



ORIGINAL RESEARCH PAPER

Physical Education

ROLE OF SELECTIVE TRADITIONAL GAMES FOR STRENGTH DEVELOPMENT OF COLLEGE STUDENTS

KEY WORDS: Traditional games, leg strength, abdominal strength, college students.

Dr Saugata Sarkar

Assistant Director of Physical Education, Sports Department, Mizoram University, Aizawl, Mizoram

ABSTRACT

The purpose of this study was to determine the effect of selective traditional games in strength developing factor of college male students. For the purpose total sixty subjects were selected from the different colleges of Mizoram. Two groups were formed a control group (n1 30) and experimental group (n2 30). The subjects were selected randomly from different colleges of Mizoram. The subjects' age ranged from 18- 25years. The experimental group was under the experiment of six weeks of Mizo traditional games thrice in a week. Standing Broad Jump and sit ups Test was conducted to collect the data before and after the training programme of both the groups. Central tendency was judged by calculating mean and variability was assessed by standard deviation. T- Test was performed for justifying significance of means at $p < 0.05$ level of confidence. The significant difference was found between the pre and post test results of the experimental group. The traditional games may have the influence on developing the strength.

INTRODUCTION:

Fitness components are having the vital role to play satisfactory and meaningful performance in life. Important fitness components like strength, agility and balance etc are regarded as prerequisites for effective movement (Pienaar, 2012). Review of related literature proves that youth now a days show an insufficient level of physical fitness skills. Even the children also have lack of aerobic fitness, strength, agility (Volbekiene & Griuciute, 2007; Keller, 2008; Mak et al., 2010; Pienaar et al., 2012; Ross et al., 2014). As a result children with inadequate motor skills also display low levels of physical fitness skills (Okely et al., 2001; Cairney et al., 2006; Haga, 2008; Hands, 2008;). Among all the fitness components muscle strength is a primary component of physical fitness skills and increases proportionately with age from the early childhood years up to adolescence (Winnick, 2005). This increase can be observed of boys during puberty, which continues at a slower rate during the young adulthood (Pienaar, 2012).

Methodology:

Sixty college boys were randomly selected for the study from different colleges of Mizoram in the age group of 18 – 25 years. All subjects underwent the medical check-up before the start of the training programme. All the subjects were divided randomly into two groups' experimental group and control group and each group have equal number of subjects. The experimental group participated in Mizo traditional sports training programme in morning consisting with proper warming up exercises whereas the control group participated only in 30 minutes exercise programme. The detail training programme for the experimental group was as following.

Table-1: Training program for Experimental group

First Two weeks	General exercise	Mizo Traditional games	Total
	30 minutes	Two traditional games each 15 minutes X 2= 30minutes 'In arpa sual' and 'Insuknawr'	60 minutes
Second Two weeks	30minutes	Three traditional sports each 15 minutes X 3= 60 Minutes 'In arpa sual', 'Insuknawr' and 'Insaihrupawh'	75 minutes
Last two weeks	30minutes	Four traditional sports each 15 minutes X 4= 60 Minutes 'In arpa sual', 'Insuknawr', 'Insaihrupawh' and 'Invaibah'	90 minutes

Initial score of Power and Leg Strength and Abdominal Strength of the subjects were collected using the standard tests. After the experimental period of six weeks, the subjects were again tested on selected. In the first two weeks the experimental group were under the practice of 'in arpa sual' and Insaihrupawh, along with the warming up exercise. Next second two weeks one more Mizo traditional game, 'insaihrupawh' was introduced and for the last

two weeks 'invaibah' was introduced to increase the load volume.

In arpa sual:

For playing this game a circle of 10yds was marked. The players were made pair. Then they were asked to hold one leg with both the hands. They were then started to hop and play pushing each other using their shoulder. After a fall they had to use their leg for the same activity.

Insuknawr:

Material used: One wooded pestle.

In a marked area the player practiced this game pair wise. They had to push the pestle with their full force lining the upper body forward.

Insaihrupawh:

Material used: One mill made cloth of 10mts.

Procedure: Both the end of the cloth is tied round the waist of the two players each trying to move in the opposite directions. At the centre of the practice area one line is drawn. One mark also made in the middle point of the cloth. This was practiced in pair wise of the experimental group.

Invaibah:

Material used: One round flat stone / broken/ plate/seeds of beans. In this training programme seed of beans were used.

Procedure: Ground was marked with lime. One ladder was drawn in a total distance of ten metres which was equally divided in twenty boxes each 50cm. The width of the ladder was also 50cm. All the boxes were marked by numbers from 1-10. The players put the seed of beans at the first box then in one leg hop they had to push the seed of beans. They were not allowed to walk or run. Only one leg hopping was allowed. The same process was practiced for returning using the alternative leg.

RESULT FINDINGS AND DISCUSSION:

Table-2: Comparison of Power and Leg Strength Test scores between pre and post test of control group and experimental group

Performance	Group	Pre/Post	N	Mean	Sd	t'	Significance
Power and leg strength	Control group	Pre	30	207.76	9.81	0.15	NS
		Post	30	209.6	9.92		
	Experiential group	Pre	30	206.1	10.18	6.46	S
		Post	30	216.8	10.33		

Table value of t for df 58 is 2.01 at 0.05 level of significance. ≤ 0.05 indicates significant at 5% level. NS= Not Significant, S=significant

The result of pre test and post test is presented in table -2. It is noted from the table that control group showed better performance in post tests than the pre tests. The difference of

mean values were not significantly greater where the calculated 't' values were 0.15. But on the other hand the experimental group showed better performance in post tests than the pre test. The calculated 't' value was 6.46 which is greater than the table value.

Therefore, it may safely be inferred that participation in traditional games of experimental group improved their power and leg strength performance significantly.

Table-3: Comparison of Abdominal Strength scores between pre and post test of control group and experimental group

Performance	Group	Pre/ Post	N	Mean	Sd	't'	Significance
Abdominal Strength	Control group	Pre	30	16.6	2.02	0.0005	NS
		Post	30	17.7	1.93		
	Experiential group	Pre	30	16.26	2.21	4.32	S
		Post	30	21	2.99		

Table value of t for df 58 is 2.01 at 0.05 level of significance. ≤ 0.05 indicates significant at 5% level. NS= Not Significant, S=significant. The result of pre test and post test is presented in table 3. It is noted from the table that the control group shows better performance in post tests than the pre tests. But the difference of mean values were significantly not greater where the calculated 't' values was 0.0005. on the other hand the experimental group also shown the better performance in post test than the pre test. The calculated 't' value which was 4.32 greater than the table value. Therefore, it may also be said that participation in traditional games of experimental group improved their abdominal strength.

The Mizos have many indigenous games of their own and they are very fond of them. Only four games were used as the training means for developing the strength which were somehow directly or indirectly involved with the leg muscles and lower abdominal muscles. As the control group also participated in exercise program so they have also some improvement in relation to strength which was not statistically significant. On the other hand experiential group also participate in exercise programme including the Mizo traditional games. The pattern of movement and the process of execution of power and strength is similar to specific resistance training. In all four selected traditional games the subjects used their body weight as resistance also which caused the strength development. It may be recommended that in the country like India with a huge population and lack of scientific gym equipment, traditional games may be emphasised and popularised for improvement of people's fitness level.

REFERENCES

1. CAIRNEY, J.; HAY, J.A.; WADE, T.J.; FAUGHT, B.E. & FLOURIS, A. (2006). Developmental coordination disorder and aerobic fitness: Is it all in their heads or is measurement still the problem? *American Journal of Human Biology*, 18(1): 66-70.
2. LALNHMINTHANGA, (1998). *Material culture of the Mizo* (1st ed). Calcutta, India, Firma KLM Private Limited.
3. OKELY, A.D.; BOOTH, M.L. & PATERSON, J.W. (2001). Relationship of cardiorespiratory endurance and fundamental movement skill proficiency among adolescents. *Pediatric Exercise Science*, 13(4): 380-391.
4. PIENAAR, A.E. (2012). *Motoriese ontwikkeling, groei, motoriese agterstande, die assessering en intervensie daarvan: Handleiding vir nagraadse studente in kinderkinetika* [trans.: Motor development, growth, motor deficiencies, the assessment and intervention thereof: Manual for postgraduate students in Kinderkinetics]. Potchefstroom, RSA: Xerox Noordwes Universiteit.
5. PIENAAR, A.E.; DU TOIT, D.; STICKLING, A.; PEENS, A.; BOTHA, J.; KEMP, C. & COETZEE, D. (2012). *Motoriese ontwikkeling, groei, motoriese agterstande, die assessering en die intervensie daarvan: 'n Handleiding vir nagraadse student in kinderkinetika* [trans. Motor development, growth, motor deficiencies, assessment and intervention: A textbook for Child Kineticist postgraduate students]. Potchefstroom, RSA: Xerox, Noordwes-Universiteit.
6. WINNICK, J.P. (2005). *Adapted physical education and sport* (4th ed.). New York, NY: Human Kinetics.
7. WINTER, D.A.; PATLA, A.E. & FRANK, J.S. (1990). Assessment of balance control in humans. *Medical Progress Through Technology*, 16(1-2): 31-51.