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DEMOGRAPHIC FACTORS AS DETERMINTANT OF ACADEMIC PERFORMANCE AMONG POSTGRADUATE STUDENTS OF NIGERIAN DEFENCE ACADEMY KADUNA

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ABSTRACT

This study examined demographic factors as determinant of academic performance among Postgraduate Students of Nigerian Defence Academy in Kaduna. A cross sectional survey design was adopted using convenient sampling technique with140 participants selected from Postgraduate School Students in Nigerian Defence Academy Kaduna. The first hypothesis was tested usingOne-Way ANOVA. The mean scoresfrom 18-22 years (M= 33.14; SD= 1.864); 23-27 years (M= 30.92; SD= 7.163), 28-42 years (M= 32.54; SD= 6.328 and 48 years above (M= 24.20; SD= 5.848). Further analysis revealed F(3, 136) = 3.015, P < .05 difference in academic performance among postgraduate students of NDA, Kaduna. In other words, the hypothesis was confirmed in this study. This implies that academic performance differs relatively with student's age. The second hypothesis was tested with independent sample t-test where the mean scores of male students (M= 32.37, SD= 6.393) and females (M= 30.75, SD= 6.911) on academic performance. The results further indicates that, male and female postgraduate students have no statistically significantly difference in academic performance; t(138) = 1.424, P > .05NS. This implies that, academic performance of the postgraduate students in NDA was not based on their gender identity. Therefore, this hypothesis was not confirmed.We concluded and recommended that; age is a determinant factor while gender is not to academic performance of postgraduate students in NDA Kaduna. Lecturers at Postgraduate should endeavor to be closed to their students through interaction which will help students to adjust positively to stress in their ways of studying.

Keywords: **Demographic Factors, Determinant, Academic performance, Postgraduate Students, Nigerian Defence Academy.**

Introduction

Academic performance is one of the most vital considerations among students in higher educational level. The academic performance can be illustrated by Grade Point Average (GPA). Despite living in the millennium area where education is accessible to all, there are still some differences in performance among the students. The poor quality of performance was not limited to WAEC and NECO results; Onyiliofo (2008) also reported that the employers of labour complained about the low performance of graduates from the nation's institutions of higher learning. Postgraduate students have numerous impediments to overcome in order to attain ideal academic performance. A number of researches have been

done looking at the correlation of many stress factors that postgraduate students face and the effects of stress on their results. However, a review of literature indicates that not much have been prioritized on the stress-related in this research and as such, there has been a public outcry on the continual decline in the standard of education in the country especially as indicated in the public examinations and the performance of graduates of higher institution in their various areas of employment. The Federal Ministry of Education reported that only an average of 13.8 percent and 20.72 percent of candidates who sat for the West African Senior School Certificate Exanimation (WASSCE) and the National Exanimation Council (NECO) between 2000 and 2005 had five credits including Mathematics and English language respectively.

Okereke and Uzomah (2010) noted the outcry of parents, lecturers and governments over the deteriorating quality of tertiary education in Nigeria. This, according to Azikwe (2004), could be deduced from the result of World University ranking carried out in 2004 where no Nigerian University made it within the best 200 Universities. Dike (2002) opined that the decline in standard of education is continually leading to the production of ill-informed graduates who are unable to contribute positively to the societal development.

A number of factors according to the previous researches accounts for the observed decline in students' performance. For instance, Dike (2002), claimed that the number of Inspectors of Education is grossly inadequate. In the same vein, education stakeholders have blamed the quality assurance agents (Inspectors of Education) for the negative development. Other researchers such as Adiotomeand Olushola (2008), Eze (2008), and Ofoefula (2009), attributed the decline in the standard of education in Nigeria to: unqualified teachers, poor policy formulation and implementation problems, constant strikes, poor study habits, corruption, poorbudgetary allocations to education and lack of study materials and amenities for students.

While a number of studies confirm a no significant effects of demographic characteristics (age and gender) on student performance, Krause (2015) found age and gender to have an effect on academic performance. In another study conducted by, Clarke and Ramsey the results of such research found age to correlate with academic performance in most institutions and programmes of study. In that research it was found that older university students perform better than younger students in certain courses. But in contrasts, in sciences courses like Mathematics and general Science, mature-age students were adversely affected as a result of decline in learning speed with advancement in age, but with the depth of learning increase.

The findings of the study conducted by Khan (2015) revealed that self-esteem and stress are strongly correlated with each other but gender has no significant impact on students' GPA. In another study the results reveal that Male students' more than female students experienced greater stress due to absence of social support. This is as a result of female students having a better social support received from their families compared to male students who are usually left to fend for themselves in schools. It has also been observed that the poor performance is worst among female students. Poor academic achievement among female students has also been attributed to several factors. Eze (2012) viewed this problem as that which is associated with educational development of the country; for example, expansion of schools by the Federal or State government without proper fiscal and academic planning, shortage of

qualified teachers and inadequate provision of essential equipment in all schools. Amao (2014) attributed female backwardness in education to home and marital responsibilities, cultural bias of male's superiority over females, urge for early marriage and pressure from male teachers/lecturers. Bandele (2012) attributed female poor performance to low parental expectation for girls, public regard for women as being inferior, domestic responsibilities, increased poverty level among Africans and insufficient self confidence among girls.

A University student who is not satisfied with his/her study may be prone to stress and a distressed student who has no adequate knowledge of stress or how to cope or manage stressful situations may become more depressed and frustrated. This can lead to poor student-lecturer relationship, low or poor academic performance which may eventually jeopardize the learning objectives (Alao, 214).

Abdulahi (2011) also reported that high level of academic stress, if chronically sustained, can contribute significantly to lowering of people's energy level and also weaken their immune systems. Of great interest to this study also, is to find out, if differences in gender can influence students academically. Gender, in this study, goes beyond male and female perception. It is conceived as a social construct, social attributes and opportunities associated with being male or female and the relationships between women and men and/ or boys and girls as well as the relations between women and those between men. These attributes and relationships are socially constructed and are learned through socialization processes. This is in line with the standing of the social scientists' scholars Eagly& Wood (2011) who did not locate the cause of psychological gender differences in biological dispositions, but argued that these differences mainly result from the contrasting roles of females and males. Babette (2013) asserted that gender determines what is expected of, allowed and valued in a woman or a man in a given context. Gender is the position of men and women in the society. It refers to roles and responsibilities ascribed or allowed to either a man or a woman by the society.

Hobson and Beach (2010) examined the relationship between psychological health and credit unit workload among students. The findings of the study provided that over 60 percent of students were above the threshold level on at least one measure of psychological health. No statistically significant relationship was demonstrated between actual hours of studies and psychological health. A relationship was demonstrated between some perceived academic stressors and actual hours of studies, and between some perceived academic stressors and psychological health. A large proportion of students in a typical academic environment appeared at risk of developing psychological illness.

Moreover, Ayodele (2007) stated that the environment where a child finds himself/herself goes a long way in determining his learning ability and ultimately his academic performance in school. According to Fauto-Sterling(2005) suggested no significant difference in cognitive ability between males and females. Although research results vary widely the following conclusions have been drawn. Males are more abstract learners, females have more anxiety about study success, males are more instructive, and females are more analytical and organized (Bielinskia& Davison, 2003). Okoye (2008) postulated that sex differences may have little or no effect on academic performance, rather, he submits that eventual achievement by learners is predicted more on personal effort than sex variable. However, the overall picture suggests that males and females may learn differently. In the same vein, socio-economic

background is another factor that may affect academic performance of students. This background refers to the parent's educational attainment, occupation, level of income and social class placement. When a child's needs are not properly addressed, his learning ability could be affected due to lack of motivation.

Every educational institution has its various stressors in the learning environment. This may include project writing in the face of limited materials, lack of constant supply of water and power, examinations especially under non-conducive conditions, food insecurity and the likes. Statistics has shown that the major cause of stress in student in Nigeria is the fact that they mix work and studies and Constant examination has been implicated as major cause of stress. Female students are also more likely to be poorly motivated, less productive, less safe at work and vulnerable to social vices such as drug abuse and violence. On the whole, the institutions are less likely to succeed in a competitive market.

Statement of Problem

Base on the decline in the standard of education coupled with the poor qualities of graduates produced in education system has led to public outcry among Nigerians from all walks of life especially in the tertiary institutions. This is continually leading to the production of ill-informed graduates who are unable to contribute positively to societal development. The influence of sex (gender) on academic performance has also been an issue of concern to most researchers. This is because 'gender' appears to have some powerful effect on learning. Demographic factors among student academics; From the researcher's point of view, a common factor to these studies is the apparent concentration on external factors that could adversely affect students' performance without considering possible psychological factors among the students themselves which could be implicated.

Therefore, it is timely to conduct research to examine this particular issue as findings from the present study would benefit various parties in the postgraduate students especially the students and the Academic Affair Department in planning and conducting necessary programmes for the students so that demographic –related factors could be reduced and better academic performance could be achieved by the students.

Without any doubt, education is the single most valuable thing anyone can have. Unfortunately, many a times some students in postgraduate level find it difficult to coup due to the academic stress in the environment. So many literatures have been reviewed on academic performance on the postgraduate level, secondary level, academic stress on married women among many. As a mentioned earlier education is the most valuable thing anyone can have, and for a society to succeed there must be a qualitative education, without qualitative education there will be reduced likely hood of sustainable employment which may lead a failed nation.

The thrust of the study is to determine the demographic factors as determinant of academic performance of Students Nigerian Defence Academy, Kaduna State.

Objectives of the Study

i. To examine age difference in academic performance among Postgraduate Students in NDA.

ii. To determine gender difference and academic performance among NDA Postgraduate Students.

Research Questions

i. What is the age difference in academic stress among Postgraduate Students in Nigerian Defence Academy?
ii. Will there be gender difference in academic performance among NDA Postgraduate Students?

METHODS

Research Design

The research design of this study was cross-sectional survey design. This was considered appropriate for this study as the variables involved in the study was not manipulated but considered retrospectively in the way they occurred. This research explored demographic factors as determinant of academic performance among Postgraduate Students. This means the plan, structure, strategy of investigation, formulated by the researcher to enable her carry out the study.

Sample and Sampling Technique

The sampling size of this study comprised of 140 Postgraduate Students of NDA Kaduna which both male and female were selected using convenient sampling technique from each Faculty (Arts and Social Sciences, Civil Engineering, Management Science, Military Science and Sciences) to participate in the study. This was done in such a way that the questionnaires were issued to the students that were selected. To have an equal distribution of the gender 83 were male while 57 were female.

Method of data collection

A structured, self-administered questionnaire adopted developed as a mode of data collection. The questionnaire comprises of three sections, students' profile; Perceived Academic Stress Scale (PSS); and Stress Factors Survey. In section A, the participants were asked to furnish demographic information such as gender, age, religion affiliation, level, performance and Faculty. This information required to allow matching of data with the data on academic performance and stress during the analysis.

The questions in Section B measured individual's Academic stress using the PSS developed by Cohen, Kamarck, and Mermelstein (1983), using a four-point Likert-type scale ranging from 0 (Never) to 3 (Very Often). The 14-item self-report instruments have demonstrated reputable reliability and validity (Cohen et al., 1983). Items 4, 5, 6, 7, 9, 10, 12 and 13 are positively stated items. Individual scores on the PSS can range from 14 to 70 with lower scores indicating lower perceived stress and higher scores indicating higher perceived stress at that particular point of time. The items can be easily understood and very general in nature that they are free of content specific to any subpopulation groups. Therefore, they are easy to score and can be administered within a short period of time. The Cronbach alpha value of the 14-item PSS is 0.67, 0.78 and 0.76, respectively, indicating acceptable internal consistencies (Norzaidi, Chong &IntanSalwani, Rafidah, 2004).

The questions in Section C measured individual's Academic Performance it was developed by developed by Murali&Salwani (2007) using a four-point Likert-type scale. The data on the

academic performance of students obtained by the researcher by asking the students to provide the information.

Technique for Data Analysis

The study presents the data analysis and correspondent interpretations of the data collated in the study using SPSS v23 software program, where frequencies, percentages, means and standard deviations were used to analysed and described the demographic data while the further analysis using inferential statistics for the test of hypotheses are: Independent Sample t-test was used to test the gender difference on academic and One-Way ANOVA way used to test the mean difference of age on academic performance among postgraduate students of NDA.

Ethical Considerations

The ethics considered in this study were based on professional guidelines and conduct of research principles and they include: The participants all agreed to take part in the study and there was assurance of confidentiality.

RESULTS

Data presentation and interpretation of results

This section presents the data analysis and correspondent interpretations of the data collated in the study using SPSS v23 software program, where frequencies, percentages, means and standard deviations were used to analysed and described the demographic data while the further analysis using inferential statistics for the test of hypotheses are: One-way Analysis of Variance and Independent Sample t-test.

Table 1: Frequency and Percentages of the Characteristics of Participants

VARIABLES		FREQUENCY	PERCENTAGES
Gender	Male	83	59.3
	Female	57	40.7
	Total	**140**	**100%**
Age	18-22 Years	7	5.0
	23-27 Years	48	34.3
	28-42 Years	80	57.1
	48 years above	5	3.6
	Total	**140**	**100%**
Religion	Christianity	53	37.9
	Moslem	87	62.1
	Total	**140**	**100%**
Marital Status	Single	75	53.6
	Married	61	43.6
	Divorced	4	2.9
	Total	**140**	**100%**

Table 1 shows the frequencies and percentages of the characteristics of 140 postgraduate students in NDA (83 males and 57 females). Age: 18-22 years (N= 7, 5%), 23-27 years (N= 48, 34.3%), 28-42 years (N= 80, 57.1) and 48 years above (N= 5, 3.6%). Religion: Christianity (N= 53, 37.9%) and Moslem (N= 87, 62.1%) and Marital Status: single (N= 75, 53.6%), married (N= 61, 43.6%) and Divorced (N= 4, 2.9%).

Data Analysis and Results

Hypothesis 1

There will be a significant age difference in academic performance among postgraduate students of NDA, Kaduna. This hypothesis was tested with One-way analysis of variance in table 2 and 3

Table 2: Means and Standard Deviations of the Difference in Academic Performance According to Age

Age	N	Mean	Standard Deviation
18-22 years	7	33.14	1.864
23-27 years	48	30.92	7.163
28-42 years	80	32.54	6.328
48 years above	5	24.20	5.848
Total	**140**	**31.71**	**6.632**

Table 2 shows the mean and standard deviation scores of the difference in academic performance among postgraduate students based on age difference. The results revealed that students between 18-22 years (M= 33.14; SD= 1.864); 23-27 years (M= 30.92; SD= 7.163), 28-42 years (M= 32.54; SD= 6.328 and 48 years above (M= 24.20; SD= 5.848).

Table 3: Summary of ANOVA Results of the Difference in Academic Performance of the Students Based on Age

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	381.360	3	127.120	3.015	.032
Within Groups	5733.211	136	42.156		
Total	6114.571	139			

Level @ 0.05

Table 3 shows the additional analysis of the difference in academic performance among students based on age difference where the results revealed a statistically significant $F(3, 136) = 3.015$, $P < .05$ difference in academic performance among postgraduate students of NDA, Kaduna. In other words, the hypothesis was confirmed in this study. This implies that academic performance differs relatively with students age.

Hypothesis 2

There will be a significant difference between male and female in academic performance among postgraduate students in NDA, Kaduna. This hypothesis was tested using Independent Sample t-test in table 4.

Table 4: Difference between Male and Female on Academic Performance among Postgraduate Students of NDA, Kaduna

Variables	N	M	SD	df	t-test	Sig.
Male	83	32.37	6.393			
				138	1.424	.157
Female	57	30.75	6.911			

t(138) = 1.424, P> 0.05NS

Table 4, shows the mean and standard deviation scores between male and female postgraduate students in NDA where males (M= 32.37, SD= 6.393) and females (M= 30.75, SD= 6.911) on academic performance. The results further indicates that, male and female postgraduate students have no statistically significantly difference in academic performance; t(138) = 1.424, *P* > .05NS. This implies that, academic performance of the postgraduate students in NDA was not based on their gender identity. Therefore, this hypothesis was not confirmed in this study.

Discussion

The study examined Demographic factors as determinant of academic performance among postgraduate students of Nigerian Defence Academy, Kaduna. Two hypotheses were postulated and tested and the results and discussion are shown beneath.

The first hypothesis stated that there will be a significant age difference in academic performance among postgraduate students of NDA, Kaduna. This hypothesis was tested with One-way analysis of variance. The hypothesis was confirmed significant; thus, we concluded that, there is a statistical significant age difference in academic performance among postgraduate students of NDA, Kaduna. Old age can lead to poor academic achievement, examination malpractice and fear of failure. When a child's needs are not properly addressed, his learning ability could be affected due to lack of motivation. Unqualified teachers, poor policy formulation and implementation problems, constant strikes, poor study habits, corruption, poor budgetary allocations to education and lack of study materials and amenities for students. Supporting the finding in this study Clarke and Ramsey, the result of such research found age to correlate with academic performance in most institutions and programs of study. In that research, it was found that older university students perform better than younger students in certain courses. But in contrasts, in sciences courses like mathematics and general science, mature-age students were adversely affected as a result of decline in learning speed with advancement in age, but with the depth of learning increase. Moreover, Ayodele (2007) stated that the environment where a child finds himself/herself goes a long way in determining his learning ability and ultimately his academic performance in school.

The second hypothesis stated that there will be a significant difference between male and female in academic performance among postgraduate students in NDA, Kaduna. This hypothesis was tested using Independent Sample t-test the fourth hypothesis was not

confirmed significant; thus, we concluded that, there is no statistical significant difference between male and female in academic performance among postgraduate students in NDA, Kaduna. Supporting the finding of this study according to khan (2015) revealed that self-esteem and stress are strongly correlated with each other not but gender has no significant impact in students' GPA. Accordingly, Abdulahi (2011) also reported that high level of academic stress, if chronically sustained, can contribute significantly to lowering of people's energy level and also weaken their immune systems. Of great interest to this study also, is to find out, if differences in gender can influence students academically. Gender, in this study, goes beyond male and female perception. According to Fauto-Sterling (2005) suggested no significant difference in cognitive ability between males and females. Although research results vary widely the following conclusions have been drawn. Males are more abstract learners, females have more anxiety about study success, males are more instructive, and females are more analytical and organized (Bielinskia& Davison 2003). Okoye (2008) postulated that sex differences may have little or no effect on academic performance, rather, he submits that eventual achievement by learners is predicted more on personal effort than sex variable. However, the overall picture suggests that males and females may learn differently. In the same vein, socio-economic background is another factor that may affect academic performance of students. This background refers to the parent's educational attainment, occupation, level of income and social class placement.It is conceived as a social construct, social attributes and opportunities associated with being male or female and the relationships between women and men and/ or boys and girls as well as the relations between women and those between men. These attributes and relationships are socially constructed and are learned through socialization processes.

Conclusion

This study found out about demographic factors as determinant of academic performance among postgraduate students in NDA. The research was guided based on two hypotheses. The first hypothesis was confirmed using one way ANOVA. The second hypothesis was not confirmed, here, independent sample T-test was used. The main objective of the study was students should be able to manage their demographic differences so as to prevent it from getting into their way of studies, and NDA management should be able to inject proper orientation into the school programme which will make the present and future students perform better in their academic performance.

Recommendations

It is on this note we recommended that

i. Parents and teacher should encourage their children/ wards or students to set clear goals, and ensure that they are disciplined and careful to consistently achieve them which will give them a positive academic achievement.
ii. Stress management techniques should be used by students in order to cope with stressors effectively.
iii. Understanding the factors influencing academic performance has should be important and identify by students, lecturers, counselors and psychologists for easy management.
iv. Policy makers should be able to motivate her staff to increase productivity in their work.

v. Students need to adjust passively in their ways of studying and adjusting to stress as this can lead to their psychological and physiological health.

vi. Lecturers should endeavor to be close to their students through interaction outside the classroom.

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