

Research Projects/Activities

(a) In progress

Below Are The On-Going Researches Designed And Carried Out By Me In Collaboration With My Academic Colleagues.

1. Effects of Artificially Induced Fatigue on Learning and Performance of Gross Motor Skills

This research started in March 2008. The purpose is to supply information on physical and physiological effects of overtraining and rest deprivation on performance. It is an experimental research designed to investigate how fatigue affects the physical, physiological and performance variables of university undergraduates. The selected variable for study includes age, height, weight, V_{O_2} max, blood pressure, percent body fat, anthropometric measures, muscular endurance, cardiorespiratory endurance, power and flexibility. Five research assistants helped in data collection. Data analysis will involve the use of descriptive statistics of mean and standard deviation to describe the demographic data; and inferential statistics of analysis of covariance (ANCOVA) to test the stated hypotheses at 0.05 alpha level. If significant differences were found, Scheffe post hoc analysis would be used to determine which of the mean scores were significantly different.

2. Efficacy of the Use of Bicycle Ergometer and Multi-gym Equipment in the Reduction of Body Fat and Improve Muscular Endurance of Sedentary Individuals.

This research started in July 2007. The research is designed to provide the sedentary individuals easy and reliable method of achieving the important health related physical fitness components to increase their efficiency in work and play. This is a comparative study, designed to highlight the procedure for proper use of the two equipment (Bicycle Ergometer and Multi-gym.) and to show which of them will be more effective for body fat reduction and development of muscular endurance in the sedentary individuals. Data collection involving measurements anthropometric and physical performance variables are in progress. Six research assistants are involved in the study. The statistical tools of range, mean and standard deviation will be used to describe demographic data while Analysis of Covariance (ANCOVA) will be used to analyze the data at 0.05 level of significance.

3. Relationship Between Body Fat and Selected Motor Performance Variables Among University Athletes.

This research started in January 2008. The study was designed to investigate the extent to which body fat was related to some selected motor performance variables. Relative body fat was estimated from the triceps and subscapular skinfolds while the motor performance was measured from five motor tests v

variables of 50 yard dash to test for speed, sergeant jump for leg power, sit and reach for flexibility, dodge run for agility and brass stick tests for balance. Pearson's product-moment correlation coefficient would be used to determine the relationship between relative body fat and the motor performance variables studied.

4. Comparative Study of Selected Performance and Health Related Variables of Volleyball and Basketball Players.

This research started in May 2008. The study was conducted with the view

to compare selected performance and health related variables of volleyball and basketball players among the University athletes. The two teams of ball game players were specifically compared using variables of height, weight, muscular endurance, speed, flexibility, agility and leg power. The data collected would be subjected to descriptive statistics of range, mean and standard deviation to describe demographic data, an inferential statistics of t-test would be used to show the comparison among the variables of study. The alpha level will be set at 0.05.

B) Completed:

Below Are Completed Researches Designed And Carried Out By Me In Collaboration With My Academic Colleagues And Some Of My Postgraduate Students.

1. Effects of Eight Weeks Aerobic Exercise Programme on Body Composition of Female Obese-osteoarthritic Patients.

Co-Researcher: Sangobiyi, T.O.

The aim of the study was to determine the effects of eight weeks aerobic exercise programme on body composition of female obese-osteoarthritis patients. A total of twenty patients were randomly divided into two groups to make the experimental and the control groups using purposive sampling technique. Only the experimental group was subjected to the aerobic exercise programme. Descriptive statistics of mean, standard deviation and range was used to describe the demographic data and inferential statistics of 't' test was used to determine significant differences between the groups. Significant difference was found in body weight between the treatment and the control group while there was no significant difference in body fat between the groups. The study showed that a longer duration of exercise should be prescribed to have adequate effects on weight reduction programmes for the subjects.

2. 10-Weeks Morning and Evening Exercise Training Programme and Improved Capacities for Physical Performance.

The research identified the values of a well designed exercise

training programme in the improvement of the fitness level and performance capacities of collegiate athletes. The results showed that regular physical exercise both in the morning and evening could result into significant improvements in physical performance of the athletes if the sessions are properly monitored. The research has implications for the general public in that, if individuals cultivate the attitude of a well coordinated early morning and evening physical exercises, they can achieve improved capacities for daily activities.

3. Effect of Cigarette Smoking on the Cardiorespiratory Endurance and Max VO₂ of Collegiate Athlete Smokers.

The research was conducted on collegiate athletes who were chain cigarette smokers. The study showed that heavy smoking adversely affected endurance performance of these athletes. Although the previous sports records of the athletes showed them to be good, abstinence from smoking habit would have made them to have better athletic records. This study has implications and will benefit trainers, coaches, exercise therapist and the athletes.

4. Effects of Sleep Deprivation on Resting and Recovery Systolic and Diastolic Blood Pressures of University Athletes.

This research showed that sleep deprivation will adversely affect the physiological variables such as resting and recovery systolic and diastolic blood pressures of University athletes. The result also showed that depriving athletes of adequate sleep will have detrimental effects on their health status. The study has implications for athletic trainers, coaches and exercise therapists to provide for adequate sleep and rest in order to ensure improved health and enhanced sports performance in their athletes.

5. Application of Physical Exercises in the Management of Mechanical Low Back Pain.

The study aimed at applying physical exercise to the management of pain in the lower back region. The research utilized a pre-test, post-test experimental design. It was discovered that low back pain resulted from weak abdominal muscles, psoas major and minor, and hamstring muscles. People with weak muscles are advised to participate in exercise while the general public should take recreational physical exercise as valued habit.

6. Effects of Hip Angles of 100° and Above on Quadriceps Strength During Isometric Contractions in the Male and Female Athletes.

This study investigated the effect of three obtuse angles on the quadriceps strength during isometric quadriceps muscle contraction. Forty (40) female and thirty-five (35) male participants took part in the study. The hip angle

was set at three different angles at 100° and 130° using an adjustable back support of a specially designed testing table. The quadriceps strength was then measured using an angle adapted cable tensiometer after subject had exacted a maximal pull on the tensiometer. Statistical analysis revealed that the quadriceps muscle of the male subjects generated a greater isometric force, than the female subjects, at the various hip angles. It was however discovered that the hip angle at which the maximal isometric force was produced in both sexes was 130°.

7. Comparative Effects of Two Modes of Aerobic Training on the Pulmonary Indices of Police Trainees.

Co-Researcher: Dr. Aniodo, D.A.

The study compared the effects of two modes of aerobic training on the pulmonary indices of vital capacity and respiratory rate of police trainees. The study adopted the randomized pretest-posttest control group experimental design. The trainees were ninety recruits who were within the age range of 18-24 years. These were randomly assigned to three groups. Using the progressive training principle, the pre-training and post-training measurements of the vital capacity and respiratory rate were taken. The data collected were subjected to descriptive statistics of range, mean and standard deviation to describe the demographic data and inferential statistics of analysis of covariance to test the hypotheses at 0.05 alpha level. The result showed that jog-walk and circuit training which had significant effects on the pulmonary indices investigated should form the major part of the training programme of police trainees.

8. Reliability of Kraus-Weber Exercise Test as an Evaluation Tool in Low Back Pain Susceptibility Among Apparently Healthy

University Students. Co-Researchers: Awolola, O.E. and Hamzat, T.K. Reliability of Kraus-Weber exercise test in predicting susceptibility to low back pain among apparently healthy university students was the focus of this study. The study was intended to be an evaluative tool for the diagnosis and management of people suffering from low back pain as well as predicting the possibility that people may develop the condition in later life. All the test items were found to be reliable. In addition, the study identified the diagnostic and management procedures for low back pain among young people.

(c) Dissertation and Thesis

1. Babalola, J. F. (1982) The Effects of a 10-Week Training Programme on the Physical Performance of College Physical and Health Education Majors. Unpublished M. Ed Project, University of Ibadan, Ibadan, **112 pages.**

Babalola, J.F, (1987) The Effects of Sleep Deprivation on the Physical and Physiological Performance Variables of College men. Unpublished Doctoral Thesis, University of Ibadan, Ibadan, **177 pages.**