

A COMPARATIVE STUDY OF PSYCHOMOTOR ABILITIES OF SCHOOL AND UNIVERSITY LEVEL ATHLETES

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ABSTRACT

Psycho-motor Abilities are supposed to be the basis of successful sports performance. The Psycho-motor profile of a sports person is comprised of different type of abilities as mentioned in the paper. The present studies focus on the comparison of different psycho-motor abilities in the very young school athlete and mature university level players. Descriptive survey method was adopted. The data was collected from 243 school players and 244 college players who participated at University level. Seven tests for testing seven Psycho-motor abilities were applied in the field and lab as per requirement. The data collected was converted into standard score. Then t-ratios technique was applied to see the difference between the means of scores of all the tests. The results reveal that university level athletes have better Psycho-motor profile than school level players.

Key Words: Visuo-Spatial Coordination, Psycho-Motor Mobilization and Psycho-Motor Stability.

INTRODUCTION:

Sport is conceived as a psycho-physical phenomenon in the modern times. When one analyses the sports-skills, almost all motor movements are found to be backed by one or the other psychological factor. Since sport is so visible and influential, psychomotor abilities are receiving considerable attention with an increasing number of individuals wishing to be involved in their explorations.

Psychomotor abilities are skills such as hand-eye coordination, balance, and reaction time that arise from a unity of cognitive and physical functions. All healthy people develop some psychomotor abilities during the course of early development, and many people choose to develop those abilities further for work, athletics, or other activities.

Noble(1968) argued that motor skills can be defined as merely muscular actions modified by learning variables. Psycho-motor tasks are elaborately interpreted to these situations that require the identification and combination of stimulus organism response elements in the coordinated

spatio-temporal patterns of receptor effectors activity as a joint function of practice, repetition and reinforcing feedback so as to optimize probability, amplitude and time score in their acquisition, retention and transformation. Singer (1979) reported that activities which are primarily movement oriented and emphasis overt physical responses bear the label 'psychomotor'. They encompass controlling, manipulating and/or moving an object; controlling the body of the object such as balancing, moving and/or controlling the body or the part of the body in space with timing in a brief or long act or sequence under predictable and unpredictable situation. In this study it is hypothesized that school level athletes and university level athletes would differ in their psychomotor abilities.

Sports being mainly a movement oriented enterprise, it will be highly pertinent to go for the establishment of psychomotor profiles of the young people as primary steps towards their future progress in sports. In this sense, the present study could be viewed as a significant scientific exercise. Moreover in present time government is emphasizing more and more on harmonious development of learners which of course includes sports activities. So the investigator is curious to study the psychomotor profile of these budding athletes.

METHODOLOGY:

. A total sample of 487 was drawn from the schools and colleges located in the rural and urban areas. The schools and colleges were randomly selected and the age range of the subjects was kept between 14-25 years. 243 school level athletes and 244 university level athletes were taken from different games. Descriptive survey method was followed in the present study. Data was collected quantitatively with help of various psychomotor tests. t-ratio was employed as statistical technique. Standing broad jump (Visuo-spatial co-ordination), Skipping rope jump test (Psychomotor mobilization), Basketball Wall Pass test (Eye-arm co-ordination), Volleyball Wall Volley test (Visuo-motor co-ordination), Soccer-ball wall Volley test (Eye-leg co-ordination), Mirror drawing test (Eye-hand co-ordination), Steadiness test (Psychomotor stability) tools were used.

RESULT AND DISCUSSION:

Table-1

Table showing Mean, Standard Deviation, Standard Error, t- ratios and level of significance

S. No	Psycho-motor Abilities	School (N = 243)			University (N = 244)			dm	SEdm	t-ratios	Significant Level
		M	SD	SE	M	SD	SE				
1.	Standing Broad Jump (Mts)	1.77	0.424	0.027	2.06	0.423	0.027	0.29	0.038	7.647**	P < .01
2.	Skipping Rope Jump (30 Sec.)	61.42	14.149	0.908	67.23	14.669	0.939	5.81	1.306	4.448**	P < .01
3.	Basketball Wall Pass (30 Sec.)	26.21	4.189	0.269	27.69	4.098	0.262	1.48	0.376	3.941**	P < .01
4.	Volleyball Wall Volley 10/20 Sec	9.52	2.756	0.177	10.45	2.560	0.164	0.93	0.241	3.854**	P < .01
5.	Soccer Ball Wall Volley (20 Sec.)	8.15	1.359	0.087	8.32	1.059	0.680	0.17	0.110	1.540	NS
6.	Mirror Drawing Test Time	30.26	9.719	0.623	28.39	9.541	0.611	2.13	0.873	2.143*	P < .05
	Error	33.68	11.386	0.730	31.98	10.813	0.692	1.70	1.006	1.69	NS
7.	Steadiness Test	30.45	17.410	1.117	35.44	16.665	1.067	3.01	1.545	1.949	NS

Table no. 1 shows that results have indicated that school level and university level athletes differ on five out of the seven tests of psychomotor abilities as the t-values were found to be statistically significant, except in the case of soccer ball wall volley and steadiness test which measure eye-leg co-ordination and psychomotor stability, where differences were not significant statistically.

The university level athletes got higher mean scores on five field tests as compared to the school level athletes. In the laboratory test i.e. mirror drawing test (time); the mean score is less (M = 28.39) than the school level (M = 30.26) which shows the lesser the time; the better the eye-hand co-ordination. All these results indicate that the university level players were found to be

superior in visuo-spatial co-ordination, psycho-motor mobilization, eye-arm co-ordination, visuo-motor co-ordination and eye-hand co-ordination. This shows that mature the athlete is in field of sports, better the Psychomotor Coordination he has.

The reasons for the above results may be that university level athletes are more practised for years together for the use of Psychomotor abilities in the field and school athletes have less experience. The university athletes are well grown and have full physical capacities as compared to schoolathletes, which may contribute to better performance at a mature stage.

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