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## Relationship between waist to hip ratio and peak flow rate in national women hockey players of Uttar Pradesh

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### Abstract

The purpose of the study was to assess the relationship between waist to hip ratio and peak flow rate in national women hockey players of Uttar Pradesh. For these purpose 20 national women players were selected randomly from Uttar Pradesh. The variables selected were waist to hip ratio & peak flow rate. To find out the relationship between waist to hip ratio and peak flow rate in national women hockey players of Uttar Pradesh, product moment correlation was calculated at 0.05 level of significance. There was insignificant relationship between waist to hip ratio and peak flow rate in national women hockey players of Uttar Pradesh.

**Keywords:** Waist to hip ratio, peak flow rate

### Introduction

Hockey is a team sport in which a team of players attempt to score goals by hitting, pushing or flicking the ball with hockey sticks into the opposing team's goal. Its official name is simply hockey, and this is the common name for it in many countries. However, the name field hockey is used in countries where the word hockey is usually reserved for another form of hockey, such as ice hockey or street hockey.

Amongst most of the sports that is being played these days Hockey is one of the favourite of all. In the general sense it is a kind of sport in which two teams compete by trying to makeover the ball into the opponent's nest using a hockey stick.

Waist-to-hip ratio (WHR) is the dimensionless ratio of the circumference of the waist to that of the hips. This is calculated as waist measurement divided by hip measurement. Waist hip ratio (WHR) and waist circumference (WC) are used as the measures for abdominal obesity.

A "normal" peak flow rate is based on a person's age, height, sex and race. A standardized "normal" may be obtained from a chart comparing the patient with a population without breathing problems.

A patient can figure out what is normal for them, based on their own peak flow rate. Therefore, it is important for you and your healthcare provider to discuss what is considered "normal" for you.

### Objective

To assess the relationship between waist to hip ratio and peak flow rate in national women hockey players of Uttar Pradesh.

### Methodology

For the purpose of the present study 20 women national hockey players were selected randomly from Uttar Pradesh. The purpose of the study was explained to the subjects who in turn agreed voluntarily to undergo the testing programme.

### Criterion Measures

The following criterion measures were under taken for the purpose of the study:

- Waist measurement was measured with the help of steel tape.
- Hips measurement was measured with the help of steel tape.

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- Peak flow rate was measured by with the help of peak flow meter.
- Waist to hip ratio was measured as waist measurement divided by hip measurement.

### Statistical Analysis

To find out the relationship between waist to hip ratio and peak flow rate in national women hockey players of Uttar Pradesh, product moment correlation was calculated and the

level of significance was checked at .05 levels.

### Results

The data was analyzed by employing product moment correlation. The calculations were. Performed using the SPSS 20.0 software and the findings pertaining to Product moment correlation between waist to hip ratio and peak flow rate is depicted in Table no 1.

**Table 1:** Correlation between waist to hip ratio and peak flow rate

Variables	Mean	N	Std. Deviation	Std. Error Mean	Correlation	Sig.
Waist to hip ratio	.9350	20	.04979	.01113		
Peak flow rate	272.5000	20	86.13789	19.26102	-.066	.783

Significant at 0.05 levels

Tabulated r-value required to be significant at (18) = 444

Table 1 indicates the calculated values of product moment correlation of waist to hip ratio and peak flow rate selected for the purpose of the study. Further, it is evident from the table that the insignificant relationship between waist to hip ratio and peak flow rate.

### Discussion of Findings

Result of the study reveals that insignificant relationship between waist to hip ratio and peak flow rate in national women hockey players of Uttar Pradesh.

The findings of Ilango S, Christy A, Saravanan A *et al.*, (2014) who investigated Correlation of Obesity Indices with Peak Expiratory Flow Rate in Males and Females gave the similar conclusion that WHR and PEFR did not show any significant difference.

The findings of Lazarus *et al* and Collins *et al* also did not find any correlation between WHR and PEFR In contrast to these findings, Yogesh Saxena *et al.*, and Chen *et al* reported a significant negative correlation between WHR and expiratory flow rates including PEFR. The reason for this difference may be attributed to the group of the selected subjects.

The above studies suggest that insignificant relationship between WHR (waist hip ratio) and PEFR (peak expiratory flow rate) also support the finding of present study and similar environmental factors might have brought no significant difference.

### Conclusions

There was insignificant relationship between waist to hip ratio and peak flow rate in national women hockey players of Uttar Pradesh. WHR and PEFR were concerned; there was no significant correlation between these two in both males and females.

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