p-value was calculated and found that the post test score were significantly higher, and p-value less than 0.05 i.e significant. This means there is significant difference between pretest and post-test knowledge score in relation to prevention of problems among professional computer users.

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6. Summary

The purpose of the study was to determine the knowledge and practice regarding prevention of problems among professional computer users. The study also aimed to find out the level of knowledge and practice among professional computer users regarding prevention of problems among professional computer users.

7. Conclusion

The conclusions drawn from the finding of the study are as follows:

The 't' test used to find the effect of self-instructional module on knowledge and practice regarding prevention of problems among professional computer users revealed that there is highly significant gain in knowledge and practice of professional computer users who had been supplemented with the self-instructional module.

The study concludes that professional computer users need the training about ergonomics and practices to be carried out while working with computer to avoid problems.

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