

Relationship between Digit Finger Ratio and Selected Psychological Variables of Volleyball Players

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Abstract: The purpose of the study was to find relationship between digit finger ratio and selected psychological variables of Volleyball players. By applying simple random sampling a total number of 100 Volleyball players age ranging between (18-25) selected from Varanasi and nearby to act as a subject for the study. Keeping in mind about specific purpose of the study, the following variables has been selected: Digit finger ratio (Independent variables) Measured by using Vernier calliper (Fink et all, 2006) accurate to 0.01mm. And by taken photo copy of right hand palm. Psychological variables (Dependent variables) Aggression constructed by Prof. Anand kr. Shrivastava and Prem Shankar shukla, and Achievement Motivation constructed by Dr. M.L. Kamlesh. In this study correlation design was used for achieving the objectives of the study. In the light of the findings of the present study, the hypothesis that there shall not be any significant impact of digit finger ratio on the psychological variables of Volleyball players was accepted in case of Achievement Motivation, whereas not accepted in the case of Aggression. The level of significance was set at 5%.

Keyword: Digit finger Ratio, Aggression, Achievement motivation, Volleyball players.

I. Introduction

Elite sporting performance results from the combination of innumerable factors, which interact with one another in a poorly understood but complex manner to mould a talented athlete into a champion (Tucker & Collins, 2012).

The **Digit ratio** is the ratio of the lengths of different digits or fingers typically measured from the midpoint of bottom crease where the finger joins the hand to the tip of the finger (Mayhew, Gillam, McDonald & Ebling, 2007). It has been suggested by some scientists that the ratio of two digits in particular, the 2nd (index finger) and 4th (ring finger), is affected by exposure to androgens e.g. testosterone while in the uterus and that this 2D:4D ratio can be considered a crude measure for prenatal androgen exposure, with lower 2D:4D ratios pointing to higher androgen exposure. Digit ratio has been shown to correlate with several psychological traits.

Women with smaller digit ratios report higher, more masculinised scores on the Bam Sex Role Inventory (Csatho et al., 2003a). Men with smaller 2D:4D ratios are perceived as being more masculine and dominant by female observers (Neave et al., 2003).

Procedure

In this study the selection of subjects, Criterion Measures, collection of data and design.

Selection Of Subjects

By applying simple random sampling a total number of 100 Volleyball players age ranging between (18-25) selected from Varanasi and nearby to act as a subject for the study.

Selection Of Variables

Keeping in mind about specific purpose of the study, the following variables has been selected:

- 1-Digit finger ratio (Independent variables)
- 2-psychological variables (Dependent variables)
 - Aggression
 - Achievement Motivation

Criterion Measures

The criterion measures adopted for the study was as follows:

- Aggression constructed by Prof. Anand kr. Shrivastava and Prem Shankar shukla.
- Achievement Motivation constructed by Dr. M.L. Kamlesh
- Digit finger ratio, Measured by using Vernier calliper (Fink et all, 2006) accurate to 0.01mm. And by taken photo copy of right hand palm.

Collection Of Data

The data were collected at different clubs and stadiums of Varanasi and nearby. Necessary instructions were given to the subjects before administration of the questionnaire.

Design Of The Study

The Correlation design was used for the study.

Administration Of Questionnaire

Respondents were called to a common place when they were not busy and have enough time to spare for testing. Necessary instructions were passed on to the subjects before the administration of each test. No time limit for filling in the questionnaire was set, but the subjects were made to respond as quickly as possible once the instructions were clearly understood by them.

II. Statistical Analysis

In this study correlation, was used for achieving the objectives of the study. The level of significance was set at 5%.

Table .1: Descriptive Statistics of Selected Psychological Variables and Digit Finger Ratio of Volleyball players

Descriptive Statistics	Agg.	Achiev.	Ratio
Mean	16.14	25.78	.8717
Standard Error	.378	.226	.00808
Standard Deviation	3.782	2.263	.08078
Sample Variance	14.303	5.123	.007
Skewness	-.206	-.324	.056
Standard Error of Skewness	.241	.241	.241
Kurtosis	-1.282	-1.078	.524
Standard Error of Kurtosis	.478	.478	.478
Range	12	7	.41
Minimum	10	22	.68
Maximum	22	29	1.09

Note: Agg= Aggression, Achiev= Achievement Motivation,Ratio= Digit Finger Ratio.

Table-1 revealed that the mean (\pm standard deviation) of male Volleyball players in relation to Aggression, Achievement Motivation, and Digit Finger Ratio were 16.14 (\pm 3.78), 25.78 (\pm 2.26) ,and 0.87 (\pm 0.08) respectively.The table also showed other descriptive statistics i.e. standard error and sample variance along with the range showing minimum and maximum score of the subjects. The value of kurtosis and skewness along with the standard error of kurtosis and standard error of skewness itself indicates the normality (scientific authenticity) of the data.

Table.2: Correlation between Digit Finger Ratio and Selected Psychological Variables of Volleyball Player

Selected Psychological Variables	Correlation Coefficient	Sig.
Aggression	.289**	.004
Achievement Motivation	-.013	.895

**p < .01 & * p < .05

Table-2 revealed that significant positive relationship was found between Digit Finger Ratio and Aggression (r = .289, p < .05) In case of Achievement Motivation (r = -.013, p > .05) an insignificant relationship was found as the value of coefficient of correlation was insignificant at 0.05 level

III. Discussion Of Finding

In the light of the findings of the present study, the hypothesis that there shall not be any significant impact of digit finger ratio on the psychological variables of Volleyball players was accepted in case of Achievement Motivation whereas not accepted in the case of Aggression.

IV. Conclusions

Following conclusions may be drawn from the obtained result:

- ❖ A significant positive relationship was found between Digit Finger Ratio and Aggression of Volleyball players.
- ❖ An insignificant relationship was found in case of digit finger ratio and achievement motivation. Of Volleyball players.

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