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Relationship of hand length, palm length and hand strength on adolescence boys

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Abstract

The purpose of the study was to find the relationship of full hand length, palm length and hand strength on adolescence boys. Thirty (N=30) adolescence boys subjects were randomly selected from the Purba Medinipur district of West Bengal. The ages ranged of the subjects were 15-18 years. In this study, full hand length was measured by anthropometric rod in centimeters, palm length was measured by freeman tape in centimeter and hand strength was measured by a grip dynamometer in kilogram. Collected data on full hand length and hand strength were statistically treated through calculation of Mean, S.D. and coefficient correlation for interpretation, analysis and discussion. Level of significance was chosen at the 0.05% level of confidence. For statistical calculation SPSS software 19.0 version was used. The result of the present study revealed no significance relationship hand length, palm length and hand strength on adolescence boys.

Keywords: Full hand length, palm length, hand strength and adolescence boys

1. Introduction

The human hand is a very complex structure and devoted to the functions of manipulation. It is also capable of relaying sensory information about temperature, shape and texture of the object to the brain. Its effectiveness is due to the ability to perform firm grip, together with highly collaborated nervous control and sensitivity of fingers. It will function and adequate strength of hand is necessary for dealing with the demands of daily life.

Hand grip strength can be quantified by measuring the amount of static force that the hand can squeeze around a dynamometer. The force has most commonly been measured in kilograms and pounds. Hand grip strength is important for any sports in which the hands are used for hatching, throwing, or lifting. Strength of hand is an important motor ability in majority of the sports. Activity especially in tennis, hockey, basketball, handball, volleyball etc. measurement of hand strength is an important factor for sports counseling.

Hand grip strength general term used by strength adolescent boys in the school level, referring to the muscular strength and force that they can generate with their hand. The strength of a hand grip is the result of forceful flexion of all finger joints, thumbs, and wrists with the maximum voluntary force that the subject are able to exert under normal biokinetic condition. Hand grip strength is a physiological variable that affected by a number of factors, including age, gender and body size among others.

1.1 Purpose of the study

The purpose of the study was to find out the relationship between full hand lengths, palm length and hand strength on adolescence boys.

2. Methodology

Thirty (N=30) adolescent boys (subjects) were randomly selected from the Purba Medinipur district of West Bengal. The ages ranged of the subjects were 15-18 years. In this study, full hand length was measured by anthropometric rod in centimeters, palm length was measured by freeman tape in centimeter and hand strength was measured by a grip dynamometer in kilograms. Collected data on full hand length and hand strength were statistically treated through calculation of mean, S.D. and discussion. Level of significance was chosen at the 0.05 % level of confidence. For statistical calculation SPSS software 19.0 version was used.

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Table 1: Mean S.D and Correlation of left hand strength (LHS) with left hand full length (LHFL).

Variable	Mean	Sd	Correlation	Remarks
LHS	8.13	3.28	0.37	Positive significant
LHFL	68.77	4.66		

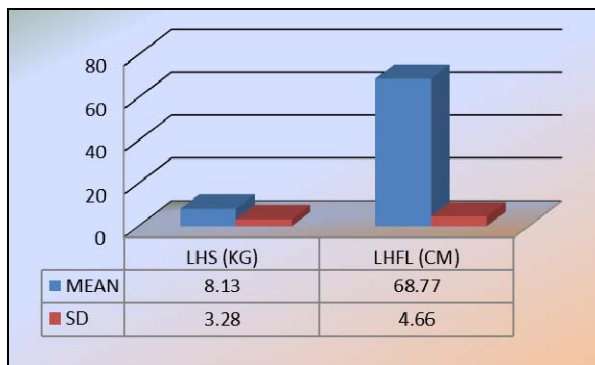


Fig 1: Graphical representation of mean and standard deviation of left hand strength (LHS) and left hand full length (LHFL) on adolescence boys.

Table 2: Mean S.D and Correlation of left hand strength (LHS) with left palm length (LPL).

Variable	Mean	Sd	Correlation	Remarks
LHS	8.13	3.28	-0.08	Negative significant
LPL	17.50	0.86		

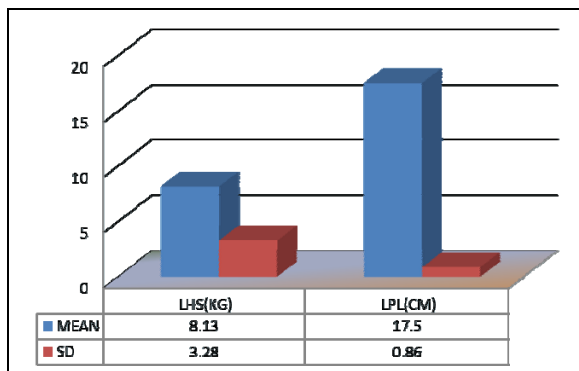


Fig 2: Graphical representation of mean and standard deviation of left hand strength (LHS) and left palm length (LPL) on adolescence boys.

Table 3: Mean S.D and Correlation of right hand strength (RHS) with right hand full length (RHFL).

Variable	Mean	Sd	Correlation	Remarks
RHS	9.87	3.95	0.35	Positive significant
RHFL	68.53	4.23		

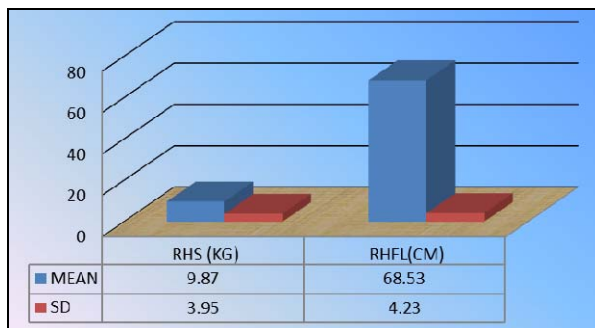


Fig 3: Graphical representation of mean and standard deviation of right hand strength (RHS) and right hand full length (RHFL) on adolescence boys.

Table 4: Mean S.D and Correlation of right hand strength (RHS) with right palm length (RPL).

Variable	Mean	Sd	Correlation	Remarks
RHS	9.87	3.95	-0.10	Negative significant
RPL	17.51	0.85		

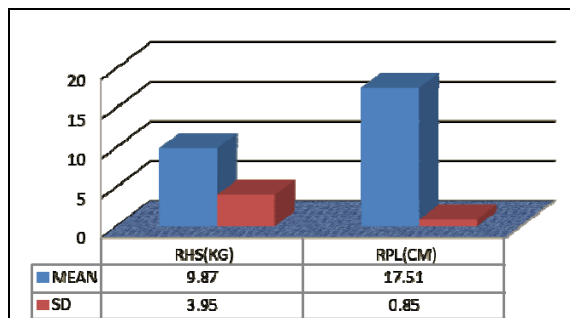


Fig 4: Graphical representation of mean and standard deviation of right hand strength (RHS) and right palm length (RPL) on adolescence boys.

3. Discussion of Findings

From the result of the study positive relationship was found in left hand full length and right hand full length in respect to the left hand strength and right hand strength on adolescence boys. The left palm length and right palm length have been found in negative relationship with respect to the left hand strength and right hand strength. In physical education is important hand strength for better performance in various sports skills, especially in tennis, hockey, basketball, handball, volleyball etc.

4. Conclusion

Within the limitation of the present study on the basis of result the conclusion was drawn: Full hand length is a significantly related for better hand strength where, palm length is not a factor in adolescent boys.

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