Dr. P Manju Pushpa
Assistant Professor,
Department of Physical
Education, Bharathiar
University, Coimbatore,
Tamil Nadu, India

Lipid profile and physical fitness relationship among information technology professionals

Dr. P Manju Pushpa

Abstract
Physical activity is one of the most important facts of human body without any discuses. But due to the work pressure especially female faces lot of health issue at their young age. This study was conducted to find out the health status of the female Information Technology professionals and their relationship on lipid profile was taken, which is the need for the today's lifestyle. To achieve the purpose 15 female Information Technology professionals were selected from "Outsource Partners International" and NIC Kendriya Bavan at Ernakulum, Kerala and their age ranged from 30 to 40 years. The lipid profile variables selected for the study are High Density Lipoprotein(HDL), Low Density Lipoprotein(LDL), Very Low Density Lipoprotein (VLDL), Triglycerides and physical fitness variables are age, height, Weight, cardiovascular endurance, Muscular strength and endurance, and flexibility are tested using the criterion measures. The collected data were statistically analyzed by using product moment correlation (SPSS 16- Version).The finding of this study showed that there was a positive relationship between age, height, weight, flexibility, Cardio Respiratory Endurance (CRE), Muscular Strength and Endurance (MSE), flexibility, Low Density Lipoprotein (LDL) and TC level and negative relationship exist between Muscular Strength and Endurance(MSE)& age Cardio Respiratory Endurance (CRE) and weight, flexibility and weight, TC and Flexibility, Low Density Lipoprotein(LDL)& flexibility of female IT professionals.

Keywords: Lipid profile, physical fitness relationship, technology professionals

Introduction

It is known that due to physical activity the blood circulation and the muscles contraction may be much fasted which lead to do activity for longer without undue fatigue. The faster in circulation circulates the oxygen to all parts to human body and it stimulates the nerve system to be quick in nature. Through the physical activity the sweat content remove the fluid wastage from the body and it regulate the body temperature. As the rate of metabolism increases, the levels of cholesterol reduce due to physical activity. Psychology aspects such as stress, aggression and anxiety is also reduced. Motor fitness components like co-ordination, agility, reaction time and the level of memory also become high. Now a day's physical activity are of the medicine for the heart attack, diabetes and for all other deadly diseases in the world. When people understand the necessity of health and fitness and to be free from diseases they must know about their physical fitness status. The IT professionals earn more on wealth and loss more on health in India and they do not maintain their health so the researcher made an attempt to find the health status of women IT professionals and their relationship on lipid profile was taken as a study which is the need for the today's life style. Between monitoring networks, configuring applications and managing technology projects, IT professionals spend massive amount of time in front of the computer screen because IT emergencies can occur any time, workers often have to monitor IT system outside the normal business hours. Over time work in front of computer can have a negative tone in the health. The common health hazards for IT workers are Thrombosis, heart disease, cancer, carpel tunnel syndrome, vitamin D deficiency, bacterial infection, anxiety, Insomnia, Lower back pain, neck and eye strain etc.

Correspondence
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Methodology
To achieve the purpose of this study 15 female IT professionals who volunteered were selected as subject from "Outsource Partners International" and NIC Kendriya Bavan Information Technology centers, Ernakulum, Kerala. Their age ranged from 30 to 40 years.

Variables used in study: Lipid profile consists of Low Density Lipoprotein (LDL), High Density Lipoprotein (HDL), Very Low Density Lipoprotein (VLDL), TC & Triglycerides and physical fitness variables consists of age, height, weight, cardio respiratory endurance, muscular strength and endurance and flexibility were selected for this study.

Instrument used in this study: To measure the lipid profile variables, Modern laboratory test was established under a standard lab (Modivision Laboratories) further to measure the physical fitness variables, cardio respiratory endurance was measured using 12 minutes run or walk test (cooper) in meters, age, Height, measure by in Centimeter, Weight was measure by weight mission, Flexibility was measured using (Sit and reach) in centimeters and Muscular strength and endurance using sit ups in minutes/count.

Collection of data: Subject were clearly instructed about the criterion measures and its purpose of this study before they were inducted into the criterion measures. Awareness along with self- motivation also created among the subject for achieving the main purpose of the study. Test assistance was used in this study to help in collection of data. Subject were tested on lipid profiles (morning) and physical fitness variables (evening) for each variable, data were collected on two different days. The collected data were analyzed, to find out relationship that exist among the lipid profile and physical fitness product movement correlation was used as statistical technique using SPSS 16- Version to find out the result.

Table 1: Correlation among Lipid Profile and Physical Variable

Variable	Age	Height	Weight	Cardio respiratory endurance	Flexibility	Muscular strength and endurance	Total cholesterol	Triglycerides	Hight density lipoprotein	Low density lipoprotein	Very low density lipoprotein
Age											
Height	0.19										
Weight	0.05	0.36									
Cardio respiratory endurance	0.71	0.12	-0.37								
Flexibility	0.24	-0.58	-0.24	0.10							
Muscular strength	0.77	0.15	0.58	-0.32	-0.35						
Total cholesterol	0.46	-0.59	0.10	-0.46	0.21	0.32					
Triglycerides	0.21	0.26	0.19	-0.20	-0.13	0.29	0.07				
High density lipoprotein	0.48	0.66	0.13	-0.55	0.45	0.14	0.77	0.9			
Low density lipoprotein	0.28	-0.54	-0.01	-0.25	0.11	0.22	0.87	-0.34	0.45		
Very low density lipoprotein	0.21	0.26	0.19	0.19	-0.13	0.29	0.07	1.00	0.19	-0.34	

1. The 'r' value obtained between cardio respiratory endurance and was (-0.708). The obtained value (0.03) was found as significant at (0.05) level. From the result, it was observed that there is a negative relationship exists between cardio respiratory endurance and age.
2. The 'r' value obtained between flexibility and height was (-0.580). The obtained value (0.023) was found as significant at (0.05) level. From the result, it was observed that there is a negative relationship exist between flexibility and height.
3. The 'r' value obtained between total cholesterol and height was (-0.586). The obtained value (0.022) was found as significant at (0.05) level. From the result, it was observed that is a negative relationship exist total cholesterol and height.
4. The 'r' value obtained between low density lipoprotein and height was (-0.664). The obtained value (0.007) was found as significant at (0.05) level. From the result, it was observed that is a negative relationship exists between high density lipoprotein and height.
5. The 'r' value obtained between low density lipoprotein and height was (-0.536). The obtained value (0.039) was found as significant at (0.05) level. From the result, it was observed that is a negative relationship exist between low density lipoprotein and height.
6. The 'r' value obtained between flexibility and weight was (0.582). The obtained value (0.023) was found as significant at (0.05) level. From the result it, was observed that there is a positive relationship exists between flexibility and weight.
7. The 'r' value obtained between high density lipoprotein and cardio respiratory endurance (-0.554). The obtained value (0.32) was found as significant at (0.05) level. From the result it, was observed that there is a negative relationship exists between high density lipoprotein and cardio respiratory endurance.
8. The 'r' value obtained between High Density Lipoprotein and total cholesterol was (0.769). The obtained value (0.001) was found as significant at (0.05) level. From the result it, was observed that there is a positive relationship exists between High Density Lipoprotein and total cholesterol.
9. The 'r' value obtained between Low Density Lipoprotein and total cholesterol was (0.872). The obtained value

(0.000) was found as significant at (0.05) level. From the result it, was observed that there is a positive relationship exists between Low Density Lipoprotein and total cholesterol.

10. The 'r' value obtained between Very low Density Lipoprotein and total triglycerides was (1.000). The obtained value (0.000) was found as significant at (0.05) level. From the result it, was observed that there is a positive relationship exists between Very Low Density Lipoprotein and triglycerides.

Discussion and findings
The present study demonstrates that lipid profile and selected physical fitness components had a significant relationship between muscular strength and endurance, cardiovascular endurance, flexibility, age, total cholesterol and low density lipoprotein. The result shows negative relationship between muscular strength endurance and age. This is because of the potential mechanism for the endurance loss is type two fibers that occur with age. This finding is similar to the result of previous studies on effect of old age on human skeletal muscle force velocity and fatigue properties. (Jappalphyiol. 2011 November 111(5) 345-1352). Flexibility levels of female IT professionals are decreased significantly with body weight. According to Brad Appleton for CM crossroads a sedentary life style usually arent't very flexible because they simple don't move their bodies very often. Joints become tight without regular movement and inactivity can leads to chemical changes in surrounding connective tissue that restrict flexibility. Result revels that is a positive relationship between muscular strength endurance and cardio respiratory endurance. Through regular endurance exercises, your muscle straighten due to the burning of fat by improving the muscle to fat ratio. The lower percentage of body fat helps metabolism work more efficiently, accelerating the weight-loss effect of future exercises. Result shows that flexibility will increase the muscular strength endurance. If we do the regular endurance workout the fat deposit in the muscle and joints will burn. Due to this range of motion in the joints will improve. In this study the result shows that the flexibility level decreases significantly with total cholesterol and low density lipoprotein. This is due to more fatty substance deposit in the adipose tissue. Hence the range of motion will decrease. Result also indicates that the level of total cholesterol is increased significantly with low density lipoprotein. Hence the low density lipoprotein is called as bad cholesterol.

Conclusion:
Based on the result, following conclusion has been made.
1. It was concluded that there was a positive relationship between flexibility and cardio respiratory endurance, muscular strength endurance and cardio respiratory endurance, muscle strength endurance and flexibility and low density lipoprotein and total cholesterol level of female IT professional.
2. There was negative relationship exist between muscular strength endurance and age, cardio respiratory endurance and weight, flexibility and weight total cholesterol and flexibility of female IT professionals.

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