

# Comparative study of Emotionality, Activity, Sociability, and Impulsivity (EASI) among Gymnasts of Madhya Pradesh

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**Abstract:** *In this study total fifty Boys and Girls gymnasts (n=50) of Madhya Pradesh state were selected and they were categories as under 14 and under 17. Questionnaire was distributed to the gymnasts and under the supervision of their coaches and the investigator the data was recorded appropriately, questionnaire having 4 different measures (Emotionality, Activity, Sociability, and Impulsivity) EASI, was separately compared in the present study to know the difference in the temperament level of the gymnast, and in the results it shows that there is no significant difference in the reported temperament level in between the groups that is under 14 and under 17 years of gymnast and according to the results the null hypothesis is accepted,  $t(48) = .43, p = .667$  and on other side when the investigator compare the four different measures (Emotionality, Activity, Sociability, and Impulsivity) then there was still not a significant difference in the reported EASI measure of temperament, therefore the null hypothesis is accepted at 0.05 significant level. The investigator also tested over all Temperamental traits difference between under 14 – 17 Boys and under 14 – 17 Girls and the result found insignificant.*

**Keyword:** Gymnastics, Temperament, Questionnaire, EASI

## 1. Introduction

Temperament refers to basic dimensions of personality that are grounded in biology and explain individual differences in the developmental process rather than universal dynamics. While these dimensions show continuity over time, they are subject to change with maturation and experience. The view of behavior as a function of the organism and of the environment is basic to psychology. Accordingly, temperament serves as a mechanism to explain how individuals contribute to their own development in a given environmental context. Harmony between persons and their surroundings is produced through bi-directional interplay between inborn, temperamental attributes and external demands, supports, and circumstances. Temperament refers to basic dimensions of personality that are grounded in biology and explain individual differences in the developmental process rather than universal dynamics. While these dimensions show continuity over time, they are subject to change with maturation and experience. The view of behavior as a function of the organism and of the environment is basic to psychology. Accordingly, temperament serves as a mechanism to explain how individuals contribute to their own development in a given environmental context. Harmony between persons and their surroundings is produced through bi-directional interplay between inborn, temperamental attributes and external demands, supports, and circumstances. Buss and Plomin (1975, 1984) defined traits as temperament if they fulfilled certain criteria—thus the designation of their approach as “criterial.” They chose criteria on the basis of comparative psychology, in particular the work of S. Diamond (1957). Diamond thought that observations of adult human behavior, “no matter how sophisticated in either a statistical or a clinical sense, have the common failing that they are unable to distinguish between the essential foundations of individuality and its cultural elaboration” Temperament is

often defined as ‘a subset of early-developing personality traits that display biological origins and are consistent across situations and time stimulated behavioral genetic studies of child temperament. In psychology, temperament refers to those aspects of an individual’s personality, such as introversion or extroversion, that are often regarded as innate rather than learned. A great many classificatory schemes for temperament have been developed; none, though, has achieved general consensus in academia. Temperament is a configuration of observable personality traits, such as habits of communication, patterns of action, and sets of characteristic attitudes, values, and talents. It also encompasses personal needs, the kinds of contributions that individuals make in the workplace, and the roles they play in society. To measure temperament in this study, we employed a psychological measure devised by Buss and Plomin (1975) A Questionnaire of Temperament factors of Emotionality, Activity, Sociability, and Impulsivity (EASI) whereas Emotionality is a predisposition to get easily distressed and upset. The “total activity level refers to the total energy output” (Buss & Plomin, 1975, p. 32-33). Sociability “is the tendency to prefer the presence of others to being alone” (Buss & Plomin, 1984, p. 63). Sociability is not the same as shyness, because shy people may desire the presence of others, but they avoid it because they tend to be tense and anxious when surrounded by other people, especially unfamiliar people & Impulsivity was originally included (Buss & Plomin, 1975) but later dropped because factor analyses had shown that the trait seems to be composed of various subcomponents, only some of which replicated, which contains items designed to assess the present study here by makes an effort to broaden the horizon of knowledge by bringing new facts and thoughts by comparison of the EASI (Emotionality, Activity, Sociability, and Impulsivity) measures of Temperament among Gymnasts.

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## 2. Objectives

- 1) To compare the Temperamental traits of the gymnasts of Madhya Pradesh.
- 2) To compare the temperamental traits (Emotionality, Activity, Sociability, and Impulsivity) of under 14 with the under 17 years of gymnasts.
- 3) To compare the temperamental traits among Boys and Girls gymnast

## 3. Delimitations

- 1) The study was delimited to Gymnasts of Madhya Pradesh.
- 2) The study was further delimited to the fifty Boys and Girls Gymnasts those who had participated in state level championship.
- 3) The study was delimited to the subjects belonging to the age group of 14 to 17 years.
- 4) The study was delimited on the Questionnaire of Temperament factors of Emotionality, Activity, Sociability, and Impulsivity (EASI). By Buss and Plomin (1975).

## 4. Limitations

- 1) The Authenticity of the responses given by the subject in questionnaire may act as limitation of the study.
- 2) Daily routine, training age, individual differences and habits, may act as a limitation.

## 5. Hypotheses

- 1) It is hypothesized that there is no significant difference among gymnasts in over all temperament between the groups of under 14 with under 17 of age
- 2) It is hypothesized that there is no significant difference in EASI measures of temperament (Emotionality, Activity, Sociability, and Impulsivity) between the groups of under 14 with under 17 age gymnast's.
- 3) It is hypothesized that there is no significant difference between Boys and Girls gymnast in temperamental traits.

## 6. Sample

For the present study the purposive sampling (Non probability sampling) technique was employed to select the sample of fifty Boys and Girls gymnasts (n=50) of 14 to 17 years of age from gymnastics state championship of Madhya Pradesh.

### Tool

The selection of suitable tools is of paramount significance in any investigation. The success of research immensely depends upon the instruments, which are used for the data collection. In the present study, the following tool was used:

A Questionnaire of Temperamental traits factors of Emotionality, Activity, Sociability, and Impulsivity (EASI). By Buss and Plomin (1975).

### Methods

The methodology of the study consist of selection of subjects, testing procedure and the technique employed for analysis of data. In this survey study total fifty Boys and Girls gymnasts (n=50) of Madhya Pradesh state were selected as the subject under 14 to 17 years of age. Questionnaire was distributed to the gymnasts and under the supervision of their coaches and the investigator the data was recorded appropriately. Buss Temperament Questionnaire having four different measures (Emotionality, Activity, Sociability, and Impulsivity) EASI, was separately interpreted in the present study to judge the temperament level of the gymnast. T –test was used to see the difference among the groups of the gymnast and the level of significance was set at 0.05 and the investigator also tested over all Temperamental traits difference between under 14 – 17 Boys and under 14 – 17 Girls and the result found insignificant.

## 7. Results

**Table 1: Group Statistics**

	Total Groups	N	Mean	Std. Deviation	Std. Error Mean
Over all temperament	Under 14	25	146.3600	20.72012	4.14402
	Under 17	25	144.2000	13.83835	2.76767

**Table 2: Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Over all temperament	Equal variances assumed	0.636	0.429	0.433	48	0.667	2.16	4.98327
	Equal variances not assumed			0.433	41.857	0.667	2.16	4.98327

*\*Level of Significance 0.05 \*Degree of freedom=48*

Interpreted results in the table no. 2 reveal that there was not a significant difference in the reported temperament level in between the groups that is under 14 and under 17 years of gymnast and according to the results the null hypothesis is accepted at the 0.05 level of significance,  $t(48) = .43, p = .667$ .

As there is not much difference in the age of gymnast and the effect of any circumstances can fluctuate the level of temperament and because of that the interpreted result was insignificant.

**Table 3: Group Statistics**

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Emotional Status	Under 14	25	13.8800	7.69913	1.53983
	Under 17	25	12.2800	9.72334	1.94467
Activity Status	Under 14	25	12.7600	7.55690	1.51138
	Under 17	25	14.5200	11.29203	2.25841
Sociability Status	Under 14	25	15.0000	9.34969	1.86994
	Under 17	25	13.1200	10.67442	2.13488
Impulsivity Status	Under 14	25	11.9600	9.77872	1.95574
	Under 17	25	14.3600	9.68624	1.93725

**Table 4: Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Emotional Status	Equal variances assumed	1.155	.288	.645	48	.522	1.60000	2.48048
	Equal variances not assumed			.645	45.603	.522	1.60000	2.48048
Activity Status	Equal variances assumed	.955	.333	-.648	48	.520	-1.76000	2.71747
	Equal variances not assumed			-.648	41.906	.521	-1.76000	2.71747
Sociability Status	Equal variances assumed	.177	.676	.662	48	.511	1.88000	2.83803
	Equal variances not assumed			.662	47.181	.511	1.88000	2.83803
Impulsivity Status	Equal variances assumed	.026	.873	-.872	48	.388	-2.40000	2.75279
	Equal variances not assumed			-.872	47.996	.388	-2.40000	2.75279

*\*Level of Significance 0.05 \*Degree of freedom=48*

The results of the Independent T test which were obtained in order to ascertain the comparison of two groups (under 14 and under 17) and according to the above scores (table no. 3 and 4) investigator state that there was not a significant difference in the reported measure of temperaments

(Emotionality, Activity, Sociability, and Impulsivity) therefore the null hypothesis is accepted at 0.05 level of significant.

**Table 5: Group Statistics**

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Temperamental traits	Under 14 - 17 (Boys)	25	144.16	22.82849	4.5657
	Under 14 - 17 (Girls)	25	146.44	9.87877	1.97575

**Table 6: Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Temperamental traits	Equal variances assumed	6.196	0.016	-0.458	48	0.649	-2.28	4.97486
	Equal variances not assumed			-0.458	32.684	0.65	-2.28	4.97486

*\*Level of Significance 0.05*

The recorded results of the Independent T test which were obtained in order to ascertain the difference of two groups (under 14 – 17 Boys and under 14 – 17 Girls) and according to the above scores (table no. 5 and 6) investigator state that there was insignificant difference in the reported all

recorded temperamental status do not possessed by the gymnast regularly and it may varies situation to situation or during training and learning.

*\*Degree of freedom=48*

Over Temperamental traits therefore the null hypothesis is accepted at 0.05 level of significance.

## 8. Discussion

The data was obtained from the gymnast before the competition, on the basis of the findings the selected sample possessed same temperament status it may be due to competition situation, growth and development pattern and environmental factors like presence of the audience, other participants, judges, performance phobia etc. so that the

## 9. Implication of the study

- 1) The study will help in finding out how the gymnast with varying level of performances would differ from each other on the variable relating to emotions, activity, sociability and impulsivity.
- 2) The results of the study can help to improve the effect of temperamental status on performance and learning.

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