Stress Vulnerability Comparison among Selected Disciplines

Harendra Singh Sikarwar* Dr. Keshav Singh Gurjar**

*Research Scholar, Dept. of Physical Education, Jiwaji University, Gwalior, M.P., INDIA
** Deputy Director, Dept. of Physical Education, Jiwaji University, Gwalior, M.P., INDIA

Abstract

Background: To assess the level of stress and to compare the stress vulnerability among physical education, education and engineering students. And, also assess, whether the stress vulnerability in a population have equal variances.

Methods: For the purpose of the study 150 Male and Female students from Jiwaji University, Gwalior, M.P., INDIA from different streams i.e. Physical Education, Education and Engineering stream students were taking part on this survey study, there age ranged from 22 to 27 years. The necessary data on the stress vulnerability of selected subjects examine by "Stress Vulnerability Scale" developed by Lyle H. Miller and Alma Dell Smith (1989), Boston University Medical Center and also cited by Werner W.K. Hoeger, "Lifetime Physical Fitness and Wellness". To find out the Stress Level of selected subjects, descriptive statistics was used, and to examine the significance difference of stress vulnerability between selected subjects, one way ANOVA was used, the hypothesis was tested at 0.05 level of significance.

Results: It is reveals that physical education students found less Vulnerability stress in compared to the education and engineering students. This less vulnerability stress occurred due to the type of curriculum of physical education. Physical education students are involves most of the time in particular physical activity. These activities are develops the tolerance power for coping with stress. It can also be seen that the stress vulnerability difference between the physical education students and education students, physical education students and engineering students are found significant as the p-value for this mean difference was 0.001 and 0.031 which is less than the 0.05. This significance difference was also found due to the some agreements that people with psychosis handle stress poorly. It seems that they have a low tolerance for stress things that would have not been stressful for someone who does not have psychosis can prove too much for those who do have it. There is also a lower tolerance of intense emotions from others, e.g. anger, criticism, conflict or extremes in positive concern or over involvement. Clearly this makes knowing how far to push or encourage someone to do something a difficult decision. On the one hand too much pushing may lead to problems and even relapse, whereas no encouragement to do things may see someone sink into apathy and withdrawal. However, the mean difference between education and engineering is found insignificant as the p-value was more than 0.05. The P-value of Levene's test is less than critical value (typically 0.05), the obtained differences in sample variances are unlikely to have occurred based on random sampling from a population with equal variances. Thus, it was showed that there is no difference between the variances in the population.

Conclusion: The stress vulnerability difference between the physical education students and education students, physical education students and engineering students were found significantly. The mean difference between education and engineering is found insignificant. However, less level of stress was also found in physical education students. It was also concluded that there is no difference between the variances in the population.

Key words: Stress Vulnerability

INTRODUCTION

Modern life is full of hassles, deadlines, frustrations, and demands. For many people, stress is so commonplace that it has become a way of life. Stress isn't always bad. In small doses, it can help you perform under pressure and motivate you to do your best. But when you're constantly running in emergency mode, your mind and body pay the price. You can protect yourself by recognizing the signs and symptoms of stress and taking steps to reduce its harmful effects. Stress is a normal physical response to events that make you feel threatened or upset your balance in some way. When you sense danger—whether it's real or imagined the body's defence kick into high gear in a rapid, automatic process known as the "fight-or-flight-or-freeze" reaction, or the stress response. The stress response is the body's way of protecting you. When working properly, it helps

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you stay focused, energetic, and alert. In emergency situations, stress can save your life giving you extra strength to defend yourself, for example, or spurring you to slam on the brakes to avoid an accident. The stress response also helps you rise to meet challenges. Stress is what keeps you on your toes during a presentation at work, sharpens your concentration when you're attempting the game-winning free throw, or drives you to study for an exam when you'd rather be watching TV. But beyond a certain point, stress stops being helpful and starts causing major damage to your health, your mood, your productivity, your relationships, and your quality of life. It's important to learn how to recognize when your stress levels are out of control. The most dangerous thing about stress is how easily it can creep up on you. You get used to it. It starts to feel familiar, even normal. You don't notice how much it's affecting you, even as it takes a heavy toll. The signs and symptoms of stress overload can be almost anything. Stress affects the mind, body, and behaviour in many ways, and everyone experiences stress differently. Not only can overwhelming stress lead to serious mental and physical health problems, it can also take a toll on your relationships at home, work, and school. The situations and pressures that cause stress are known as stressors. We usually think of stressors as being negative, such as an exhausting work schedule or a rocky relationship. However, anything that puts high demands on you or forces you to adjust can be stressful. This includes positive events such as getting married, buying a house, going to college, or receiving a promotion. Of course, not all stress is caused by external factors. Stress can also be self-generated, for example, when you worry excessively about something that may or may not happen, or have irrational, pessimistic thoughts about life. What causes stress depends, at least in part, on your perception of it. Something that's stressful to you may not faze someone else; they may even enjoy it. For example, your morning commute may make you anxious and tense because you worry that traffic will make you late. Others, however, may find the trip relaxing because they allow more than enough time and enjoy listening to music while they drive. The body doesn't distinguish between physical and psychological threats. When you're stressed over a busy schedule, an argument with a friend, a traffic jam, or a mountain of bills, your body reacts just as strongly as if you were facing a life-or-death situation. If you have a lot of responsibilities and worries, your emergency stress response may be "on" most of the time. The more your body's stress system is activated, the harder it is to shut off.

Objectives of the Study

To assess the level of stress and to compare the stress vulnerability between physical education, education and engineering students

To assess, whether the stress vulnerability in a population have equal variances

METHODOLOGY

For the purpose of the study 150 Male and Female students from, Jiwaji University, Gwalior, M.P. INDIA, from different streams i.e. Physical Education, Education and Engineering stream students were taking part on this survey study, there age ranged from 22 to 27 year. The necessary data on the stress vulnerability of selected subjects examine by "Stress Vulnerability Scale" developed by Lyle H. Miller and Alma Dell Smith (1989), Boston University Medical Center and also cited by Werner W.K. Hoeger, "*Lifetime Physical Fitness and Wellness*". To find out the Stress Level of selected subjects, descriptive statistics was used, and to examine the significance difference of stress vulnerability between selected subjects, one way ANOVA was used, the hypothesis was tested at 0.05 level of significance.

Stress Vulnerability Rating Scale

0-10 Point	…………………………………	Excellent. Excellent resistance to stress
11-30 Points	…………………………………	Good. Very little vulnerability to stress
31-50 points	…………………………………	Fair, Some vulnerability to stress
51.-80 points	…………………………………	Poor. Seriously vulnerable to stress

RESULTS OF THE STUDY

Table 1: Descriptive Statistics

Variable	Selected Students	N	Mean	Std. Deviation
Stress Vulnerability	Physical Education	50	25.26	5.35
	Education	50	28.52	4.11
	Engineering	50	27.30	4.45
	Total	150	27.02	4.83

Table 1 reveals that the mean and standard deviation of stress Vulnerability for selected subject of physical education student 25.26, ± 5.35, education students 28.52, ± 4.11 and engineering students 27.30 ± 4.45 respectively.

To compare the stress vulnerability difference between selected subjects, the one way analysis of variance was adopted and data pertaining to these have been presented in table 2.

Table 2: Significant Difference of Mean of stress Vulnerability among Selected Students

	Sum of Squares	df	Mean Square	F - Ratio	P-value Sig.
Between Groups	271.29	2	135.64	6.21*	0.003
Within Groups	3208.60	147	21.82		
Total	3479.89	149			

*Significant at .05 level of significance

It is evident from table- 2 that the p-value for stress vulnerability of selected subjects is less than 0.05 and hence the F- value is significant at 5 % level.

To assess the equality of variances or homogeneity of variance for a variable i.e., stress vulnerability, calculated by Levene's statistics for selected groups.

Table 3

Test of Homogeneity of Variances			
Stress Vulnerability			
Levene Statistics ('t' test)	df1	df2	*P* - value
1.457	2	147	**0.236**

Table 3 reveals that the *P*-value of Levene's test is more than critical value (typically 0.05), the obtained differences in sample variances are unlikely to have occurred based on random sampling from a population with equal variances. Thus, it was showed that there is a no difference between the variances in the population for level of stress.

In order to determine which groups differs significantly, post hoc mean comparison was applied.

Table 4: Post hoc Comparison of Means using LSD

(I) Groups	(J) Groups	Mean Difference (I-J)	P-value Sig.
Physical Education Students	Education Students	-3.26*	0.001
	Engineering Students	-2.04*	0.031
Education Students	Physical Education Students	3.26*	0.001
	Engineering Students	1.22	0.194
Engineering Students	Physical Education Students	2.04*	0.031
	Education Students	-1.22	0.194

*Significant at .05 level of significance

Since F-value is significant, post hoc comparison test needs to be applied for comparing means of groups, the SPSS output shown in table 4 provides such comparison. It can be seen that the stress vulnerability difference between the physical education students and education students,

physical education students and engineering students are found significant as the p-value for this mean difference is 0.001 and 0.031 which is less than the 0.05. However, the mean difference between education and engineering is found insignificant as the p-value for this no difference is 0.194 which is more than 0.05.
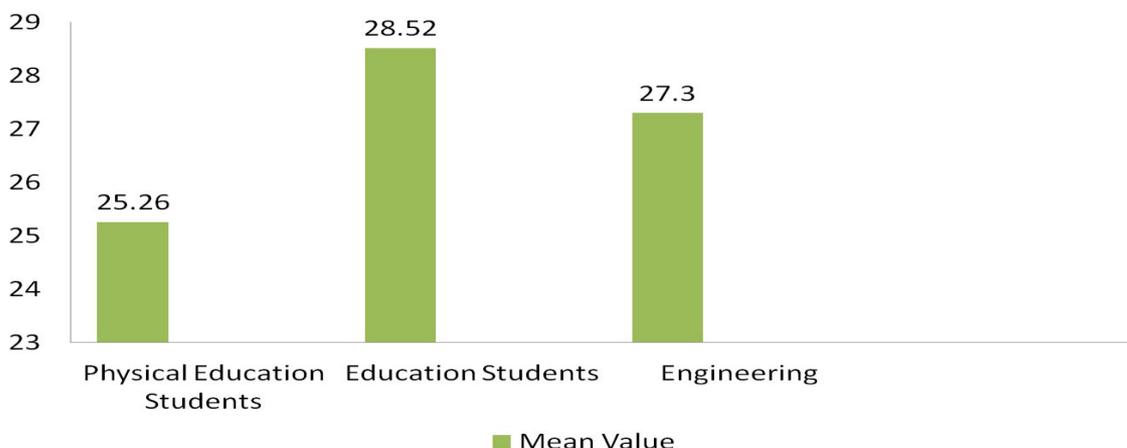
Discussion of Findings:

It is reveals that physical education students found less Vulnerability stress in compared to the education and engineering students. This less vulnerability stress occurred due to the type of curriculum. Physical education students are involves most of the time in particular physical activity. These activities are develops the tolerance power for coping with stress. It can also be seen that the stress vulnerability difference between the physical education students and education students, physical education students and engineering students are found significant as the p-value for this mean difference was 0.001 and 0.031 which is less than the 0.05. This significance difference was also found due to the some agreements that people with psychosis handle stress poorly. It seems that they have a low tolerance for stress - things that would have not been stressful for someone who does not have psychosis can prove too much for those who do have it. There is also a lower tolerance of intense emotions from others, e.g. anger, criticism, conflict or extremes in positive concern or over involvement. Clearly this makes knowing how far to push or encourage someone to do something a difficult decision. On the one hand too much pushing may lead to problems and even relapse, whereas no encouragement to do things may see someone sink into apathy and withdrawal. However, the mean difference between education and engineering is found insignificant as the p-value was more than 0.05. The P-value of Levene's test is more than critical value (typically 0.05), the obtained differences in sample variances are unlikely to have occurred based on random sampling from a population with equal variances. Thus, it was showed that there is a no difference between the variances in the population.

CONCLUSION

The stress vulnerability difference between the physical education students and education students, physical education students and engineering students were found significantly. The mean difference between education and engineering is found insignificant. However, less level of stress was also found in physical education students. It was also concluded that there is a no difference between the variances in the selected population.

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