GENDER- BASED ANALYSIS OF PERCIEVED STRESS LEVELS AMONG SECONDARY SCHOOL STUDENTS IN KENYA

By
Robert K. Muniu, Peter Wanderi and Andanje Mwisukha
Kenyatta University, Kenya

Abstract

Stress is present in day to day activities providing motivation for living. This form of stress does not bother a majority of people since through experience they learn to cope with it. However, major events in people's lives bring about great changes in levels of stress. Students undergoing courses in an education system view examinations as a major life event. In Kenya, examinations play a major role in the determination of an individual's future. This study therefore, sought to find out if there were significant differences between boys and girls who participate in sports and non sports participants in their levels of stress as the examinations approached. This was done by comparing within the genders and also between the genders. The target population was 17 national schools in Kenya and the sample size was 480 students, comprising of 224 girls and 245 boys. The data collection instrument used was a questionnaire measuring the perceived stress levels. Data was analyzed using a one way ANOVA and an independent t- test. Results indicate that as the examinations approached, there was significant difference in stress levels between sports active boys and non sports active boys; there was no significant difference between sports active and non-sport active girls and; there was a significant difference between sports active boys and girls. From the findings, it is recommended that there is need to introduce sports for all students in schools in addition to the elite sports that are already in existence. More emphasis should be put on sports participation by girls whose level and intensity of participation was lower than that of boys.

Introduction

Stress is present in day to day activities providing motivation for living. This form of stress does not bother a majority of people since through experience they have learnt to cope with it. However, major events in people's lives bring about great changes in levels of stress. Stress manifests itself both psychologically and physiologically. In the former, it causes anxiety which leads to loss of attention and concentration, feelings of loneliness, anger, disgust, sadness or disappointment (Papalia and Olds, 1988). Production of stress hormones leads to physiological changes in the body. These include an increase in heart rate, blood pressure, breathing rate, skin conductance, stomach acidity, muscle tension, mental alertness, sweating and a reduction in skin temperature (Selye, 1983). Prolonged presence of stress leads to a depressed immunity system which leads to common colds, indigestion, fatigue, skin rashes, chronic pain and insomnia (Huffmean *et al.*, 1987). Students undergoing courses in an education system view examinations as a major life event.

In Kenya, examinations play a major role in the determination of an individual's future. This study therefore, sought to find out if there were significant differences between boys and girls who are sports and non- sports participants in their levels of stress as the examinations approached. This was done by comparing within the genders and also between the genders.

Methodology

The target population was 17 national schools in Kenya. The sample size was 480 students comprising of 224 girls and 245 boys. The instrument used was a questionnaire measuring the perceived stress levels. Data was analyzed using a one way ANOVA and an independent t- test.

Findings and Discussion

Perceived Stress Levels in Sports Active Boys and Sports Active Girls

Among the sports active subjects it was important to establish whether there are any significant differences in perception of stress in the pre and post-test between the students who were active in both genders. The results are presented below in tables 1a and b.

Table 1a: Perceived stress levels among the sports active subjects.

	GENDER	N	Mean	Std. Deviation
Pre-test	Girls	129	51.4698	10.62134
	Boys	125	51.4816	8.79912
Post-test	Girls	129	54.8093	9.40883
	Boys	125	44.0800	7.88596

Table 1b: Independent t-test

		t	Df	Sig. (2-tailed)
Pre-test stress score	Equal variances assumed	-.010	252	.992-no significant
Post-test stress score	Equal variances assumed	9.834	252	.0020-significant

At the beginning of the study sports active girls had a mean of 51.47 ± SD 10.62. The sports active boys results produced a mean of 51.48 ± SD 8.80. From the means, there was almost negligible difference in the stress levels of the two groups. In the post-test the sports active girls recorded a mean of 54.80 ± SD 9.40, while the sports active boys had a mean of 44.08 ± SD 7.89. It will be noticed that the differences in the means for the post-test were much greater than those of the pre-test. The results were subjected to an independent t test in which the pre-test scores produced a significance of 0.992 with a t value of –0.10 (Table 1a and b). Thus, there was no significant difference in the perceived stress levels for the sports active girls and the sports active boys. The post-test scores were subjected also to an independent test yielding a significance of 0.0020, which was lower than the set value of $P<0.05$. This means that there were significant differences in perceived stress values between sports active girls and sport active boys. Sports active girls perceived examinations as being more stressful than sports active boys.

Perceived Stress Levels in Non-Sports Active Girls and Non-Sports Active Boys

In the absence of sports participation, it was important to establish whether girls and boys perceived examinations with the same amount of stress. The results are presented below in table 2a and b.

Table 2a: Perceived stress levels for the non-sports active

	GENDER	N	Mean	Std. Deviation
Pre-test	Girls	95	56.9305	9.24106
	Boys	120	52.7967	9.46921
Post-test	Girls	95	56.3537	9.43346
	Boys	120	53.4400	10.46899

Table 2b: Independent t-test

		t	df	Sig. (2-tailed)
Pre-test stress score	Equal variances assumed	3.213	213	.002-significant
Post-test stress score	Equal variances assumed	2.116	213	.035-significant

The pre-test scores for the girls produced a mean of 56.93 ± SD 9.24, while boys the mean was 52.79 ± SD 9.46. For the post-test the girls had a mean of 56.35 ± SD 9.43 while boys had a mean of 53.44 ± SD 10.48. For both groups the means for the pre-test and post-test remained statistically similar. The results were subjected to an independent t test and for the pre-test a significance of 0.002 was obtained with a t-value of 3.213. The significance was below the acceptance value of $P<0.05$ meaning there was a significant difference in the levels of stress between non-sports active girls and non-sports active boys. The post-test yielded a significance of 0.035 with a t-value of 2.116 (2a and b). This was below the set value of $P<0.05$. This means that there was a significant difference in stress levels between sports active boys and sports active girls in the post-test. From the means of both the pre- and post-test the perceived level of stress among the girls were always higher than those of the boys. The null hypothesis which stated that there would be no significant difference in perceived stress levels between non-sports active girls and non-sports active boys in their Form Three second term and just before they sat for their mock examinations was therefore rejected.

Gender Influence on Perceived Examination Stress for All Subjects

The results of a comparison in between all the female subjects and all the male subjects are presented below in table 4.13a and b.

Table 3a Stress level descriptive among the genders

	GENDER	N	Mean	Std. Deviation
Pre-test	Girls	224	53.7857	10.39550
	Boys	245	52.1257	9.13845
Post test	Girls	224	55.4643	9.42921
	Boys	245	48.6645	10.34598

Table 3b Independent t-test

		t	df	Sig. (2-tailed)
Pre-test	Equal variances assumed	1.840	467	.066
Post-test	Equal variances assumed	7.416	467	.0001

The pre-test means for all female subjects was 53.79 ± SD 10.40 while that of boys was 52.13 ± SD 9.14. On subjecting the results to an independent t test, a t-value of 1.84 was obtained with a significance of 0.066, which was not significant as per the set value of $P<0.05$ (Table 3a and b). This means that at the beginning of the study, there was no significant difference in the stress levels between the genders.

Post-test results produced a mean of 55.46 for the girls ± SD 9.43, while the boys had a mean of 48.66 ± SD 10.35. An independent t test carried on this result produced a t-value of 7.42 with a significance of 0.0001, which was below the set value of $P<0.05$. This means that there was a significant difference between the perceived stress levels of the girls and boys during the post-test. These results indicate that female subjects perceived more stress as the mock examinations approached. The null hypothesis that stated that there is no significant difference in perceived stress levels is rejected.

Recommendations

From the findings of this study it is recommended that there is need for school authorities not only to emphasize on competitive(elite) sports but also on non-competitive(recreational) sports (sports for all students) in schools as this would be an ideal stress management strategy for them. Furthermore, emphasis should be put on participation of girls in sports as their level and intensity of participation was found to be much lower than that of boys.

References

Huffman, K. Vernoy, M. and Vernoy, J., (1987). *Essentials of Psychology in Action.* New York: John Wiley and Sons.

Papalia, P.E and Olds, S.W., (1988). *Psychology.* New York: McGraw Hill Book Company.

Selye, H., (1983). The Stress Concept, Past, Present and Future. In Cooper C.L. (Ed): *Stress Research.* Chichester:, John Willey and Sons.