

P-ISSN: 2394-1685 E-ISSN: 2394-1693 Impact Factor (ISRA): 5.38 IJPESH 2018; 5(1): 158-160 © 2018 IJPESH www.kheljournal.com Received: 28-11-2017 Accepted: 29-12-2017

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## An investigation on relationship between physical performance and emotional intelligence in male adolescents

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#### Abstract

Hand grip strength testing is widely used because of its fear ability and economy. Physically active child demonstrates higher physical, mental and emotional effectives are compared to its inactive counterpart. (Jonatan R, et al., (2010) [3]. Emotional intelligence is most essential during adolescence. Dealing with outside world needs lot of temperament and emotional stability, an individual or usually judge by the way of emotional expression. Experiences in sports and allied activities give ample opportunity to stabilise personality. There are plenty of channels to exhibit emotions and gain control over them in sports. (Fazadkhodamoradi, et al., (2015) [1] The period of adolescence is known as period of emotional disturbances with various types of tensions, uncertainties, failures and frustrations, which may be dealt more effectively through proper direction and guidance by utilizing the emotional intelligence as an aid. Adolescents who are academically brilliant may sometimes be socially and interpersonally inept. This paper is an attempt to explore the influence of physical performance on Emotional intelligence. To achieve the purpose of the study necessary data was collected from 635 subjects of high schools in Karnataka during 2016-17. Hand grip strength was used as a proxy for physical performance among school students. Standardized paper pencil tests were used to assess Emotional intelligence. Apart from descriptive statistics Pearson product moment correlation coefficient was calculated using SPSS. The findings are discussed in detail. On the basis of the results of the present study it has been concluded that there was significantly positive linear relationship of handgrip strength with Emotional intelligence in adolescent boys of Karnataka.

Keywords: Adolescent, physical performance, handgrip strength, emotion, emotional intelligence

#### Introduction

Physical performance is naturally high in those adolescents who are physically active. The child engaged in leisure time pursuits like sports, games, dance and martial arts ect. Tend to exhibit higher levels of physical performance capacities. Hand grip strength is an ideal way to assess physical performance in adolescence. Although there are plenty of tests to determine physical performance. Hand grip strength testing is widely used because of its fear ability and economy. Physically active child demonstrates higher physical, mental and emotional effectives are compared to its inactive counterpart. (Jonatan R, et al., (2010) [3] Emotions are quite common and maintaining stability is of almost importance. The emotions cannot be expressed at will of an individual. Timely expression of emotions is detrimental for achieving stress in life. Adolescence is a stage filled with fluctuation in emotions. Frequent outburst of emotions can be dangerous in certain circumstances. Emotional intelligence is most essential during adolescence. Dealing with outside world needs lot of temperament and emotional stability. An individual or usually judge by the way of emotional expression. Experiences in sports and allied activities give ample opportunity to stabilise personality. There are plenty of channels to exhibit emotions and gain control over them in sports. (Fazadkhodamoradi, et al., (2015) [1] The period of adolescence is known as period of emotional disturbances with various types of tensions, uncertainties, failures and frustrations, which may be dealt more effectively through proper direction and guidance by utilizing the emotional intelligence as an aid. Adolescents who are academically brilliant may sometimes be socially and interpersonally inept. Research suggests that emotional health is fundamental to effective learning. Given that both trait and ability emotional intelligence have been linked to life success,

it is critical for educators to know whether emotional intelligence can be changed and how it might develop as it will undoubtedly fall to them to introduce its education into the curriculum. There is undoubtedly evidence identifying emotional intelligence as important in predicting personal and school success. Emotional intelligence enables the adolescent to develop very good interpersonal relationships and to have better social support. It is a highly desirable and personally valuable attribute to possess. Through physical activities and sports emotional intelligence of adolescents can be improved and thus can lead them towards a very successful future life. There is currently little research addressing the developmental determinants of emotional intelligence specifically, although there is a plethora of research (Fox, 1994) pertaining to the emotional development of children.

#### Materials and Methods Selection of subjects

To achieve the purpose of the study necessary data was collected from 635 subjects of high schools boys in Karnataka during 2016-17. The subjects selected from various schools of Bengaluru and Mysuru divisions were studying in 9<sup>th</sup> standard and their age ranged between 14 to 16 years.

#### Selection of test items

### Assessment of physical performance through handgrip strength

Dominant hand grip strength was used for assessing physical performance among school students. Grip strength was measured by the help of an analogue hand grip dynamometer. Before taking the measurement, the subjects were requested to sit in a comfortable position. They were asked to squeeze the dynamometer as hard as possible without moving the body. Thus, the final grip strength was measured for both hands and the reading was taken from the dynamometer scale when the pointer no longer moved. Three trials were given to each subject and the best reading was the score of the subjects.

#### **Assessment of Emotional Intelligence**

Emotional Intelligence was tested through a 33-item Scale comprised of six factors where items are rated on a 5-point scale anchored by 1=strongly agree to 5=strongly disagree. The model of emotional intelligence of provided the conceptual foundation for the items used in the scale.

#### Procedure

The researcher along with a trained helper collected necessary data related to the present investigation in a class room set up. The researcher personally visited within Bangalore and Mysore educational divisions of Karnataka State. The selected subjects of ninth (9th) standard were requested to assemble in a particular class room for data collection. Objectives of the tests were made clear to the subjects at the outset. The researcher oriented the subjects regarding the procedure of all the tests to be conducted. An informed written consent was received from each subject to ensure their willingness to take part in the study as subjects. Honest responses were sought from the subjects and doubts were timely clarified. Each written test tool took no more than 20 minutes each. The filled in questionnaire was received by the subjects for intended analysis of data. Handgrip strength was assessed individually with three non-consecutive trials each.

Data was analyzed using the SPSS 21.0 statistical package. Firstly, descriptive tests including mean and standard deviation were calculated to determine the nature of the data. In order to test the duly formulated hypotheses Pearson product moment correlation coefficients were assessed and multiple regression analysis were carried out. This helped in eliciting association of physical performance with Emotional Intelligence.

#### **Results & Discussion**

The descriptive statistics on handgrip strength and Emotional Intelligence of adolescent boys in Karnataka given in table 1.

Table 1: Results on handgrip strength and Emotional Intelligence of adolescent boys

	Rural	Urban	Kannada Medium	English Medium	Overall
Handgrip strength	21.93±4.27	21.26±4.37	21.60±4.22	21.53±4.54	21.57±4.33
Emotional Intelligence	120.63±13.66	118.54±18.63	120.93±13.5	117.06±20.13	119.52±16.51

Table 1 on handgrip strength and Emotional Intelligence of adolescent boys makes it clear that the results are normally distributed with acceptable homogeneity. Results on

relationship between physical performance and Emotional Intelligence of adolescent boys are provided in table 2.

**Table 2:** Summary of Pearson product moment correlation coefficient regarding relationship between handgrip strength and Emotional Intelligence of adolescent boys

			Handgrip strength	Emotional Intelligence
Rural Hand		Pearson Correlation	1	.074
	Handgrip strength	Sig. (2-tailed)		.203
		N	297	297
Urban Ha		Pearson Correlation	1	.065
	Handgrip strength	Sig. (2-tailed)		.237
		N	338	338
Kannada Hand		Pearson Correlation	1	012
	Handgrip strength	Sig. (2-tailed)		.817
		N	403	403
English		Pearson Correlation	1	.166*
	Handgrip strength	Sig. (2-tailed)		.011
		N	232	232
Overall	Handgrip strength	Pearson Correlation	1	.072
		Sig. (2-tailed)		.069
		N	635	635

<sup>\*.</sup> Correlation is significant at the 0.05 level (2-tailed).

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

From table 2 it is evident that there is not significant linear relationship between handgrip strength and Emotional Intelligence (.074) in rural boys; there is not significant positive linear relationship between handgrip strength and Emotional Intelligence (.065) in urban boys; Not significant linear relationship between handgrip strength and Emotional Intelligence (-.012) in Kannada medium boys; significant positive linear relationship between handgrip strength and Emotional Intelligence (.166)\* in English medium boys; and there is not significant positive linear relationship between handgrip strength and Emotional Intelligence (.072) in overall adolescent boys of Karnataka.

It has been observed that the rural boys demonstrate emotional intelligence as they possess higher grip strength. The boys who engage in physical activities and sports in rural setting for keeping themselves fit can considerably was not significant of emotional intelligence. In urban setting a significant positive correlation between hand grip strength and emotional intelligence. The results make it clear that the boys who engage in physical activities can well being of emotion. Interestingly, there was not significant positive linear relationship between physical performance and emotional intelligence in urban boys. Kannada medium boys tend to have Physical performance was not significantly related with emotional intelligence, as we know under privileged and un privileged boys now a day's attend Kannada medium schools. English medium boys are immensely benefitted by keeping themselves physically fit. Hand grip strength showed significant positive association with emotional intelligence in English medium boys. Overall it was observed that the physical performance measured in terms of hand grip strength has significantly positive relationship with emotional intelligence. This means that the boys are benefitted from physical activities and sports in order to gain well being of emotion.

Emotional stability and wellbeing is necessary for overall development of personality of adolescents. Physical performance was not significantly related with emotional intelligence in boys in total. This means that the physical education and allied activities, both in school and outside school hours have not been directing towards development of emotional wellbeing.

Raut (2015) found out the relationship of Health Related physical fitness with emotional intelligence and Self esteem. The findings of the present study indicate that the variables of health related physical fitness are not significantly correlated with emotional intelligence and self-esteem.

#### Conclusions

On the basis of the study present study in boys section it was concluded that the physical performance was positively related to emotional intelligence in urban setup; as well as English medium and overall adolescent boys. In adolescent boys of Karnataka.

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