

Relationship between Resting Pulse Rate and Anxiety among Hockey Handball and Volleyball Male Player

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(Received 25 May 2016 – Accepted & Published 05 June 2016)

Abstract

Background: The purpose of the present study is to find out if there was any relationship existed in the resting pulse rate and anxiety profile of different players.

Methods: Total sixty (N=60) intervarsity players, 20 hockey players, 20 handball players and 20 volleyball players were selected as the subjects for the study. The age of subjects was ranged from 18 to 25 years. Sports competitive anxiety test (SCAT) developed by Martin (1977) was employed on the subjects. Heart rate was measured by pulse palpation. The pulse rate is measured by counting the heart beats in a set period of time. Pearson product moment correlation was applied to determine the relationship between the anxiety and resting pulse rate.

Results: The result of the study revealed that there was no significant relationship was found between resting heart rate and anxiety profile among selected three team game players.

Keywords: Anxiety, resting heart rate, hockey, handball, volleyball.

INTRODUCTION

Today's modern era of sports, psychological aspects of the player play a major role in training and giving high performance (Yamada, Kawata, Nakajima, & Hirose, 2012). Anxiety is always present in sports. In simple words it is a type of emotional disturbance. The level of anxiety and pulse rate may differ from individual to individual even among the players of different ball games (Cervantes-Blásquez, Rodas-Font, & Capdevila-Ortís, 2009). Anxiety may be motivating force or it may interfere with successful athletic performance (De, Debnath, Roy, & Murthy, 1990). As a positive motivating force it can be instrumental in motivating the athletes to work hard to find new and to help to set goals. As a negative motivation anxiety may interface with productive as well as constructive thinking. Athletes may attempt to handle anxiety by denying mistakes, denying their weakness and thus denying working hard (Delextrat, & Kraiem, 2013). This can lead to the development of poor work habits, or athletic technique. These often lead to failure and in turn, lack of confidence and increased anxiety. When an athlete is anxious, the heart rate increases; the blood pressure becomes elevated and the breathing becomes more rapid and oxygen consumption increases (Buchheit, Mendez-Villanueva, Quod, Poulos, & Bourdon, 2010). He/she has feeling of fatigue or weakness etc., even he/she may yawn frequently, begin to tremble or engage in nervous activity (bite his/her nails wriggle his/her leg twin his/her hair act.) or he/she may sweat profusely, urinate frequently etc. The anxiety level of different people to the similar situation is entirely different (Chauhan, & Haider, 2012). Different researches are conducted by contemporary researchers on such topic (Buchheit, *et al.*, 2010; Yamada, *et al.*, 2012). But, few things are remain uncertain like is there any relationship existed between resting heart rate and anxiety, thus this work is undertaken with the objective to find out if there was any relationship existed in the resting pulse rate and anxiety of different team game players.

METHODS AND MATERIALS

Total sixty (N=60) intervarsity players, 20 hockey players, 20 handball players and 20 volleyball players were selected as the subjects for the study. The age of the subjects was ranged from 18 to 25 years.

Sports competitive anxiety test (SCAT) developed by Martin (1977) was employed on all the subjects. Heart rate was measured by pulse palpation. The pulse rate is measured by counting the beats in a set period of time.

Data on the selected variables were collected during respective intervarsity competition held at different parts of the country. Before the data collection researchers met with team coaches and players and explained their objective of the work, after acquiring their consent questionnaire were administered on the selected subjects simultaneously their pulse rate was measured.

Pearson's product moment correlation was applied to determine the relationship between the anxiety and resting pulse rate, the level of significant was set at 0.05 with 58 degree of freedom.

RESULTS

Table 1: Correlation among the Team game Players on Anxiety with Resting Heart Rate.

		Resting hart rate		
		Hockey (<i>r</i>)	Handball (<i>r</i>)	Volleyball (<i>r</i>)
Anxiety	Hockey (<i>r</i>)	0.14		
	Handball (<i>r</i>)		-0.01	
	Volleyball (<i>r</i>)			0.21

Tab. $r(0.05)_{58} = 0.25$

Table 1 illustrates that the obtained correlation values between the anxiety level of hockey players with the resting heart rate is 0.14 which is very less to bring the significant relation ($p > 0.05$). The obtained correlation values between the anxiety level of handball players with the resting heart rate is -0.01 which is also very less to bring the significant relation ($p > 0.05$). The obtained correlation values between the anxiety level of volleyball players with the resting heart rate is 0.21, that is also very less to bring the significant relation ($p > 0.05$).

DISCUSSION

The study was carried out with the aim to compare the selected psycho-physiological variables among the team games players. The selected team games were hockey players, handball players and volleyball players whereas; the variables were anxiety and resting heart rate. The previous studied revealed that players with lower resting heart rate were able to perform well in the competition due to their control on cognitive ability (Lambert, Mbambo, Gibson, 1998; Pradeep, Ajeesh, & Nair, 2012). Where ever a player feel highly tense or nerves his/her heart rate increase dynamicity which is having negative effects on the performance and similar vice-versa was found (Parfitt, & Hardy, 1993; Deutsch, Maw, Jenkins, & Reaburn, 1998).

Further, to find out the relationship between the selected with the different team games players reflected that there is no significant relationship existed between anxiety and resting heart rate among different team game players. The causes for not getting statistical significance difference in between the psychological variables and physiological variables were that, all the selected elite team games players were university level participators. Playing at national or international level is that standard level where difference between the psychological and physiological variables could be seen.

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