

A Comparative study of Stress Vulnerability between Sports Persons and Non-Sports Persons

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Abstract

The purpose of the study was to assess and compare Stress Vulnerability between Sports Persons and Non-Sports Persons. For the purpose of the study, total 300 subjects will be selected in two groups i.e. 150 in sports persons (Individual Games-50, Combative Games-50, Team Games-50) and 150 Non-sports Persons i.e. (I.T.-50, A.G.-50, B.Sc.-50) were selected randomly on the basis of stratified random sampling. The subjects were selected from Banaras Hindu University and Mahatma Gandhi Kashi Vidyapith respectively. (Subjects of Institute of Technology (I.T) were selected from Banaras Hindu University only.) The age level of the subjects ranged from 18 to 25 years. Keeping the feasibility criterion in mind, the Stress Vulnerability variable was selected for the present study. Stress Vulnerability was assessed with the help of Stress Vulnerability Scale developed by Lyle H. Miller and Alma Dell Smith. To assess and compare the level of Stress Vulnerability between sports persons and non-sports persons, Descriptive Statistics i.e. mean, standard deviation, t test, analysis of variance (ANOVA) were used. The level of significance was set as 0.05 level. Significant difference was found between sports persons and non-sports persons in relation to Stress Vulnerability. Significant difference was found between the Stress Vulnerability of Sports Persons & Non-Sports Persons. Stress Vulnerability of Sports Persons was found to be more than that of the Non-Sports Persons. Insignificant difference was found among Individual, Team and Combative Game Players in relation to Stress Vulnerability. Significant difference was found among I.T, A.G and B.Sc. Students in relation to Stress Vulnerability. The observed sequence of performance was found B.Sc. > I.T > A.G in relation to Stress Vulnerability.

KEYWORDS: Stress Vulnerability, Sports Persons, Non-Sports Persons.

INTRODUCTION

Stress is the body's reaction to a change that requires a physical, mental or emotional adjustment or response (Wills, T. A. 1981).

Vulnerability is considered a characteristic of all people, ecosystems, and regions confronting environmental or socioeconomic stresses and, although the level of vulnerability varies widely, it is generally higher among poorer people (Kasperson, R. E. & Dow, K. 2001).

Stress vulnerability is defined as individual's ability related to unprotected to stress, unguarded to stress, helpless to stress, defenseless to stress, at risk to stress, thin

skinned to stress and touchy to stress. In stress vulnerability individual becomes sensitive to stress.

The Stress Vulnerability model was first proposed by Zubin & Spring in 1977, and although it has evolved into several versions since, the model continues to be used as a dominant conceptual framework for understanding psychosis. This framework allows clients to have an 'active role' in the process of reducing their vulnerability to stress, and also raising the threshold for relapse through the development of various strategies.

While there are a number of approaches to understanding occupational vulnerability and impairment in psychologists, the most useful of those emphasize the interaction between the specific demands of the work and individual characteristics of each psychologist. In other words, as psychologists, our vulnerability to occupational stress stems from the interaction between particular aspects of our work (the situation) and aspects of who we are and our current life circumstances (Saakvitne, K. 1996).

Despite a small, but compelling literature on occupational stress for psychologists and other mental health professionals, the topic of vulnerability is not widely addressed within the profession. The prevalence of stigma associated with psychological distress and a misguided belief that psychologists should not be affected by their work, combine to create a "conspiracy of silence" about occupational vulnerability for psychologists. Yet, at the same time, research studies indicate the very real effect of distress and impairment on psychologists (Guy, J. D. 1987).

Objective of the study

1. To assess and compare the Stress Vulnerability between sports persons and non-sports persons.
2. To assess and compare the Stress Vulnerability among Individual, Combative and Team Game Players.
3. To assess and compare the Stress Vulnerability among I.T, A.G and B.Sc. Students.

Hypothesis

1. There will not be any significant difference between Sports Persons and Non-Sports Persons in relation to Stress Vulnerability.
2. There will not be any significant difference among Individual, Combative and Team Game Players in relation to Stress Vulnerability.
3. There will not be any significant difference among I.T, A.G and B.Sc. Students in relation to Stress Vulnerability.

Procedure and Methodology

Selection of subjects

To achieve this purpose of investigation, a total 300 Male Subjects (150 Sports Persons & 150 Non-Sports Persons) were selected randomly on the basis of stratified random sampling. The subjects were selected from Banaras Hindu University and Mahatma Gandhi Kashi Vidyapith respectively. (Subjects of Institute of Technology (I.T) were selected from Banaras Hindu University only.) The age level of the subjects ranged

from 18 to 25 years. The distribution of the subjects has been numerated below in table no. 1.

Table-1

Details of the Subjects Distribution with regard to Sports Persons and Non-Sports Persons

Category of Subjects	Sub Category of Subjects	Number of Subjects
Sports Persons	Individual Games	50
	Combative Games	50
	Team Games	50
Non-Sports Persons	Institute of Technology (I.T.)	50
	Agriculture Sciences (A.G.)	50
	Faculty of Sciences (B.Sc.)	50

Selection of Variables

Keeping the feasibility criterion in mind, the Stress Vulnerability variable was selected for the present study.

Criterion Measures

Stress Vulnerability was assessed with the help of Stress Vulnerability Scale developed by Lyle H. Miller and Alma Dell Smith.

Statistical technique

Descriptive Statistics i.e. mean, standard deviation, t test, analysis of variance (ANOVA) was used. The level of significance was set as 0.05 level.

Result of the Study

The findings pertaining to descriptive statistics, t test, one way analysis of variance (ANOVA) as well as post hoc test for the various psychological variables of one hundred and fifty Sports Persons and one hundred and fifty Non-Sports Persons has been presented in table no. from 2 to 8.

Table-2

Descriptive Statistics of Sports Persons and Non-Sports Persons in relation to Stress Vulnerability

Sports Persons		Non-Sports Persons	
Mean	32.86	Mean	29.22
Standard Error	1.01	Standard Error	1.01
Median	32	Median	30
Mode	29	Mode	38
Standard Deviation	12.47	Standard Deviation	12.43

Sample Variance	155.57	Sample Variance	154.60
Kurtosis	-0.34	Kurtosis	0.49
Skewness	0.14	Skewness	-0.00
Range	60	Range	74
Minimum	3	Minimum	0
Maximum	63	Maximum	74
Sum	4929	Sum	4384
Count	150	Count	150

It is evident from table - 2 that mean and standard deviation scores of Sports Persons and Non-Sports Persons in relation to Stress Vulnerability has been 32.86 & 29.22 and 12.47 & 12.43 respectively and range of score was 60 & 74 respectively where as standard error was found 1.01 & 1.01 respectively.

Table-3

Comparison of Stress Vulnerability between Sports Persons & Non-Sports Persons

Groups				T-ratio
Sports Persons		Non-Sports Persons		
Mean	S.D	Mean	S.D	
32.86	12.47	29.22	12.43	2.52*

* Significant at 0.05 level of significance

T-value required to be significant at 298 df = 1.97

Table- 3 revealed that significant difference was found between Sports Persons & Non-Sports Persons in relation to Stress Vulnerability, since T-value of 2.52 was found greater than the required tabulated value of 1.97 with 298 df at 0.05 level of significant.

Sports Persons possessed greater Stress Vulnerability in comparison to Non-Sports Persons.

The graphical representation of means between Sports Persons and Non-Sports Persons in relation to Stress Vulnerability has been presented in figure No.1.

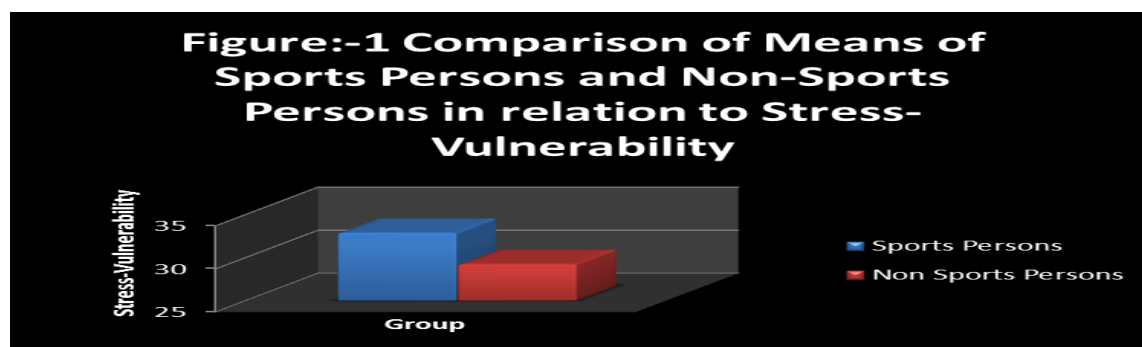


Table-4**Descriptive Statistics among Individual, Team and Combative Game Players in relation to Stress Vulnerability**

Individual Game		Team Game		Combative Game	
Mean	31.9	Mean	34.2	Mean	32.48
Standard Error	1.40	Standard Error	1.88	Standard Error	1.97
Median	32	Median	32	Median	33
Mode	37	Mode	29	Mode	14
Standard Deviation	9.90	Standard Deviation	13.33	Standard Deviation	13.93
Sample Variance	98.13	Sample Variance	177.75	Sample Variance	194.25
Kurtosis	-0.70	Kurtosis	-0.12	Kurtosis	-0.78
Skewness	-0.21	Skewness	0.14	Skewness	0.18
Range	41	Range	60	Range	54
Minimum	11	Minimum	3	Minimum	9
Maximum	52	Maximum	63	Maximum	63
Sum	1595	Sum	1710	Sum	1624
Count	50	Count	50	Count	50

It is evident from table - 4 that mean and standard deviation scores among Individual, Team and Combative Game Players in relation to Stress Vulnerability has been found 31.9, 34.2 & 32.48 and 9.90, 13.33 & 13.93 respectively and range of score was 41, 60 & 54 respectively where as standard error was found 1.40, 1.88 & 1.97 respectively.

Table-5**Analysis of Variance among Individual, Team and Combative Game Players in relation to Stress Vulnerability**

Source of Variation	Sum of Squares	Df	Mean Square	F-Value	Sig.
Between Groups	143.08	2	71.54	.45*	.63
Within Groups	23036.98	147	156.71		

* Insignificant at 0.05 level of significance
 $F_{0.05}(2, 147) = 3.06$

Table- 5 revealed that there was insignificant difference among Individual, Team and Combative Game Players in relation to Stress Vulnerability, as obtained F-ratio was .45, which was lower than the tabulated value 3.06, required for F-ratio to be significant at 0.05 level with (2,147) degree of freedom.

Since the one way analysis of variance was found insignificant in relation to Stress Vulnerability the least significant difference (LSD) test was not applied to find out the differences of the means among Individual, Team and Combative Game Players.

The graphical representation of means among Individual, Team and Combative Game Players in relation to Stress Vulnerability has been presented in figure No.2.

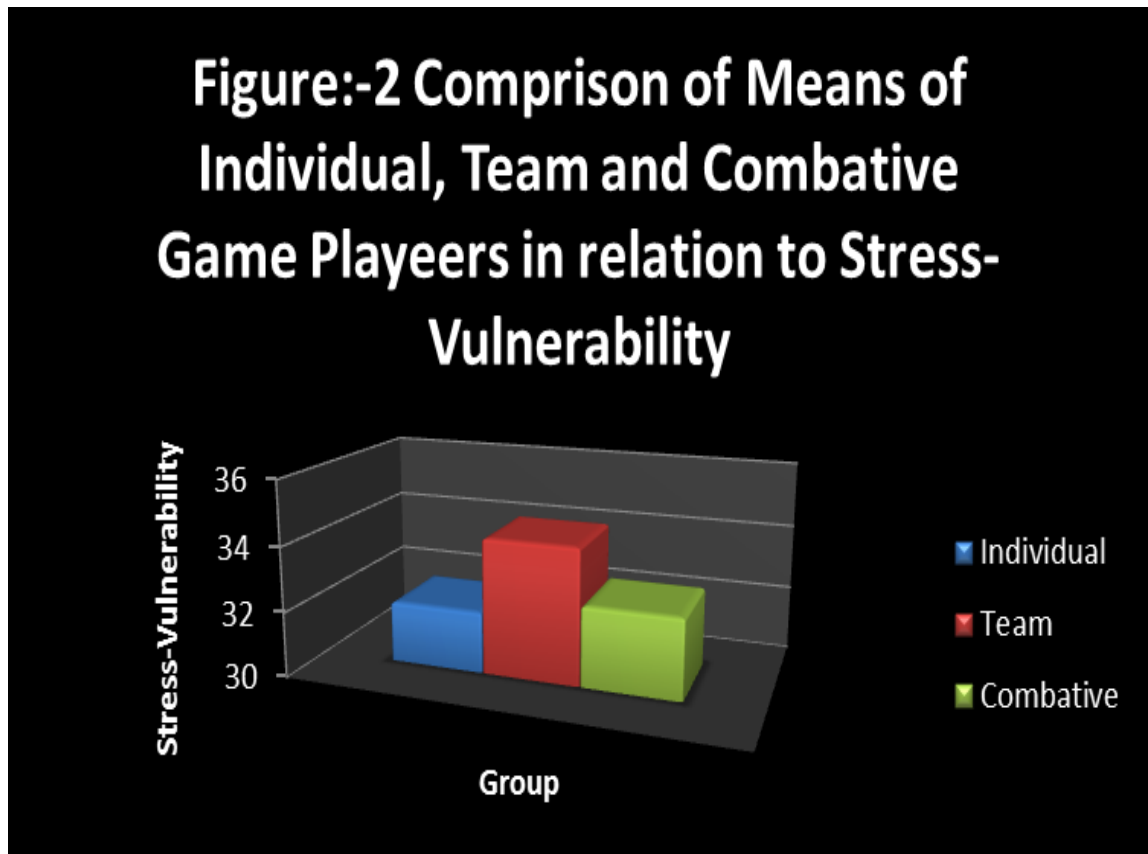


Table-6
Descriptive Statistics among I.T, A.G and B.Sc. Students in relation to Stress Vulnerability

I.T Students		AG Students		B.Sc. Students	
Mean	30.5	Mean	24.4	Mean	32.78
Standard Error	1.82	Standard Error	1.85	Standard Error	1.36
Median	31	Median	24.5	Median	32.5
Mode	35	Mode	21	Mode	38

Standard Deviation	12.90	Standard Deviation	13.13	Standard Deviation	9.64
Sample Variance	166.45	Sample Variance	172.40	Sample Variance	92.95
Kurtosis	1.68	Kurtosis	-0.86	Kurtosis	-0.54
Skewness	0.61	Skewness	-0.16	Skewness	0.00
Range	74	Range	47	Range	41
Minimum	0	Minimum	0	Minimum	14
Maximum	74	Maximum	47	Maximum	55
Sum	1525	Sum	1220	Sum	1639
Count	50	Count	50	Count	50

It is evident from table - 6 that mean and standard deviation scores among of I.T, A.G and B.Sc. Students in relation to Stress Vulnerability has been found 30.5, 24.4 & 32.78 and 12.90, 13.1 & 9.64 respectively and range of score was 74, 47 & 41 respectively where as standard error was found 1.82, 1.85 & 1.36 respectively.

Table-7

Analysis of Variance among I.T, A.G and B.Sc. Students in relation to Stress Vulnerability

Source of Variation	Sum of Squares	df	Mean Square	F-Value	Sig.
Between Groups	1877.21	2	938.60	6.52*	.00
Within Groups	21159.08	147	143.93		

* Significant at 0.05 level of significance

F 0.05 (2, 147) = 3.06

Table- 7 revealed that there was significant difference among I.T, A.G and B.Sc. Students in relation to Stress Vulnerability, as obtained F-ratio was 6.52, which was higher than the tabulated value 3.06, required for F-ratio to be significant at 0.05 level with (2,147) degree of freedom.

Since the one way analysis of variance was found significant in relation to Stress Vulnerability the least significant difference (LSD) test was applied to find out the differences of the paired means among I.T, A.G and B.Sc. Students.

Table-8

Least Significant Difference (LSD) post hoc test for the paired means among I.T, A.G and B.Sc. Students in relation to Stress Vulnerability

Means			Sig.	Mean Difference	Critical Difference
I.T	A.G	B.Sc.			
30.50	24.40		.012	6.10(*)	4.69
30.50		32.78	.344	-2.28	

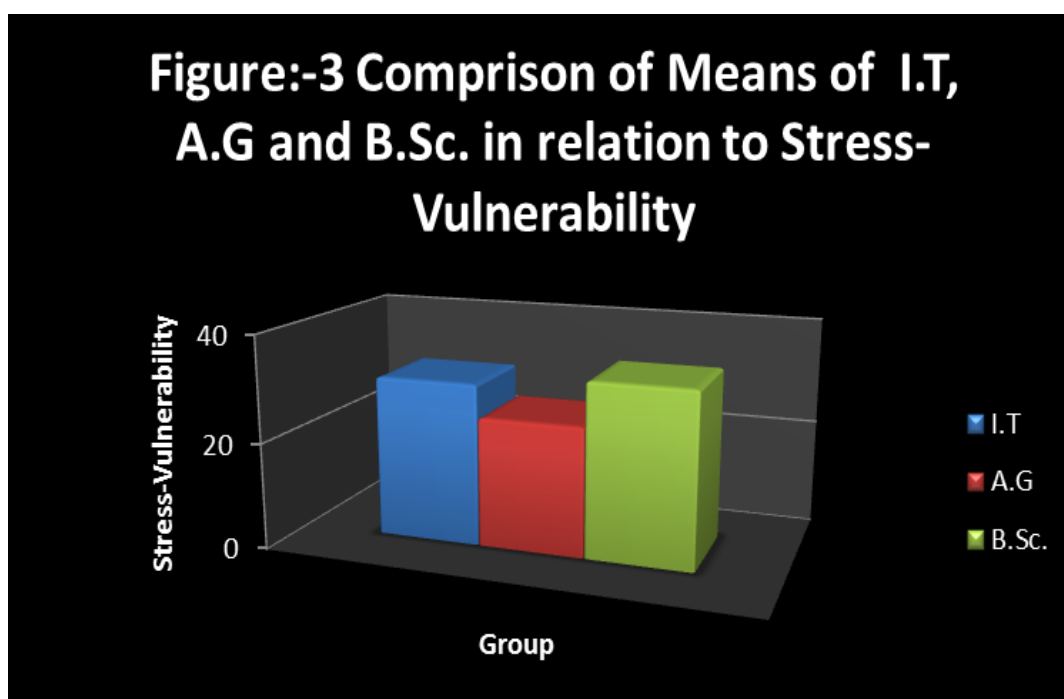
	24.40	32.78	.001	-8.38(*)	
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* Significant at .05 level of significance

It is evident from table- 8 that paired mean differences among I.T, A.G and B.Sc. Students in relation to Stress Vulnerability was found significant between I.T and A.G; A.G and B.Sc.

Mean differences between Individual and Combative did not prove to be significant at.05 level of significance.

The graphical representation of means among I.T, A.G and B.Sc. Students in relation to Stress Vulnerability has been presented in figure No.3.



Discussion of findings

From the findings of the study revealed that the significant difference was found between Sports Persons and Non-Sports Persons in relation to Stress Vulnerability. Sports Persons possessed greater Stress Vulnerability in comparison to Non-Sports Persons. The reason for this may be that Stress Vulnerability is defined as individual's ability related to unprotected to stress, unguarded to stress, helpless to stress, defenseless to stress, at risk to stress, thin skinned to stress and touchy to stress. In Stress Vulnerability individual becomes sensitive to stress. Sports Persons possessed greater Stress Vulnerability probably they are not equip with the coping strategies. Coping strategies are individualistic and moreover some individuals used emotional focused and some used problem focused.

Hintsala, T., Jokela, M., Pulkki, L. & Keltikangas-Jarvinen, L. (2010) conducted a study on topic “Divergent influence of different type a dimensions on job Strain and effort-reward imbalance”. The present study is on 752 participants. In the present study more Stress was found in Sports Persons in comparison to Non-Sports Persons; this might be due to hard working and tough schedule of Sports Persons.

Drake, C., Scofield, H. & Roth, T. (2009) revealed in their study that 37.2% of the variance in Vulnerability to Stress-related sleep disturbance can be accounted for by familial aggregation. Another cause of their Stress Vulnerability of Sports Persons in comparison to Non-Sports Persons might be due to the difference in aggression of Sports Persons and Non-Sports Persons.

In case of Stress Vulnerability insignificant difference was found among Individual, Team and Combative Games Players The reason for this may be that Stress Vulnerability is defined as individual’s ability related to unprotected to stress, unguarded to stress, helpless to stress, defenseless to stress, at risk to stress, thin skinned to stress and touchy to stress. In Stress Vulnerability individual becomes sensitive to stress. Team Game Players possessed greater Stress Vulnerability in comparison to Combative and Individual Game Players probably they are not equipped with the coping strategies.

Finally, In case of Stress Vulnerability significant difference was found among I.T, A.G and B.Sc. Students. The reason for this may be that Stress Vulnerability is defined as individual’s ability related to unprotected to stress, unguarded to stress, helpless to stress, defenseless to stress, at risk to stress, thin skinned to stress and touchy to stress. In Stress Vulnerability individual becomes sensitive to stress. B.Sc. Students possessed greater Stress Vulnerability in comparison to I.T and A.G Students probably they are not equipped with the coping strategies. Coping strategies are individualistic or moreover some individual used emotional focused and some used problem focused.

Discussion of Hypothesis

1. The hypothesis, that there will be no significant difference between Sports Persons and Non-Sports Persons in relation to Stress Vulnerability is rejected since significant difference was found between Sports Persons and Non-Sports Persons in relation to Stress Vulnerability.
2. The hypothesis that, there will be no significant difference among Individual, Combative & Team Game Players in relation to Stress Vulnerability is accepted since no significant difference was found among Individual, Combative & Team Game Players in relation to Stress Vulnerability.
3. The hypothesis that, there will be no significant difference among I.T, A.G and B.Sc. Students in relation to Stress Vulnerability is rejected since significant difference was found among I.T, A.G and B.Sc. Students in relation to Stress Vulnerability.

Conclusions

1. Significant difference was found between the Stress Vulnerability of Sports Persons & Non-Sports Persons.
2. Stress Vulnerability of Sports Persons was found to be more than that of the Non-Sports Persons.

3. Insignificant difference was found among Individual, Team and Combative Game Players in relation to Stress Vulnerability.
4. Significant difference was found among I.T, A.G and B.Sc. Students in relation to Stress Vulnerability.
5. The observed sequence of performance was found B.Sc. > I.T > A.G in relation to Stress Vulnerability.

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