INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT AND MANAGEMENT

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CONTRIBUTIONS TO BOOKS
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- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS
- Garg Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

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- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Economic and Political Weekly, Viewed on July 05, 2011 http://epw.in/user/viewabstract.jsp

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A STUDY ABOUT HEALTH PROBLEMS OF EMPLOYEES WORKING IN IT AND ITES INDUSTRY IN THE ASPECTS OF ERGONOMICS

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ABSTRACT

Ergonomics is a stream of science, which may be helpful for your health and helps you to recover from various kinds of problems. There are various studies conducted regularly, in reference to ergonomics, which helps in creating products that would provide more comfort and benefits to the people who use them. It has been seen that most of these studies have provide information that has been effective in creating an impact on the person. The health problems can be classified as short-run health problems and long-run health problems. Short-run health problems are those which comes into picture very soon as a person starts spending long hours in front of the monitor. It takes the form of tiredness, eye-pain, neck-pain, backache, shoulder-pain, headache, numbness and stiffness in joints. These problems lasts for few hours after work and some times from the beginning itself. To study the above mentioned short-run health problems more specifically, a sample of one hundred persons were taken into consideration on random basis. These people were selected from software companies and BPO's at different age group on random basis. The study concludes that the most common complaints brought about by Computer users are headaches, burning eyes and dry eyes, which are related to eyestrain. Because; good health and productivity are helpful in raising both human capital and physical capital which results in capital formation. Ergonomic problems cannot be completely avoided. They can, though be scientifically reduced by a better workstation and a combination of rest and exercise.

KEYWORDS

Ergonomics, Health Problems, Human Capital, Carpal tunnel Syndrome.

INTRODUCTION

The term ergonomics has been used widely in decorating homes and offices along with many other options. Ergonomics is a stream of science, which may be helpful for your health and helps you to recover from various kinds of problems. There are various studies conducted regularly, in reference to ergonomics, which helps in creating products that would provide more comfort and benefits to the people who use them. It has been seen that most of these studies have provide information that has been effective in creating an impact on the person. Technological innovation is essential for human progress. From the printing press to the **Computers**, from the first use of penicillin to the widespread use of vaccines, people have devised tools for improving health, raising productivity and facilitating learning and communication. Today technology deserves new attention. Why? Because digital, genetic and molecular breakthroughs are pushing forward the frontiers of how people can use **technology to eradicate poverty.** These breakthroughs are creating new possibilities for improving **health** and nutrition, expanding knowledge, stimulating economic growth and empowering people to participate in their communities.

Today's technological transformations are inter-wined with another transformation-**Globalization** –and together they are creating a new paradigm: the network age. These transformations expand opportunities and increase the social and economic rewards of creating using technology. They are also altering how- and by whom technology is created and owned, and how it is made accessible and used. Human development is also an important means to technology development. Technological innovation is an expression of human potential. Higher levels of education make especially powerful contributions to technology creation and diffusion. More scientists can undertake research and development, and better – education farmers and factory workers can learn, master and use techniques with greater ease and effectiveness. So, human development and technological advance can be mutually reinforcing, creating a virtuous circle. Technological innovations in agriculture, medicine, energy, manufacturing and communications were important – though not, the only – factors behind the gains in human development and poverty eradication. **Globalization** propels technological progress with the competition and incentives of the global marketplace and the world's financial and scientific resources. And the global market place is technology based, with technology a major factor in market competition.

REVIEW OF RELATED LITERATURE

Over the last fifteen years tremendous shifts have taken place in the perspective of educators towards technology. In the early 1980's the computer was looked upon as an agent of change (**Mehan, 1989**). It didn't take long for mixed results to temper this initial enthusiasm and reduce expectations. (**Hawisher, 1989**) Today the Internet and school networking is often times viewed the way computers were in the 1980's. Schools rush to "wire buildings" as an agent of change, without much depth in thinking about how this tool will contribute to student learning. The Internet and wiring, like their predecessor, the computer, are simply tools, which can be used effectively, with a common goal.

C. Paul Olson in his work "who computers" offers a published prescient in 1987 examination of the promises and problems offered by the intersections of computers and literacy with class and economics. **Charles Moran** points out, scholars in computers and writing have since treated Olson's essay as the first and final word on how economic and class concerns affect our field: aside from works by Moran, Cindy and Dickie Selfe, Donna LeCourt, Jeffrey Grabill, and a few others, this topic has to gain more attention than ignoring it they contend that economic issues are of deep concern to scholars and teachers in computers and writing, and ought to be more explicitly addressed.

In a recent retrospective article titles **"Health of the people" Moran** points out that computers and writing has constructed the functions of technology in the wired writing classrooms as fostering either efficiency (making the production and circulation of writing easier) or equity (making the classroom a more democratic space). Both efficiency and equity are concerns associated with economics, as **N. Gregory Mankiw**, current Chairman of the President's board of economic advisers points out, This is an issue of importance as well. **Marxian economists** point to increased efficiency as an increased rate of exploitation, and

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privilege equity as the highest economic value, while mainstream **neoclassical economists** contend that an equitable society can serve and be served by a highly efficient economy. Moran notes with reference to the **"increased productivity"** where computers can bring to student writing is, symptomatic of the common early view that computers would make writing more efficient, and that **Donna LeCourt's** hope that "technology offers a way to provide students with then means to critique how their textual practice participates in ideological reproduction; This reflects the growing view that technology can be used to serve critical pedagogy's end of fostering a more equitable classroom in their work on learning.

Olson in his work on **"Computers"** writes, "That computers are, plain and simple, is a very efficient tool for processing information". He also examines its problematic consequences, as one way to point towards some possible alternative perspectives and solutions that might finally ask not only who computers, but also what is computing. His evaluation explains how the disadvantages of using computers can be overcome.

According to **Anyon, Bernstein,** and others have demonstrated, and this should remind us once more that writing itself is a technology, and -- as such -- far more than mere instrument or tool. Olson notes that "Tools are used by people for particular ends," and "no tool autonomously organizes and employs itself". The Author **Bruce Pietrykowski** in his work on **"Health of people"** states that examination of "the identification of the campus as a significant site of capital accumulation" resulting "in the systematic conversion of intellectual activity into intellectual capital and, hence, intellectual property", and suggests that "the introduction of computer-based technologies may well signal a new terrain of struggle over the purpose and nature of higher education". Computer literacy education makes freshly visible the economic commoditization of higher education.

Cindy Selfe has pointed to the **Clinton administration's** repeated invocation of national economic productivity and competitiveness as the driving force behind computer literacy education. So, too, today we hear the **Bush administration** declare that the computer literacy education is the only way to keep Americans competitive in the global information economy. His economy is typically constructed as transcendent, as beyond intervention, as monolithic, market-driven, capitalistic, and immaterial, as evidenced by the discursive connections often drawn between the dreams of bodily and material transcendence of difference offered by the Web and the dreams of "what **Bill Gates** calls the **'friction-free' capitalism of the twenty-first century"** also offered by the Web.

In the Article titled **"The Health", Andrew Feenberg** observes that education has been "reorganized to provide capitalist industrialism with the type of workers it required". So too, **Stanley Aronowitz** notes that "Even for those schools that lay claim to the liberal intellectual tradition, the insistent pressure from many quarters to define themselves as sites of job preparation has clouded their mission and their curriculum", and goes on to suggest that "Perhaps the most urgent questions today concern whether the academic system has a genuine role in providing the space for learning, whether or not its curricula are useful to the corporate order." **Michael Porter** offers another counter to this transcendent and delocalizing discourse, describing the business advantages of what he calls "clusters": "A cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities". In pointing out the absence of an understanding of the significance of location in the literature on management, According to him the cheerleaders of the information economy do the same, constructing information as free flowing and transcending any material context.

Geetha Kumari and Pandey (2010), her study identifies the various health problems of the employees working in GCE and GIMT Gurgaon has been studies on the basis of answers received from the employees for the given questionnaire. Very few employees frequently use laptop at home. Also most of employees use desktop / workstation as alternative to laptop. The study concludes that seeing for wide advertisement media about various problems generated from working on computers and companies must do something for the better health of their employees.

STATEMENT OF PROBLEM

There are different ways to define ergonomics and one of the simplest methods of doing the same is to state it as a science or scientific discipline concerned with designing, which is based according to the human needs and making life more comfortable. Hence ergonomics can also be defined as a stream that applies theory, principles, data and methods of designing for optimizing human well-being and overall system performance. Ergonomics has often been termed as human engineering, and human factors. The emphasis of the study is on India as the growth of the Indian Software Industry. A healthy man enjoys work and is rewarded by a high degree of productivity. Good health is a prerequisite for human productivity and development process. It is essential for economic and technological development. The progress of the society depends on the quality of the people. Unhealthy people cannot make any valid contribution towards developmental programmes. Good health and productivity are interrelated; development is a process of growth in the direction of modernity, especially towards nation building and socio-economic progress. It is learnt that the people who spend long hours in front of the monitor are affected from the health problems.

The **health problems** can be classified as **short-run health problems and long-run health problems. Short-run health problems** are those which comes into picture very soon as a person starts spending long hours in front of the monitor. It takes the form of tiredness, eye-pain, neck-pain, backache, shoulder-pain, headache, numbness and stiffness in joints. These problems lasts for few hours after work and some times from the beginning itself. On the other hand, **long run health problems** occur if the short run health problems are allowed to continue and ultimately it takes the form of spinal cord injury, **repetitive strain injury**, nervous break down, cumulative trauma disorder, carpal tunnel syndrome, bursitis, tendonitis, dequervains syndrome, thoracic outlet syndrome, trigger finger or thumb, myofascial pain syndrome, reflex sympathetic dystrophy and shoulder impringement syndrome. So to avoid all these health problems a proper care must be taken from the beginning itself. To study the above mentioned short-run health problems more specifically, a sample of one hundred persons were taken into consideration on random basis. These people were selected from software companies and BPO's at different age group on random basis.

OBJECTIVES OF THE STUDY

Through the broad objective of the present work is to study the health status of people working on Computers, the objective may be stated as follows:

1. To compare and study the health status of the people working on computers i.e., to examine if prolonged working hours on computers is the cause of health problems of if they are age induced.
2. To compare the level of income based on their educational Qualification and the total years of expenditure.
3. To analyze the short run and the long run health problems.

HYPOTHESIS

It is hypothesized sitting in front of the monitor for a very long time causes many health problems and The health problem persists if proper care is not taken.

PERIOD OF THE STUDY

The time period considered for the study is June'11– July '11 as the study involves a simple comparison of the health status of individuals falling under differing age category.

DATABASE

The study will be based on primary data mainly collected from Software companies and Business Processing Outsourcing Units (BPO'S)

METHODOLOGY

The present study is largely based on the primary data collected from one hundred respondents using questionnaires. The sample was randomly selected from leading BPO'S and Software companies. The questionnaire was designed to elicit information like the age, working hours and the health problems of people working on computers. Along with other variables, education and income was also taken into consideration. The analysis of the data was done with the help of correlation and chi-square test to see the relationship between age to health problems and working hours to health problems.

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TOOLS FOR ANALYSIS

Statistical tools such as correlation and chi-square test have been used to study the relationship between age-health problems and working hours-health problems. These apart, average, percentage and growth rates have been applied wherever necessary. Further data has been classified and presented with the help of simple and complex tables as well as through exhibits.

LIMITATIONS OF THE STUDY

1. The extent of disease cannot be measured because it is a subjective factor.
2. The year 2006 is the only 1yr taken into consideration to study the short run health problems because it is comparison between one age group to another age group people.

Thus the present study would have been much more useful but for the above limitations.

RESULTS AND DISCUSSION

The purpose of the study is to compare the health status of people working on computers at different age groups. The present chapter is on **data analysis** and it takes into the objectives of the study for evaluation with the data collected for the purpose. The analysis of the data was mainly done based on the objectives as the framework for the study. With this scenario as the backdrop, **the study took up a detailed analysis of one hundred persons working on Computers at different age groups.** For this purpose, the selection of people working on Computers at different age groups was done on a **random basis**. The people working on Computers at different age groups were selected from software companies, and BPO's. The technique of random sampling was adopted, where one hundred questionnaires were distributed to people working on Computers at different age groups starting from 15-20yrs, 20-25yrs, 25-30yrs, 30-35yrs, 35-40yrs, and 40-45yrs.These questionnaires were distributed to people working on Computers at different areas namely software companies and BPO's to cover the above-mentioned age groups i.e. from 15-20yrs to 40-45yrs.

The selection of the people at different age group was made on their educational qualification, which was classified as **professionals (i.e. B.E and M.C.A), postgraduates and undergraduates at different age groups.** Out of this classification of 100 persons, there were 60 professionals at different age groups starting from 20-25yrs, 25-30yrs, 30-35yrs, 35-40yrs and 40-45yrs. All these professionals were either MCA's or B.E respondents selected on random basis from different software companies. It is an established fact that age plays a dominant role in shaping the personality and values of work responsibility, to participate in different walks of life. Keeping this point in mind age composition of respondents has been presented below in **Table 1** with the percentage of the respondents.

TABLE 1: AGE WISE CLASSIFICATION OF PEOPLE WORKING ON COMPUTERS

S.No	Age groups in years	No.of Respondents	Percentage
1	15-20	8	8%
2	20-25	10	10%
3	25-30	12	12%
4	30-35	15	15%
5	35-40	23	23%
6	40-45	32	32%
	Total	100	100

Source: Primary Data

The **Table 1** shows the classification of the sample and the respondents working on Computers at different age groups. The sample of one-hundred persons working on Computers were selected, out of which 8 persons were at the age group of 15-25 yrs, 10 persons of the age group of 20-25 yrs, 12 persons of the age group of 25-30yrs, 15 persons of the age group 30-35yrs, 23 persons of the age group 35-40yrs and 32 persons of the age group of 40-45 yrs respectively. For which the percentage of the sample is shown as above and also with the help of the Pie diagram as shown below. Where in the sample size 8% of the respondents are in the age group of 15-20yrs, 10% of the sample is in the group of 20-25yrs, 12% of the sample is in the age group of 25-30yrs, 15% of the sample is in the age group of 30-35yrs, 23% of the sample is in the age group of 35-40yrs and 32% of the sample is in the age group of 40-45yrs.

The **Table 1** is also explained with the help of Chi-square test($\chi2$) as follows where the observed frequency and the expected frequency are given in the table 1, with the help of the above data the Chi-square test is done.

Hypothesis: Age is not related to the sample of respondents working on computers, i.e. Age and number of people are independent.

TABLE 2: CHI-SQUARE ANALYSIS

Factor	Calculated Value	Table Value	d.f	Significance
Age	420.86	11.071	5	Ho: Rejected

The table value of Chi-square (χ^2) for 5 degrees of freedom at 5% level of significance is 11.071. The calculated value of χ^2 is much higher than the table value and hence the result of the experiment does not support the above hypothesis. We can thus, conclude that the age and the number of people working on computers are directly related.

TABLE 2: THE SUB-CLASSIFICATION OF THE SAMPLE ACCORDING TO WORKING HOURS AND THE NUMBER OF RESPONDENTS AT THE AGE GROUP OF 15-20 YRS

Working hours	Number of respondents
4hrs	3
5hrs	5
Total	8

Source: Primary Data

Table 2 explains the fact that 3 of tem work for 4 hours in a day and 5 of them work for 5 hours a day respectively in the age group of 15-20yrs where it makes up a total of 8 respondents from the total sample size of 100. This also indicates that the people in this age group work for lesser number of hours in a day. In this age category there are totally 8 respondents from the total sample size 100 since then people are all fresher, they work for more or less number of hours in a day and they are also paid less compared to the other age category.

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TABLE 3: THE SUB-CLASSIFICATION OF THE SAMPLE BY EDUCATION, INCOME AND WORKING HOURS AT THE AGE GROUP OF 20-25 YRS

| Income level per month (In Rs.) | Total number of working hours per day and Educational qualification. (Hour) | | | | | | | | | Total | Experience in years |
| | Professional Qualification (B.E & MCA) | | | PG | | | UG | | | | |
Hours	8	9	10	8	9	10	8	9	10		
Below 5,000	-	-	-	-	-	-	-	-	4	4	0
5,000-10,000	2	-	-	1	-	-	-	-	-	3	3
10,000-15,000	-	3	-	-	-	-	-	-	-	3	3
15,000-20,000	-	-	-	-	-	-	-	-	-	0	0
Total	2	3	-	1	-	-	-	-	4	10	6

Source: Primary Data Collection.

Table 3 shows the distribution of educational qualification, earnings per month and the number of working hours per day for the 20-25 yrs-age category. From the above table it many be observed that the distribution of respondents on the basis of qualification included five professionals, a post-graduate and four under-graduates. For the 20-2yrs age category there were 10 respondents based on this the classification of the sample were made according to their education, income and working hours respectively where the earnings per month ranged from Rs.5,000 to Rs.20,000 per month, corresponding to the educational qualification and the working hours per day. It is thus seen that in this age category there are 3 respondents who are professionals and 3 respondents who were a postgraduate and 4 respondents who were under graduates, making a total of 10 in this age category.

TABLE 4: THE SUB-CLASSIFICATION OF THE SAMPLE ACCORDING TO EDUCATION, INCOME AND WORKING HOURS AT THE AGE GROUP OF 25-30YRS

| Income level per month (in Rs.) | Total number of working hours per day and Educational qualification. | | | | | | | | | Total | Experience In years |
| | Professional Qualification (B.E & MCA) | | | PG | | | UG | | | | |
Hours	8	9	10	8	9	10	8	9	10		
10,000-15,000	1	2	-	1	-	-	-	-	-	4	5
15,000-20,000	-	1	-	1	-	-	1	-	-	3	6
20,000-25,000	2	-	-	-	1	-	-	-	-	3	7
25,000-30,000	1	-	-	1	-	-	-	-	-	2	8
Total	4	3	-	3	1	-	1	-	-	12	26

Source: Primary Data Collection.

Table 4 explains the sub-classification of the sample according to their educational qualification, income level and working hours per day in the age group of 25-30years. This shows that people with higher experience work for less number of hours and they are paid more and it is the other way for people with less experience work for longer hours but they are paid less. It also shows that the professionals are paid more than the Postgraduates and the under graduates. The next in rank is the PG's who are paid more than the UG's. Thus according to the educational qualification the income varies from each respondent.

TABLE 5: THE SUB-CLASSIFICATION OF THE SAMPLE BY EDUCATION, INCOME AND WORKING HOURS AT THE AGE GROUP OF 30-35YRS

| Income level per month (in Rs.) | Total number of working hours per day and Educational qualification. | | | | | | | | | Total | Experience In years |
| | Professional Qualification (B.E & MCA) | | | PG | | | UG | | | | |
Hours	8	9	10	8	9	10	8	9	10		
10,000-15,000	3	1	-	1	-	-	-	-	-	5	10
15,000-20,000	1	1	-	-	-	1	-	-	-		11
20,000-25,000	3	-	-	-	-	-	--	-	-	3	12
25,000-30,000	4	-	-	-	-	-	-	-	-	4	14
Total	11	2	-	1	-	1	-	-	-	15	47

Source: Primary Data Collection.

Table 5 explains the classification of the sample by their educational qualification, income level and the working hours of the people in the age group of 30-35years. This table shows that people with higher qualification work for less number of hours per day in front of the monitor and they are pain more, likewise people who are not Professionals are paid less but they work for longer hours. Even in this age group Professionals are paid more than the PG's and the UG's. In this group professionals are more in number than the PG's and there are no UG's in this list.

TABLE 6: THE SUB-CLASSIFICATION OF THE SAMPLE BY EDUCATION, INCOME AND WORKING HOURS AT THE AGE GROUP OF 35-40YRS

| Income level per month (in Rs.) | Total number of working hours per day and Educational qualification. | | | | | | | | | Total | Experience in years |
| | Professional Qualification (B.E & MCA) | | | PG | | | UG | | | | |
Hours	8	9	10	8	9	10	8	9	10		
10,000-15,000	3	1	-	2	-	-	-	-	-	6	14
15,000-20,000	2	1	2	-	-	-	-	-	-	5	18
20,000-25,000	2	2	-	-	-	-	-	-	-	4	15
25,000-30,000	4	2	2	-	-	-	-	-	-	8	19
Total	11	6	4	2	-	-	-	-	-	23	66

Source: Primary Data Collection

Table 6 shows the classification of the sample by their educational qualification, income level and the number of working hours of the people in the age group of 35-40 years. This shows that the people who are professionally qualified work for less number of hours and they are pain more, since people in this age group

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are more in number. From the above table it is revealed that the Professionals in all age groups are more in number than the PG's and the UG's, the table explains that there are only 2 Post graduates working for 8hrs and getting 25,000-30,000 earnings per month.

TABLE 7: THE SUB-CLASSIFICATION OF THE SAMPLE BY EDUCATION, INCOME AND WORKING HOURS AT THE AGE GROUP OF 40-45YRS

Income level per month (in Rs.)	Total number of working hours per day and Educational qualification.									Total	Experience In years
	Professional Qualification (B.E & MCA)			PG			UG				
Hours	8	9	10	8	9	10	8	9	10		
10,000-15,000	5	4	1	-	-	-	-	-	-	10	15
15,000-20,000	3	1	1	-	-	-	-	-	-	5	16
20,000-25,000	2	1	2	-	-	-	-	-	-	5	18
25,000-30,000	6	4	2	-	-	-	-	-	-	12	22
Total	16	10	6	-	-	-	-	-	-	32	71

Source: Primary Data Collection

Table 7 explains the classification of the sample according to their educational qualification, income level and the number of working hours in the age group of 40-45 years. People who are working in this age group are more in number since they are all well experienced people. This table shows that the Professionals are more in number than the PG's and the UG's and they receive more earnings than the other category of the people, the 40-45yrs age group shows that people are more in number working for lesser hours and receiving more income. This also shows their experience level and their efficiency in their work.

TABLE 8: CLASSIFICATION OF HEALTH PROBLEMS OF PEOPLE AT DIFFERENT AGE GROUPS

Age Groups (In yrs)	Number of People Working on Computers	Health Problems
15-20	8	Tiredness, Headache, Backache, Neck pain and Eye pain.
20-25	10	Tiredness, Headache, Backache, Neck pain and Eye pain.
25-30	12	Tiredness, Headache, Backache, Neck pain and Eye pain.
30-35	15	Tiredness, Headache, Backache, Neck pain, Eye pain and Shoulder pain.
35-40	23	Tiredness, Headache, Backache, Neck pain, Eye pain, Shoulder pain, Numbness and Stiffness in joints.
40-45	32	Tiredness, Headache, Backache, Neck pain, Eye pain, Shoulder pain, Numbness and Stiffness in joints.
Total	100	

Source: Primary Data Collection.

Table 8 explains that the number of working hours in front of the monitor increases the number of health problems and it also shows the relationship of the age groups of the people. This table explains the fact that the health of an individual is also related to his age, because when a person of lower age group works for more hours in front of the monitor, he suffers from lesser number of health problems when compared to a person of higher age group working in front of the monitor for more hours.

Karl Pearson's Correlation Co-efficient is calculated for given data for number of people in working on computer is r = 0.94 this shows high degree positive correlation. It was observed from the table 8 that the age and health of an individual is directly related with each other. The same was confirmed using a test correlation where r (Karl Pearson's Correlation Co-efficient) equals 0.94. This indicates that there exists a high degree positive correlation between the two variables age and the health of an individual.

Table 8 is also proved with the help of **Chi-Square Test (χ^2)** where the **Hypothesis is set:** that the age and the health of an individual are not related to each other they are independent.

Factor	Calculated Value	Table Value	d.f	Significance
Age	62.54	11.071	**5**	Ho: Rejected

The table value of χ^2 is much higher than the table value and hence the result of the experiment does not support the hypothesis. We can thus, conclude that age and the health of an individual is directly related to each other. This shows that age matters a lot for an individual to face all kinds of health problems where there are short-run and long-run health problems; this also shows that if proper care is not taken the individual suffers from long-run health problems. One can avoid health problems in the short-run if proper care is taken.

TABLE 9: CLASSIFICATION OF PEOPLE WORKING ON COMPUTERS, THEIR WORKING HOURS AND THE NUMBER OF PERSONS SUFFERING FROM HEALTH PROBLEMS

Working Hours X	Number of Persons Y	Health Problems
1	3	Tiredness, Eye pain, Headache, Backache and Neck pain.
2	6	Tiredness, Eye pain, Headache, Backache and Neck pain.
7	27	Tiredness, Eye pain, Headache, Backache and Neck pain and Shoulder pain.
8	27	Tiredness, Eye pain, Headache, Backache and Neck pain, Shoulder pain, Stiffness in joints and Numbness.
9	21	Tiredness, Eye pain, Headache, Backache and Neck pain, Shoulder pain, Stiffness in joints and Numbness.
10	16	Tiredness, Eye pain, Headache, Backache and Neck pain, Shoulder pain, Stiffness in joints and Numbness.
Total	100	

Source: Primary Data Collection.

Karl Pearsons Co-efficient of Correlation is r = 0.78 this shows high degree positive correlation. It was observed from the **Table 9** that the **health** of an individual and the **working hours** per day are **directly related** with each other. The same was confirmed using a test of correlation **where r (Karl Pearson's Correlation co-efficient) equals 0.78.** This indicates that there exists degree of positive correlation between the two variables – working hours and the number of persons suffering from health problems.

Table 9 is also proved with the help of **Chi- square test (χ^2)** where the **HYPOTHESIS** is set; that the health of the people is not affected by the working hours i.e. health and working hours are independent.

Factor	Calculated Value	Table Value	d.f	Significance
Working hours	41.27	11.071	**5**	Ho: Rejected

The table value of χ^2 for 5 degrees of freedom at 5% level of significance is 11.071. The calculated value of χ^2 is much higher than the table value and hence the result of the experiment does not support the hypothesis. We can thus, conclude that working hours is directly related to the health problems/ status of the people. In the light of the above analysis the following points are noted:

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CONCLUSION AND SUGGESTIONS

There are different ways to define ergonomics and one of the simplest methods of doing the same is to state it as a science or scientific discipline concerned with designing, which is based according to the human needs and making life more comfortable. Hence ergonomics can also be defined as a stream that applies theory, principles, data and methods of designing for optimizing human well-being and overall system performance. Ergonomics has often been termed as human engineering, and human factors. **A**nd finally coming to the conclusion, it was noted that **the Health of an individual is also related to his age**, because **when a person of lower age group works for more hours in front of the monitor, he suffers from lesser number of Health problems when compared to a person of higher age group working in front of a monitor for large hours**. Thus, there exists a high degree positive correlation between the age of an individual and the total number of working hours in front of the monitor.

Generally, occasional aches and pains go away in a day or two, especially when anything is overdone. But if one has the symptoms of **RSI** regularly while using a Computer then one should go to the doctor immediately. Dealing with this early is critical to limiting to damage and to space a word of hurt, trouble and frustration. No doubt that Computers are a fact of modern life. The migration towards expanding career opportunities in **information technology** is happening with breath taking speed in India, attracting unbelievable large number of people mostly bright **young people**. It's occupational environment, however holds the threat of opening or aggravating a **basket of health problems**, if needed preventive steps are not taken.

Continuously sitting in front of the monitor without proper workstation leads to backache. **Almost 80%** of the people have back pain at some point and Computers are making the problem worse. Improper Keyboard placement, table height and working placement of work causes shoulder pain complaint and neck pain. There is a lot of movement of the neck while a Computer. We move forward to look at the screen and backward while visualizing on the Computer or looking at the reference material. This makes the neck and the backbone prone to injury.

The **most common complaints** brought about by Computer users are headaches, burning eyes and dry eyes, which are related to eyestrain. It lasts for a few hours after work and some times persists till the next day. The **Carpal tunnel Syndrome (CTS)** is also common among Computer operates that its symptoms are coffee counter conversation favorites. Burning pain and tingling in the wrist, hand, thumb as well as the first three fingers is a common indicator of CTS. When the Computer users strain to look at the monitor, the head is positioned in front of the shoulders, rather than directly over them. When the health of an individual is affected, it's not that; only he is at a loss but on the whole, the economy is at a loss. Because; **good health and productivity** are helpful in raising both human capital and physical capital which results in **capital formation**. **Ergonomic problems** cannot be completely avoided. They can, though be scientifically reduced by a better workstation and a combination of rest and exercise.

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