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Baljinder Singh Bal
Department of Physical
Education (T), Guru Nanak Dev
University, Amritsar, Punjab,
India

Gurjit Singh
Department of Physical
Education (T), Guru Nanak Dev
University, Amritsar, Punjab,
India.

Kamal Kishore
Department of Physical
Education (T), Guru Nanak Dev
University, Amritsar, Punjab,
India

Emotional maturity among district level, state level and national level hockey players

Baljinder Singh Bal, Gurjit Singh and Kamal Kishore

Abstract

The purpose of this study was to compare Emotional Maturity among district level, state level and national level Hockey players. To obtain data, the investigators had selected Ninety (N=90), Female subjects between the age group of 12-28 years (Mean \pm SD: Age 16.77 \pm 3.74 (yrs), Body Height 161.2 \pm 5.14 (cm), Body Mass 52.08 \pm 5.50 (kg)) volunteered to participate in the study. For evaluating the levels of Emotional Maturity among subjects, Singh and Bhargava's (1988) Emotional Maturity Scale (EMS) was used. The Statistical Package for the Social Sciences (SPSS) was used for all analyses. To conclude, it is significant to mention in relation to Emotional Unstability, Emotional Regression and Social Maladjustment that results of Analysis of Variance (ANOVA) among district level, state level and national level Hockey players were found statistically insignificant ($P > .05$). Furthermore, in relation to Personality Disintegration and Lack of Independence that results of Analysis of Variance (ANOVA) among district level, state level and national level Hockey players were found statistically significant ($P < .05$).

Keywords: Emotional maturity, emotional Unstability, emotional regression, social maladjustment, personality disintegration, lack of independence

1. Introduction

The psychological aspects related to sport have been studied since as early as the late 19th century with researchers becoming more interested in the emotional aspects involved during the second part of the 20th century (Weinberg & Gould, 2007) [13]. Many researchers therefore have studied emotions as a unique part of sport performance (Hanin, 2000a; Jones, 2003; Kerr, 1997; Lazarus, 2000; Vallerand, 1983) [1, 4, 6, 7, 11]. Emotions experienced in sport are specific and unique to individual athletes (Jones *et al.*, 2005) [5].

Hanin (2000b) [2], who has conducted extensive research on the role of emotions in sport, developed the Individual Zones of Optimal Functioning (IZOF) model in an attempt to predict individual athletes' successful and less successful performances based on their emotional states.

Studies indicated that both positive and negative emotions such as excitement, anger, fear, happiness, sadness, embarrassment and joy or enjoyment were experienced during sport participation (Jackson & Csikszentmihalyi, 1999; Jones, Taylor, Tanaka-Oulevey & Daubert, 2005; Le Roux, 2006) [3, 5, 8].

Emotions may affect sport performance in various ways. The effect of emotions on sport performance has been viewed through research to have an influence on intensity (representing the degree in which emotions are experienced and revealed), motivation, confidence and focus of athletes (Jones *et al.*, 2005; Manzo *et al.*, 2005; Stratton *et al.*, 2005; Walker *et al.*, 2005; Wilson *et al.*, 2005) [5, 9, 10, 12, 14].

2. Material and Methods

2.1 Selection of Subjects

For the purpose of the present study, Ninety (N=90), Female subjects between the age group of 12-28 years (Mean \pm SD: Age 16.77 \pm 3.74 (yrs), Body Height 161.2 \pm 5.14 (cm), Body Mass 52.08 \pm 5.50 (kg)) volunteered to participate in the study. The demographics of subjects are brought forth in Table-1.

Correspondence

Baljinder Singh Bal
Assistant Professor, Department
of Physical Education (T), Guru
Nanak Dev University,
Amritsar, Punjab, India

Table 1: Subject’s Demographics of Hockey Players (N=90) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20))

Variable (s)	Sample Size (N=90)			
	Total N=90	District Level (N ₁ =40)	State Level (N ₂ =30)	National Level (N ₃ =20)
Age (yrs)	16.77±3.74	13.6±1.25	17.36±4.90	22.25±2.93
Body Height (cm)	161.2±5.14	156.32±3.59	164.73±1.81	165.65±1.34
Body Mass (kg)	52.08±5.50	46.77±3.61	55.53±1.59	57.53±1.42

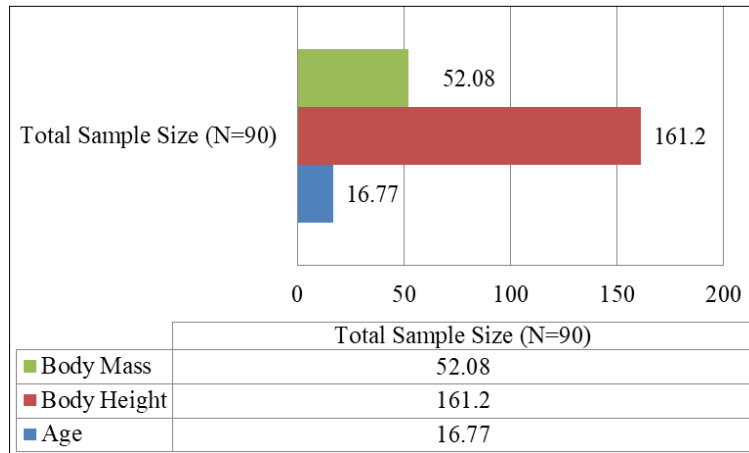


Fig 1: Subject’s Demographics of Hockey Players (N=90) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20))

3. Selection of Tools

3.1 Emotional Maturity Scale (EMS)

For evaluating the levels of Emotional Maturity among subjects, Singh and Bhargava’s (1988) Emotional Maturity Scale (EMS) was used. This scale consists of five parameters namely:

- i. Emotional Unstability
- ii. Emotional Regression
- iii. Social Maladjustment
- iv. Personality Disintegration
- v. Lack of Independence

4. Statistical Analysis

The Statistical Package for the Social Sciences (SPSS) was

used for all analyses. The differences in the mean of each group for selected variable were tested for the significance of difference by One-way Analysis of Variance (ANOVA). For testing the hypotheses, the level of significance was set at 0.05.

5. Results

For each of the chosen variable, the result pertaining to Analysis of variance (ANOVA) among District Level, State Level and National Level Hockey Players on the variable Emotional Maturity (i.e., Emotional Unstability, Emotional Regression, Social Maladjustment, Personality Disintegration and Lack of Independence) are presented in the following tables.

Table 2: Analysis of variance (ANOVA) results among Hockey Players (N=90) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20)) with regards to Emotional Unstability

Source of Variation	Sum of Squares	d.f.	Mean Square	F-value	p-value
Between Groups	59.214	2	29.607	1.258	.289
Within Groups	2046.742	87	23.526		
Total	2105.956	89			

The p-value is .289. The result is not significant at $p > .05$.

Table 3: Analysis of variance (ANOVA) results among Hockey Players (N=90) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20)) with regards to Emotional Regression.

Source of Variation	Sum of Squares	d.f.	Mean Square	F-value	p-value
Between Groups	79.897	2	39.949	1.480	.233
Within Groups	2348.725	87	26.997		
Total	2428.622	89			

The p-value is .233. The result is not significant at $p > .05$.

Table 4: Analysis of variance (ANOVA) results among Hockey Players (N=90) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20)) with regards to Social Maladjustment.

Source of Variation	Sum of Squares	d.f.	Mean Square	F-value	p-value
Between Groups	45.764	2	22.882	.982	.379
Within Groups	2027.892	87	23.309		
Total	2073.656	89			

The p-value is .379. The result is not significant at $p > .05$

- It is evident from Table-2 that results of Analysis of Variance (ANOVA) among Hockey Players with regards

to Emotional Unstability were found statistically insignificant ($P > .05$).

- It is evident from Table-3 that results of Analysis of Variance (ANOVA) among Hockey Players with regards to Emotional Regression were found statistically insignificant ($P > .05$).

- It is evident from Table-4 that results of Analysis of Variance (ANOVA) among Hockey Players with regards to Social Maladjustment were found statistically insignificant ($P > .05$).

Table 5: Analysis of variance (ANOVA) results among Hockey Players (N=90) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20)) with regards to Personality Disintegration.

Source of Variation	Sum of Squares	d.f.	Mean Square	F-value	p-value
Between Groups	173.033	2	86.517	4.498	.014
Within Groups	1673.367	87	19.234		
Total	1846.400	89			

The p-value is .014. The result is significant at $p < .05$.

- It is evident from Table-5 that results of Analysis of Variance (ANOVA) among Hockey Players (N=90) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20)) with regards to Personality Disintegration were found statistically significant ($P < .05$). Since the

obtained F-value was found significant, therefore, post-hoc test was employed to study the direction and significance of differences between paired means. The results of post-hoc test have been presented in Table-6.

Table 6: Analysis of post-hoc test among Hockey Players (N=90) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20)) with regards to Personality Disintegration

Multiple Comparisons			
Group (A)	Group (B)	Mean Difference	Sig.
District (14.4500)	State	-.68333	.813
	National	-3.55000*	.016
State (15.1333)	District	.68333	.813
	National	-2.86667	.083
National (18.0000)	District	3.55000*	.016
	State	2.86667	.083

- A glance at Table-6 showed that the mean value of District group was 14.4500 whereas State had mean value as 15.1333 and the mean difference between both the groups was found .68333. This shows that the State group had demonstrated significantly better on Personality Disintegration than their counterpart's District group.
- The mean value of District group was 14.4500 whereas National had mean value as 18.0000 and the mean difference between both the groups was found 3.55000. This shows that the National group had demonstrated

- significantly better on Personality Disintegration than their counterpart's District group.
- The mean value of State group was 15.1333 whereas National had mean value as 18.0000 and the mean difference between both the groups was found 2.86667. This shows that the National group had demonstrated significantly better on Personality Disintegration than their counterpart's 15.1333 group.

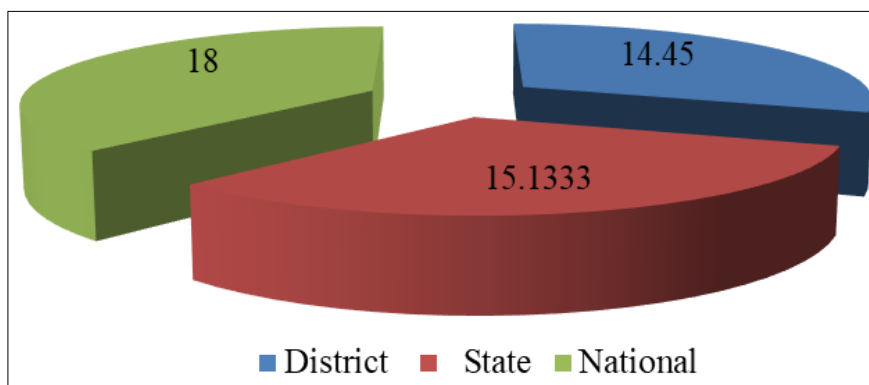


Fig 2: Graphical representation of mean scores of Hockey Players (N=90) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20)) with regards to Personality Disintegration

Table 7: Analysis of variance (ANOVA) results among Hockey Players (N=90) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20)) with regards to Lack of Independence

Source of Variation	Sum of Squares	d.f.	Mean Square	F-value	p-value
Between Groups	165.950	2	82.975	4.912	.010
Within Groups	1469.650	87	16.893		
Total	1635.600	89			

The p-value is .010. The result is significant at $p < .05$

- It is evident from Table-7 that results of Analysis of Variance (ANOVA) among Hockey Players (N=99) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20)) with regards to Lack of Independence were found statistically significant ($P < .05$). Since the obtained F-value was found significant, therefore, post-hoc test was employed to study the direction and significance of differences between paired means. The results of post-hoc test have been presented in Table-8.

Table 8: Analysis of post-hoc test among Hockey Players (N=90) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20)) with regards to Lack of Independence.

Multiple Comparisons			
Group (A)	Group (B)	Mean Difference	Sig.
District (17.0000)	State	-3.10000*	.010
	National	-1.05000	.649
State (18.0500)	District	3.10000*	.010
	National	2.05000	.230
National (20.1000)	District	1.05000	.649
	State	-2.05000	.230

- A glance at Table-8 showed that the mean value of District was 17.0000 whereas State group had mean value as 18.0500 and the mean difference between both the groups was found 3.10000. This shows that the State group had demonstrated significantly better on Lack of Independence than their counterpart's District group.

Table 9: Analysis of variance (ANOVA) results among Hockey Players (N=90) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20)) with regards to Emotional Maturity

Source of Variation	Sum of Squares	d.f.	Mean Square	F-value	p-value
Between Groups	477.097	2	238.549	1.186	.310
Within Groups	17492.025	87	201.058		
Total	17969.122	89			

The p-value is .310. The result is not significant at $p > .05$.

- It is evident from Table-9 that results of Analysis of Variance (ANOVA) among Hockey Players with regards to Emotional Maturity were found statistically insignificant ($P > .05$).

6. Hypothesis Testing

6.1 Main-hypotheses

It was hypothesized that there will be significant differences among district level, state level and national level Hockey players on the Variable Emotional Maturity.

Furthermore, the following Sub-hypotheses were formulated:

6.2 Sub-hypotheses

- There will be significant differences among district level, state level and national level Hockey players on the sub-variable Emotional Unstability.
- There will be significant differences among district level, state level and national level Hockey players on the sub-variable Emotional Regression.
- There will be significant differences among district level, state level and national level Hockey players on the sub-variable Social Maladjustment.
- There will be significant differences among district level, state level and national level Hockey players on the sub-variable Lack of Independence.
- There will be significant differences among district level, state level and national level Hockey players on the sub-variable Personality Disintegration.

- The mean value of District group was 17.0000 whereas National had mean value as 20.1000 and the mean difference between both the groups was found 1.05000. This shows that the National group had demonstrated significantly better on Lack of Independence than their counterpart's District group.
- The mean value of State group was 18.0500 whereas National had mean value as 20.1000 and the mean difference between both the groups was found 2.05000. This shows that the State Level group had demonstrated significantly better on Lack of Independence than their counterpart's 20.1000 group.

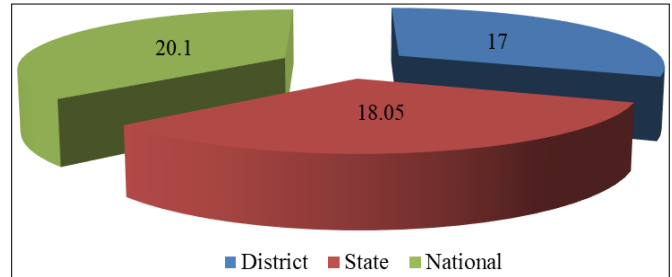


Fig 3: Graphical representation of mean scores Hockey Players (N=90) (i.e., District Level (N₁=40), State Level (N₂=30) and National Level (N₃=20)) with regards to Lack of Independence

At this point in the research study, the researcher rejected the hypothesis of this study.

7. Conclusions

To conclude, it is significant to mention in relation to Emotional Unstability, Emotional Regression and Social Maladjustment that results of Analysis of Variance (ANOVA) among district level, state level and national level Hockey players were found statistically insignificant ($P > .05$).

Furthermore, in relation to Personality Disintegration and Lack of Independence that results of Analysis of Variance (ANOVA) among district level, state level and national level Hockey players were found statistically significant ($P < .05$).

8. Future Recommendations

Since this study had only focused on to find out the significant differences among district level, state level and national level Hockey players on the variable Emotional Maturity (i.e., Emotional Unstability, Emotional Regression, Social Maladjustment, Personality Disintegration and Lack of Independence), it is recommended that further studies be carried out on much more broadly based (Larger multinational) sample; the better to aid generalization.

Furthermore, future research could also explore the other variable namely, physical, physiological, anthropometrical and biomedical in addition to the variables chosen in the present study.

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