

# CHAPTER 42

## PHYSICAL EDUCATION & SPORTS SCIENCES

### Doctoral Theses

01. CHAUDHARY (Gautam Kumar)  
**Study on Development of Model Curriculum of Bachelor of Physical Education Course in Indian Universities.**  
Supervisor : Dr. Rakesh Gupta  
Th 22847

*Abstract  
(Verified)*

The purpose of the present study was to develop model curriculum for Bachelor of Physical Education course in Indian Universities. Total 30 universities as samples were finally selected from north & west zones of India as per classification of Association of Indian Universities (A.I.U.). The variables were selected as: Syllabi of B.P.Ed. course in selected universities in India, syllabi of Annual & Semester mode, scheme of Skill & Prowess, Scheme of Lesson Plan & Teaching Practice, Scheme of Vocational and Add-on courses, Contents of Theory and Practical papers and overall marking scheme & weightage of theory, internal and practical marks. The study was analyzed by content analysis, Delphi Method and Descriptive Statistics techniques were used for assessing the objectives of the study. The important conclusions were drawn from the results that the uniformity in structure & syllabi was required and most of the selected Universities were not having credit base system. The study was further observed that similar nature of paper were taught with different names and in different styles. Some of the universities had merged different nature of papers in one paper. On the basis of findings, a Model Curriculum was designed to maintain uniformity and to learn and experience professional skills required for Physical Education Professionals.

*Contents*

1. Introduction 2. Reviews of related literature 3. Procedure and methodology. 4. Results of the study and discussion on findings 5. Summary, conclusions and recommendations. Bibliography. Appendices.

02. JHA (Om)  
**Construction and Standardization of Skill Test for Handball Players.**  
Supervisor: Dr. Anil Kumar Vanaik  
Th 23064

*Abstract  
(Not Verified)*

The purpose of the research is to construction and standardization of skill test for handball players. 79 subjects were selected from different affiliated clubs and colleges with minimum experience of 5 years playing handball and at least participated at the state level. Then secondly, the data was taken from 133 subjects for the construction of the norms. The age group of the subjects ranged from 17 to 25 years. Initially, the 12 skill test was developed for four skill variable that mean three skill test for each variable in an appropriate manner, a trial run of all skill test items was conducted on 15 handball players. After a

trial run nine skill test items are, retain for further study. The reliability of data is ensured by establishing instrument's reliability, tester's competency and subject reliability. The first method of the statistical analysis is factor analysis, which is used as a tool to select the best-suited skill test items. Finally, a skill test battery for measuring the playing ability in handball was prepared by picking up the variables having highest loading from each factor. The validity of the test battery was established by the means of construct validity by employing factor analysis. Reliability and Objectivity were established by employing Pearson Product Moment Correlation on the test retest scores and the scores obtained by the administration of the final test items by different testers. For interpretation of the playing ability scores, percentile method for development of the norms and Hull Scale methods for developing a grade scale were used. The factor analysis resulted in the extraction of 4 factors for the skill assessment of Handball game, namely Jump Throw Test, 20m Dribble Test, Throwing for Distance, Speed passing Test. Keywords Skill test , Handball.

### *Contents*

1. Introduction. 2. Review related literature. 3. Procedure and methodology. 4. Analysis of data and result of the study and procedure for establishing scientific authenticity. 5. Summary, conclusions and recommendations. References and appendices.

#### 03. MANISH KUMAR P.

#### **Study on the Selected Kinematic Variables of Snatch Technique Among Elite Women Weightlifters at all India Inter- University Weightlifting Championship.**

Supervisor : Dr. Dinesh Prakash Sharma

Th 22848

### *Abstract (Verified)*

The study was entitled as "Kinematic Analyses of Snatch Techniques of Different Weight Categories Participating in All India Inter University Weightlifting Championship 2010-11". For the purpose of the study women participants selected from their team, who won the medals i.e. gold medal, silver medal and bronze medal in their respective weight categories (i.e. 48 kg, 53 kgs, 58 kgs, 63kgs, 69 kgs, 75kgs and +75 kgs respectively) at All India Inter University Weightlifting Championship held at Kannur University in the year 2010-2011 were selected. The age of the subjects ranged from 18 to 28 years. The selected variables were: (i) barbell kinematics i.e. barbell trajectory and Five lifting phase analysis (first pull analysis, transition analysis, second pull analysis, turnover phase analysis, and catch phase analysis), (ii) mechanical kinematic variables: velocity, acceleration, potential energy, kinetic energy, mechanical energy, and average power output. The performance of the women weightlifters was captured during the competition by two DV PC- 60 Digital cameras (Panasonic Company, Ltd) from filed at lateral and frontal view. The finding revealed that the 48kg category lifters were the best among all the seven categories in their snatch technique among all 21 selected lifters. The peak max velocity, max acceleration, max potential energy, max kinetic energy, max mechanical energy, max average power, was 2.85 m/s, 20.938 m/s<sup>2</sup>, 462.56 (J), 312.736 (J), 742.858 (J), 6011.725 (W) respectively for +75kg female weightlifter category, the heaviest among all other category in all Indian Inter-University Weightlifting Championship. The maximum relative strength and maximum relative power output was calculated in 53kg weight category for 1<sup>st</sup> and 2<sup>nd</sup> place lifters which was 1.423 times (95%) more than their body weight and 148.174 (W/kg). It was concluded that there was difference among selected 21 female weightlifters in all the kinematic variables selected in the study.

### *Contents*

1. Introduction 2. Review of the related literature 3. Procedure 4. Analysis of the data and findings of the study 5. Summary, conclusions and recommendations. Bibliography. Appendices

04. MOR (Ashwani)

**Study on the Effect of Progressive Relaxation Training (PRT) on Selected Sympathetic and Parasympathetic Functions of Male Sports Students.**

Supervisor : Dr. Dhananjoy Shaw

Th 22849

*Abstract  
(Verified)*

The study was conducted with following objectives; To find out the effect of the practice of PRT on the selected sympathetic activity variables, parasympathetic activity variables, sympathetic reactivity variables and parasympathetic reactivity variables of male sports students age ranging from 17 years to 25 years. Keeping in view the purpose of the study, a large number of male sportsperson were randomly selected. (n= 60). There was one experimental protocol namely progressive relaxation training for six week. For experimentation one experimental and one control group were assigned. The corresponding experimental and control group were homogeneous/ matched groups in regard to age and sex. The number of samples at pretest and posttest in experimental group were consisting of thirty samples(n=30). The numbers of samples at pretest and posttest in control group were consisting of thirty samples (n=30). The experimental groups were treated with progressive relaxation training for 30 to 45 min. progressively, for six days per week, for six weeks, at least two days per week was the minimum eligibility attendance though each participants were motivated to have maximum number of attendance. The experimental treatment was administered for six weeks, whereas the control groups were not given any treatment. The selected 24 variables were SDNN, MeanHR, STDHR, RMSSD, NN50, PNN50, TINN, LF(FFT), HF(FFT), TP(FFT), LF/HF, LF(AR), HF(AR), TPOWER(AR), LF/HF(AR), SBP, DBP, HGT, CPT, LST, E:I Ratio, DBT, VM and 30:15(LST) Ratio. From the findings it has been concluded that there was positive effect of the practice of Progressive relaxation training on the selected sympathetic activity variables, parasympathetic activity variables, parasympathetic reactivity variables and sympathetic reactivity variables of male sports students age ranging from 17 years to 25 years.

*Contents*

1. Introduction 2. Review of the related literature 3.Procedure 4. Analysis of data and findings of the study 5. Summary, Conclusions and recommendations. Bibliography. Appendices.

05. RANJIT KAUR

**Study on the Effect of Selected Yogic Training Programme on the Sleep Quality Index of Female Judo Players.**

Supervisor : Dr. Dhananjoy Shaw

Th 22850

*Abstract  
(Verified)*

The study was conducted with following objectives; To examine the relationship between the PSQI–Hindi Scores and PSQI-English Score, PSQI-Hindi Scores and selected autonomic variables, to determine sleep quality index after normal judo training as well as just two or three days before judo competition, to compare between sleep quality index after normal training and just two or three days before the competition, and to find out the effect of yogic training program on sleep quality index before competition of female judo players age ranging from 17 to 23 years. Keeping in view the purpose of the study, a large number of female judo players were randomly selected (N= 60) equally divided into experimental group and control group. The corresponding experimental and control group were homogeneous/ matched groups in regard to age and sex. The experimental groups were treated with yogic training programme for 30 to 45 minutes per day progressively for six days per week for six weeks, whereas the control groups were not given any treatment. The selected variables were sleep quality (SQ), sleep latency (SL), sleep disturbance (SDIS), sleep duration (SD), daytime dysfunctioning (DTD), habitual sleep efficiency (HSE), roommate (RM), Medicine (MED), global score (GS), distress score (DS), sleep parameter (SP), quality of life (QL) and total score (TOT). The following had been concluded from findings that there was significant

positive effect of yogic training programme on sleep quality index before competition of female judo players age ranged from 17 to 23 years, hence helpful for judo performance.

#### *Contents*

1. Introduction 2. Review of the related literature 3. Procedure 4. Analysis of the data and findings of the study 5. Summary, conclusions and recommendations. Bibliography. Appendices.

06. SHAH (Mohammad Muzamil)  
**Health Related Fitness in 14 to 17 Year Old School Boys: A Normative Study.**  
 Supervisor: Dr. Sandhya Tiwari  
Th 23065

#### *Abstract (Not Verified)*

The purpose of the study was to develop normative values of health related fitness components among 14 to 17 year old school boys. For the purpose of the study two thousand boys (N=2000) boys were selected from different schools of Delhi. Health-related fitness components cardiorespiratory endurance, body composition (height, weight, BMI, triceps skinfold, calf skinfold and body fat percentage), flexibility, muscular strength and muscular endurance were selected as variables. Cardiorespiratory endurance, skinfold measurements, height, weight, flexibility, muscular strength and muscular endurance were measured with 1 mile run/walk test, skinfold caliper, stadiometer, weighing machine, flexometer, pull up test and bent knee sit up test respectively. Descriptive statistics was employed and norms were developed with the help of percentile scale. There was an increase in the cardiorespiratory endurance, height, weight, muscular strength from age 14 through 17 years. The body mass index and muscular endurance showed an increase from 14 to 16 years followed a dip in the 17 years old boys. The thickness of triceps skinfold and calf skinfold and body fat percentage showed a decrease from 14 through 17-year-old school boys. There was a slight decline in the flexibility from 14 to 15-year-old school boys followed by an increase thereafter. In case of muscular strength, 17% of 14 year, 7% of 15 year, 8% of 16 year and 4% of 17 year children were not able to perform a single pull up. Five-point category (very high, high, average, low and very low) norms has been developed for cardiorespiratory endurance, body mass index, flexibility and muscular endurance. Whereas, three-point category (high, average and low) norms has been developed for triceps skin fold, calf skinfold, body fat percentage and muscular strength. Key words: Health-related fitness, cardiorespiratory endurance, body composition, flexibility, muscular strength and muscular endurance etc.

#### *Contents*

1. Introduction. 2. Review related literature. 3. Procedure and methodology. 4. Analysis of data and results of the study. 5. Summary, conclusion and recommendations. Bibliography and appendices.

07. SHARMA (Prashant)  
**Critical Study of Physical Education Teaching in Colleges of North India**  
 Supervisor : Dr. Devinder K. Kansal  
Th 22851

#### *Abstract (Not Verified)*

A pilot study was conducted on the status of physical education teaching in the colleges of north India. Questionnaires were mailed to 760 colleges of 16 multidisciplinary universities. Responses could be obtained from 93 of the colleges of 16 universities. The variables of the study included – Physical Education as a subject of teaching, the courses of physical education taught, teachers of physical education. On the average, only 37.5 % of the colleges are teaching physical education. However, in Punjab and Uttar-Pradesh the class room teaching of physical education was found to be 83.3% and

90.9% . In Haryana, Rajasthan, and Uttara-khand these percentages were found to be 10%, 7.7 % and 0% respectively. Present study has shown that the appointment of physical education teachers is very less in relation to the number of students in Bachelor degree courses' in the colleges of North India .Teachers of physical education for class room teaching have been appointed only in 32.26 % of the colleges. The facilities for sports participation differ greatly in different colleges. Among the selected colleges of north India, the provision of gymnasium/exercise space ranged from 27.3% to 63.6%. Majority of the colleges are yet to comply with the National Policy on Education and UNESCO Charter of physical education (1978) which seek that physical education and sports must be made an integral part of education for each student. On the basis of the findings of the present study, the following recommendations have been made: an effective & practicable curriculum in physical education for college students should be compulsory and integral part of each Bachelor's degree student; every college must create standard infrastructure and congenial , recreational environment for the promotion of adoption of lifelong healthy and physically activity lifestyle.

#### *Contents*

1. Introduction 2. Review of related literature 3. Procedure and methodology 4. Analysis of data and result of the study 5. Summary, conclusion and recommendations. Bibliography.

08. YADAV (Meenakshi)

#### **Study on Trait Anxiety Management Among Sportspersons in Relation to Rational Emotive Behavior Therapy.**

Supervisor : Dr. Rakesh Gupta

Th 23201

#### *Abstract (Not Verified)*

There were three broad aims for this thesis. These included an investigation of the relationship between the intensity and directional dimensions of trait anxiety ,state anxiety and performance in sport,a detailed exploration of mechanisms mediating observed relationship using the theory of REBT as a frame work and based on the findings of this exploration, an assessment of the efficacy of a tailored REBT treatment as a means of modifying harmful trait anxiety directional interpretations, resulting in changes at the state level and ultimately changes in performance Total 200 competitors from 8 sports (athletics,kabaddi, boxing, hockey, football, judo, vollyball, wrestling from RAI sports school and sports authority of India. State and traite anxiety and the directional interpretation of state anxiety, trait anxiety, skill level and performace were the selected variables CSAI-2D, CTAI-2D, SAS, SGABS, SDS, MRF-L-D were used as the criterion measures, Mean, S.D, Pearson product moment, correlation, qualitative analysis using REBT, Paired 't 'test, one way Anova were computed for statistical Analysis. The result of the study revealed that measures of anxiety correlated as predicted. The ABC framework adopted provided insight into specific cognitive mechanisms behind directional measures of anxiety and REBT played a significant role in the theory and management of anxiety in sport.

#### *Contents*

1. Introduction 2. Reviews of related literature 3. Pcedure and methodology 4. Analysis of data and findinds of the study 5. Summary, conclusions and recommendations. Appendices. Bibliography.