



Investigation of Stress in Volleyball Players During Competition

KEYWORDS

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ABSTRACT *Stress and its management is an important field of sports coaches, teachers of physical education and researchers as well as sports person also. This paper consists one of the important type of stress and its factors like frustration, conflict, pressure and anxiety and their effect on volley-ball players during a state level tournament. A research study was undertaken to find out the effect of institutional stress among male volley-ball players (N = 55) in the 08 state Universities (05 Madhya Pradesh and 02 Chhattisgarh). The sample for this research was taken into consideration from the total of seven university volley-ball team players. To measure the effect of institutional stress, one scale of institutional stress (BBSS-1987) was administered. The ANOVA and correlation coefficient of this test have been described that some time, motivational factors to sports person creates stress and its effects provide best performance of their life.*

The results revealed that playing under pressure is harmful for the player during competition because an. Institutional stress have been found significantly differ from team to team. The results are also described in the special reference of first, second and third place holder teams player responses. The finding shows the more need of psychological preparation of teams because all the guest team which has given sincere response and performance in higher stress, but those teams whom has not given higher performance and higher stress score, it shows the less orientation to the sports.

INTRODUCTION

Now-a-days stress has become widely recognized as exercising a major influence on performance. For example, players experience the stress of heavy playing schedule, the competition for team places and attention of communication media. It is important that modern player and his/her coach or trainer should be aware of the practical implication stress on performance. Stress is the psycho-physiological response of the individual to any influence which disturb his inner balance. Stress can be produced by a wide variety of stimuli such as physical injury, illness, surgical intervention, climatic influence, spectators, peers and nutritional factors.

Stress can also result from inter-personal communication for example, between a player and his/her team mates, between a player and his/her opponents and between the players and the coaches. So the sports participants are exposed to many potential stressors, some having their origin in the environment and other may be internally produced.

In this respect, the institutional stress is also an important type of stress which is produced by the different types of stressors like a resources for players in mother institutions, training and coaching facilities, climatic variables (humidity, air temperature, wind), game officials, team mates, opponents, physical and psychological preparation of a player for the competition. Another major stressor is the expectancy level of mother institution from the players. Stress is also created by the motivational factors for the player which used to come from their mother institution or organizers of the tournament. It means the performance of the player shall be effected by stressor of their mother institution. When the institutional stress has defined in the form of frustration, conflict, pressure and anxiety, then the stress should also be defined as the existential stress

(SES), achievement stress (Aches), physical stress (PS) etc. It is fact that all. types of stress shall be effective upon the individuals at a time, which can be identified from the performance and behaviour of the players.

All these objective and subjective influences are more or less stressful depending on the perception or inner experience of the player. (Nadori 1987). During the past few years, plenty of serious works on the stress problem of sports men performance capacity have enriched the world of sports (Sunin 1985), Adam & Wieggingen (1983), Nadori (1987). These theoretical and practical approaches should be conducted in different fields of sports.

REVIEW OF RELATED LITERATURE

Nadori (1987) stated that stress should be self evident. There is a reciprocal influence and interdependence between stress and anxiety. Klavora (1977) discovered that peak performance were associated with moderate anxiety levels, while poorer or average performances were associated with either low or high anxiety level. Pestonji (1991) has stated that stress has the caused for co-worker inter-personal relationship, communication gap between higher and lower authority and low fulfillment of expectancy level. Mahoney and Avenor (1977) discovered that successful finalists in the Olympic gymnastic trials experienced high level of anxiety before the competition, however they not only reacted to their anxiety differently, but they also reduced it during actual competition.

METHODOLOGY

Subject

The sample of the subjects for the investigation were taken from the state level university volleyball tournament held at Govt. College, Seepat, Bilaspur and consisted of 55 male volleyball players from seven divisional university teams. All the players were of age ranging 20-27 and were

having sports experience of 2 to 5 years.

Tool

A scale of institutional stress (SIS) from Bisht Battery of Stress Scale (1987) was administered upon all players who participated in the M.P. State university volleyball tournament-1997. The methodological approach is idiographic it may also reflect the subject's perception as well as his way of coping with life change events.

Hypotheses

On the basis of review of literature and general observation, the following hypotheses were formulated :-

1. Some volleyball players of all teams shall suffer from higher potentiality of institutional stress.
2. All volleyball players will differ in four components of institutional stress.
3. The first three winner team of volleyball would differ from one another in their institutional stress.

Procedure

A personal contact with respondents was made during the M.P. State University volleyball tournament. SIS questionnaire was administered on the respondent to collect the needed data information. The respondents were duly instructed about the filling up questionnaire. About 100 questionnaire were distributed and about 55 duly filled in questionnaire were collected in the end.

RESULTS AND DISCUSSION

To draw the statistical inference from data, the means, S.Ds., percentiles and correlation coefficient were calculated on all variable separately. Anova and 't'-test, Newman-Kuels Test were applied to find out the difference among volleyball players: The raw scores were converted in stress scores of all teams and after that mean, S.D., q- Value and F ratio calculated from these scores of institutional stress in relation to four components of stress (frustration, conflict anxiety, pressure) frequency and quantity.

**TABLE 1
MEANS AND STANDARD DEVIATIONS SUM OF FREQUENCY AND QUANTITY OF STRESS COMPONENTS AMONG VOLLEYBALL PLAYER:**

S. No.	Teams	Frustration		Conflict		Pressure		Anxiety	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1.	Sagar	93.40	13.85	56.40	12.44	76.30	11.87	98.40	16.57
2.	Jabalpur	100.75	8.25	58.50	13.72	82.20	5.31	82.50	13.00
3.	Indore	94.90	17.30	51.36	7.18	64.09	14.76	64.81	17.79
4.	Raipur	91.22	19.57	53.22	12.50	63.00	12.45	62.00	19.07
5.	Rewa	93.83	7.28	61.00	5.64	67.83	15.56	78.33	9.60
6.	Bilaspur	96.28	21.35	50.42	5.76	62.00	23.94	61.71	28.87
7.	Bhopal	81.33	7.73	37.83	20.49	57.66	13.14	63.33	20.69

**TABLE 2
TOTAL MEANS, GRAND TOTAL MEANS AND STANDARD DEVIATIONS (S.D.) OF STRESS FREQUENCY (F) AND QUANTITY (Q) IN DIFFERENT UNIVERSITY VOLLEYBALL TEAMS :**

S.No.	University N	Total Mean		Grand Total	S.D.	Performance level
		F	Q			
1.	Bilaspur	132.0	140.85	272.85	71.02	Gold
2.	Sagar	142.9	143.1	286.00	46.21	Silver
3.	Raipur	137.55	131.45	269.00	55.23	Third
4.	Jabalpur	155.5	160.25	315.75	20.32	
5.	Indore	123.18	151.27	274.45	42.55	
6.	Rewa	151.50	148.18	298.66	19.27	
7.	Bhopal	121.85	132.0	253.85	38.30	

Table-2 reveals that means of the four components of stress do not possess the same quantity and frequency of stress during competition. The difference in mean of four components of stress (frustration, conflict, pressure and anxiety) was observed in volleyball players during entire period of volleyball competition. The results also shows that the performance of the winner team (Bilaspur), Runner team (Sagar) and third team (Raipur) differ in their total and grand total mean of stress scores, (shown in table-2)

**TABLE 3
ANOVA TEST FOR STRESS AMONG MALE VOLLEYBALL TEAMS**

Source of variance	Degree of freedom(df)	Sum of Squares (SS)	Mean Squares	F-Ratio
Between team	6	163445.59	27240.93	11.80
Within team	48	110779.52	2307.90	

Significant at .05 level = 2.29

The result of ANOVA reveals that institutional stress among volleyball teams players (Table-3) have reflected that players of divisional volleyball team of seven university differ in institutional stress one another, and differences were found significant at .05 level and .01 level of confidence within teams and between teams. The F-ratio obtained 11.80 which is higher and significant at .05 level of significance (2.29) and .01 level of significance (3.19). This is also verified by Newman-Kuels test that the calculated q-value = 9.56 is higher than the table value 5.27 at 0.01 level of confidence.

**TABLE 4
PERCENTILE SCORES OF PERFORMER UNDER HIGH STRESS (P70 AND ABOVE),LOW STRESS (P 70 AND BELOW) AND AVERAGE STRESS (P69 TO P31):**

	Name of the	No.of	Stress level of performers		
			High	Low	Average
	Team	Players			
1.	Bhopal	6	2	2	2
2.	Bilaspur	7	2	2	3
3.	Rewa	7	1	3	3
4.	Raipur	9	3	3	3
5.	Indore	11	3	2	6
6.	Jabalpur	5	1	1	3

7.	Sagar	10	3	3	4
	Total	55	15	16	24
Percentage			27.27%	29.09%	43.63%

Table No. 4 shows that 43.63% player obtained average stress score, 29.09% players obtained low stress scores and 27.27% players obtained high stress score. It means the stress is an important factor which effects the performance of a player at different level during the competition. High and low stress is not useful for the performance and average stress play a vital role to increase the performance of the players.

TABLE 5
MEAN DIFFERENCE, SED AND T VALUE OF 1ST THREE WINNER TEAMS :

No.	Name of teams	MD	σ DM	T value
1.	Sagar V/s Raipur	17	23.5	0.723
2.	Sagar V/s Bilaspur	14	29.05	0.48
3.	Raipur V/s Bilaspur	3	31.00	0.09

The table no. 5 shows that the significance difference between the three higher performing team Sagar and Raipur, Sagar and Bilaspur and between Raipur and Bilaspur obtained 't'-value 0.723, 0.48 and 0.09 are not significantly differ at any level of confidence.

DISCUSSION

The first hypothesis stated that "All the volleyball players feel some potentiality of institutional stress during competition". It was proved that the results of table no.4 show that out of fifty five players, fifteen players were found under high stress, sixteen players under low stress and twenty four players under average stress during the competition. It means we can say that the volleyball players feel some potentiality of stress at different levels during competition. Hence first hypothesis is proved and accepted. Second hypothesis stated that "All volleyball players will differ in four component of institutional stress" The result of F-ratio and q-test reveals that the significant differences in the mean of all groups were found and F-ratio and q-test value are higher in every level of significance. It means the second hypothesis is proved and accepted too. The third hypothesis stated that "The first three winner team of volleyball differed one another in their institutional stress." After applying the t-test, it is clear that t-ratio is not found significant at any level of confidence. It means the third hypothesis is rejected.

A positive co-relation (.569) between frequency and quantity of four components of institutional stress in all teams was also seen. The players suffer from hyper stress stage, this stage is of over activation or heavy demand in term of time and responsibility. The players which are under less stress will suffer from lack of activation. (Pestonjee 1987). The both stages are harmful for the individual. The ideal stage is that all the players should feel average stress. It shows the shortage of stress coping ability. This is also pointed out that frustration obtained highest place in their mean in all teams. It means that there is something which is not satisfactory between players and mother institutions. The average level of pressure and anxiety is needed for competitiveness. This is an ideal stage. The player who suffer from high level of pressure and anxiety will not able to show their best performance. If the ideal stage is not obtained at the time of competition, the players may loose the game and will suffer from frustration after defeat.

CONCLUSIONS

In the light of findings, the following conclusions can be drawn from the present study :-

1. All the volleyball players differed from one another in four components of institutional stress during competition.
2. The three winner teams (first, second, third) of volleyball differed one another in institutional stress but significant difference was not found after applying the 't'-test. The performance of the teams were effected by the stress components of institutional stress minutely during competition.
3. All the players feel some potentiality of institutional stress which is explained in the form of high, low and average stress from the statistical analysis of percentile.

REFERENCE

- Adam, J. & Van Wieringen, P. " Relationship between anxiety and performance on two aspect of a throwing task" *International Journal of Sports Psychology*, 14 (1983) : 174-185. | Lande, D & Christina, R. *Psychology of Motor Behaviour and Sports*, IL: Human Kinetics, 1977. | Lieberman, M. A., Yalom, I. & Dand Mile, B. *Encounter Groups: First Fact*, New York :Basic Book Publication, 1967. | Moore, R. A. *The Inner athlete* New York : Thomas Crowe II, 1967. | Mahoney, M. & Avener, M. "Psychology of the Elite Athlete: An Exploratory Study". *Journal of Cognitive Therapy and Research*, 1 (1977) : 135-141. | Nadori, L. Paper presented on "Stress Regulation in Soccer" in *First World Congress on Science and Football*, Liverpool, New York, 1987. Proceedings pp. 511-545. | Pestonjee, D. M. "Executive Stress: Should always be avoided" *Quarterly Journal of Decision Maker* 12(1) (1987) : 23. | Pestonjee, D. M. & Mukherji, W. " Executive Health :An Off Neglected Aspect of HRD" *Vikalp* I.I.M. Ahmedabad 16 :3 (1991) : 45. | Sunin, R. " The Seven Step to Peak Performance" *Manual for Mental training for Athletes* Fort: Edins Company, Rocky Mountain, 1985. |