

ISSN 2321-6557

RNI NO. : PUNENG/2012/47863

# Sports Research

Quarterly

Vol. 2 No. 4

October-December, 2013



**SPORTS AUTHORITY OF INDIA**  
**Netaji Subhas National Institute of Sports**  
**Patiala Website: <http://www.nsnis.org>**

**CONTENTS**

**A Study of Occupational Stress Between College Teachers and  
Senior Secondary School Teachers**  
Dr. V. Amutha

**5**

**Relationship of Selected Morphological Variables with Swimming  
Performance of Male Age Group Swimmers**  
Dr. Amrish Tony, Dr. P.C. Krishnaswamy

**10**

**A study of physique and body fat of National women  
wrestlers of different weight groups**  
Jaswinder Singh, R.K. Talwar, S.S. Kang & G. Kaur

**21**

**Biomechanical Evaluation of Indian Javelin Throwers**  
Dr. M.D. Ranga, Baljinder Singh

**27**

**Injury Pattern in Elite Indian Men Field Hockey Players-Pre Olympic 2012**  
G.B. Sethy, AGK Sinha

**33**

**Effects of Haemoglobin Concentrations with 15-day  
Altitude Training on Female Hockey Players**  
Mathew Trrorea, Dr. Rajdeep Kaur, Neil Hawgood

**43**

**SPORTS AUTHORITY OF INDIA**

**Netaji Subhas National Institute of Sports  
MOTI BAGH, PATIALA, INDIA**

### Information for Subscribers / Contributors

- The *Sports Research*, an official organ of the Sports Authority of India Netaji Subhas National Institute of Sports, is a quarterly Journal published in the months of January, April, July and October.
- The Journal publishes original research and review articles on sports and allied sports science.
- The subscription should be renewed promptly. The Publishers cannot guarantee the supply of back issues, on belated renewals.
- Any change of address must be notified immediately.
- Remittances should be made through Bank Draft in the name of 'SAI NSNIS, Patiala', payable at Patiala.
- All correspondence concerning business and editorial matters should be addressed to the Managing Editor, Sports Research, SAI NSNIS, Motibagh, Patiala - 147 001, India.
- Subscription rates are subject to change.
- The copyright of the published material rests with the Publishers. Any reproduction of the material, in any manner, requires prior permission of the Publishers.
- The authors are responsible for the correctness of the facts mentioned in the articles and advertisements. Acceptance of the advertisement material does not imply endorsement.
- The opinions expressed in the articles are of the authors and not necessarily those of the Publisher.

## *Editorial*

### **Editor-in-Chief**

S.S.Roy

### **Editor**

Dr. Rajdeep Kaur

### **Consultant Editor**

Surjeet Singh Dhaliwal

### **Editorial Board**

Dr. M.L. Kamlesh

Sports Psychology

R.K. Gupta

Statistician

Dr. M.D.Ranga

Sports Biomechanics

Dr. Jaswinder Singh

Anthropometry

### **Managing Editor**

Vineet Kumar

### **Editorial Assistant**

Yashpal Sharma

### **Assistant (Circulation)**

Neeta Rani

Recently, I have taken over as Editor-in-Chief of this Journal 'Sports Research'. It will be my endeavor to get this Journal regularly printed as per schedule. One main reason for delayed publication of issues of this Journal is lack of quality research papers. Whatever research is being done is mainly to fulfill the requirement of research degrees and to cope up with the issue of fulfillment of norms for promotion etc. There is hardly an effort being made towards the research for the sake of "research and development" We wish the situation could improve in this regard. It has always been our aim to help the young researchers to improve their presentation.

*Sports Research* is an official journal of the Sports Authority of India. Therefore, all contributors are requested to explore important fields of Sports Sciences such as Sports Biomechanics, Sports Medicine, Sports Psychology, Exercise Physiology, Sports Nutrition, Sports Biochemistry and Sports Anthropometry. All Sports Science have intra and inter-relationships. Intra & Inter relationships mean close connection with each. This issue is an example of such co-relation.

The first article of this issue studies the occupational stress between the college and senior school teachers. The researchers conclude that academicians experience stress and they need to learn relaxing strategies to overcome the negative effects of stress.

The second contribution explores the relationship of selected morphological variables with the performance of male swimmers, and concludes that the physical attributes play an important role in swimming performance and can help swimmer to achieve excellence at the higher level of

competitions.

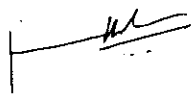
*In the third article, the researchers study the physique and body fat of elite women wrestlers of different weight groups and conclude that women wrestlers do not differ significantly in height, endomorphic component of somatotype and per cent body fat. The trend of increase in height with increasing weight is lacking. This is an important finding as lack of this feature can affect performance.*

*The next article carries out the biomechanical evaluation of Indian javelin throwers. The analysis reveals high angle of release, velocity at foot contact and lower velocity of release, as compared to their international counterparts.*

*The fifth article studies the injury pattern of pre 2012 Olympic Indian men field Hockey players.*

*The last article explores the effects on hemoglobin concentrations with 15-days high altitude training on female Hockey players. The analysis of pre and post training showed statistically non significant effects, perhaps due to the insufficient training period. But 15 days training at high altitude has improved the value of hemoglobin among National Women Hockey Players. India's only high altitude Hockey turf is available at RGHAT Centre Shillaroo and I think we should make frequent utilization of the same.*

*I hope, you would find these studies useful and interesting. Before launching the on-line publication of this journal, we have meanwhile decided to up-load the abstracts of the published articles on the Institute website [www.nsnis.org](http://www.nsnis.org), for the information of the interested subscribers.*



S.S.ROY  
Editor-in-Chief