CHAPTER 42

PHYSICAL EDUCATION
&
SPORTS SCIENCES

Doctoral Theses

01. BHAT (Sajjadh Ahmad)
Selected Autonomic Functions of Kashmiri Youth Habitat of Srinagar in Relation to High and Low Physical Fitness Level.
Supervisor : Dr. Dhananjoy Shaw
Th 24162

Abstract
(Not Verified)

The study was conducted on randomly selected 242 subjects in phase-1 and VO max ranked based 70 subjects in phase-2, (male youth of Kashmir valley).70 subjects were placed into two groups: 1) group 1 i,e high fitness group (HFG) with VO max= ≥59.0 ml/kg/min, n =35 and 2) group 2 i,e low fitness group (LFG) with VO max= ≤47.6 ml/kg/min, n =35. HFG and LFG were subjected to autonomic testing as per the standardized protocol of testing. Findings: 1) The variables namely MHR and MRR in regard to sympathetic activity and LST30CSBP, CPT1CDBP and HGT6CDBP in regard to sympathetic reactivity were found to be statistically different between HFG and LFG, 2) pNN50 in regard to parasympathetic activity and VM ratio in regard to parasympathetic reactivity were found to be statistically different between HFG and LFG and 3) the comparison between HFG and LFG in regard to abnormal frequencies as per the existing autonomic norms documented significant $\chi = 9.36$. It was summarized that HFG having better autonomic functions and fitness levels, thus having better organic functions which attribute to their wellbeing positively than that of LFG. Conclusions*:* 1) High fitness group (HFG) is better in sympathetic reactivity than that of low fitness group (LFG), 2) high fitness group (HFG) is better in sympathetic activity than that of low fitness group (LFG), 3) high fitness group (HFG) is better in parasympathetic reactivity than that of low fitness group (LFG), 4) high fitness group (HFG) is better in parasympathetic activity than that of low fitness group (LFG), 5) this study concluded that fitness levels (VO max) is significantly related to autonomic functions and 6) the findings of the study suggest that high fitness group (HFG) is better in overall autonomic functions hence expected to have better organic functions than that of low fitness group (LFG).

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02. GUPTA (Anil Kumar)
Analysis of Strategies Employed by Fitness Service Provider for Sales Promotion, Customers Satisfaction and Business Development in Corporate Fitness Centers.
Supervisor : Dr. Shankar Jyoti Basumatary
Th 241635

Abstract
(Not Verified)

Healthy lifestyle is playing a very vital role in the fitness industry development. Today, fitness gyms and private health clubs are a very successful business in the 21 century. Different types of strategies, digital marketing, interest of customer awareness in health and fitness. Its sum of keys is helpful for the business growth. Sales is always depends on the customer relationship. So, always maintain the healthy relationship for successful business development in fitness industry. In today world everyone is involved in different types of occupations. According to their needs they have developed innovative ideas, themes for their business development. Many types of scheme related to different occupations have been come forward during the recent years. Business in fitness industry is also one of the most recently up-coming professional in which people are likely to be successful in future. This profession is becoming more popular day by day. People have to make choice related to their future occupation choice always involves knowledge and ideas. Selecting a good profession is very necessary as a pupil way join in an occupation by virtue of more love. But the wise choice of an occupation requires accurate information about occupational information is therefore important. Fitness industry in today world growing fast, attracting people in large number this is due to changing life style that we have and the stress it puts on our bodies and brain. This is why professional fitness centers come into picture and developed their business by gaining customers satisfaction. Key words: - Fitness Centers, Digital Marketing, Sales Promotion, Customers Satisfaction, Business Development.

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03. KOAK (Sunil)
Effect of Modification Proprioceptive Neuromuscular Facilitation Type Suryanamaskar on College Level Students.
Supervisor : Dr. Pradeep Kumar
Th 24161

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04. PARVEEN
Comparative Study of Common Sports Injuries of Team and Individual Sports Competition.
Supervisor : Dr. Jai Parkash Sharma
Th 24164

Abstract
(Not Verified)

Injuries in sports due to acute distress or repetitive pressure related to athletic activities. Games wounds will affect bones or delicate tissue (tendons, muscles, ligaments). Consistently, a great deal of people (everything being equal) inside the world partake in physical activity and games exercises, from affiliation football field to softball jewels and Kabaddi courts. It's called playing at the same time, however wears exercises are more than

play. Cooperation in sports enhances physical wellness, coordination and self-restraint, and give kids and individual profitable chances to learn collaboration. Amusement and games can likewise bring about wounds some minor, some genuine, and still others bringing about long lasting medicinal issues. (Ajmer Singh, 2012) Sports carry an element of risk in the form of injury. In fact, there is no sport-whether amateur or professional where injury does not occur. In some sports, chance injury may be much more due to the nature of the sport itself; in others, it may be less. The athletic injury may be as simple and insignificant as a bruise on the knee or elbow and as serious and fatal as a thigh fracture or skull smash. Athletic injuries occur from two different mechanisms: macrotruma, and microtruma. Macrotrauma-a deeply distressing experience-is a sudden injury from a major force. This could for example, be due to a bad fall from a horizontal (or parallel) bar or a ball hit during play in field hockey or cricket. Such situations abound in almost all sports, and can cause fractures, sprains or ligament, muscle strains (tear) and bruises or contusion, which are commonly termed as acute injuries. Microtrauma is due to repetitive injury over a long period of time and these injuries are also termed overuse.

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05. RAVINDER KUMAR

Comparison between Male and Female Sportsperson in Regard to Pressure Distribution Pattern in the Plantar Aspect on Right and Left Foot in Standing Posture.

Supervisor : Dr. Dhananjoy Shaw

Th 24166

Abstract
(Verified)

Objectives: (1) to compare between male and female sportsperson in regard to selected plantar pressure distribution variables (of right and left foot) in standing posture (2) to compare the bilateral asymetricity (between right and left foot) of male sportsperson in standing posture (3) to compare the bilateral asymetricity (between right and left foot) of female sportsperson in standing posture. Total 200 sportsperson (100 Males and 100 Females), Age ranged from 18 to 25 years were randomly selected as a sample. Equipment's used: Weighing machine (Omron HN283), Height measured by anthropometrie , BMI =Weight (kg)/ Height (m), (4) Laptop Dell Vostro-3450, Pressure plate (Zebris Inc ; Germany (40x30 cm), Win FDM-S software for Impulse variables, Average impulse variables and Force variables. Mean, Standard Deviation and Student's't'-test were computed for analysis. Conclusions :(1)There is significant difference between the male and female sportsperson in regard to selected plantar pressure distribution variables (right and left foot) in standing posture. Among 421 variables, 411 variables (96.27%) were found to be significant.(2) There is significant bilateral asymetricity (between right and left foot) of male sportsperson in standing posture. Among 203 variables 201 variables (100%) were significantly differently.(3) There is significant bilateral asymetricity (between right and left foot) of female sportsperson in standing posture. Among 203 variables 201 variables (100%) were found to be significantly differently.

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06. SHARMA (Deepika)
Psychometric Paradigm of Sports Intelligence Test Battery in Gymnastics.
Supervisor : Dr. Lalit Sharma
Th 24167

Abstract
(Not Verified)

The purpose of the study was to develop and standardize the Sports Intelligence Test Battery in Gymnastics (SITB-G). The variables selected for the study were Sports Intelligence Questionnaire, Body Awareness Questionnaire and Executive Functions. The objective was to develop the standardized questionnaire to test the difference between General-Intelligence and Sports-Intelligence and to assess the relationship between Sports-Intelligence and Performance. The data was collected from various colleges in India (age above-17years). For the development, standardization and validation of the 2-questionnaires, 42-gymnast were selected and for the norms development of SITB-G 168-gymnast were selected. Statistics adapted was Descriptive-Statistics, Pearson's Product Moment-Correlation, Cronbach's Alpha and inter-item correlation. The results concluded that 'r' values for Sports-Intelligence Questionnaire, Body-Awareness Questionnaire ranged from 0.865 to 0.974 that signifies higher reliability. The Cronbach's Alpha-value for reliability of Executive Function was 0.589, which shows good level of internal-consistency between the items. For SITB-G Cronbach's alpha coefficient of reliability was 0.708, indicating an excellent level of homogeneity between the test items of SITB-G. Validity for SITB-G was calculated by index of reliability the coefficient value found was 0.841 i.e. excellent-validity. Therefore, concluding SITB-G as validated tool and can be applied in gymnastics. SITB-G was highly correlated with the performance score (Male "r= 0.765" and Female "0.788" at 0.01 level of significance) of gymnast. Correlation value for SITB-G was -0.124 which was statistically insignificant at $P<0.05$. Indicates that Sports-Intelligence is different from the general-intelligence and therefore, there is a need to develop separate test for Sports Intelligence. In results founds that there has a gender neutrality on these tests namely; Sports Intelligence Questionnaire, Body Awareness Questionnaire and Executive Functions so they could be used for both gender. Further it is recommended that the test battery developed can be used by coaches for assessment of Sports-Intelligence among various Training-stage of Gymnast.

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07. SHUKLA (Raghvendra)
Study on the Selected Spatio-Temporal Gait Parameters of Male and Female Walking with Different Speed.
Supervisor : Dr. Dhananjoy Shaw
Th 24158

Abstract
(Not Verified)

Objectives: (1) to compare among the walking with different speed of female (Slow, Medium and Fast) in regard to selected gait variables. (2) to compare among the walking with different speed of male (Slow, Medium and Fast) in regard to selected gait variables. (3) to compare between male and female in regard to selected gait variables while walking with slow speed. (4) to compare between male and female in regard to selected gait variables while walking with medium speed. (5) to compare between male and female in regard to selected gait

variables while walking with fast possible speed (Maximum effort). Sample: For the purpose of the study 75 (37 female and 38 male) subjects were randomly selected, I.G.I.P.E.S.S University of Delhi. Testing Protocol: The Zebris WinFDM-S pressure plate was used for the purpose of data collection. Conclusions: It was concluded that male and female are significantly different while walking with slow speed in regard to 57.35 percent variables (2) It was concluded that male and female are significantly different while walking with medium speed in regard to 52.2 percent variables (3) It was concluded that male and female are significantly different while walking with fast speed in regard to 47.83 percent variables (4) It was concluded that male are significantly different at different speed of walking (Slow, Medium and Fast) in regard to 87.65 percent variables and (5) It was concluded that female are significantly different at different speed of walking (Slow, Medium, Fast) in regard to 81.82 percent variables.

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08. SINGH (Vishal)
Study on Mental Skills Learned through Natural Learning Experiences versus Psychological Skill Training Programme among Inter-Collegiate Level Players.
Supervisor : Dr. Samiran Chakraborty
Th 24163

Abstract
(Not Verified)

The purpose of the study was a study of mental skills learned through natural learning experiences versus Psychological Skills Training Program among inter-collegiate level players. The subjects for the study were up to inter-collegiate players. From the age group of the students were 18 to 25 years age group male players. The variables Mental Imagery, Goal Setting, Self-Confidence, Stress Control, and Relaxation were used for the study. The Statistical techniques applied for analyzing, the assumptions of homogeneity test were evaluated by the Levene's Test. All data were normally distributed and it was evaluated by Shapiro-Wilk test. For investigating the composed raw numerical data examination was completed by using IBM SPSS and the result consecutively tabularized in order. For describing the training effect in case of all selected groups, descriptive statistics such as mean and standard deviation employed besides the study it was experimental where PST training was given on experimental groups so to see the real effect of PST training on each group as well as the combined effect of that training, the one-way analysis of covariance (ANCOVA) was applied at 0.05 level of significance. The research study concluded that the Scholar has been conducted the examination work for the purpose to see the effect of Psychological Skills training on the participants after the training in their respected groups, those are gymnastics, athletics, archery, and divers. For the purpose of the study and to achieve the objectives, a questionnaire was administered to the students from the selected colleges and training centers of NCR region. Ottawa Mental Skills Assessment Tools-3 questionnaire. Which one having 48 questions recorded the data on psychological variables of psychological skills training. In this section, the researcher has tried to understand the possible causes and mechanisms underlying the findings.

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09. TANDON (Anshika)
Effect of Ginseng and Different Type of Exercises on Selected Psycho-Physiological Variables.
Supervisor : Dr. Anil K. Vanaik
Th 24159

Abstract
(Not Verified)

The purpose of the study was to assess the Effect of Ginseng and different type of Exercises on selected Psycho-Physiological variables. The variables selected for the study were *Blood Pressure, Heart Rate, pH level of Urine, Hemoglobin, Stress level and Reaction-Time.* The data was collected from IGIPESS(Delhi Univ.). Initially a Cohen-Perceived Stress questionnaire was administered on 250-students(Age 18-21years) out of which 75-subjects who indicated stress at mid-moderate level were selected and were divided into five different Experimental Groups through sequential random sampling. The Experimental-Design implemented for collection of the data was Repeated Measure Design in which score was taken every 2 week for all the variables for 6-weeks. Group-A was given Yogic Program For 6-weeks, Group-B was given Aerobic-Exercise-Program for 6-weeks, Group-C was given Red Korean Ginseng Capsule(500mg) for 6-weeks, Group-D was given Combination of Aerobic-Exercise & Ginseng and Group-E was Deprived of any treatment(Control Group). The criterion measure used for the variables were Sphygmomanometer(B.P), Pulse Count(H.R), Blood-Test(Hb), Urine-Test(pH), Cohen-Perceived Stress Questionnaire(Stress), Nelson Reaction Time test. Statistics adapted was *Descriptive-Statistics, Repeated-measures ANOVA, Trend-Analysis and Post-Hoc.* The results have revealed a significant difference in the post-test values of all the selected psychophysiological variables for all the experimental groups except the control group. Results have clearly indicated the effect of the respective trainings being given to the groups in the improvement of the selected psycho-physiological parameters. The analysis has shown significant difference among all the groups. The yogic group has been significantly superior to the other groups. The descriptive analysis had also exhibited that the most significant improvement has been seen in the Yogic Group followed by Exercise & Ginseng Group, Ginseng and Exercise. Further, it is recommended that studies can be done with more number of subjects, various psychophysiological, specific sports or hematological tests and enzyme activities.

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10. TANWAR (Anshul)
Construction and Development of Fitness Test Battery for Cricket Players.
Supervisor : Dr. Sandeep Tiwari
Th 24160

Abstract
(Not Verified)

The study was conducted on construction and development of fitness test battery of cricket players. Testing for the study took place over a 19 month period. Stratified purposive sampling method was used to draw the sample for the present study. Subjects for the study were three hundred fifty one (351) male cricket players from different schools, clubs, academies and colleges of Delhi and NCR region. The average ages of the subjects were 17 to 23 years. The age classification, the educational qualification, the training experience, the playing position/skill, the name of club/college/school/academy, the highest level of participation of subjects, the region of residence of the subjects were taken as the demographic information of

the subjects. The study was delimited to the following variables: Body weight and height Flexibility: shoulder and back. Speed Agility Muscular strength Aerobic power Reaction ability Anaerobic power Eye-hand coordination The subjects were provided with all the vital information required prior to the administration of the test and the collection of the data. The tests were administered by strictly following the guidelines and requisite protocol stipulated for the test. Further, the test and testing procedures were explained in detail to co-worker and subjects. The subjects were directed to come in proper playing kit. During the performance of tests no motivational technique was used to enhance the performance. Factor analysis technique was applied in order to extract the required factors. 5 groups of Factors were extracted the factors finally extracted out as a result were -: 1. Speed Factor 2. Reaction Ability and Agility Factor 3. Flexibility and Body Composition Factor 4. Aerobic Power and Muscular Strength Factor 5. Eye- Hand Coordination Factor

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11. VIKAS

Study on Implementation of Selected Resolutions on Physical Education and Sports Policies and their Implications.

Supervisors : Dr. Devinder K. Kansal and Dr. Sarita Tyagi

Th 24157

Abstract
(Not Verified)

The study was based on two types of data: Factual data (Published fixture book of zonal competitions) and survey data, both of which were anaylzed through statistical tools. Two Questionnaire were used for the survey study, one for data collection from physical education teachers and the other from zonal supervisors of physical education. Data were collected from 290 physical education teachers and 20 zonal supervisors of physical education of the schools of Delhi. The current status of implementation of selected resolutions(from state and national sports policies) was studied. The results revealed that there is no scientific approach to implement sports policies. Many schools (37.3%) did not participate even in a single sport in the zonal competitions. About 63% of physical education teachers were not aware about UNESCO Charter of physical education and sport(1978). Contrary, to Delhi Govt. sports policy 47.6% of schools of Delhi did not allocate four periods per week to physical education; more than 75% schools did not participate in Indigenous games; no zonal competitions were held in 19 out of 29 recognized games. There was no yoga teaching in 25.5% of schools of Delhi. A scientific implement stat has been developed for the future implementation of state, national and international sports policies about charters. With specified responsibilities and practical scientific steps, it will be easier to assure implementation. The road map for assuring implementation has been well illustrated in the results. A large number of current implications of non-implementation like huge number of premature deaths, disabilities and illnesses (caused by inactivity diseases) will be greatly reduced. Steps have been created for making the sports policies implemented with the help of better controls (developed in the present study), for fuller implementation of the resolutions contained in the sports policies.

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