

Vol 3 Issue 12 Sept 2014

ISSN No : 2249-894X

*Monthly Multidisciplinary
Research Journal*

*Review Of
Research Journal*

Chief Editors

Ashok Yakkaldevi
A R Burla College, India

Flávio de São Pedro Filho
Federal University of Rondonia, Brazil

Ecaterina Patrascu
Spiru Haret University, Bucharest

Kamani Perera
Regional Centre For Strategic Studies,
Sri Lanka

RNI MAHMUL/2011/38595

Review Of Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

ISSN No.2249-894X

Flávio de São Pedro Filho Federal University of Rondonia, Brazil	Delia Serbescu Spiru Haret University, Bucharest, Romania	Mabel Miao Center for China and Globalization, China
Samani Perera Regional Centre For Strategic Studies, Sri Lanka	Xiaohua Yang University of San Francisco, San Francisco	Ruth Wolf University Walla, Israel
Caterina Patrascu Spiru Haret University, Bucharest	Karina Xavier Massachusetts Institute of Technology (MIT), USA	Jie Hao University of Sydney, Australia
Abricio Moraes de Almeida Federal University of Rondonia, Brazil	May Hongmei Gao Kennesaw State University, USA	Pei-Shan Kao Andrea University of Essex, United Kingdom
Anna Maria Constantinovici L. I. Cuza University, Romania	Marc Fetscherin Rollins College, USA	Loredana Bosca Spiru Haret University, Romania
Monica Mihaila Spiru Haret University, Romania	Liu Chen Beijing Foreign Studies University, China	Ilie Pinte Spiru Haret University, Romania

Farahadi Moharrampour Islamic Azad University buinzahra branch, Qazvin, Iran	Nimita Khanna Director, Isara Institute of Management, New Delhi	Govind P. Shinde Bharati Vidyapeeth School of Distance Education Center, Navi Mumbai
Titus Pop PhD, Partium Christian University, Iradia, Romania	Salve R. N. Department of Sociology, Shivaji University, Kolhapur	Sonal Singh Vikram University, Ujjain
K. VIJAYAKUMAR King Abdullah University of Science & Technology, Saudi Arabia.	P. Malyadri Government Degree College, Tandur, A.P.	Jayashree Patil-Dake MBA Department of Badruka College Commerce and Arts Post Graduate Centre (BCCAPGC), Kachiguda, Hyderabad
George - Calin SERITAN Postdoctoral Researcher Faculty of Philosophy and Socio-Political Sciences I. I. Cuza University, Iasi	S. D. Sindkhedkar PSGVP Mandal's Arts, Science and Commerce College, Shahada [M.S.]	Maj. Dr. S. Bakhtiar Choudhary Director, Hyderabad AP India.
ZEZA KAFIPOUR Shiraz University of Medical Sciences Shiraz, Iran	Anurag Misra DBS College, Kanpur	AR. SARAVANAKUMARALAGAPPA UNIVERSITY, KARAIKUDI, TN
	C. D. Balaji Panimalar Engineering College, Chennai	V. MAHALAKSHMI Dean, Panimalar Engineering College
Ajendra Shendge Director, B.C.U.D. Solapur University, Solapur	Bhavana vivek patole PhD, Elphinstone college mumbai-32	S. KANNAN Ph.D , Annamalai University
	Awadhesh Kumar Shirottriya Secretary, Play India Play (Trust), Meerut (U.P.)	Kanwar Dinesh Singh Dept. English, Government Postgraduate College , solan

More.....

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
 Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.ror.isrj.net



CONSTRUCTION OF NORMS: HIP FLEXIBILITY OF NORTH-EASTERN STATES ADOLESCENT BOYS.

Sandip Saha¹ and V. Gopinath²

¹Ph. D Research Scholar, Dept. of Phy. Edu. & Sports Sciences,
Annamalai University, Tamil Nadu, India,

²Professor, Dept. of Phy. Edn. & Sports Sciences, Annamalai University,
Tamil Nadu, India,

Abstract:

It is indeed unfortunate that in our modern era of technologic and scientific achievement, in which man has walked on the moon, developed surgical procedures to prolong and enhance the quality of life, and discovered many of the secrets of molecular interaction, there is no adequate explanation for a seemingly simple question: why do people become too prone to hypokinetic diseases and what can be done to prevent it? 12,600 various districts India to Flexibility was measured by the sit and reach box test. Mean and standard deviation were computed by using SPSS statistical package. The calculated mean (\bar{X}) and standard deviation (\bar{Y}) was used to find out the Hull Scale. The result of the study shows that the adolescent boys of North-Eastern states were differing on flexibility. Hence it was concluded that, age, geographical region, growth, social behaviour, food habit and level of physical activity in curriculum and social life may influence the flexibility of adolescent boys of North-Eastern states.

KEY WORDS:

North-Eastern state, Adolescent, Flexibility and NORMS.

INTRODUCTION

Flexibility can be most simple defined as the range of possible movement in a joint (hip joint) or series of joints. The need for flexibility varies with the athletic endeavour, but in some activities it is all-important. It should be recognized from the outset that flexibility is specific to a given joint or combination of joints. As with speed of movement, an individual is a composite of many joints, some of which may be unusually flexible, some inflexible and some average. Accordingly, it would be incorrect to speak of a flexible individual. In agreement with much human experience, the laboratory studies also showed that within the range of normal human deep-muscle temperatures, the amount of structural weakening produced by a given amount of tissue elongation varies inversely with the temperature. The North-Eastern states have different temperature and geographical nature. The level of physical activity also varies from place to place.

Title: "CONSTRUCTION OF NORMS: HIP FLEXIBILITY OF NORTH-EASTERN STATES ADOLESCENT BOYS."
Source: Review of Research [2249-894X] Sandip Saha¹ and V. Gopinath² yr:2014 | vol:3 | iss:12

CONSTRUCTION OF NORMS: HIP FLEXIBILITY OF NORTH-EASTERN STATES ADOLESCENT BOYS.

Hence the research intended to assess and construct norms on flexibility of North-Eastern state adolescent boys.

METHODOLOGY

To achieve this purpose (N=12,600) adolescent boys from schools of various districts of North-Eastern states of India [Tripura (TR), Meghalaya (ML), Assam (AS), Mizoram (MZ), Manipur (MN), Nagaland (NL) and Arunachal Pradesh (A.R.)] (N=12,600) were selected as subjects at random. Their age ranged from 13 to 15 years (studying from 7th to 10th standard). Flexibility was measured by the sit and reach box test (E-source-1) to construct the norms of flexibility test; mean and standard deviation were computed by using SPSS statistical package. After calculating the mean (X) and standard deviation (Y) the scores were converted into Hull Scale (Verma 2009).

Table - 1
Norms for different states of north-eastern states adolescent boys of 13, 14 and 15 years on Flexibility

Age		TR	ML	AS	MZ	MN	NL	A.R.
13 Yrs	\overline{X}	7.83	4.89	6.76	8.31	8.69	7.47	8.93
	\ddot{Y}	4.25	2.31	3.68	3.55	4.29	3.41	4.02
14 Yrs	\overline{X}	7.52	6.31	6.99	8.07	14.31	9.03	8.26
	\ddot{Y}	4.19	3.16	2.97	3.38	7.44	4.17	3.88
15 Yrs	\overline{X}	7.22	7.63	7.22	9.65	15.65	10.83	10.69
	\ddot{Y}	3.51	3.67	3.50	3.67	6.93	4.93	4.16

Table - 2
Percentage of qualitative grading for the constructed norms for difference states of north-eastern state boys of 13, 14 and 15 years on flexibility

Age	Scores	Qualitative Grading (%)	TR	ML	AS	MZ	MN	NL	A.R.
13 Yrs	0 - 20	Very poor	-	-	-	-	-	-	-
	21 – 40	Poor	35.84	46.67	49.17	34.17	28.00	42.50	34.50
	41 – 60	Average	46.33	41.50	35.17	50.33	53.17	46.17	45.33
	61 – 80	Good	16.00	8.33	13.50	13.17	18.17	8.00	19.17
	81 - 100	Excellent	1.83	3.50	2.16	2.33	0.66	3.33	1.00

CONSTRUCTION OF NORMS: HIP FLEXIBILITY OF NORTH-EASTERN STATES ADOLESCENT BOYS.

14 Yrs	0 - 20	Very poor	-	-	-	-	-	-	-
	21 – 40	Poor	39.67	44.50	43.33	36.17	27.33	35.84	38.17
	41 – 60	Average	46.67	36.83	46.33	53.50	52.17	46.83	43.67
	61 – 80	Good	11.16	18.00	9.67	8.33	20.50	14.50	17.50
	81 - 100	Excellent	2.50	0.67	0.67	2.00	-	2.83	0.66
15 Yrs	0 - 20	Very poor	-	-	-	2.50	7.33	-	1.33
	21 – 40	Poor	43.67	38.17	42.50	25.67	13.00	23.33	23.00
	41 – 60	Average	37.17	46.00	41.00	57.67	63.83	63.67	59.67
	61 – 80	Good	17.16	14.83	14.17	12.00	15.84	13.00	14.33
	81 - 100	Excellent	2.00	1.00	2.33	2.16	-	-	1.67

TR: Tripura, **ML:** Meghalaya, **AS:** Assam, **MZ:** Mizoram, **MN:** Manipur, **NL:** Nagaland and **A.R.:** Arunachal Pradesh.

13 yrs: it was concluded that irrespective of North-Eastern states of India minimum of 28% to maximum of 49.17% boys were in the category of very poor and poor on flexibility.
14 yrs: it was concluded that irrespective of North-Eastern states of India minimum of 27.33% to maximum of 44.50% boys were in the category of very poor and poor on flexibility.
15 yrs: it was concluded that irrespective of North-Eastern states of India minimum of 20.33% to maximum of 43.67% boys were in the category of very poor and poor on flexibility.

DISCUSSION

Quality of life is enhanced by improving and maintaining a good range of motion in the joints. Overall flexibility should be developed with specific joint range of motion needs in mind as the individual joints vary from one to another. Loss of flexibility can be a predisposing factor for physical issues such as pain syndromes or balance disorders.

Gender, age, and genetics are important for range of motion. Exercise including stretching often improves flexibility. Many factors are taken into account when establishing personal flexibility: joint structure, ligaments, tendons, muscles, skin, tissue injury, fat (or adipose) tissue, body temperature, activity level, age and gender all influence an individual's range of motion about a joint. Individual body flexibility level is measured and calculated by performing a sit and reach test, where the result is defined as personal flexibility score.

Static-active stretching includes holding an extended position with just the strength of the muscles such as holding the leg in front, side or behind. Static-active flexibility requires a great deal of strength, making it the hardest to develop. Ballistic stretching is separate from all other kind of stretching. It does not include stretching or any kind of bouncing motion. The actual performance of ballistic movements prevents lengthening of tissues. These movements should only be performed when the body is very warm; otherwise they can lead to injury (E-source-2).

Ligaments are composed of two different tissues: white and yellow. The white fibrous tissues are not stretchy, but are extremely strong so that even if the bone were fractured the tissue would remain in place. The white tissue allows subjective freedom of movement. The yellow elastic tissue can be stretched considerably while returning to its original length (E-source-3).

Stretch receptors have two parts: spindle cells and golgi tendons. Spindle cells, located in the centre of a muscle, send messages for the muscle to contract (E-source-4). On the other hand, golgi tendon receptors are located near the end of a muscle fibre and send messages for the muscle to relax. As these receptors are trained through continual use, stretching becomes easier. When reflexes that inhibit flexibility are released the splits then become easier to perform. The splits use the body's complete range of motion and provide a complete stretch.

CONSTRUCTION OF NORMS: HIP FLEXIBILITY OF NORTH-EASTERN STATES ADOLESCENT BOYS.

Internal Factors of flexibility refers movement demands include strength, endurance and range of motion. Training oversights occurs when the body is overused (E-source-5). Internally, the joints, muscles, tendons, and ligaments can affect one's flexibility. The mental attitude of the performer during the state of motion can also affect their range.

The majority of "flexibility" work should involve performing exercises designed to reduce the internal resistance offered by soft connective tissues. Most stretching exercises attempt to accomplish this goal and can be performed by almost anyone, regardless of age or gender (E-source-6). Upper body flexibility continues to decline during the 50th decade of life and has implications for influence on aspects of health-related quality of life in this segment of the population (Fabre 2007). Studies strongly suggest that growth is not a cause of decreased flexibility during the prepubescent period (Feldman 1999).

Explored developmental patterns of gender traditionalist and flexibility in middle childhood and early and late adolescence and assessed the correlates of gender flexibility at these 3 developmental periods. Most variables assessed contributed significantly and cumulatively to the prediction of gender flexibility; socialization variables proved to be the strongest predictors of all 3 developmental levels (Katz 1994).

Children are also more flexible than adults. During the rapid growth of puberty, kids often become temporarily less flexible than they were prior to puberty. Some children have a slow growth spurt; while others grow so fast they need a speeding ticket. Essentially, their bones are growing more quickly than their muscles and tendons can stretch to keep up. Most boys get more muscles and lose some body fat, but often lose flexibility.

Having good flexibility may help some athletes self-select into certain sports such as swimming, diving, gymnastics, tennis, figure skating, wrestling, or martial arts. Understanding these changes in body composition and flexibility can prepare adolescent for their potential effect or compete while going through puberty (Paul 2013). The sit-and-reach score does not distinguish spine and pelvic flexibility differences in men and women and does not adequately assess hip flexibility (Mier 2013).

CONCLUSION

From the result it is clear that when age advances in adolescent years flexibility is improved. The boys of A.R., MN and NL state show better flexibility. Irrespective of state a minimum of 49.17% (13 yrs), 44.50% (14 yrs) and 43.67% (15 yrs) adolescent boys were in the category of very poor and poor in flexibility.

IMPLICATION:

Curriculum and health awareness will be reformed for the adolescent boys of North-Eastern states. The role of flexibility may be inculcated to parents, pupils and teachers. The state government and M.H.R.D. may give importance for health of the adolescents.

ACKNOWLEDGEMENT:

We personally thank the authority of Education Department and North-Eastern states for permitting us to collect the data from the school boys. We also record our appreciation to all the participants and their teachers for their kind co-operation. Further we thank Annamalai University administration for their support to complete this study.

REFERENCES:

- 1.Proff. J. P. Verma (2009), "Advanced Statistics", Sports Publication, pp. 280.
- 2.Fabre JM, Wood RH, Cherry KE, Su LJ, Cress ME, King CM, de Veer MJ, Ellis R, Jazwinski SM. (2007), "Age-related deterioration in flexibility is associated with health-related quality of life in nonagenarians", J Geriatr Phys Ther, 30(1): pp. 16-22.
- 3.Feldman D, Shrier I, Rossignol M, Abenhaim L. (1999), "Adolescent growth is not associated with changes in flexibility", Clin J Sport Med, 9(1): pp. 24-9.
- 4.Katz, Phyllis A., Ksansnak, Keith R. (1994), "Developmental aspects of gender role flexibility and traditionality in middle childhood and adolescence", American Psychological association, 30(2): pp. 272-282.
- 5.Paul R. Stricker (2013), "Body Composition and Flexibility", American academic of pediatrics,
- 6.Mier CM, Shapiro BS. (2013), "Sex differences in pelvic and hip flexibility in men and women matched

CONSTRUCTION OF NORMS: HIP FLEXIBILITY OF NORTH-EASTERN STATES ADOLESCENT BOYS.

for sit-and-reach score”, J Strength Cond Res, 27(4): pp. 1031-5.
7. www.topendsport.com
8. http://en.wikipedia.org/wiki/Flexibility_%28anatomy%29
9. (Blaket, WP. “Stretching without Pain.” P. 26)
10. Blakey, WP. "Stretching without Pain." p. 33
11. Berardi, Gigi. "Finding Balance." p. 37
12. http://web.mit.edu/tkd/stretch/stretching_3.html



Sandip Saha
Ph. D Research Scholar, Dept. of Phy. Edu. & Sports Sciences, Annamalai University,
Tamil Nadu, India,

Publish Research Article International Level Multidisciplinary Research Journal For All Subjects

Dear Sir/Mam,

We invite unpublished Research Paper, Summary of Research Project, Theses, Books and Books Review for publication, you will be pleased to know that our journals are

Associated and Indexed, India

- ★ Directory Of Research Journal Indexing
- ★ International Scientific Journal Consortium Scientific
- ★ OPEN J-GATE

Associated and Indexed, USA

- ✍ DOAJ
- ✍ EBSCO
- ✍ Crossref DOI
- ✍ Index Copernicus
- ✍ Publication Index
- ✍ Academic Journal Database
- ✍ Contemporary Research Index
- ✍ Academic Paper Database
- ✍ Digital Journals Database
- ✍ Current Index to Scholarly Journals
- ✍ Elite Scientific Journal Archive
- ✍ Directory Of Academic Resources
- ✍ Scholar Journal Index
- ✍ Recent Science Index
- ✍ Scientific Resources Database

Review Of Research Journal
258/34 Raviwar Peth Solapur-413005, Maharashtra
Contact-9595359435
E-Mail-ayisrj@yahoo.in/ayisrj2011@gmail.com
Website : www.ror.isrj.net