

## Correspondence between breathing rate at normal and likeness of playing football

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### ABSTRACT

Objective of the present study was to correlate the breathing with fondness of playing football. Breathing is the mechanism through which human beings and many other organisms exchange gases between body and environment. There are two types of respiration in man, external respiration and cellular respiration. External respiration is also called breathing. During breathing air is inhaled inside the body and then exhaled outside the body. Air contains many gases. The proportion of gases in air is different during inhalation and exhalation. Football is a game being played all over the world. It helps to maintain the respiration. It was concluded that from the present study that respiration rate was low for those who like football.

**Keywords:** Breathing; Football; Oxygen level; Breathing rate; Normal breathing; Likeness of playing football; Exercise and respiration; Physical exertion; Cardiorespiratory fitness; Breathing patterns in sports; Athletic performance; Football and respiratory health; Endurance and breathing rate; Sports physiology; Breathing efficiency in athletes; Football-related fitness; Respiratory response to exercise.

### 1. Introduction

Breathing is the mechanism through which human beings and many other organisms exchange gases between body and environment. There are two types of respiration in man, external respiration and cellular respiration. External respiration is also called breathing. During breathing air is inhaled inside the body and then exhaled outside the body. Air contains many gases. The proportion of gases in air is different during inhalation and exhalation [1],[2]. This type of respiration is also superficial type of respiration because the gases are exchanged only in lungs at cellular level. The air enters the body through nasal cavity and then moving through pharynx, larynx, trachea and bronchi, it reaches inside the lungs. Inside the lungs the smallest unity alveoli are present. The cell membrane of alveoli is semi-permeable for those gases that need to be added in body or removed from the body. Alveoli are surrounded by network of capillaries. The gases diffuse from alveoli to blood capillaries and then vital gases like oxygen, are supplied to whole body cells. The mechanism of physical respiration is also specific and many body parts regulate it [3],[4].

Football is a game being played all over the world. It helps to maintain the respiration.

#### 1.1. Study Objectives

Objective of the present study was to correlate the breathing with fondness of playing football. Detail-wise objectives were:

- 1) To determine the breathing rate;
- 2) To determine the likeness of playing football;
- 3) To determine the co-relation between Exercise and respiration;
- 4) To determine the cardiorespiratory fitness through respiratory rate;

- 5) To determine the breathing patterns in sports;
- 6) To determine the athletic performance;
- 7) To determine the co-relation between sports performance and respiration.

## 2. Material & Procedure

The total of about 130 participated in this studies. All were the students of Bahauddin Zakariya University of Pakistan, Multan.

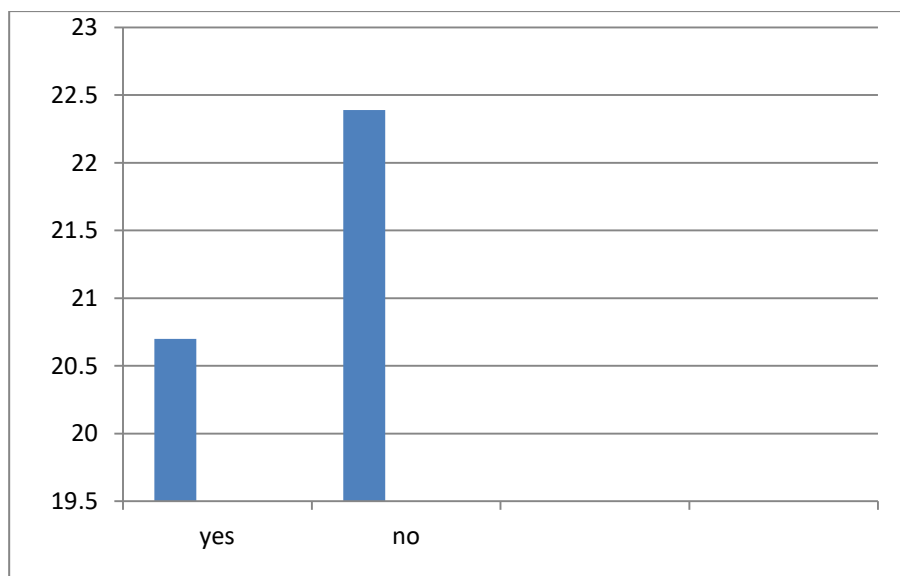
The breathing rate of every participant was measured by the following the integrated steps. Firstly, the subject was asked to sit calm and silent for five minutes. The participant was asked to breathe. The numbers of breath per minute were counted manually with the help of stop watch. Every subject was supposed to know the breathing rate before filling the questionnaire.

Questionnaire was designed to illustrate the analysis of this study. The questionnaire was made on blank paper. The questionnaire contained a question that whether did you like to play football or not? Two options were given to subject in two blocks within questionnaire that were 'yes' or 'no'. Subjects were supposed to write their breathing rate at block of their choice. In this way the questionnaire was designed.

The statistical analyses were made by MS Excel.

## 3. Result & Discussion

There was difference ( $p > 0.1$ ) between the breathing rate of those who liked to play football and those who did not like to play football. The breathing rate of those who showed affinity towards football was low. Questionnaire based studies have been given important outcomes in current researches [5-10].



**Figure 1.** Correspondence of likeness of football with breathing

## 4. Conclusion

It was concluded that from the present study that respiration rate was low for those who like football.

## 5. Future Recommendations

These types of investigations might inform personalized training regimens. It could also have broader applications in improving conditioning for athletes at various levels.

### Declarations

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#### Competing Interests Statement

The authors declare no competing financial, professional, or personal interests.

#### Consent for publication

The authors declare that they consented to the publication of this study.

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