Research Article

A STUDY TO ASSESS THE PATTERN OF USAGE OF COMPUTER AND ITS IMPACTS ON HEALTH STATUS OF CLERICAL STAFFS OF SELECTED ORGANIZATION VIJAYAPUR

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A R T I C L E   I N F O

A B S T R A C T

Background: Computer jobs are more sedentary; require more cognitive process and mental attention and best physical expenditure of energy. The length of working in front of video display units (VDT) may be a direct cause of reported health complaints among computer users. Computer networking is fast and convenient way to transfer data and make our workload less and perform all the tasks fast. But still, computers have some disadvantages we must be aware of it.

Aims and objectives: The study aims at assessing the impact of computer usage on health status of clerical staffs of BLDE organization at Vijayapur

Materials and Methods: Non experimental Descriptive design was used for this study and conducted in BLDE Organization as a setting of the study. Total sample size of the study was 52 clerical staffs who meet the criteria of the study. The samples were selected by purposive sampling technique. The data were gathered by conducted interview and administering the questionnaire. The anthropometric measurements were recorded like weight, height, BMI, waist circumference, blood sugar level. Data were analyzed by using descriptive and inferential statistics.

Results: In this study out of 52 samples 41 (78.84%) were having average pattern of computer usage and 38 (73.07%) were not influenced by computer, 21 (40.38%) were had over weight B M I status, 22 (42.30%) male were had waist circumference as more than 40 inch, where as 09 (17.30%) females were had waist circumference as more than 35 inch. The GRBS categorization indicates that 84.61% of samples belongs to pre diabetic level. There is no significant association between pattern of computer usage and impact of computer with selected demographic variables.

Conclusion: More usage of computers will lead to health problems. The correct practice will be required while using computer.

INTRODUCTION

Computer is the revolutionary invention of modern science. This is the age of computer. Computer has become an integral part of our life. We cannot imagine our present life without computer everything in our life is connected with it [1] They have become an electronic device of almost everyday use for individuals of every age, and essential in almost all the business dealing that are made nowadays.[1]

Computer is now essential in office, institution, bank, rail, shops, business, industry etc. We are helpless without it. Computer has made our life easier. It helps us to do much hard work quickly that we cannot do manually and save our time [2]. The computers had made people very lazy just because of the facilities that the computer had provided them.

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- Computers affect our eyesight due to radiation.
- Computers destroy our social life.
- Too much time in front of computers distracts our mind.
- Computer also cause short term eye problems like burning eyes, itching and tearing.
- Eye strain, eye soreness especially for the video display users.
- Employers had heavy workloads or prone to psychological distress like anxiety, irritability and fatigue.[6]
- People who have used the computers for an extensive period of time may complain about headache, pain in their wrist, shoulder and neck.
- Due to prolonged sitting in front of computer and sedative life style may cause obesity leads to risk of diabetes and hypertension.

Approximately 75% of jobs in the year 2000 relied on computers, while 50% of homes contained a computer.[3] Computer jobs are more sedentary, require more cognitive processing mental attention and less physical expenditure of energy. The length of working in front of video display unit may be a direct cause of reported health complaints among computer users.[4]

Back and neck pain, headache and shoulder and arm pain are common computer related injuries. Such muscle and joint problems can be caused or made worse by poor work station design, bad posture and sitting for long periods of time. Although sitting requires less muscular efforts than standing, it still causes physical fatigue. This reduces the circulation of blood to muscle, bones, tendons and ligaments, sometime leading to stiffness and pain. If work station is not set up properly these steady positions can put even greater stress on muscle and joints. Muscle and tendons can become painful with repetitive movements and awkward postures. This is known as 'overuse injury' and typically occurs in the elbow, wrist or hand of computer users. Symptoms of these overuse injuries include pain, swelling, stiffness of the joints, weakness and numbness. Focusing eyes at the distance point for long periods of time causes fatigue. The human eye structurally prepares to look at objects more than six meters away, so any work performed close up put extra demands on eye muscle. The illuminated computer screen can also cause eye fatigue. Computer users may get symptoms such as blurred vision, temporary inability to focuses on for away objects and headache.[5]

Statement of problem: A study to assess the Pattern of Usage of Computer and Its Impacts on Health Status of Clerical Staffs of Selected Organization at Vijayapur

Objectives of the study

- To assess the pattern of usage of computers of clerical staffs.
- To determine the health status of clerical staffs.
- To find out the association between pattern of usage of computer scores with selected demographic variables.
- To find out the association between health status of clerical staffs with their selected demographic variables.

Hypotheses

The hypotheses will be tested at 0.05 level of significance.

H_1 : There is a significant association between pattern of usage of computer with selected demographic variables.
H_2 : There is a significant association between health status scores with selected demographic variable.

MATERIAL AND METHODS

Sources of Data

The data was collected from clerical staffs at selected organization of Vijayapur.

Research Design: The research design selected for this study is Non Experimental Descriptive Design

Setting: This study was conducted in the selected Organization at Vijayapur.

Population: All clerical staffs who are working with computer in selected Institution of Vijayapur.

Sample: Clerical staffs from selected Organization in Vijayapur

Sample Size: The sample size of this study consist of 52 clerical staffs.

Sampling Technique: The technique used for sample selection is Purposive sampling technique.

Sampling Criteria

Inclusion Criteria

- Clerical staffs who are willing to participate in the study.
- Clerical staffs who are present during data collection.
- Both male and female clerical staffs.
- Clerical staffs who use computer continuously more than two hours per day.

Exclusion Criteria

- Clerical staffs who are absent during the period of data collection.
- Clerical staffs who are not working with computer.

Tool Used

The questionnaire including 4 tools. Tool-1 containing 10 demographic variables, Tool-2 containing 27 questions about pattern of usage of computer, Tool-3 containing 21 questions about impacts of computer on health status and Tool-4 has been used to assess the health status of clerical staffs.

Statistical Methods: Mean, median, Frequency and SD were used to describe the data of samples. Chi square test was used to find out the association between patterns of usage of computer with selected demographic variables and Association between impacts of computer with selected demographic variables.

RESULTS

Section – I

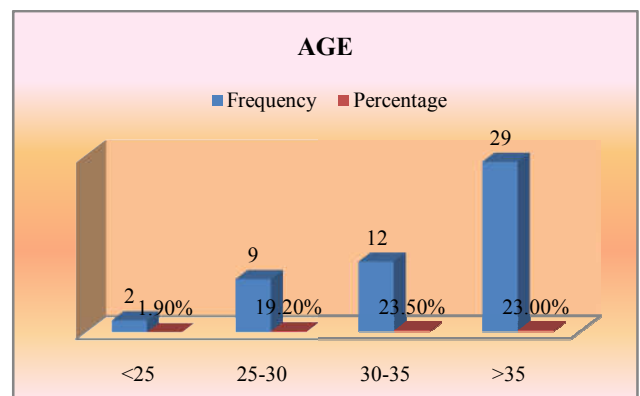***Frequency and Percentage Distribution of Subjects According To Baseline Characteristics***

Figure 1 Distribution of samples according to age Group

The above simple bar diagram shows that 1.9% samples belongs to <25year, 19.2% belongs to 25-30year, 23% belongs to 30-35year and 55 and 7% belongs to >35year.
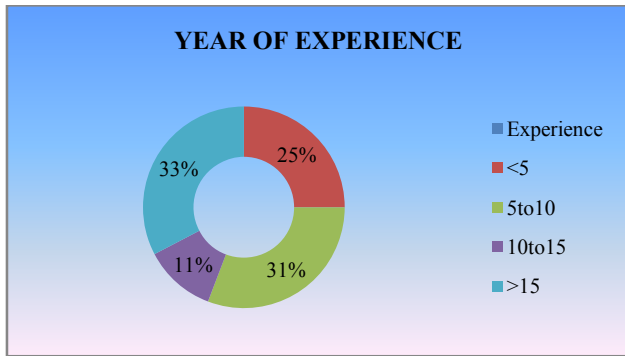
Figure 2 Distribution Of samples according to Year of Experience   **N=52**

The above pie diagram showing sample distribution according to year of experience. 25% of samples had <5 years experience, 30.7% of sample had 5-10years experience, 11.5% of samples had 10-15years of experience, and 32.6% of samples had >15years of experience.
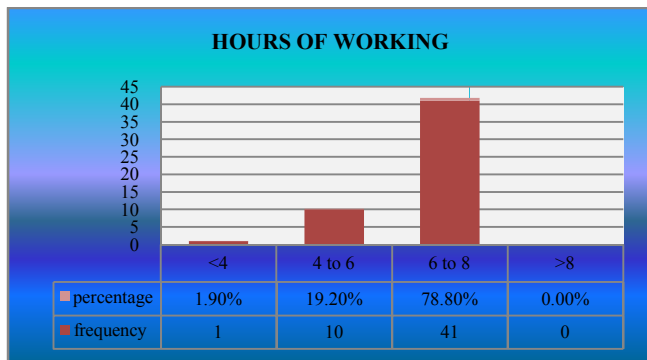

Figure 3 Distribution of samples according to Hours Of Working In A Day   **N=52**

The above bar diagram showing sample distribution according to working hours per day. 1.90% working less than 04 hours, 19.20% working 4-6 hours, 78.80% working 6-8hours.
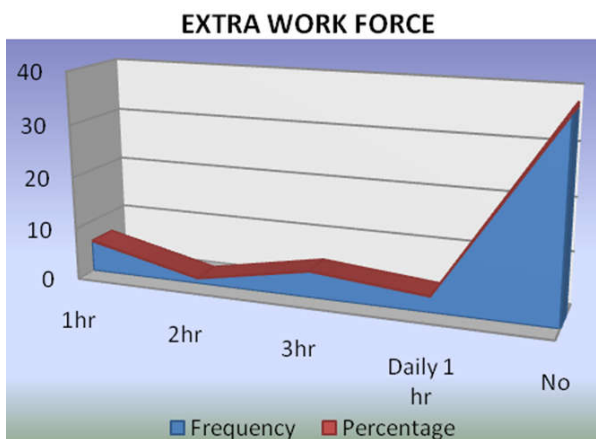

Figure 4 Sample distribution according to Weekly Extra Work Force   **N =52**

The above area diagram showing frequency and percentage distribution of Extra work force of working in a day. Data shows 11.5% had 1hour, 1.92% had 2hours, 7.6% had 3hours, 5.7% had >3hours, 73% had No extra work force.
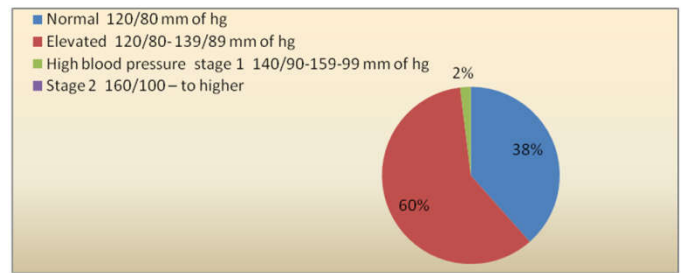

Figure 5 Distribution of samples according to blood pressure level   **N=52**

The above pie diagram showing frequency and percentage distribution about blood pressure categorization. Data presented with regard to blood pressure of individuals shows that –38.46% samples had normal BP, 59.61% samples had elevated BP, 1.92% samples had high blood pressure stage -1.
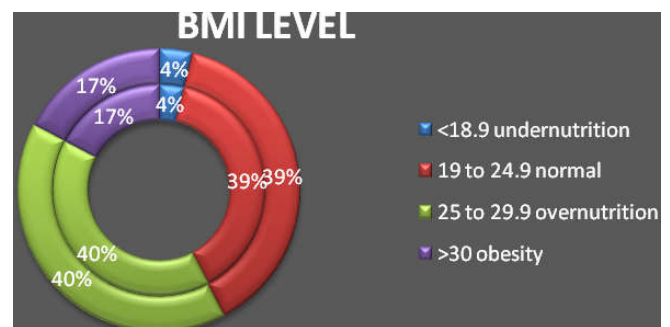

Figure 6 Distribution of samples according to BMI Level   **N=52**

The above pie diagram shows that sample distribution according to Body mass index. 3.84% samples shows that <18.9 BMI, 38.46% samples shows that 19-24.9 BMI, 40.38% samples lies between scores of 25-29.9 BMI, 17.30% samples are belongs to >30 BMI level.

Table 1 Distribution of Samples According To Waist Circumference

N=52

Waist circumference level in male	F	%
≥ 40 inch	22	42.3
< 40 inch	18	34.61
Waist circumference level in female		
≥ 35 inch	09	17.30
<35 inch	02	5.76
Total	52	100

Data presented in above table with regard to waist circumference shows that males belongs to ≥40 inches are 22 i.e (42.30%), < 40 inches are 18 i.e (34.61%). And in Females ≥35 are 09 i.e (17.30%), <35inch are 2 i.e (5.76%).

Table 2 Distribution of samples according to BMI Level

N=52

Body mass index level	category	f	%
<18.9	Under nutrition	2	3.84
19-24.9	Normal	20	38.46
25-29.9	Over nutrition	21	40.38
>30	obesity	09	17.30
	Total	52	100

The above table showing frequency and percentage distribution about Body mass index categorization of samples. Data presented with regard to Body mass index shows that 2 samples had <18.9 BMI Level i.e under nutrition (3.84%), 20 samples had 19-24.9 BMI level i.e normal(38.46%), 21 samples had 25-29.9 BMI level i.e over nutrition (40.38%), 9 samples had >30 BMI level i.e obesity (17.30%).

Table 3 Distribution of samples according to Blood Glucose Level

N=52

Random Blood glucose level	Scores or values in mg/dl	f	%
Normal	79-160	4	7.69
Pre Diabetic	160-200	44	84.61
Diabetic	>200	4	7.69
	total	52	100

Data presented in above table with regard to random blood glucose level shows that 04 samples had normal glucose level i.e 79-160 (7.69%), 44 samples had pre diabetic level 160-200 i.e (84.61%) and 04 samples had diabetic i.e >200 (7.69%). Section – II

Table 4 Distribution of Pattern of Usage of Computer

N=52

S No	Computer usage pattern	Scores	F	%
1	Poor	37-54	9	17.30
2	Average	19-36	41	78.84
3	Good	0-18	2	3.84
		Total	52	100

Data presented in above table with regard to pattern of usage of computer shows that 09 samples had poor pattern of usage (17.30%) 41 samples had average pattern of usage (78.84%) and 02 samples had good pattern of usage of computer (3.84%).

Table 5 Distribution of samples according to health status

N=52

S No	Health Status	Scores	F	%
1	Poor	27-38	1	1.92
2	Average	14-26	13	25
3	Good	0-13	38	73.07
		Total	52	100

Data presented in above table with regard to health status of clerical staffs.01 sample had poor health status (1.92%), 13 samples shows that average health status (25%) and 38 samples had good health status (73.07%).

Table 6 Distribution of Blood Pressure Level

S No	Blood pressure	Scores	F	%
1	Normal	120/80 mm of hg	20	38.46
2	Elevated	120/80- 139/89 mm of hg	31	59.61
3	High blood pressure Stage 1	140/90-159-99 mm of hg	1	1.92
4	Stage 2	160/100 – to higher	0	0
5	Stage 3	Higher than 180/110 mm of hg	0	0
		Total	52	100

Data presented in above table with regard to blood pressure of individuals shows that 20 sample had normal BP (38.46%), 31 samples had elevated BP (59.61%), 01 sample had high blood pressure stage -1 (1.92%).

Table 7 Association between patterns of usage of computer with selected demographic variables

N=52

SL.no	Demographic variable	Chi square value	DF	Table value	Significance
1.	Age	1.79	3	7.82	NS
2.	Gender	3.36	1	3.84	NS
3.	Education	2.38	2	5.99	NS
4.	Designation	2.34	3	7.82	NS
5.	Experience	2.44	3	7.82	NS
6.	Hours of work per day	0.11	3	7.82	NS
7.	Weekly extra work force	2.84	4	9.49	NS
8.	Marital status	0.4	3	7.82	NS
9.	Number of children	0.24	3	7.82	NS
10.	Monthly income	0.06	3	7.82	NS

S: Significant   NS: Not Significant

The above table depicts that there is no significant association between pattern of usage of computer with selected demographic variables at 0.05 level of significance.

Table 8 Association between impacts of computer with selected demographic variables.

N=52

SL.No	Demographic variable	Chi square value	DF	Table value	Significance
1.	Age	0.8	3	7.82	NS
2.	Gender	1	1	3.84	NS
3.	Education	1.5	2	5.99	NS
4.	Designation	1.2	3	7.82	NS
5.	Experience	0.23	3	7.82	NS
6.	Hours of work per day	0.16	3	7.82	NS
7.	Weekly extra work force	0.19	4	9.49	NS
8.	Marital status	051	3	7.82	NS
9.	Number of children	1.19	3	7.82	NS
10.	Monthly income	0.67	3	7.82	NS

S: Significant   NS: Not Significant

The above table depicts that there is no significant association between patterns of usage of computer with selected demographic variables at 0.05 level of significance.

DISCUSSION

The study findings reveals that most of the sedentary workers like clerical staffs are working more with computers are at risk to get the non communicable diseases. 84.61% of samples belongs to pre diabetic level, 40.38% samples had BMI level 25-29.9, 42.3% males are having > or = 40 inch waist circumference, 17.3% of females are having more than or equal 35 inch waist circumference, 17.3% of samples are having poor pattern of usage of computers and 25% of samples had average health status.

CONCLUSION

The study concludes that some training programme or health awareness programme is required for sedentary workers like clerical staffs those are using more computers for prolonged period of time regarding correct pattern of usage of computers and its adverse effects on health and its management. More usage of computers will lead to health problems.

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