

Spiritual Intelligence in Basketball Performance: Identifying Performance Indicators

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Abstract The present study was aimed to identify the role of Spiritual Intelligence in performance of basketball players. For this purpose of selection of the subjects around N=250 Female Basketball Players of 20-30 years of age group were chosen to acts as subjects. The entire group of players were further sliced into three group which include (N₁= 50 International Basketball Players; N₂= 100 Senior National level Basketball Players and N₃= 100 All India Inter-university level Basketball Players). The major aim of this sampling technique was to formulate the objectives of the study. One Way Analysis of Variance (ANOVA) were employed to compare the three groups of Basketball Players. Where 'F' values were found significant, Scheffé Post-hoc test were applied to find out the direction and degree of difference. For testing the hypotheses, the level of significance was set at 0.05. In a nutshell it can be said that from the findings that significant differences were found in basketball players on the sub-variables of Spiritual Intelligence i.e., The Inner Self, The Inter Self and Spiritual Intelligence (Total). However, insignificant differences had been observed in the basketball players on the sub-variables of Spiritual Intelligence i.e., Biostoria, Life Perspectives, Spiritual Actualization and Value Orientation.

Keywords: *Spiritual Intelligence, Basketball Players*

Cite This Article: Nishan Singh Deol, and Davinder Singh, "Spiritual Intelligence in Basketball Performance: Identifying Performance Indicators." *American Journal of Sports Science and Medicine*, vol. 5, no. 4 (2017): 69-74. doi: 10.12691/ajssm-5-4-2.

1. Introduction

Sports psychology relates to understanding of spirituality. It is this psychology which impacts an athlete stressfully after retirement or career ending. A sports consultant could be helpful who could address both sport and non-sport issues. Spirituality helps in attaining health and wellbeing of an athlete [1]. By allowing personal qualities like perseverance, courage and determination which could encourage and awareness of the spiritual. This way a consultant could help an athlete more able to cope up with the comforting adversity and pressure which may over power an athlete. It is spirituality which offers true purpose and meaning to human activity and life. The use of spirituality and religious observance of prayer in sports could help in overcoming performance anxiety and personal difficulties in regaining the strength and finesse [2].

Spirituality enables them to excel by equipping themselves with practical strategies to handle their passion and emotions. Spirituality, hence, is an ingredients which fills the gapping vacuum in life and slides an individual's to slip over handling stress and upcoming challenges. The athlete incorporates spirituality which greatly befits their performance. In an age of competition performance excellence relates to the inner qualities which a sportsman possesses. He remains ever watchful and a no way allows the lower mind to ignore the higher values required in

competition. It is observed that when one weakness removed, one find all other weakness disappearing. It will create a mind that will concentrate only on one goal of winning. It is much better for a player to love the world but without attachment [3]. This will allow the huge cultivation of weeds and vanity which brings down the performance of a player. For an athlete a fall sense of ego should be removing, and too to falls attachment with the body. In spiritual terms it could be accomplish only by meditation. This rubbing off of the ego would wake you to perform regular practice which is in the form of a Sadhana. It will help you digest and assimilate the ideas and live with it in day to day life. An athlete is who essentially make his life a Sadhana [4]. The athletes and cricketers perform keeping spirituality primary in mental concentration. The Mental Skill Training has to be regulated in accordance with specific religious or spiritual belief of a sports person [5]. The study of Mental Skill Training reveals mental Skills and attitude, social economic factors and spiritual & religious factors as the basic keel in making up of an athlete and rising to the higher echelon of sports. It is observed that athlete's spiritual and religious belief provide a deeper to success and failure in their careers and help them remain faithful to training programmes but a faith which will shape and reshape of an athlete to become a better person, and reach the top rung of the awards stand. It will not out of place mention that both spiritual and religious beliefs of an athlete are inextricably bound to their supporting experience [6].

2. Selection of Subjects

For this purpose of selection of the subjects around N=250 Female Basketball Players of 20-30 years of age group were chosen to acts as subjects. The entire group of players were further sliced into three group which include (N₁= 50 International Basketball Players; N₂= 100 Senior National level Basketball Players and N₃= 100 All India Inter-university level Basketball Players). The major aim of this sampling technique was to formulate the objectives of the study.

3. Selection of Variables

The availability of tools for investigation were given privacy and along with it the legitimate time was calculated which could be devoted for tests. The opinion of the experts was taken into consideration for the entire study. After due analysis of the criteria in mind following variables were selected for the present study.

Spiritual Intelligence

- The Inner Self
- The Inter Self
- Biostoria
- Life Perspectives
- Spiritual Actualization
- Value Orientation

4. Selection of Tools

To measure the level of Spiritual Intelligence of the subjects, the s Spiritual Intelligence scale constructed by Roquiya Zainuddin & Anjum Ahmed was administered.

5. Statistical Technique Employed

One Way Analysis of Variance (ANOVA) were employed to compare the three groups of Basketball Players. Where ‘F’ values were found significant, Scheffe Post-hoc test were applied to find out the direction and degree of difference. For testing the hypotheses, the level of significance was set at 0.05.

6. Results

Table 1. Descriptive Analysis results among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable The Inner Self

S. No.	Groups	N	Mean	Std. Deviation	Std. Error
1.	International Level Basketball Players	50	39.74	2.91	.41
2.	Senior National Level Basketball Players	100	37.68	4.31	.43
3.	All India Interuniversity Level Basketball Players	100	38.97	4.61	.46
	Total	250	38.60	4.26	.26

Table 1 given above describes the outcomes of the observation of female basketball players regarding the Spiritual Intelligence on the sub-variable The Inner Self. The means of the International Level Basketball Players, Senior National Level Basketball Players and All India Interuniversity Level Basketball Players were observed to be 39.74, 37.68 and 38.97 respectively whereas as the Standard Deviations were observed to be 2.91, 4.31 and 4.61 respectively along with the corresponding Standard Errors being .41, .43 and .46.

Table 2. One Way Analysis of Variance (ANOVA) results among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable The Inner Self

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	163.29	2	81.64	4.619*	.011
Within Groups	4366.29	247	17.67		
Total	4529.58	249			

*Significant at 0.05

F0.05 (2,247).

Considering the level of significance at 0.05 Table 2 depicts the significant differences regarding the sub-variable The Inner Self among the basketball players of different levels like International Level, Senior National Level and All India Interuniversity Level Basketball Players. The P-value (Sig.) being .011 which was significant as it was less than 0.05 (p<0.05). As calculated F-value (4.619*) was found to be significant, hence Scheffe Post-hoc test was applied to analyze the direction and significance of difference between paired means among basketball players of different levels mentioned above on the sub-variable The Inner Self. The outcomes of Scheffe Post-hoc test have been shown in Table 3.

Table 3. Analysis of Scheffe Post-hoc test among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable The Inner Self

Means		Mean Difference	P-value (Sig.)
International Level Basketball Players [39.74]	Senior National Level Basketball Players [37.68]	2.56*	.001
	All India Interuniversity Level Basketball Players [38.97]	.26	.927
Senior National Level Basketball Players [37.68]	International Level Basketball Players [39.74]	2.56*	.001
	All India Interuniversity Level Basketball Players [38.97]	2.82*	.000
All India Interuniversity Level Basketball Players [38.97]	International Level Basketball Players [39.74]	.26	.927
	Senior National Level Basketball Players [37.68]	2.82*	.000

Level of Significant at 0.05.

The mean difference between International Level Basketball Players and Senior National Level Basketball

Players was 2.56. The International Level Basketball Players showed significantly better The Inner Self than the Senior National Level Basketball Players as the P-value (Sig.) .001. The table also specified the mean difference between International Level Basketball Players and All India Interuniversity Level Basketball Players to be .26 and the P-value (Sig.) being .927 proving International Level Basketball Players had shown better The Inner Self than their counterpart Senior All India Interuniversity Level Basketball Players although not very significantly. Finally it was observed from the above table (Table 3) that the mean difference between Senior National Level and All India Interuniversity Level Basketball Players was 2.82 and corresponding P-value (Sig.) .000 which established that All India Interuniversity Level Basketball Players showed significantly better The Inner Self than in their counterpart Senior National Level Basketball Players.

Table 4. Descriptive Analysis results among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable The Inter Self

S. No.	Groups	N	Mean	Std. Deviation	Std. Error
1.	International Level Basketball Players	50	65.86	14.91	2.10
2.	Senior National Level Basketball Players	100	76.65	12.34	1.23
3.	All India Interuniversity Level Basketball Players	100	79.31	11.98	1.19
	Total	250	75.55	13.65	.86

Table 4 given above describes the outcomes of the observation of female basketball players regarding the Spiritual Intelligence on the sub-variable The Inter Self. The means of the International Level Basketball Players, Senior National Level Basketball Players and All India Interuniversity Level Basketball Players were observed to be 65.86, 76.65 and 79.31 respectively whereas as the Standard Deviations were observed to be 14.91, 12.34 and 11.98 respectively along with the corresponding Standard Errors being 2.10, 1.23 and 1.19.

Table 5. One Way Analysis of Variance (ANOVA) results among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable The Inter Self

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	6229.55	2	3114.77	19.130*	.000
Within Groups	40216.16	247	162.81		
Total	46445.71	249			

*Significant at 0.05

F0.05 (2,247).

Considering the level of significance at 0.05 Table 5 depicts the significant differences regarding the sub-variable The Inter Self among the basketball players of different levels like International Level, Senior National Level and All India Interuniversity Level Basketball Players. The P-value (Sig.) being .000 which was significant as it was less than 0.05 (p<0.05). As calculated F-value (19.130*) was found to be significant, hence Scheffe Post-hoc test was applied to analyze the direction and significance of difference between paired means among basketball players of different levels mentioned above on the

sub-variable The Inter Self. The outcomes of Scheffe Post-hoc test have been shown in Table 6.

Table 6. Analysis of Scheffe Post-hoc test among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable The Inter Self

Means		Mean Difference	P-value (Sig.)
International Level Basketball Players [65.86]	Senior National Level Basketball Players [76.65]	10.79*	.000
	All India Interuniversity Level Basketball Players [79.31]	13.45*	.000
Senior National Level Basketball Players [76.65]	International Level Basketball Players [65.86]	10.79*	.000
	All India Interuniversity Level Basketball Players [79.31]	2.66	.339
All India Interuniversity Level Basketball Players [79.31]	International Level Basketball Players [65.86]	13.45*	.000
	Senior National Level Basketball Players [76.65]	2.66	.339

Level of Significant at 0.05.

The mean difference between International Level Basketball Players and Senior National Level Basketball Players was 10.79. The Senior National Level Basketball Players showed significantly better The Inter Self than the International Level Basketball Players as the P-value (Sig.) .000. The table also specified the mean difference between International Level Basketball Players and All India Interuniversity Level Basketball Players was 13.45 and corresponding P-value (Sig.) .000 which established that All India Interuniversity Level Basketball Players showed significantly better The Inner Self than in their counterpart International Level Basketball Players. Finally it was observed from the above table (Table 6) that the mean difference between Senior National Level Basketball Players and All India Interuniversity Level Basketball Players was 2.66 and the P-value (Sig.) being .339 proving that the All India Interuniversity Level Basketball Players had exhibited better The Inter Self than their counterpart Senior National Level Basketball Players although not very significantly.

Table 7. Descriptive Analysis results among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable Biostoria

S. No.	Groups	N	Mean	Std. Deviation	Std. Error
1.	International Level Basketball Players	50	23.66	3.32	.47
2.	Senior National Level Basketball Players	100	23.92	3.22	.32
3.	All India Interuniversity Level Basketball Players	100	24.46	3.61	.36
	Total	250	24.08	3.40	.21

Table 7 given above describes the outcomes of the observation of female basketball players regarding the Spiritual Intelligence on the sub-variable Biostoria. The means of the International Level Basketball Players,

Senior National Level Basketball Players and All India Interuniversity Level Basketball Players were observed to be 23.66, 23.92 and 24.46 respectively whereas as the Standard Deviations were observed to be 3.32, 3.22 and 3.61 respectively along with the corresponding Standard Errors being .47, .32 and .36.

Table 8. One Way Analysis of Variance (ANOVA) results among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable Biostoria

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	25.81	2	12.90	1.112	.331
Within Groups	2867.42	247	11.60		
Total	2893.23	249			

*Significant at 0.05 F0.05 (2,247).

It became evident from Table 8 given above that on the basis of One Way Analysis of Variance (ANOVA) among “Between Groups” and “Within groups” depicted the insignificant difference with regard to the sub-variable Biostoria among female basketball players comprising of International Level, Senior National Level and All India Interuniversity Level Basketball Players since the P-value (Sig.) .331 was found greater than the 0.05 level of significance (p>0.05). But the F-value (1.112) was found insignificant, therefore, Post-hoc test was not required.

Table 9. Descriptive Analysis results among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable Life Perspectives

S. No.	Groups	N	Mean	Std. Deviation	Std. Error
1.	International Level Basketball Players	50	40.40	9.21	1.30
2.	Senior National Level Basketball Players	100	39.72	4.71	.47
3.	All India Interuniversity Level Basketball Players	100	41.43	5.28	.52
	Total	250	40.54	6.10	.38

Table 9 given above describes the outcomes of the observation of female basketball players regarding the Spiritual Intelligence on the sub-variable Life Perspectives. The means of the International Level Basketball Players, Senior National Level Basketball Players and All India Interuniversity Level Basketball Players were observed to be 40.40, 39.72 and 41.43 respectively whereas as the Standard Deviations were observed to be 9.21, 4.71 and 5.28 respectively along with the corresponding Standard Errors being 1.30, .47 and .52.

Table 10. One Way Analysis of Variance (ANOVA) results among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable Life Perspectives

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	147.43	2	73.71	1.995	.138
Within Groups	9124.67	247	36.94		
Total	9272.10	249			

*Significant at 0.05 F0.05 (2,247).

It became evident from Table 10 given above that on the basis of One Way Analysis of Variance (ANOVA) among “Between Groups” and “Within groups” depicted the insignificant difference with regard to the sub-variable Life Perspectives among female basketball players comprising of International Level, Senior National Level and All India Interuniversity Level Basketball Players since the P-value (Sig.) .138 was found greater than the 0.05 level of significance (p>0.05). But the F-value (1.995) was found insignificant, therefore, Post-hoc test was not required.

Table 11. Descriptive Analysis results among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable Spiritual Actualization

S. No.	Groups	N	Mean	Std. Deviation	Std. Error
1.	International Level Basketball Players	50	85.28	15.07	2.13
2.	Senior National Level Basketball Players	100	86.39	13.52	1.35
3.	All India Interuniversity Level Basketball Players	100	89.51	12.84	1.28
	Total	250	87.41	13.64	.86

Table 11 given above describes the outcomes of the observation of female basketball players regarding the Spiritual Intelligence on the sub-variable Spiritual Actualization. The means of the International Level Basketball Players, Senior National Level Basketball Players and All India Interuniversity Level Basketball Players were observed to be 85.28, 86.39 and 89.51 respectively whereas as the Standard Deviations were observed to be 15.07, 13.52 and 12.84 respectively along with the corresponding Standard Errors being 2.13, 1.35 and 1.28.

Table 12. One Way Analysis of Variance (ANOVA) results among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable Spiritual Actualization

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	771.87	2	385.93	2.091	.126
Within Groups	45592.86	247	184.58		
Total	46364.73	249			

*Significant at 0.05 F0.05 (2,247).

It became evident from Table 12 given above that on the basis of One Way Analysis of Variance (ANOVA) among “Between Groups” and “Within groups” depicted the insignificant difference with regard to the sub-variable Spiritual Actualization among female Basketball Players comprising of International Level, Senior National Level and All India Interuniversity Level Basketball Players since the P-value (Sig.) .126 was found greater than the 0.05 level of significance (p>0.05). But the F-value (2.091) was found insignificant, therefore, Post-hoc test was not required.

Table 13. Descriptive Analysis results among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable Value Orientation

S. No.	Groups	N	Mean	Std. Deviation	Std. Error
1.	International Level Basketball Players	50	47.64	9.63	1.36
2.	Senior National Level Basketball Players	100	47.22	8.18	.81
3.	All India Interuniversity Level Basketball Players	100	48.97	8.24	.82
	Total	250	48.00	8.51	.53

Table 13 given above describes the outcomes of the observation of female basketball players regarding the Spiritual Intelligence on the sub-variable Value Orientation. The means of the International Level Basketball Players, Senior National Level Basketball Players and All India Interuniversity Level Basketball Players were observed to be 47.64, 47.22 and 48.97 respectively whereas as the Standard Deviations were observed to be 9.63, 8.18 and 8.24 respectively along with the corresponding Standard Errors being 1.36, .81 and .82.

Table 14. One Way Analysis of Variance (ANOVA) results among Female Basketball Players with Regard to Spiritual Intelligence on the Sub-variable Value Orientation

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	161.406	2	80.70	1.114	.330
Within Groups	17897.590	247	72.46		
Total	18058.996	249			

*Significant at 0.05 F0.05 (2,247).

It became evident from Table 14 given above that on the basis of One Way Analysis of Variance (ANOVA) among “Between Groups” and “Within groups” depicted the insignificant difference with regard to the sub-variable Value Orientation among female basketball players comprising of International Level, Senior National Level and All India Interuniversity Level Basketball Players since the P-value (Sig.) .330 was found greater than the 0.05 level of significance ($p > 0.05$). But the F-value (1.114) was found insignificant, therefore, Post-hoc test was not required.

Table 15. Descriptive Analysis results among Female Basketball Players with Regard to the Variable Spiritual Intelligence (Total)

S. No.	Groups	N	Mean	Std. Deviation	Std. Error
1.	International Level Basketball Players	50	308.68	39.28	5.55
2.	Senior National Level Basketball Players	100	311.02	38.91	3.89
3.	All India Interuniversity Level Basketball Players	100	322.46	34.20	3.42
	Total	250	315.13	37.52	2.37

Table 15 given above describes the outcomes of the observation of female basketball players regarding to the variable Spiritual Intelligence (Total). The means of the

International Level Basketball Players, Senior National Level Basketball Players and All India Interuniversity Level Basketball Players were observed to be 308.68, 311.02 and 322.46 respectively whereas as the Standard Deviations were observed to be 39.28, 38.91 and 34.20 respectively along with the corresponding Standard Errors being 5.55, 3.89 and 3.42.

Table 16. One Way Analysis of Variance (ANOVA) results among Female Basketball Players with Regard to the Variable Spiritual Intelligence (Total)

Source of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value	P-Value (Sig.)
Between Groups	9142.22	2	4571.11	3.307*	.038
Within Groups	341415.68	247	1382.25		
Total	350557.90	249			

*Significant at 0.05 F0.05 (2,247).

Considering the level of significance at 0.05 Table 16 depicts the significant differences regarding the variable Spiritual Intelligence (Total) among the Basketball Players of different levels like International Level, Senior National Level and All India Interuniversity Level Basketball Players. The P-value (Sig.) being .038 which was significant as it was less than 0.05 ($p < 0.05$). As calculated F-value (3.307*) was found to be significant, hence Scheffe Post-hoc test was applied to analyze the direction and significance of difference between paired means among basketball players of different levels mentioned above on the variable Spiritual Intelligence (Total). The outcomes of Scheffe Post-hoc test have been shown in Table 17.

Table 17. Analysis of Scheffe Post-hoc test among Female Basketball Players with Regard to the Variable Spiritual Intelligence (Total)

Means		Mean Difference	P-value (Sig.)
International Level Basketball Players [308.68]	Senior National Level Basketball Players [311.02]	2.34	.936
	All India Interuniversity Level Basketball Players [322.46]	13.78	.103
Senior National Level Basketball Players [311.02]	International Level Basketball Players [308.68]	2.34	.936
	All India Interuniversity Level Basketball Players [322.46]	11.44	.096
All India Interuniversity Level Basketball Players [322.46]	International Level Basketball Players [308.68]	13.78	.103
	Senior National Level Basketball Players [311.02]	11.44	.096

Level of Significant at 0.05.

The mean difference between International Level Basketball Players and Senior National Level Basketball Players was 2.34 and the P-value (Sig.) being .936

proving that the Senior National Level Basketball Players had exhibited better Spiritual Intelligence (Total) than their counterpart International Level Basketball Players although not very significantly. The table also specified the mean difference between International Level Basketball Players and All India Interuniversity Level Basketball Players was 13.78. The P-value (Sig.) .103 showed that the All India Interuniversity Level Basketball Players showed significantly better Spiritual Intelligence (Total) than in their counterpart International Level Basketball Players although not very significantly. Finally it was observed from the above table (Table 17) that the mean difference between Senior National Level Basketball Players and All India Interuniversity Level Basketball Players was 11.44 and the P-value (Sig.) being .096 proving that the All India Interuniversity Level Basketball Players had exhibited better Spiritual Intelligence (Total) than their counterpart Senior All India Interuniversity Level Basketball Players although not very significantly.

7. Practical Application

The study will be considerably helpful to comprehend the Spiritual Intelligence in Basketball Performance existing among basketball players. The sports psychologists and coaches working with these areas will drive benefit from the findings of the present research and they can integrate the Spiritual Intelligence variables in their training schedule from the very initial stages.

8. Conclusion

Summarizing from the above findings we can say that significant differences were found in basketball players on the sub-variables of Spiritual Intelligence i.e., The Inner Self, The Inter Self and Spiritual Intelligence (Total). However, insignificant differences had been observed in the basketball players on the sub-variables of Spiritual Intelligence i.e., Biostoria, Life Perspectives, Spiritual Actualization and Value Orientation.

References

- [1] Berger, B.G., Pargman, D., & Weinberg, R. (2002). *Personal Meaning in Exercise*, Foundations of Exercise Psychology Morgantown, WV: Fitness Information Technology, 223-243.
- [2] Miller, P.S., & Kerr, G.A. (2002). Conceptualizing Excellence: Past, Present, and Future. *Journal of Applied Sport Psychology*, 14, 140-153.
- [3] Maslow, A. (1968). *Toward a Psychology of Being*. New York: Van Nostrand.
- [4] Vernacchia, R.A., McGuire, R.T., Reardon, J.P., & Templin, D.P. (2000). Psychosocial Characteristics of Olympic Track and Field Athletes. *International Journal of Sport Psychology*, 31, 5-23.
- [5] Anderson, A.G., Miles, A., Mahoney, C., & Robinson, P. (2002). Evaluating the Effectiveness of Applied Sport Psychology Practice: Making the Case for a Case Study approach. *The Sport Psychologist*, 16, 432-453.
- [6] Voight, M. (2002). Improving the Quality of Training, Coach and Player responsibilities. *Journal of Physical Education, Recreation and Dance*, 73 (6), 43-48.