

The Association between Sporting Activities and Levels of Stress among Students of Co-Operative University

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Abstract: Previous literature on sporting activities tends to articulate that participation in sports can enable individuals alleviate depression or anxiety. It can provide positive outlet for stress and aggression. Sports psychology literature alludes that stress management interventions are effective in stress reduction among athletes. Though these revelations are available on the effectiveness of stress management, there is scanty information on strategies to alleviate stress among the university students. This study was done to examine the relationship between sporting activities and levels of stress among the students of The Co-operative University. The study used correlation design to collect data. A sample size of 100 participants was obtained through stratified random technique and was made up of both males and females. Data was collected by use of a questionnaire and was entered into SPSS Version 22. The analysis was done by use of both descriptive and inferential statistics. The findings revealed that majority of students had above than average levels of stress. Pearson correlation analysis revealed that sporting activities were negatively correlated with levels of stress. Moreover, it was revealed that duration and frequency of sporting activities were negatively correlated to levels of stress. The researcher recommend that students should engage in sporting activities to reduce levels of stress.

Keywords: Sporting Activities, Stress, University Student.

1. INTRODUCTION

A university degree is becoming increasingly necessary for entry into many jobs in the modern workplace. Correspondingly, the number of students attending college is at an all-time high. Majority of the students joining universities and colleges are at the age of 18-19 and graduate in their early 20s (Wike, 2015). During this age of the university life the young adults need to be at their peak mental state. However, this is a time of life fraught with many changes and the college escalates to the stress and anxiety which can interfere with academic performance. Stress can increase risk of suicide and also it can affects the ability of the immune system to function adequately (Merritt, 2015). Therefore, it is necessary to identify coping mechanisms that students can use to alleviate stress.

One potential opportunity to combat the consequences of stress is the use of physical activity. Research has shown that physical activity is an effective means of reducing anxiety and various indices of stress among adults (Nguyen-Michel & Hamilton, 2006). Physical activity plays a key role in reducing stress and preventing its adverse effects. It provides a positive outlet for spent up energy. According to Tomruk and Gurpinar (2016) participation in sports can help individual's alleviate depression or anxiety and sports has been found to hold people steady in times of crisis and acute stress. It places one in a better frame of mind, body and spirit. Moreover, according to Elmagd (2015) participation in sports improves concentration and mental functioning.

Literature on sports psychology advances that stress management interventions are effective in reducing stress and anxiety among athletes (Moksnes & Lillefjell, 2013). Employing certain anxiety reducing programs such as weight lifting has been found to facilitate reduction in stress levels among the participants (Stone & Sands, 2017). According to

Kolehmainen and Sinha (2015) understanding individual characteristics may moderate the main effects of treatment that is crucial in order to identify those people who may benefit from stress intervention strategies/techniques such as sports and regular exercises. While creation of awareness of interventions has been found to make stress reduction treatment more effective, Swan (2012) advanced that several people in sport and exercise science as well as health psychology have underscored the role of physical activity in mood, depression and general psychological wellbeing.

As such there is need to provide participants with a greater awareness of the treatment that are deemed effective in stress management. According to Nash (1998) there are distinctive ways of coping with feelings of tension. This includes distraction in sport and there is an abundance of stress skills which can be adopted as coping strategy. Furthermore, physically active people often experience enhanced confidence and improved image. It also plays a key role in reducing and preventing effects of stress. However, despite availability of information on the effectiveness of stress intervention strategies, there is scanty evidence on the relationship between sporting activities and levels of stress among university students. Therefore, this study aimed at filling that contextual gap.

RESEARCH OBJECTIVES:

The general objective of the current study was to ascertain the relationship between sporting activities and levels of stress among the students at The Co-operative University. The specific objectives of the study include:

- i) To examine the effects of sporting activities on levels of stress among students at The Co-operative University.
- ii) To investigate the effects of the duration of sporting activities on the levels of stress among the students at The Co-operative University.
- iii) To establish the effects of the frequency of sporting activities on the levels of stress among the students at The Co-operative University.

2. LITERATURE REVIEW

2.1 Stress:

There is no universal agreement on the definition of stress. Elfaki (2014) defines stress as any circumstances that threaten or are perceived to threaten one's well-being and thereby tax one's coping abilities. On the same note Lazarus and Folkman (1984) defined stress as a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being. Generally stress is known as pattern of disruptive physiological and psychological reaction to events that threatened the ability to cope.

The topic of stress has become important because stress is believed to contribute to occurrence of some disorders such as cardiovascular diseases, gastrointestinal skin, immune system and respiratory diseases (Elfaki, 2014). It is also believed to increase instances of committing suicide and getting addicted to narcotic drugs. Moreover, stress is associated with inactive coping strategies as avoidance, denial, or hiding one's feelings related to incompatibility, which sometime result to one experiencing negative emotions (Azizi, 2011).

According to Elfaki (2014) some people are more prone to feeling of stress than others. However, irrespective of event two main factors are believed to cause stressful situations. These are controllability of an event and the predictability of an event. Therefore, circumstances are perceived to be stressful when they are uncontrollable and unpredictable. When a person is capable of coping with the event using resources and strategies available such as accepting the death of close relative or passing an exam is possible then psychological adjustment or adaptations takes place. However, unsuccessful coping with such events leads to anxiety and depression resulting to stress. This occurs when an individual fail to identify an appropriate course of action leading to maladjustment or maladaptation.

2.2 The Association between Sporting Activities and Stress:

A number of studies have shown that sporting activities are associated with better stress outcomes (Kolehmainen & Sinha, 2015). Individuals that are involved in sporting activities have lesser rates of depression, negative affectivity and anxiety (Wipfli & Rethorst, 2008). It has been demonstrated that sporting activities promote positive changes in one's mental

health and ability to cope with stressful encounters (Kolehmainen & Sinha, 2015). According to a study conducted by Akandere and Tekin (2014) to determine the effects of physical exercise on eliminating anxiety among university youth revealed that physical activities played a very notable role in elimination of anxiety among the university youth. Another study was conducted by Azizi (2011) to investigate the effect of being involved in sporting activity on stress coping strategies and intensity of the stress among university students. The results revealed that students who do not participate in sporting activity dealt with stress using more sentimental oriented coping strategies and yet they reported more intensity of daily stress. But student who participated in sporting activity used higher levels of problem oriented coping strategies and reported less intensity of stress. So it seems that exercise has effect in selecting efficient and appropriate coping strategies to reduce the intensity of stress.

The duration and frequency of sporting activities and quantity of calories expended in physical activities have also been found to have an association with stress. Sutton and Aldana (2006) found that individuals who expend more than 3.0 kcal/kg/day in physical activities during leisure time were 78 and 62 % less likely to have moderate and high perceived stress, respectively. However, the intensity of exercise may play a key role as those who participated in exercise that was of a moderate intensity exhibited approximately half the amount of perceived stress as those who reported no exercise (Sutton & Aldana, 2006). Research has also found that exercise is an effective method for improving perceived stress, stress symptoms, and quality of life (Imayama & Alfano, 2011). According to Greenwood (2011) physical activities neutralizes the effects of psychological stressors on cardiac reactivity and dampens stressor-evoked increases in stress hormones and serotonin. Throne (2010) found that a 16-week intervention (exercise four times per week, 40 min) improved stress reactivity in a group of fire fighters. From the reviewed studies it is clear that sporting activity reduces intensity of stress.

3. METHODOLOGY

The study used a descriptive, correlation design to correct data. The findings obtained from the design facilitated in the establishment of the relationship between sporting activities and levels of stress among the students of The Co-operative University. The targeted population was students from Cooperative University in Kenya. This was composed of both males and females who were at least 18 years old and above from first year to fourth year. The sample size was calculated using the Krejcie and Morgan sample size determination table.

The instrument used for this study were questionnaires where a total of 100 of them were distributed to the participants and 18 of them were rejected, giving a response rate of 74.5 percent. Sporting activities was measured with questions asking about sporting activities duration and frequency. For instance, participants were asked duration in terms of hours and minutes and how often they engage in sporting activities per week. In addition, they were asked to write type of sporting activity they engaged. Stress was measured by questions rating the student stress on a 5 point Likert scale with 1= not stressful up to 5= extremely stressful. They were asked to rate stress in four areas; academic matters, clinical concerns, personal problems, and interface worries. The rating were then added up with the totals ranging from 22-110. The higher the score, the higher the student had stress according to Suplicki and Marquard (2011).

The data collected was entered into SPSS version 22 and was analyzed by use of descriptive statistics (frequencies, mean, standard deviation and percentages) and inferential statistics. Pearson correlation coefficients was used to determine the association between stress and sporting activities.

4. RESULT

4.1 Descriptive Analysis:

The results of descriptive statistics shown that mean of the students age was 21.5 years (SD = 4.348). The female participants were 40 (48.8 %) and males were 42 (51.2%). The student who engaged in sporting activities were 28% of the participants and the mean for the amount of minutes per week of these students who participate in sports was 55 minutes per week (SD= 45.54). The mean for the stress score was 80.95 (SD = 10.43) indicating a result of above than average of the extreme parameters.

4.2 Association between Sporting Activities and the Level of Stress

A Pearson correlation coefficient was computed to assess the association between sporting activities and the levels of stress among the students of Co-operative University. The table 4.1 shows the result.

Table 4.1: The relationship between sporting activities and the level of stress

		Engagement in sporting activities	Total stress score
Engagement in sporting activities	Pearson correlation	1	-.885**
	Sig. (2-tailed)		.003
	N	82	82
Total stress score	Pearson correlation	-.885**	1
	Sig. (2-tailed)	.003	
	N	82	82

**Correlation is significant at the level 0.01 (2-tailed)

Pearson correlation analysis in table 3.1 shows that sporting activities was negatively correlated with stress. This means the more the student engaged in sporting activities the less stressed they were. An increase in the engagement of sporting activities lead to a reduction in total stress score of the participants. The result of this study are in agreement with findings of a study conducted by Al-Eisa and Buragadda (2014). They investigated the correlation between 3 weeks of improved physical activity and stress. The findings indicated that physical activity was negatively correlated with stress outcomes. Similar study by Coulter, Dickman and Maradiegue (2009) found that women who participated in exercise had a reduction in stress. Therefore, engagement of students in sporting activity can be used as a strategy to minimise levels of stress.

4.3 Association between Frequency and Duration of Sporting Activities and Levels of Stress

A Pearson correlation coefficient was computed to assess the association between frequency and duration of the sporting activities and the levels of stress among students of The Co-operative University. The table 4.2 shows the result.

Table 4.2: The Association between Frequency of Sporting Activities and the Levels of Stress

		Frequency in sporting activities	Total stress score
Frequency in sporting activities	Pearson correlation	1	-.743**
	Sig. (2-tailed)		.002
	N	23	23
Total stress score	Pearson correlation	-.743**	1
	Sig. (2-tailed)	.002	
	N	23	23

**Correlation is significant at the level 0.01 (2-tailed)

The result in table 4.2 shows that the frequency of sporting activities is negatively correlated with total stress score. Frequency was measured by number of times per week the student engaged in sporting activities. The students that were never involved in sporting activities were not included in analysing of the pearson correlation. The result means that students who participate in sporting activities more regularly like everyday have better stress outcome or decreased levels of stress than students who engage in sporting activities less often like once in a week. Similarlry, the researcher investigated the association between duration of sporting activities with the levels of stress. The result are in table 4.3.

Table 4.3: The Association between Duration of Sporting Activities and the Level of Stress

		Duration in sporting activities	Total stress score
Duration in sporting activities	Pearson correlation	1	-.233**
	Sig. (2-tailed)		.008
	N	23	23
Total stress score	Pearson correlation	-.233**	1
	Sig. (2-tailed)	.008	
	N	23	23

**Correlation is significant at the level 0.01 (2-tailed)

The result on table 4.3 shows that there is a weak negative correlation between duration in sporting activities and total stress score. This is an indication that the more an individual spends more time engaging in sporting activities the less the intensity of stress. It can thus be concluded that frequency and duration of sporting activities significantly influence levels of stress. This is consistent with a study conducted by Michael and Hamilton (2006) whose findings revealed that with increased physical activity there was a significant decrease in perceived stress in a sample of the college students. Similarly, findings by Sutton and Aldana (2006) showed that individuals who expend at least 3.0 kcal/kg/day in physical activities during leisure time were 78 and 62 % less likely to have moderate and high perceived stress. Their finding further revealed that the intensity of exercise played a key role as those who participated in exercise that was of a moderate intensity exhibited approximately half the amount of perceived stress as those who reported no exercise. Therefore, for sporting activities to reduce levels of stress there is a minimum frequency and duration required to be effective.

5. CONCLUSION, RECOMMENDATIONS AND LIMITATION

The objective of the study was to explore the association between sporting activities and levels of stress among students at The Co-operative University. Based on this objective the study revealed that there is negative correlation between sporting activities and levels of stress among the participants. Similarly, demographic factors had no association with levels of stress. It is recommended that students should engage in sporting activities as an intervention to reduce stress. The limitation of the study is that it focused on outdoor games and excluded indoor games such table tennis and karate.

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