

Antecedents of the Academic Performance of Student Athletes

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Abstract: This research paper assesses the possible relationship between motivation and academic performance of student athletes and utilized a descriptive design as it investigated the association between two constructs (variables) of student athletes, namely their motivation and academic performance. The research is descriptive correlational research with sixty (60) student athlete respondents coming from the various varsity teams in a selected university in the city of Manila. The descriptive nature and design of the study would require that descriptive statistics and measures of association be utilized to analyze the relationship between the two constructs of the study – motivation and academic performance. The (SAMSAQ) was chosen as the research instrument to collate the necessary descriptive data, upon which a correlation analysis through the Pearson was administered. After the statistical analysis, the following were the conclusion of the study: (1) That there was a perfect positive relationship between responses of the student – athletes in the thirty (30) SAMSAQ items and their GPA's; (2) That the relationship between motivation and academic performance of respondents, as represented by their mean scores of responses and GPA's respectively are not of the same strength and significance for negatively and positively – structured queries of the SAMSAQ; (3) That the mean scores of responses in negative and positive impact queries of respondents and its relationship with their GPA's, representatives of the measures of motivation and academic performance are incomparable as the Likert scale is inverted for the negatively structured queries, where behavior adverse to academic performance is sought.

Keywords— college students; Academic performance; motivation

INTRODUCTION

College Student-Athlete's responsibilities and pressure to perform well both in academics and in sports are significant. Academics are emphasized and student-athletes are expected to balance both their athletic responsibilities and academic workload. Student-athletes are among elite groups of individuals, by the virtue of their status as University's student-athletes, they are more readily recognized in the University. Student-Athletes are considered role models.

Pertinent to a University's Athletics Program and its Student-Athletes', the researcher believed that an appraisal of their academic performance and its importance is a valid scholarly pursuit by the researcher.

The results of this study would be helpful to the Athletic Program Administrators, Professors and Student Affairs Professionals in assisting student athletes to become successful in both athletics and academics.

In addition, the findings of the study conducted could be helpful in identifying student-athletes who have low levels of academic motivation and or performance.

Specifically, this study aims to answer the following questions:

1. What is the relationship between athletic motivation and academic performance of college student-athletes?
2. Do the student-athletes believe that it is interesting and important to do well in their classes?

Hypotheses of the Study

The following null hypotheses were tested for rejection and non – rejection.

Q: Is there a relationship between motivation and academic performance of respondents, as represented by their mean scores of responses and GPAs?

A: It is presumed that there is a significant correlation between the mean scores of responses (representative of motivation) and General Point Average (representative of academic performance).

Conceptual Framework

The study Antecedents of Academic Performance of Student Athletes, which aimed to find out, if there was any relationship between the level of motivation and academic performance of a group of student athletes is summarized into its discrete steps in figure 1 below:

Figure 1: Conceptual Research Paradigm



Method and Techniques of the study

The purported study to appraise the possible relationship between motivation and academic performance of student athletes would be utilizing a descriptive design as it would investigate the association between two constructs (variables) of student athletes, namely their motivation and academic performance.

The descriptive nature and design of the study would require that descriptive statistics and measures of association be utilized to analyze the relationship between the two constructs of the study – motivation and academic performance, thus the Pearson r, to measure their correlation.

According to Galton, Francis, a British Psychologist using questionnaire and survey methods in investigating the capabilities of different groups is an effective measure.

With the stated purpose of the study, the researcher believed that the descriptive design is an ideal method that fits well into the nature of the objective.

This study was conceived with the aim of making inferences regarding the relationship between the motivation of student – athletes and their academic performance.

To administer the correlational study, the (SAMSAQ) was chosen as the research instrument to collate the necessary descriptive data, upon which a correlation analysis through the Pearson r would be administered.

Population and sample of the study

The primary sources of data for the study were the respondents, composed of sixty (60) student-athlete respondents whose responses on the survey questionnaire were analyzed. A secondary source was the data collected through the interviews with the respondents.

All in all, it is data gathered through and from the respondents, which comprise the information analyzed from which the appraisal of the academic performance of student-athletes was based.

Research Instrument

The questionnaire was the instrument used and distributed among the respondents. The Student Athlete's Motivation toward Sports and Academics Questionnaire (SAMSAQ) was used as the main instrument for the study to assess academic and athletic motivation of each student athlete.

Interviews and observation were conducted to justify the validity of the questions asked.

Statistical Tools and Treatment used

After gathering all the distributed questionnaires, the researcher started tabulating the results. Upon accomplishing this procedure, verbal presentation followed to analyze and interpret the data gathered and the descriptive measures were

computed. Thus, Descriptive, and correlational statistics were also used.

The corresponding rating scale for the responses on the survey items had five (5) categories:

1. Strongly Disagree = 1
2. Disagree = 2
3. Moderately Agree = 3
4. Agree = 4
5. Strongly Agree = 5

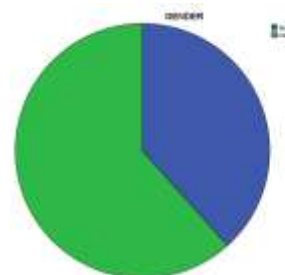
RESULTS

Profile of the Respondents

There were sixty (60) respondents of the study coming from various varsity teams, whose responses were solicited by the thirty (30) – item SAMSAQ study instrument.

Of the sixty (60) student – athlete respondents, there were more males compared to females, which constitute the survey pool; more than sixty one percent (61.7%) were males while more than a third, over thirty – eight percent were female are summarized below:

Figure 2. Gender distribution of respondents



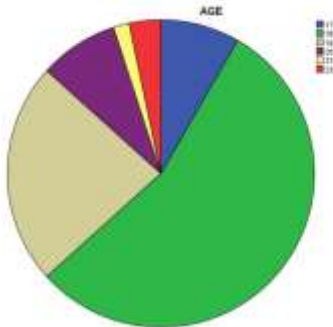
Age Range of Respondents

A significant majority of the study's respondents were eighteen (18) year – old, as they comprise more than half of the total survey population., thirty – three (33) out of the sixty or fifty – five percent (55%).

Almost a fourth of the respondents were 19-year-old, fourteen (14), a little over twenty – three percent (23.3). There was an equal number of freshmen, and senior – age student – athletes, seventeen (17) and twenty (20) year old, with five (5) a piece.

The remaining five percent (5%) was dispersed among the over twenty (20) – year old.

Figure 3. Age Distribution of Respondents

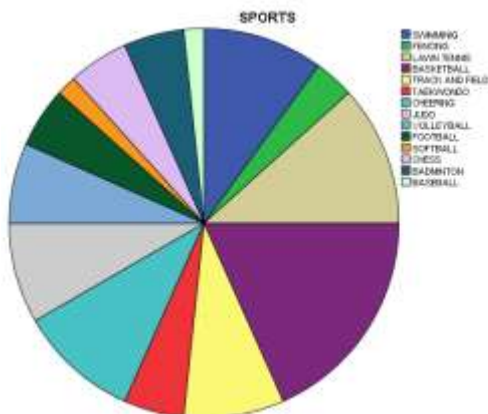


Varsity Groups

The thirty – seven (37) males and twenty – three (23) females, who were among the sixty (60) respondents of the study, were representatives of fourteen varsity teams.

Figure 4. summarizes the distribution of the respondents among the various varsity teams, wherein majority came from basketball (18.3%), lawn tennis (11.7%), and swimming and cheer dance both with six (6) respondents or 10 percent (10%).

Figure 4. Varsity Distribution of Respondents



Summary of SAMSAQ Response

The survey instrument of the study was the Student Athlete Motivation Toward Sports and Academics Questionnaire, which is a thirty (30) item set of questions to assess academic and athletic motivation of each student – athlete and was conducted from an expectancy – value motivation framework.

The SAMSAQ, together with its thirty (30) – item set of questions, and its 5 – point Likert scale of responses administered upon the respondents is summarized below:

Perusal of the responses to the SAMSAQ items, majority of the responses to each item could be found at the upper – end of the 5 – point Likert scale.

In only twelve (12) items, were there less than half of the responses in the higher end of the scale AGREE – (4) and STRONGLY AGREE – (5). In the other eighteen (18) items, no less than half (50%) of the responses are either AGREE or STRONGLY AGREE, and while in most, up to three – fourths or more are in the said range.

Only in items 5, 11,18, 21, and 30 were the responses significantly dominant in the lower – end of the Likert scale of responses – STRONGLY DISAGREE (1) and DISAGREE (2).

Mean Scores of Responses

Three (3) out of the nine (9) lowest mean scores of responses are in the same items, with the lowest total responses in the upper range of the scale. – AGREE (4) and STRONGLY AGREE (5), therein items 11, 18 and 30.

Thus, the lowest mean scores in items 5, 11, 18, 21, 24, 25, 26, 27, 28, and 30 are all below the verbal equivalent of MODERATELY AGREE (3.0).

The over-all average of the mean scores is 3.55 falling between MODERATELY AGREE (3.0) and STRONGLY AGREE (4.0).

Positive and Negative Impact Queries

The SAMSAQ, the instrument of the study had no delineations on which items are affirmatively or negatively structured or phrased, thus a score in the high-end of the Likert Scale of responses does not necessarily mean that the mean scores are positively impacting on either athletic and or academic performance.

There is no delineation in the 30 – item SAMSAQ between positive and negatively – structured queries, therein. Thus, notwithstanding the same Likert scale of responses, because one set of SAMSAQ item is positively impacting and another, negatively impacting, the value of the scale is inverted for a negatively – impacting query. A high scale value response of a response of a respondent to a negatively impacting query would mean an adverse attitude or proclivity, inimical to academic performance.

Thus, a delineation of the two sets of SAMSAQ items and separate correlational analysis on both sets of items.

Positive Impact Queries

To ascertain the correlation between motivation and academic performance only with positive impact queries, only the mean scores of respondents in the said items will be paired with academic performance measure of GPA’s. Therefore, only the mean scores of responses in items: 1, 2, 3, 4, 7, 10, 12, 13, 14, 15, 21, 23, 24, 27, 28, and 29.

Administering the same correlation equation (Pearson Product Moment Correlation) to the paired scores of the sixty (60) student – athletes, the coefficient of correlation (or Pearson r) yielded $r = 0.57$, showing a moderate correlation.

Having the same set of respondents thus, the C.V. for a significance level of .05 is the same that of the first correlation analysis with the whole SAMSAQ items at 0.25464.

With the tabulated value of $r = 0.57$, greater than the c.v. of 0.25464, there is a substantial relationship between the motivation and academic performance of student – athlete respondents, as reflected through their mean scores of responses in the positive impact queries.

To ascertain the degree of variance between positive impact queries on motivation and academic performance, the Pearson r of 0.57 would be squared (r^2), to get the coefficient of determination, thus $r^2 = 0.325$.

With $r^2 = 0.325$ the variance between the mean scores of responses in GPA's is less than one – third, thus there is a variance of 0.675, or more than two-thirds unaccounted for. This means only a third or less is the common variance between the two measures

Negative – Impact Queries

Of the thirty (30) items of the SAMSAQ, fourteen (14) are negatively – structured queries, wherein what is elicited or asked is approbation for a negatively – impacting behavior on academic performance, thus the value of the Likert scale of responses are reversed or inversed.

Items 5, 6, 8, 9, 11, 16, 17, 18, 19, 20, 22, 25, 26 and 30 constituting the negative – impact queries of the SAMSAQ, the mean scores of responses on the said items and responses on the said items and respondent's GPAs are paired to administer the correlation equation (Pearson r).

The tabular value obtained for r is 0.81, which shows a high correlation between respondents' mean score of responses and GPA's.

Having the same set (and number) of respondents, for a level of significance at .05, the critical value (c.v.) of 0.25464, showing a significant correlation between the two measures.

For the degree of common variance between the two measures the correlation coefficient would be squared to get the coefficient of determination: $r = 0.81$, $r^2 = 0.656$. Thus, only over sixty five percent (65%) is the attributable common variance between the respondents mean score of responses and their GPA's. There is over a third of variance (or 34.4 percent) unaccounted for, between the two (2) representative measures.

Academic Performance of Respondents

For a composite value of respondents' academic performance, the weighted averages, or grade-point-averages (GPAs) of respondents were collated vis-à-vis their responses in the SAMSAQ.

Perusal of the tabulated GPAs of respondents there was a rise in GPAs of thirty- nine (39) out of the sixty (60) respondents during the inclusive period that they were already members of their varsity teams.

Of the twenty-one (21) GPA's that did not rise, fifteen remained unchanged for the inclusive semester, while six

(6) showed a decrease from the prior semester.

While the average increases in the thirty-nine (39) respondents GPAs was +0.44, the average decrease in other seven (7) respondents were -0.33.

Collectively, the mean GPA for the initial semester was 2.33, while for the subsequent was 2.09, a difference of 0.24 or an increase of over ten percent (10.3%).

The Relationship between Motivation and Academic Performance of the Student – Athletes.

While the SAMSAQ was able to elicit the descriptive data of the study, thus a profile of respondents and a summary and distribution of their responses was made possible, the set of data is insufficient to infer if there is a relationship between the student – athletes' attitude and motivation and their academic performance.

To be able to make a step towards such inference, two measures representative of the study's constructs – motivation and academic performance, must be called from the collated descriptive data and perform a correlational analysis; the Pearson r Product Moment Correlation is thus applied.

Perusal of the correlational analysis administered on the paired scores, the Pearson r (correlation coefficient) yielded was 1.0 ($r = 1.0$) there was a perfect positive correlation between motivation and academic performance. Thus, in the set of scores, an increase in the mean scores of responses also shows an increase in the GPAs of the sixty (60) respondents of the study.

Testing for significance of the said correlation between the two (2) set of scores, the table of critical values for r is referred to.

For a level of significance set at .05, and sixty (60) respondents the critical value (c.v.) for r is 0.25464 the tabulated value of $r = 1.0$, being greater than the c.v. of 0.25464, thus there is a significant relationship between the respondents' mean scores of responses (motivation) and GPAs (academic performance).

To determine the degree of variance between the two measures, the correlation, coefficient (r) is squared to get the coefficient of determination. (r^2). With $r = 1.0$, r^2 is thus also in the mean score of responses also increases or decreases the GPA values of respondents.

Conclusions

Based on the descriptive data constructed from the summary of the SAMSAQ items and the correlational analysis performed on the said set of data, the following conclusions were drawn:

- That there was a perfect positive relationship between responses of the student – athletes in the thirty (30) SAMSAQ items and their GPAs.
- That the relationship between motivation and academic performance of respondents, as represented by their mean scores of responses and

GPA's respectively are not of the same strength and significance for negatively and positively – structured queries of the SAMSAQ.

- That the mean scores of responses in negative and positive impact queries of respondents and its relationship with their GPA's, representatives of the measures of motivation and academic performance are incomparable as the Likert scale is inverted for the negatively structured queries, where behavior adverse to academic performance is sought.

Recommendations

From the findings of the study, the following are put forth as recommendations to further study on motivation and academic performance of student – athletes.

1. That separate questionnaire be used for positively – impacting and negatively – impacting queries to make comparable assessments on which inclination motivation tending to affect academic performance.
2. That a greater pool of respondents be enlisted to make the findings more statistically significant.
3. That the said study on the relationship between motivation and academic performance be done in a pre and posttest to student – athlete respondents during their inclusive period as varsity.

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