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A STUDY ON EMOTIONAL MATURITY AMONG INDIAN HOCKEY PLAYERS

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Abstract:
The purpose of this study was to compare Emotional Maturity among sub-junior level, junior level and senior level Hockey Players. To obtain data, the investigators had selected Ninety Nine (N=99), Female subjects between the age group of 12-28 years (Mean ± SD: Age 16.90 ± 3.80 (yrs), Body Height 161.41 ± 4.97 (cm), Body Mass 52.36 ± 5.35 (kg)). 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: (Emotional Unstability, Emotional Regression, Social Maladjustment, Personality Disintegration and Lack of Independence). The Statistical Package for the Social Sciences (SPSS) was used for all analyses. The differences in the mean of each group for selected variables 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. 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 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 Hockey Players were found statistically significant ($P < .05$).

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

1. Introduction

Emotional maturity is defined as how well you are able to respond to situations, control your emotions and behave in an adult manner when dealing with others. Emotional

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maturity means, in essence, controlling your emotions rather than allowing your emotions to control you.

Various aspects influencing an athlete's performance have been extensively researched over the years by several researchers (Hanin, 2000a; Jackson & Csikszentmihalyi, 1999; Johnson & Tenenbaum, 2006; Moran, 2004). Sport or athletic performance simply refers to an athlete's ability and/or skill to execute or perform a required sport task. This could be developed through practice and then demonstrated by participating in a competition. The ability to perform may depend on an athlete being naturally gifted, genetically predisposed with talent or an athletic ability being nurtured during the developmental years. Natural physical as well as mental psychological factors play a significant role in sport performance (Weinberg & Gould, 2007).

The role of emotions in sport and sport performance has been highlighted by many research studies (Hanin, 2000a; Jones, 2003; Jones, Taylor, Tanaka-Oulevey, & Daubert, 2005; Kerr, 1997; Lazarus, 2000; Robazza, 2006; Vallerand, 1983). For example, independent studies conducted by Cohn and Loehr as well as Ravizza (Krane & Williams, 2006) indicated emotional characteristics associated with peak performance in sport ranging from loss of/no fear to feelings of being in complete control (having control over emotions) to extraordinary awareness and optimism as well as feelings of self-confidence, happiness, mental calmness, and excitement.

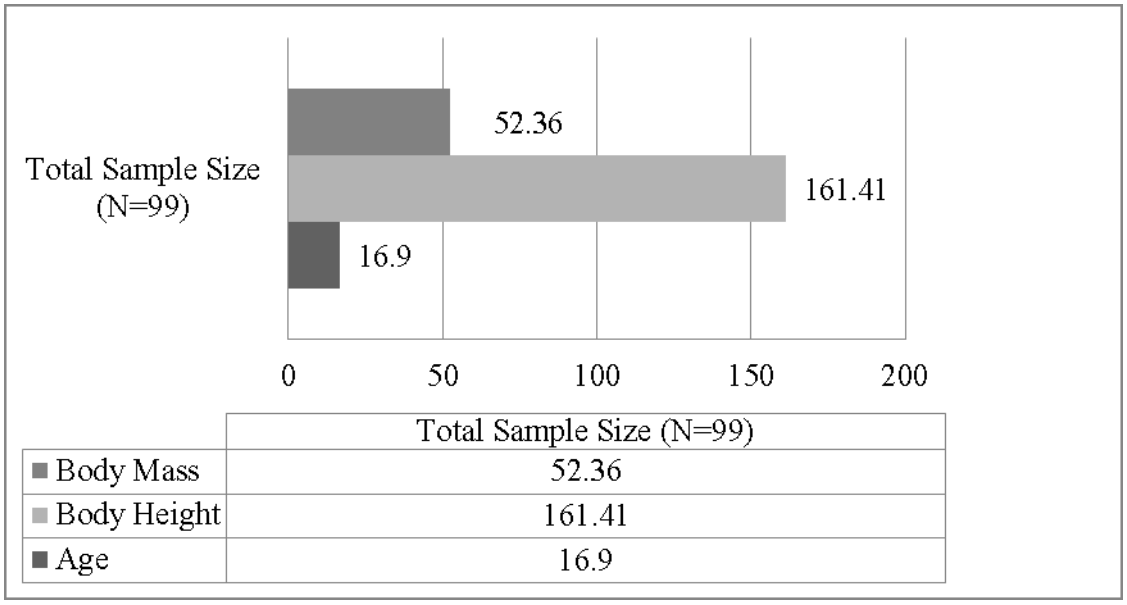
2. Material and Methods

2.1 Selection of Subjects

For the purpose of the present study, Ninety Nine (N=99), Female subjects between the age group of 12-28 years (Mean ± SD: Age 16.90 ± 3.80 (yrs), Body Height 161.41 ± 4.97 (cm), Body Mass 52.36 ± 5.35 (kg)) volunteered to participate in the study. The demographics of subjects are brought forth in Table 1.

Table 1: Subject's Demographics of Hockey Players (N=99)
(i.e., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22))

Variable (s)	**Sample Size (N=99)**			
	Total N=99	**Sub-Junior Level (N_1=45)**	**Junior Level (N_2=32)**	**Senior Level (N_3=22)**
Age (yrs)	16.90±3.80	13.8±1.32	17.40±4.98	22.54±3.05
Body Height (cm)	161.41±4.97	156.95±3.83	164.78±1.77	165.63±1.29
Body Mass (kg)	52.36±5.35	47.57±4.12	55.53±1.54	57.57±1.36



	Total Sample Size (N=99)
Body Mass	52.36
Body Height	161.41
Age	16.9

Figure 1: Subject's Demographics of Hockey Players (N=99) (i.e., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22))

3. Selection of Tools

A. 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 variables, the result pertaining to Analysis of variance (ANOVA) among Sub-Junior Level, Junior Level and Senior 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=99) (i.e., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22)) with regards to Emotional Unstability

Source of Variation	Sum of Squares	d.f.	Mean Square	F-value	p-value
Between Groups	61.599	2	30.800	1.163	.317
Within Groups	2542.037	96	26.480		
Total	2603.636	98			

The p-value is .317. The result is not significant at p > .05.

Table 3: Analysis of variance (ANOVA) results among Hockey Players (N=99) (i.e., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22)) with regards to Emotional Regression

Source of Variation	Sum of Squares	d.f.	Mean Square	F-value	p-value
Between Groups	111.637	2	55.819	2.167	.120
Within Groups	2473.353	96	25.764		
Total	2584.990	98			

The p-value is .120. The result is not significant at p > .05.

Table 4: Analysis of variance (ANOVA) results among Hockey Players (N=99) (i.e., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22)) with regards to Social Maladjustment

Source of Variation	Sum of Squares	d.f.	Mean Square	F-value	p-value
Between Groups	61.416	2	30.708	1.307	.275
Within Groups	2254.766	96	23.487		
Total	2316.182	98			

The p-value is .275. 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=99) (i.e., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22)) with regards to Personality Disintegration

Source of Variation	Sum of Squares	d.f.	Mean Square	F-value	p-value
Between Groups	123.002	2	61.501	3.226	.044
Within Groups	1830.291	96	19.066		
Total	1953.293	98			

The p-value is .044. The result is significant at p < .05.

- It is evident from Table 5 that results of Analysis of Variance (ANOVA) among Hockey Players (N=99) (i.e., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22)) 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=99) (i.e., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22)) with regards to Personality Disintegration

Multiple Comparisons			
Group (A)	**Group (B)**	**Mean Difference**	**Sig.**
Sub-Junior (14.5333)	Junior	-.46667	.899
	Senior	-2.83030*	.049
Junior (15.0000)	Sub-Junior	.46667	.899
	Senior	-2.36364	.154
Senior (17.3636)	Sub-Junior	2.83030*	.049
	Junior	2.36364	.154

- A glance at Table 6 showed that the mean value of Sub-Junior group was 14.5333 whereas Junior had mean value as 15.0000 and the mean difference between both the groups was found .46667. This shows that the Junior group had demonstrated significantly better on Personality Disintegration than their counterpart's Sub-Junior group.
- The mean value of Sub-Junior group was 14.5333 whereas Senior had mean value as 17.3636 and the mean difference between both the groups was found 2.83030. This shows that the Senior group had demonstrated significantly better on Personality Disintegration than their counterpart's Sub-Junior group.
- The mean value of Junior group was 15.0000 whereas Senior had mean value as 17.3636 and the mean difference between both the groups was found 2.36364. This shows that the Senior group had demonstrated significantly better on Personality Disintegration than their counterpart's 15.0000 group.

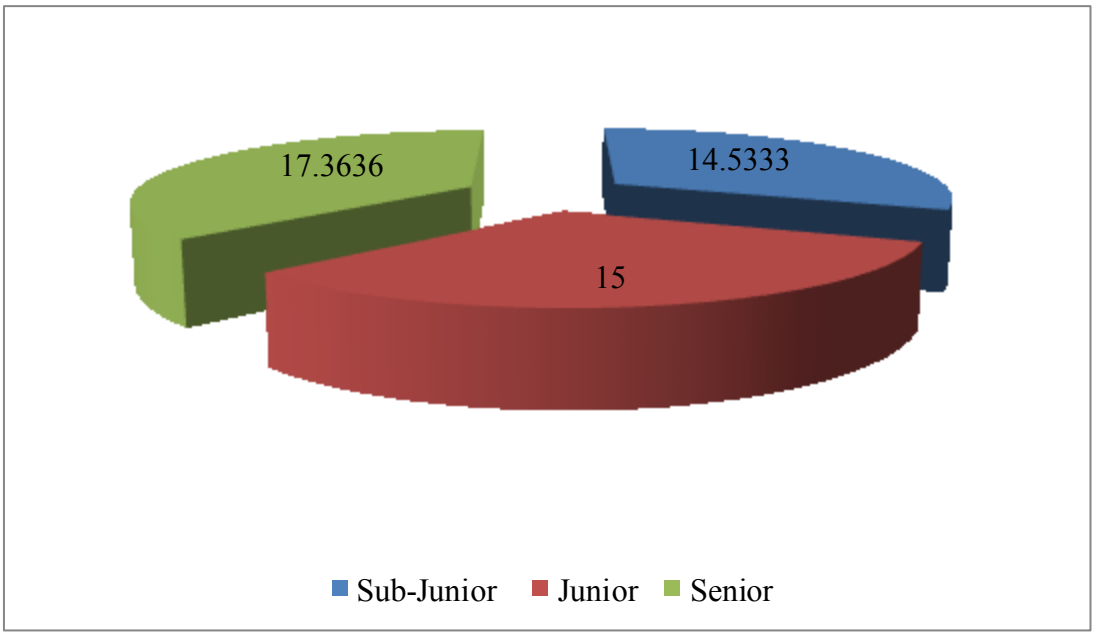


Figure 5: Graphical representation of mean scores Hockey Players (N=99) (i.e., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22)) with regards to Personality Disintegration

Table 7: Analysis of variance (ANOVA) results among Hockey Players (N=99) (i.e., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22)) with regards to Lack of Independence

Source of Variation	Sum of Squares	d.f.	Mean Square	F-value	p-value
Between Groups	199.027	2	99.514	6.201	.003
Within Groups	1540.630	96	16.048		
Total	1739.657	98			

The p-value is .003. 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., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22)) 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=99) (i.e., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22)) with regards to Lack of Independence

Multiple Comparisons			
Group (A)	**Group (B)**	**Mean Difference**	**Sig.**
Sub-Junior (16.9333)	Junior	-3.25417*	.003
	Senior	-1.11212	.568
Junior (20.1875)	Sub-Junior	3.25417*	.003
	Senior	2.14205	.161
Senior (18.0455)	Sub-Junior	1.11212	.568
	Junior	-2.14205	.161

- A glance at Table 8 showed that the mean value of Sub-Junior group was 16.9333 whereas Junior had mean value as 20.1875 and the mean difference between both the groups was found 3.25417. This shows that the Junior group had demonstrated significantly better on Lack of Independence than their counterpart's Sub-Junior group.
- The mean value of Sub-Junior group was 16.9333 whereas Senior had mean value as 18.0455 and the mean difference between both the groups was found 1.11212. This shows that the Senior group had demonstrated significantly better on Lack of Independence than their counterpart's Sub-Junior group.
- The mean value of Junior group was 20.1875 whereas Senior had mean value as 18.0455 and the mean difference between both the groups was found 2.14205. This shows that the Junior group had demonstrated significantly better on Lack of Independence than their counterpart's 15.0000 Senior group.

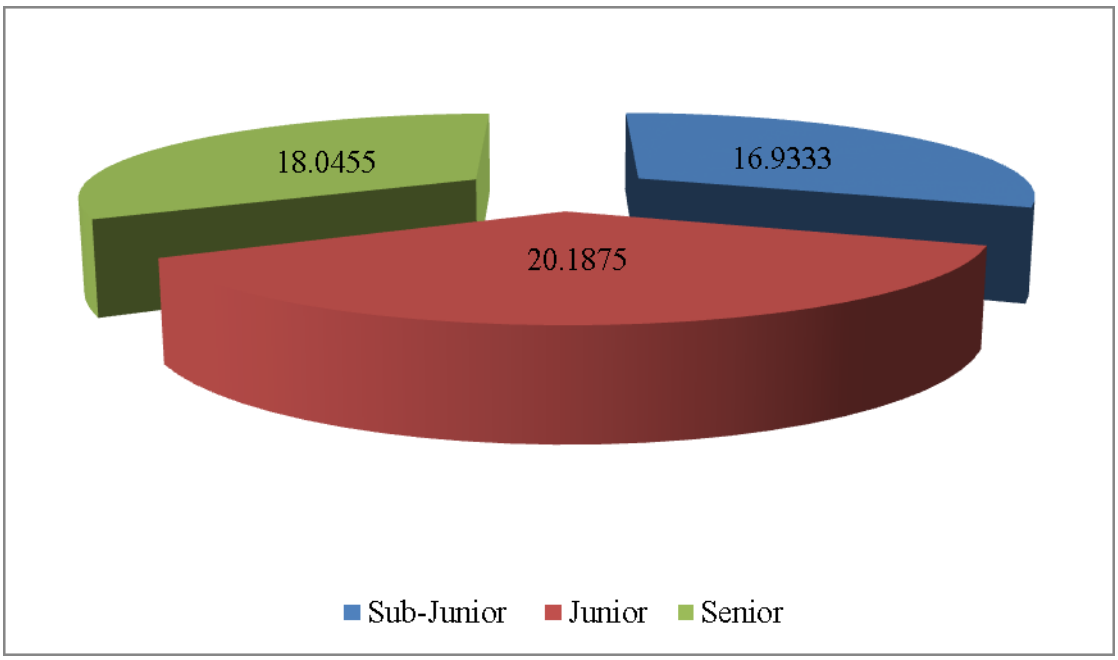


Figure 6: Graphical representation of mean scores Hockey Players (N=99) (i.e., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22)) with regards to Lack of Independence

Table 9: Analysis of variance (ANOVA) results among Hockey Players (N=99) (i.e., Sub-Junior Level (N_1=45), Junior Level (N_2=32) and Senior Level (N_3=22)) with regards to Emotional Maturity

Source of Variation	Sum of Squares	d.f.	Mean Square	F-value	p-value
Between Groups	631.821	2	315.911	1.568	.214
Within Groups	19347.532	96	201.537		
Total	19979.354	98			

The p-value is .214. 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

It was hypothesized that there will be significant differences among Sub-Junior Level, Junior Level and Senior Level Hockey Players on the variable Emotional Maturity (i.e., Emotional Unstability, Emotional Regression, Social Maladjustment, Personality Disintegration and Lack of Independence). At this point in the research study, the researcher rejected the hypothesis of this study.

7. Discussion

It is evident from findings that significant differences observed among sub-junior level, junior level and senior level Hockey Players on the sub-variable Personality Disintegration and Lack of Independence. These findings were supported by the results achieved by (Rathee and Salh, 2010) that international players are significantly better in emotional maturity as compared to state players. (Biddulph, 1954) revealed that superior athletes showed higher levels of personal and social adjustment than less skilled athletes.

Previous research demonstrated that individuals who met recommended levels of daily exercise and physical activity reported higher EI compared to their insufficient and inactive counterparts (Li, Lu, & Wang, 2009).

Furthermore, no significant differences observed among sub-junior level, junior level and senior level Hockey Players on the sub-variable Emotional Unstability, Emotional Regression and Social Maladjustment (Aghaii's study, 2007) indicated that there was no significant difference between male and female or between professional and semi-professional athlete.

8. 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 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 Hockey Players were found statistically significant (P < .05).

9. Recommendations

Sports psychologists, sports physician, coaches and athletic trainers may utilize the findings of the present study by preparing or modifying the existing training schedules

for Hockey Players. The data regarding Emotional Maturity variables will help the coaches and trainers to regulate the training programme for elite athletes.

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