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## Statistical analysis of selected psychological parameters of different ball game players

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### Abstract

The purpose of the study was to find out the differences of Psychological parameters i.e. Managing relations, Integrity, Self-development of female Baseball, Softball and Cricket players. The survey method through the technique of questionnaire of Emotional Intelligence (Hyde et al. 2001) had been taken to collect the data for this research. The researcher collected the data of ninety (N=90) Group-A: Baseball ( $n_1=30$ ), Group-B: Softball ( $n_2=30$ )), Group-C: Cricket ( $n_3=30$ ) female players as subjects between the age group of 18-28 years. The Statistical Package for the Social Sciences (SPSS) version 16.0 was used for all analysis. The differences in the mean of each group for selected parameters were tested for the significance of difference by One-way Analysis of Variance (ANOVA). In the analysis, the 5% critical level ( $p<0.05$ ) was considered to indicate statistical significance. The analysis shows that statistically insignificant differences were found with respect to Managing relations, Integrity and revealed statistical significant difference with the sub-parameter i.e. Self-development of female Baseball, Softball, and Cricket players.

**Keywords:** Managing relations, Integrity, Self-development, ANOVA, Statistical

### Introduction

The concept of emotional intelligence has been put to use in various psychological research field in recent years and has been the main focus of many different theories, ideas throughout the literature Mayer, Caruso & Salovey, (1990)<sup>[1]</sup>. Davies, Stankov, & Roberts, (1998)<sup>[2]</sup>. Brackett & Mayer, (2003). Besides that several researchers in the past introduced and developed the concept of emotional intelligence as a type of intelligence that includes abilities, competencies and skills and that enables a person to identify emotions, be able to solve emotional issues, reasons as well as to manage and control own emotions plays an integral part in their performances Lane et. al, (1999)<sup>[4]</sup>. We often hear that an athlete or team is ‘playing on emotions’ or that on any given day, feelings such as aggression, anxiety, anger may be build up or down during the competition. Competitors must have the capacity to adapt to irregular amounts of stress and trouble that emerge from the experience of difficulties and execution disappointment. The capacity to adapt well is resolved to a great extent by the way a competitor sees the requests of the earth and their capacity to control the source of stress. As needs be, identity and motivational factors, for example, uneasiness, idealism and fearlessness impact the assessment of the circumstance and add to competitor’s level of strength. Competitors can adequately manage their feelings and handle their changing mind-sets to keep up levelheadedness and an ideal level of incitement to think unmistakably and act properly. The capacity to adapt well is resolved to a great extent by the way a competitor sees the requests of the earth and their capacity to control the wellspring of stress. As needs be, identity and motivational factors, for example, uneasiness, idealism and fearlessness impact the assessment of the circumstance and add to competitor’s level of strength.

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### Procedure

The survey method through the procedure of questionnaire of emotional intelligence had been applied to collect the appropriate data for this research. The researcher collected the data on ninety (N=90), female Baseball, Softball and Cricket players as subjects between the age group of 18-28 years.

- Group-A: Baseball ( $n_1=30$ )
- Group-B: Softball ( $n_2=30$ )
- Group-C: Cricket ( $n_3=30$ )

The Statistical Package for the Social Sciences (SPSS) version 16.0 was used for analysis of data. The difference in

the mean of each group for selected variable was tested for the significant difference by One-way Analysis of Variance (ANOVA). In all the analysis, the 5% critical level ( $p<0.05$ ) was considered to indicate statistical significance.

### Findings and Analysis

**Table 1:** Mean and Standard deviation results with regard to Managing relations among female Baseball, Softball & Cricket players.

Group	N	Mean	Std. Deviation	Std. Error
Baseball	30	15.16	2.37	.43
Softball	30	16.10	2.44	.44
Cricket	30	15.83	2.24	.40
Total	90	15.70	2.36	.24

Table-1 shows the Mean and SD values of managing relations of female Baseball, Softball & Cricket players were  $15.16 \pm 2.37$ ,  $16.10 \pm 2.44$  and  $15.83 \pm 2.24$  respectively. The

obtained "F" ratio 1.249 (.292) was found statistically insignificant, ( $P<.05$ ) .05 level of significance.

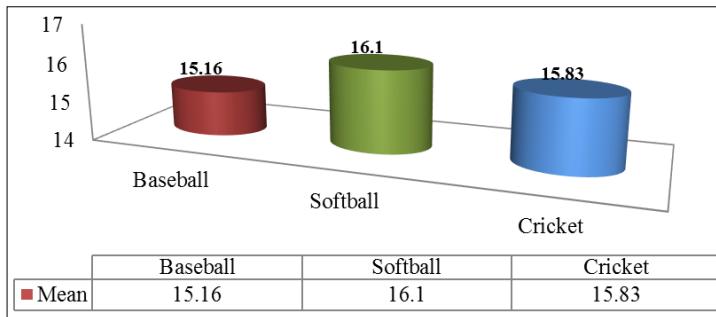
**Table 1(a):** Analysis of Variance (ANOVA) results with regard to Managing relations among female Baseball, Softball & Cricket players.

Source of variance	Sum of Squares	DF	Mean Square	F-ratio	Sig.
Between Groups	13.86	2	6.93	1.249	.292
Within Groups	483.03	87	5.55		
Total	496.90	89			

\*Significant at  $F_{0.05}$  (3.101)

It is evident from table 1(a) that the results of Analysis of Variance (ANOVA) among three groups of female Baseball, Softball and Cricket players with regard to the sub-parameter managing relations of emotional intelligence were found to be

statistically insignificant ( $P>0.05$ ). Since the obtained "F" ratio 1.249 (.292) was found statistically insignificant. The graphical representation of responses has been exhibited in figure-1.



**Fig 1:** Graphical Representation of mean scores with regard to Managing relations among female Baseball, Softball & Cricket players.

**Table 2:** Mean and Standard deviation results with regard to Integrity among female Baseball, Softball & Cricket players.

Group	N	Mean	Std. Deviation	Std. Error
Baseball	30	12.30	1.51	.27
Softball	30	11.86	2.20	.40
Cricket	30	11.33	2.44	.44
Total	90	11.83	2.10	.22

Table-2 shows the Mean and SD values of integrity of female Baseball, Softball & Cricket players were  $12.30 \pm 1.51$ ,  $11.86 \pm 2.20$  and  $11.33 \pm 2.44$  respectively. The obtained "F"

ratio 1.608 (.206) was found statistically insignificant, ( $P<.05$ ) .05 level of significance.

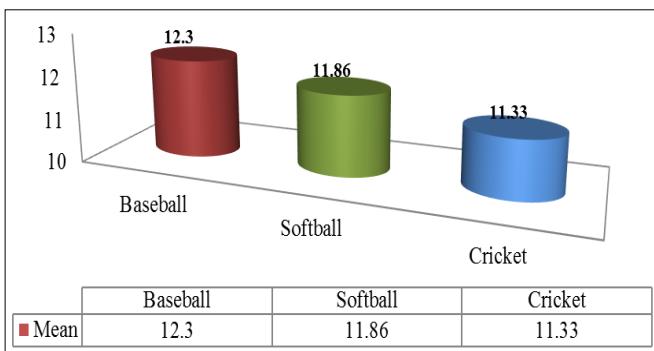
**Table 2(a):** Analysis of Variance (ANOVA) results with regard to Integrity among female Baseball, Softball & Cricket players.

Source of variance	Sum of Squares	DF	Mean Square	F-ratio	Sig.
Between Groups	14.06	2	7.03	1.608	.206
Within Groups	380.43	87	4.37		
Total	394.50	89			

\*Significant at  $F_{0.05}$  (3.101)

It is evident from table 2(a) that the results of Analysis of Variance (ANOVA) among three groups of female Baseball, Softball and Cricket players with regard to the sub-parameter integrity of emotional intelligence were found to be

statistically insignificant ( $P>0.05$ ). Since the obtained "F" ratio 1.608 (.206) was found statistically insignificant. The graphical representation of responses has been exhibited in figure-2.



**Fig 2:** Graphical Representation of mean scores with regard to Integrity among female Baseball, Softball & Cricket players.

**Table 3:** Mean and Standard deviation results with regard to Self-development among female Baseball, Softball & Cricket players.

Group	N	Mean	Std. Deviation	Std. Error
Baseball	30	7.23	1.67	.30
Softball	30	8.40	1.56	.28
Cricket	30	7.43	1.40	.25
Total	90	7.68	1.61	.17

Table-3 shows the Mean and SD values of self- development of female Baseball, Softball & Cricket players were  $7.23 \pm 1.67$ ,  $8.40 \pm 1.56$  and  $7.43 \pm 1.40$  respectively. The obtained “F” ratio  $4.839 (.010)$  was found statistically significant, ( $P<.05$ ) .05 level of significance.

**Table 3(a):** Analysis of Variance (ANOVA) results with regard to Self- development among female Baseball, Softball & Cricket players.

Source of variance	Sum of Squares	Df	Mean Square	F- ratio	Sig.
Between Groups	23.356	2	11.67	4.839	.010
Within Groups	209.933	87	2.41		
Total	233.289	89			

\*Significant at 0.05, F<sub>0.05</sub> (3.101)

It is evident from table 3 (a) that the results of Analysis of Variance (ANOVA) among three groups of female Baseball, Softball and Cricket players with regard to the sub-parameter self-development of emotional intelligence were found to be statistically significant ( $P>0.05$ ). Since the obtained “F” ratio  $4.839 (.010)$  was found statistically significant. The results of post-hoc test have been presented in Table 3(b) below.

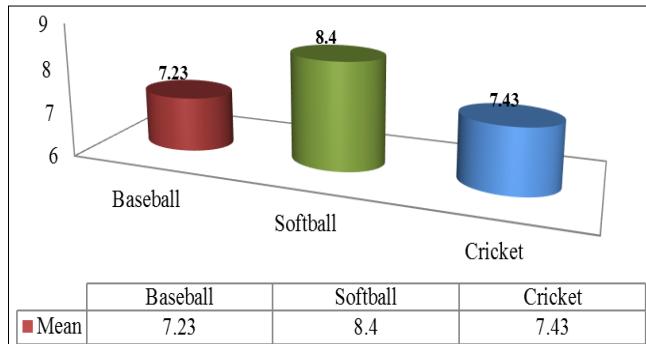
**Table 3(b):** Analysis of Least Significant Difference (LSD) post hoc test with regard to Self- development among female Baseball, Softball & Cricket players.

Group (A)	Group (B)	Mean Difference (A-B)	Sig.
Baseball (Mean=7.23)	Softball	-1.16667*	.005
	Cricket	-.20000	.619
Softball (Mean=8.40)	Baseball	1.16667*	.005
	Cricket	.96667*	.018
Cricket (Mean=7.43)	Baseball	.20000	.619
	Softball	-.96667*	.018

\*Significant at F<sub>0.05</sub> (3.101)

A glance at Table 3(b) showed that the mean value of Baseball female players were 7.23 whereas Softball female players had mean value as 8.40 and the mean difference between both the groups was found –  $1.16667^*$ . The p-value sig .005 shows that the Softball female players had

demonstrated better on Self- development than their counterpart’s Baseball female players significantly. The mean value of Baseball female players were 7.23 whereas Cricket female players had mean value as 7.43. The mean difference between Baseball and cricket female players was found - .20000. The p-value sig .619 showed that the Cricket female players had demonstrated better on Self- development than their counterpart’s Baseball female players insignificantly. The mean difference between Softball and Cricket female players was found  $.96667^*$ . The p-value sig .018 shows that the Softball female players had demonstrated significantly better on Self- development than their counterpart’s Cricket female players. The graphical representation of responses has been exhibited in Figure 3.



**Fig 3:** Graphical Representation of mean scores with regard to Self-development among female Baseball, Softball & Cricket players.

### Conclusion

Based on the findings of this study, the following conclusion was drawn:

1. To conclude, It is evident that the results of Analysis of Variance (ANOVA) among three groups with regard to the sub-parameter Managing relations of emotional intelligence were found to be statistically insignificant ( $P>0.05$ ). Since the obtained “F” ratio  $1.249 (.292)$  was found statistically insignificant.
2. To conclude, It is evident that the results of Analysis of Variance (ANOVA) among three groups with regard to the sub-parameter Integrity of emotional intelligence were found to be statistically insignificant ( $P>0.05$ ). Since the obtained “F” ratio  $1.608 (.206)$  was found statistically insignificant.
3. To conclude, It is evident that the results of Analysis of Variance (ANOVA) among three groups with regard to the sub-parameter Self development of emotional intelligence were found to be statistically significant ( $P>0.05$ ). Since the obtained “F” ratio  $4.839 (.010)$  was found statistically significant.

### References

1. Mayer JD, Caruso D, Salovey P. Emotional Intelligence meets traditional standards for an intelligence. *Intelligence*, 1990; 27:267-298.
2. Davies M, Stankov L, Roberts RD. Emotional intelligence: In search of an elusive construct. *Journal of Personality and Social Psychology*, 1998; 75:989-1015.
3. Brackett MA, Mayer JD. Convergent, discriminant, and incremental validity of competing measures of emotional intelligence. *Personality and Social Psychology Bulletin*, 2003; 29:1147-1158.
4. Lane AM, Sewell DF, Terry PC, Bartram D, Nesti MS. Confirmatory factor analysis of the Competitive Stte

Anxiety Inventory-2. Journal of Sports Sciences, 1999;  
17(6):505-512.

5. Rostami R, Mohammadi N. A Comparative Study on Emotional Intelligence and Mental Toughness for Visually Impaired Male and Female Athletes. International Journal of Kinesiology & Sports Science, 2015; 3:4.