

CHAPTER 41
PHYSICAL EDUCATION
&
SPORTS SCIENCES

Doctoral Theses

01. BHUTIA (Tashi Ongmu)
Comparative study of flexibility: physiological and psychomotor variables among North Eastern and Southern senior Women soccer players.
Supervisor: Prof. Tarak Nath Pramanik
Th 26830

Abstract

For the purpose of the study a total of sixty female Senior National women soccer players, age ranging between 18 to 30 years with (Mean \pm SD; Age 24.02 ± 3.42 years, Height 158.17 ± 5.97 cm, Weight 53.80 ± 5.69 kg) were purposively selected from North Eastern region (Manipur and Sikkim) and Southern region (Tamil Nadu and Kerala) of India. The variables selected were flexibility, physiological and psychomotor variables pertaining to women soccer players. P values ≤ 0.05 were considered statistically significant. In flexibility parameters it was concluded that there was significant difference in the Ankle Dorsi Flexion (t'-value 2.33), Knee Flexion (t'-value 2.99), Hip Flexion (t'-value 2.20), Hip Adduction (t'-value -2.13), Hip Abduction (t'-value -2.35), and Trunk Flexion (t'-value 2.19) between North East and Southern senior women soccer players. In Physiological parameters it was concluded that there was significant difference in the Blood Lipid (t'-value -3.89), and Haemoglobin Content (t'-value 4.24) between North East and Southern senior women soccer players. In regard to psychomotor parameters, it was concluded that there was significant difference in the Agility (t'-value -2.80), Balance (t'-value 5.50), and Speed (t'-value -2.91) between North East and Southern senior women soccer players. In conclusion, there is a developing acknowledgement of the requirement for more perplexing factual investigations to anticipate future predominant execution considering proportions of current ability. New exploration tends to the need for enormous scope concentrates on that utilize multidisciplinary test batteries to survey youth competitors at various age bunches tentatively.

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

02. DHUNNA (Kapil Dev)
Comparative study of anthropometric and psychological variables of sprinters middle distance and long-distance athletes of selected level.
Supervisor: Dr. Pradeep Kumar
Th 26831

Abstract

The purpose of the study was to carryout anthropometric and psychological variables of Sprinters, Middle-Distance and Long-Distance Runners. The subjects taken for the study were 60 Sprinters, 60 Middle-distance runners, 60 Long-distance runners from different parts (stadiums) of Delhi region. Appropriate testing procedures were used for anthropometric variables, such as height, weight, BMI, leg length, thigh circumference, calf circumference and skinfold measurement of biceps, triceps, supra-iliac, subscapular. In addition, appropriate questionnaires were used for psychological variables like anxiety, mindfulness attention awareness, amotivation, intrinsic and extrinsic motivation of the subjects were tested. The data was analysed using descriptive as well as Analysis of Variance (F-test). Least significant difference (Post-hoc Test) was applied in the case of F-ratio was significant. The analysis of data, employing Analysis of Variance (F-test) clearly reveals that with respect to anthropometric variables such as height, weight, thigh circumference, calf circumference and skinfold measurement of biceps, triceps, supra-iliac, subscapular and psychological variables like anxiety, mindfulness attention awareness, amotivation, intrinsic and extrinsic motivation the obtained F values were statistically significant at 0.05 levels and in respect of Leg Length and BMI, the values of F were statistically not significant.

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03. DINESH KUMAR

Effect of underwater Exercise Cryotherapy, Autogenic Training, and low intensity Exercises on rate of recovery.

Supervisor: Prof. Ashok Kumar Singh

Th 27266

Abstract

The primary goal of the research was to analyze and compare the influence of various recovery modalities on the rate of recovery at different time points, and to identify the best methodology that can assist athletes in recovering from exhaustion following high-intensity exercises. The study was delimited to male athletes who represented their basketball teams at national-level championships in the past 2 years and had 5 years of playing experience. The study was further delimited to 4 selected recovery modalities: Underwater exercise, Autogenic relaxation technique, Cryotherapy, and Low-intensity exercises. The study was finally delimited to the following physiological variables: heart rate, oxygen saturation (SPO2), and blood lactate. The statistical analyses of the data lead to the following results, autogenic training performs significantly better than active recovery in blood lactate clearance at a 10-minute time point whereas both autogenic training and active recovery perform similarly in heart rate and oxygen saturation (SPO2) recovery after strenuous workout. At a 20-minute time point active recovery and autogenic training show a similar rate of recovery in all physiological variables. Cryotherapy performs significantly better than all other recovery modalities in heart rate recovery, cryotherapy performs significantly better than autogenic training and active recovery in blood lactate clearance at a 10-minute time point. At a 20-minute time point, cryotherapy performs significantly better than active recovery and autogenic training in heart rate recovery and blood lactate clearance. For underwater exercise

modality, it was observed that at a 10-minute time point, underwater exercise performs significantly better than all other recovery modalities in lactate clearance, and at a 20-minute time point underwater recovery performs significantly better than autogenic training and active recovery in heart rate recovery and performs significantly better than all other recovery modalities in lactate clearance.

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04. KAUR (Charanjeet)
Validation and Psychometric Evaluation of Athletic Coping Skills Inventory ACSI-28 in Indian Context.
 Supervisor: Prof. Sandeep Tiwari
Th 27160

Abstract

Psychologists and researchers from all over the world are always keen to study human performance and the impact of psychological factors on motor skills, particularly when the extent of competition is high. As a result, an ample number of studies and research have been conducted to gauge and determine how an athlete can be intellectually prepared to face high-pressure situations and what psychological factors are the natures and application of coping mechanisms used by elite athletes has drawn special interest in practitioners of sports psychology as it offers a multi-dimension foundation for intervention.

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05. KIRTI
Passion and perfectionism in relation to personality among sports persons of different levels.
 Supervisor: Dr. Sandeep Tiwari
Th 26832

Abstract

Thesis titled "Passion and Perfectionism in Relation to Personality Among Sports Persons of Different Levels" was conducted by the research scholar. The objective of the study was to out the relationship between sub-scales of passion & perfectionism with sub-scales of personality. Further to find out differences in the selected psychological among male and female sportspersons of different levels namely: State/College, University & National level. For analysis of data descriptive statistics, correlation T-test and one-way ANOVA was applied. For establishing the reliability of the questionnaires on target population Cronbach's Alpha Reliability test was applied. The result of the study revealed that the questionnaires were reliable for Indian population. Further, relationship of passion and perfectionism with personality was found in selected parameters. While comparing male and female significant differences were found in openness, extraversion, obsessive passion, and

other oriented perfectionism. Further, significant difference in level wise comparison were also found.

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06. KUSHWAHA (Abhinav)
Validation and development of norms for six factors composite physical fitness test.
 Supervisor: Prof. Dharmender Kumar
Th 26833

Abstract

Physical fitness and activity are indicators of the health status of Society, the community, and individual. The various physical activities, games & sports, and physical fitness are in the form of various components of health and skill-related physical fitness it's essential required for daily tasks, a person's participation in physical activity and performing of sports skills and especially required to love for the fitness freak and sports playing people. It's now concepts of physical fitness, if you are physically, social emotional, and spiritual concepts of physical fitness for efficient contribution to the sports performance, physical fitness, and its success of life but nowadays in the country, different tests are used by many researchers to measure the importance of physical fitness of school and college-level students at different ages of the stages. The test was validated for the school-going students, and developed norms and reliability of these tests were established for school -going students in the Delhi region.

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07. ROHIT
Innovation product development and entrepreneurship in sports: developing a model.
 Supervisor: Prof. Samiran Chakraborty
Th 26834

Abstract

The purpose of this study was to compare the different football leagues which are Bedford community league from Australia, Football West Australia, Dubai sports council football academies championship, Community champions league, Green Kenya, McDonald's Junior Football from New Zealand and Football Association of Singapore. All the data was taken by Secondary sources. Above listed leagues were compared on the basis of two different components of management which are Auction Structure and Sponsorship pattern. On the basis of the components the researcher along with his supervisor has seen the increased number of participants as well as the social approach of the leagues. The result of the study shows that if

there is increased number of sponsorships and no fees will be charged from the players then there is an increase in the number of participants. Six leagues has no auction structure as they are giving platform to the players with low cost or free of cost but one league named as Football west from Australia has an auction structure which gave power to the clubs to do the auction of the players.

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08. SHUKLA (Anshuman)
Psychometric properties and validation of Indian version of flow state scale.
 Supervisor: Prof. Sandeep Tiwari
Th 26835

Abstract

The discipline of psychology, where the flow concept seems to belong more naturally, has seen relatively higher impact. There has been a lot of discussion on flow as a useful idea, interesting phenomenon, and maybe important aspect of human life. The data was obtained from five hundred (N=500) college students who were chosen at random from a different part of Indian institutions, colleges and sports hostels. The subject's age ranged from 17 to 27 years old. It was decided to select the "Flow State Scale developed by, S.A Jackson (1995)" for the adaption to the college students of Indian origin after a detailed conversation with the experts, advisory committee members and conducting a thorough literature search. The descriptive statistics of all the items are found satisfactory and with the help of skewness and kurtosis the normality of data checked. On the basis of that we concluded that the data is normally distributed for each items. The internal consistency (Cronbach's alpha) for the final questionnaire of Flow State Scale (FSS-33) was $\alpha = 0.903$ with 33 items in the questionnaire. On the basis of that we conclude that the final Flow state scale (FSS-33) valid for the Indian athletes. The CFA model shows all the values in the second order after the elimination of the items having low factor loading, increases the model fit. The model fit confirmed all the factors are applied in Indian conditions. The index of reliability (validity) for all the nine factors has shown the values towards the excellent side. On the basis of that we concluded that our FSS-33 are valid for Indian athletes. The test-retest score of all the three trails of 50 athletes ranging from 0.855 – 0.902. With that score we concluded that the FSS- 33 is reliable for Indian athletes.

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09. TIRPATHI (Abhishek)
Effect of structured intervention program on selected psychological variables: a longitudinal study.
 Supervisor: Prof. Lalit Sharma
Th 26836

Abstract

The rationale of the study is to find out the effect of psychological skill training on gymnast's performance and how the structured psychological variables (Self Confidence, Mental Imagery, Motivation, Anxiety and Fear) take part in performance enhancement, reduce stress, motivate Gymnasts, build level of confidence, increase visualization power and decrease fear of injury. Psychological intervention training is already been used in developed countries for team games and individuals. Researcher wants Indian Gymnastics to adopt it for better performance. Impact of PST has widely been studied by numerous researchers. Present study was aimed to study the effect of longitudinal impact of PST on gymnastic performance and selected psychological skills. Therefore, PSAS-G (Psychological Skill Assessment scale for Gymnast) questionnaire by Sharma.Mallika & Sharma.Lalit 2012 was revalidated with 260 subjects and FAS-G (Fear Assessment Scale for Gymnast) was constructed with 163 subjects. For the PST training 30 subjects were selected. A Training module and Training booklet was constructed and validated with the suggestion and approval of the experts. For the Quantitative results AMOS and SPSS was used and for the qualitative results Nvivo- (Trial version) was used. On the basis of the findings of the study following conclusions were drawn: There was a strong impact of PST on Arousal Regulation, Mental Imagery, Motivation, and Self-Confidence and fear of social evaluation and fear of injury. Arousal regulation among national players have linearly improved. Mental imagery among gymnast having 7 years of training age has improved. Motivation has improved among national level players and players having more than 7 years of training age. The performance level of the subjects improved after the training as compared to the performance before the training.

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10. TYAGI (Preeti)
Leadership style and coach-athlete relationship as mediating factor on group cohesion, Locus of control and aggression among selected team games.
 Supervisor: Prof. Sarita Tyagi
Th 26837

Abstract

Leadership style and coach-athlete relationship as mediating factor on group cohesion, locus of control and aggression among selected team games was the topic and Subjects were (male) sportsmen of age 18 years above, National Player of team games (Handball, Volleyball, Football and Hockey) total of 600 (150 each sport) from all over india. For data collection five questionnaires were used; Leadership style; athlete's perspective by Chelladurai & Saleh (1980) and coach-athlete relationship by Jowett and Ntoumanis; Athlete's Meta-Perspective(2004) ,Aggression by Anand Kumar Shrivastava & Prem Shanker Shukla (1988), Rotter's Locus of Control by Dr. Anand kumar & Dr. S.N Srivastava and Group cohesion by A.V. Carron, L.R. Brawley & W.N. Widmeyer (1985) statistics applied were Mean, standard deviation, frequency, percentage, Multivariate analysis of variance (Manova) and Pearson coefficient. Results of the study depicted that prominently coaches adopts training and instruction type of leadership to coach their team followed by autocratic style, democratic style, social support and positive feedback as per Athletes. Athletes believes that their coaches are close to them in coach-athlete's relationship, followed

by commitment and complementarity. No significant difference was found in aggression among coach- athlete relationship. Significant difference was found in regard to locus of control among coach-athlete relationship.No significance difference in locus of control among coach-athlete relationship. Significant difference was found in regard to group cohesion. Significant difference was found in regard to group cohesion (task cohesion and social cohesion) among coach-athlete relationship. Significant difference was found in regard to group cohesion (task cohesion and social cohesion) among games. Significant difference was found in task cohesion (group cohesion) among the interaction of coach-athlete relationship with selected games.No significant difference was found in aggression among different leadership style of coach. No significant difference was found in locus of control among different leadership style of coach. No significant difference was found in group cohesion among different leadership style of coach. Leadership style chosen by coach to coach his team is not related to aggression in athlete. Leadership style chosen by coach to coach his team is related to Locus of control in athlete.Leadership style chosen by coach to coach his team is related to Group cohesion in athlete. Coach-athlete relationship is not related to the level of aggression in athlete, in selected games. Coach-athlete relationship is not related to the locus of control of athletes, in selected games. Coach-athlete relationship is positively related with the level of cohesion in team, among games. Results of the study can be used to bring better results in team games and making positive relationship between coach and Athletes.

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