Demographic Difference in Stress Coping and Student-Athletes in Colleges of Education in Ghana

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Abstract

The study aimed to investigate a demographic difference in stress coping among student-athletes in Colleges of Education in Ghana. The study adopted a cross-sectional survey design, in which quantitative data was collected. The study was conducted in Ghana. Simple random sampling was used to select student-athletes. The target population for this study was 768 student-athletes in six (6) Ghana Colleges of Education. The total sample size for the study was 323 student-athletes. The instruments for data collection were questionnaire and document analyses. Both, descriptive and inferential statistical analyses were done using Statistical Package for Social Sciences (SPSS version 20). Descriptive statistics summarized, organized and described the responses when addressing study objectives through the use of means, standard deviations, frequencies, and percentages. Inferential statistics such as ANOVA and Point biserial were used to test the formulated null hypotheses. All hypotheses were tested at $p<0.05$ alpha level of significance. The study found that Demographic characteristics have a statistically significant relationship with stress management among student-athletes in colleges of education in Ghana.

Keywords: Stress, Coping, Student-Athletes.

Introduction

Stress signifies the quantum of physical, mental and emotional strain or tension impacting on a person (Solanky et al., 2012). It is defined as a disorder that manifests naturally in symptoms of mental and physical tension or strain (Thangaraj & D’Souza 2014). Melaku et al. (2015) established that long-lasting and continuous exposure to stressful conditions leads to emotional, physical and mental disturbance. Turner et al., (2015) linked students’ poor cognitive and psychological function to the negative effect of stress. Coping with stress is essential to the academic success of student-athletes in college (Wolters & Hussain, 2015). This study was to determine demographic Difference in Stress Coping and Student-Athletes in Colleges of Education in Ghana.

Statement of the Problem

Stress emanating from participation in sports on academic performance has become a common topic of discussion among Colleges of Education student-athletes in Ghana. There have been contentions that the stress student-athletes encounter before, during and after competing in inter-hall, inter-collegiate and inter-zone colleges of education games and sports festivals is a major cause of poor academic performance among trainee teachers. The study aimed to investigate a demographic difference in stress coping among student-athletes in Colleges of Education in Ghana.

Objective of the Study

The study was guided by the following specific objective: To investigate a demographic difference in stress coping among student-athletes in Colleges of Education in Ghana.

Hypothesis

The study tested the following null hypothesis:

H₀₁. Demographic characteristics have no statistically significant relationship with stress management among student-athletes in Colleges of Education in Ghana.

Research Design

According to Saunders et al. (2012), a research design is a general map of how the researcher intends to go about answering the study questions.

This study employed the cross-sectional survey design to collect both quantitative from student-athletes. The cross-sectional survey design was used because it allows a large amount of data to be collected within a short time (Rose et al., 2015).

The quantitative data collected was positive in reporting the demographic data of the respondents and it also offered the researcher an opportunity to test the null hypothesis formulated in order to ascertain the relationship between the independent variables and dependent variables. The purpose of collecting quantitative and data simultaneously was to sustain the strength and improve the limitations of the design (Creswell, 2014).
Target Population of the Study

The target population can also be referred to as a group of persons with distinctive features the researcher wants to study and collect data from (Arthur-Nyarko, 2017). This study targeted 768 student-athletes in six (6) Ghana Colleges of Education. Table 3.1 indicates the target population for the study.

<table>
<thead>
<tr>
<th>Table 1. Target Population</th>
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<tbody>
<tr>
<td>Participants</td>
</tr>
<tr>
<td>Student-athletes</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Sampling Techniques

The study used simple random sampling to randomly select student-athletes in the colleges targeted. Simple random sampling was used because the researcher cannot collect data from all the students in the 36 colleges of education in the three zones (Alvi, 2016).

Sample Size

A sample is a collection of individuals from a population one is interested to study (Malone & Coyne, 2016). To arrive at sample size for this study the Yamane formula (as cited in Israel, 1992) at a 95% confidence level and \( \epsilon = 0.05 \), to take care of sample error and degree of variability was used. The said formula is thus presented:

\[
 n = \frac{N}{1+N(\epsilon)^2}
\]

Where \( n \) is the sample size, \( N \) is the population size, and \( \epsilon \) is the level of precision/sampling error. Using the formula above, with a student-athlete population of 768, the study will arrive at 263 as a sample size for students. The sample size will, however, be adjusted by 23% to make up for instances of nonresponse by some members of the chosen sample (Israel, 1992). Therefore, the sample size for the study will be 323 students. Table 3.2 shows the sample grid of the sample size.

<table>
<thead>
<tr>
<th>Table 2. Sample Grid</th>
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</thead>
<tbody>
<tr>
<td>Participants</td>
</tr>
<tr>
<td>Student-athletes</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Research Instruments

According to Anum (2017), research instruments are the instruments or tools that aid a researcher to collect data. In this study, questionnaire and document analysis were used. The questionnaire was used to collect data from student-athletes.
Data Collection Procedures

Questionnaires were distributed to student-athletes with the help of the research assistants that will be trained in the colleges of education targeted. The decision to use research assistants is to ensure that data collection is done in a short period of time.

Data Collection Techniques

The instruments used for data collection were a questionnaire and document analysis. First of all, for the researcher to meet the logistical concerns of the study and to make sure that ethical issues were addressed, the researcher started the data collection procedure by collecting proposal approval letter from the Dean of Graduate School, Kenyatta University, after the Board of Graduate School’s approval of the proposal. The researcher then wrote a permission letter and attached a copy of Kenyatta University Graduate School research approval letter to the Principals of Colleges of Education in Ghana, in order to obtain a research permit.

The researcher obtained the research permit from the principals to collect data from the selected Colleges of Education in the target population. The researcher trained 2 research assistants in each college that helped to explain how to fill the questionnaire and the purpose of the study. The questionnaire was distributed to student-athletes with the help of the research assistants that were trained in each college. The number of copies of the questionnaire issued out varied from place to place depending on the accessible population available.

Data Analysis and Presentation

The data collected were analysed quantitatively and qualitatively to address the objective of the study. Descriptive and inferential statistics were employed in quantitative data analysis. The descriptive statistics were used to summarize, organize and describe the responses through the use of pie charts and tables. The inferential statistics such as a one-way-analysis of variance (ANOVA) and point-biserial correlation, were used to test the formulated null hypotheses for the study. The aim of using the inferential statistical tools employed in this study was based on the type of hypotheses tested.

Findings and Discussion

Objective: To investigate whether there is a demographic difference in stress coping among student-athletes in Colleges of Education in Ghana

Descriptive Data Analysis

The objective of the study was to investigate whether there is a demographic difference in stress coping and management among student-athletes in Colleges of Education in Ghana. To achieve this objective, both descriptive and inferential statistical analyses were done. The purpose of obtaining the demographic data of the student-athletes in colleges of education in Ghana was to find out if demographic variables differ in stress coping among student-athletes in Colleges of Education in Ghana. The demographic variables of this study were sex, age, level of student-athletes, sex that suffers competitive sports stress most, and sex that well manages stress. Sex refers to the male and female of the respondents. Age denotes how old the respondents are. Level describes the year of study of the respondents.
The findings from the study indicate that majority of respondents 155 (51.84%) were males while females constituted 144 (48.16%) of the respondents. The results infer that more males participated in competitive sports in the Colleges of Education in Ghana than females. Figure 1 presents the results of the sex distribution of the respondents.

The distribution of respondents’ age is necessary because it helped to determine the age groups whose academic performance is mostly affected due to stress from competitive sports. Figure 2 presents findings of the age group of Colleges of Education students who partake in competitive sports in Ghana. The findings indicate that majority of the students 155 (51.84%) of them were 26 years and above whilst 92 (30.77%) were between 20-26 years and 52 (17.39%) were below 20 years. The findings mean that the age group between 26 years and above participates in competitive sports in Colleges of Education in Ghana more than other age groups. Figure 2 below presents the results of the age group of the respondents.

The distribution of respondents’ level of study is imperative to this study because it helped the study to determine the level at which academic performance suffers most due to stress from competitive sports. The results in Figure 3 shows that the majority of respondents 108 (36.12%) were in level 300 while 107 (35.79%) were in level 200. The results also show that 84 (28.09%) were in level 100.
In Figure 4, the majority of respondents 252 (84.28%) agreed that females suffer competitive sports stress than males, 41 (13.71%) disagreed that females suffer competitive sports stress than males while 6 (2.01%) were not sure of the statement. The findings show that females suffer more stress from competitive sports than males.

In Figure 5. A higher number of student-athletes 277 (92.642%) agreed that females manage stress from competitive sports better than males while 22 (7.358%) disagreed with the statement. The findings indicate that though females suffer stress from competitive sports than males they were good at managing the stress than their male counterparts.

### Hypothesis Testing

To find out if the demographic characteristics have a statistically significant relationship with stress coping strategies among student-athletes in colleges of education in Ghana, a set of sub-null hypotheses were formulated from $H_01$. The $H_01$ and sub-null hypotheses are as follows:

- **$H_01$.** Demographic characteristics have no statistically significant relationship with stress management among student-athletes in colleges of education in Ghana.
- **$H_01.1$.** Sex has no statistically significant relationship with stress management among student-athletes in colleges of education in Ghana.
- **$H_01.2$.** Age has no statistically significant relationship with stress management among student-athletes in colleges of education in Ghana.
- **$H_01.3$.** Level has no statistically significant relationship with stress management among student-athletes in colleges of education in Ghana.

The sub-null hypothesis ($H_01.1$) was tested using One-Away ANOVA to establish if the group means were equal at a 0.05 level of significance. Table 2 displays the findings.

### Table 3. One-Way ANOVA Results on Sex and Stress Management among Student-Athletes in Colleges of Education in Ghana

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>6.382</td>
<td>1</td>
<td>6.382</td>
<td>.001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>68.267</td>
<td>297</td>
<td>.230</td>
<td>.999</td>
</tr>
<tr>
<td>Total</td>
<td>74.649</td>
<td>298</td>
<td>.999</td>
<td>.999</td>
</tr>
</tbody>
</table>
Table 3 explains the one-way ANOVA findings which established the relationship between the sex and stress management among student-athletes in colleges of education in Ghana. The findings disclosed that there was a statistically significant mean difference between the groups, $F(297) = 6.382, p = .01, \alpha = .05$ where $p<0.05$. Therefore, the sub-null hypothesis ($H_{0,1.1}$) which states that sex has no statistically significant relationship with stress management among student-athletes in colleges of education in Ghana was rejected. The study, therefore, concluded that sex has statistically significant relationship with stress management among student-athletes in colleges of education in Ghana.

A one-way ANOVA was used to test ($H_{0,1.2}$) which aimed to test whether the relationship between age has statistically significant relationship with stress management among student-athletes in colleges of education in Ghana. The findings are shown in Table 4.

<table>
<thead>
<tr>
<th>Table 4. One-Way ANOVA Results on Age and Stress Management among Student-Athletes in Colleges of Education in Ghana</th>
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</thead>
<tbody>
<tr>
<td>Sum of Squares</td>
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<tr>
<td>----------------</td>
</tr>
<tr>
<td>Between Groups</td>
</tr>
<tr>
<td>Within Groups</td>
</tr>
<tr>
<td>Total</td>
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</tbody>
</table>

Table 4 describes the one-way ANOVA findings which were to establish the relationship between age and stress management among student-athletes in colleges of education in Ghana. The findings showed that there was a statistically significant mean difference between the groups, $F(297) = 10.204, p = .01, \alpha = .05$ where $p<0.05$. The study, therefore, rejected the sub-null hypothesis ($H_{0,1.2}$) which states that age has no statistically significant relationship with stress management among student-athletes in colleges of education in Ghana. The study, therefore, concluded that, age has statistically significant relationship with stress management among student-athletes in colleges of education in Ghana.

The sub-null hypothesis ($H_{0,1.3}$) which was intended to test the relationship between level and stress management among student-athletes in colleges of education in Ghana was tested using one-way ANOVA. The findings are shown in Table 5.

<table>
<thead>
<tr>
<th>Table 5: One-Way ANOVA Results on Level and Stress Management among Student-Athletes in Colleges of Education in Ghana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of Squares</td>
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<td>----------------</td>
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<tr>
<td>Between Groups</td>
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<tr>
<td>Within Groups</td>
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<td>Total</td>
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Table 5 indicates the one-way ANOVA results which were to establish the relationship between level and stress management among student-athletes in colleges of education in Ghana. The results indicated that there was a statistically significant mean difference between the groups, $F(297) = 20.088, p = .01, \alpha = .05$ where $p<0.05$. The study, therefore, rejected the sub-null hypothesis ($H_{0,1.3}$) which states that level has no statistically significant relationship with stress management among student-athletes in colleges of education in Ghana.
colleges of education in Ghana. The study, therefore, concluded that level has statistically significant relationship with stress management among student-athletes in colleges of education in Ghana.

Conclusions and Recommendations

Conclusions
The study made the following important conclusion based on the above findings:

Demographic characteristics have statistically significant relationship with stress management among student-athletes in colleges of education in Ghana.

Recommendations
The following recommendations were made based on the results and conclusions of the study:

- The study found that more males participate in competitive sports than female student-athletes yet female student-athletes are much or prone to sports stress than male sports-athletes.
- It was also realized that female student-athletes are better stress managers than their male counterpart.

Based on these findings, the study, therefore, recommended that;

- Female student-athletes should be given scholarship to motivate other female students to participate in competitive sports,
- Also counseling unit must be set in the colleges of education to help student-athletes especially the males deal appropriately with the stress they encounter.

References


