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Effects of Demographic Variables on Academic Dishonesty Among Undergraduate University Students in Public Universities in Ghana

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Abstract:

The study investigated the effects of demographic variables on academic dishonesty among undergraduate university students in public universities in Ghana using a survey-inferential design. The target population for this study was all the final year undergraduate students enrolled on full time programmes estimated at 22,458. Multistage sampling technique was used to select the sample of 1,200 from three public universities in Ghana. The study adapted 19-item Prevalence of Academic Dishonesty Instrument (PADI) developed by de Lambert, Ellen, and Taylor (2003) to collect data. Independent sample t-test and one-way analysis of variance were used to test the hypotheses. The result revealed that there was no statistically significant effect of gender on academic dishonesty. Academic dishonesty was more pronounced among the older students with age group of 33 and above than any other age group of students. It was further ascertained that there existed a statistically significant effect of programme of study on academic dishonesty. It is recommended that university authorities should counsel students especially the older students to keep daily planner and manage their time to maximise their academic success instead of indulging in academic dishonesty for success. University authorities should drive the campaign to sensitise students irrespective of programme on the ill-effect of academic dishonesty..

Keywords: Demographic, academic dishonesty, undergraduate students, public universities

1. Introduction

Educational institutions across the world have important duties and responsibilities in creating an honest society and raising students with good ethical and moral values (Arslanta & Acar, 2008; Levy & Rakovski, 2006). However, Broeklman-Post (2008) lamented that academic dishonesty is becoming more pervasive and sophisticated at every stage of education. According to Wowra (2007), the introduction of information technologies (e.g., the internet, sophisticated cell phones, and wireless) into the education field have worsened 'academic dishonesty' behaviour among students as students employ these in their dishonest activities. Academic dishonest behaviours are also precipitated by students' desire for high marks, time pressure, lack of self-confidence, low self-control, gender issues, social issues and adaptation disorder (Eminoglu & Nartgun, 2009; Harding, Carpenter, Montgomery & Steneck, 2001; Wendy & Bates, 2003). In particular, distrust develops among students, faculty and administration in terms of blame, threats, lawsuits, suicides, murders among others, when academic dishonesty occurs. Academic dishonesty produces scores which are not the precise measure of the true ability of the student. This makes the scores not consistent and dependable, therefore, may not result in any meaningful interpretation and decision making regarding the student.

Some factors have been espoused to contrive and predict the occurrence of academic dishonesty among students in the universities and colleges. One of such factors is demographic characteristics of students (Hrabak, Vujaklija, Vodopivec, Darko, Marusic & Marusic, 2004; Rawwas & Isakson, 2004; Teixeira & Rocha, 2008). In most studies involving college students' gender and academic dishonesty, it was found that male college students were more likely to cheat than female students due to marginally weak ethical principles (Calabrese & Cochran, 1990; Davis et al., 1992; Finn & Frone, 2004; Rawwas & Isakson, 2000; Newstead, Franklyn-Stokes & Armstead, 1996; Whitley, 1998). Jacobson, Berger and Millham (1970) found that women cheated more than men on school assessment. However, when gender of students was used as a control variable in some studies, it was established that gender had no statistically significant effect on academic dishonest behaviours (Anderman & Midgley, 2004; Haines, Diekhoff, LaBeff & Clark, 1986; McCabe & Trevino, 1997).

Age of students was not found not to have a significant effect on academic dishonesty, contrary to some findings that emerged. First, it was established that older students have a lower propensity to cheat than younger students (Bisping, Patron, & Roskelley, 2008; McCabe & Trevino, 1997). The second perspective was that older students are inclined to cheat than younger students in medical schools (Hrabak et al., 2004). When these two schools of thought were subjected to statistical analysis by Teixeira and Rocha (2008), it was established that age as a variable had a significant influence on academic dishonesty. In this study, the effect of age on academic dishonest behaviour of students was examined because the age range of participants varied through the same level (final-year university students) but different mode of

admission (direct and mature) across the universities. Therefore, information about participant's age was collected to determine if age would serve as a significant predictor of academic dishonesty.

Furthermore, studies have consistently shown that students' academic dishonesty varies according to their programmes of study (Bowers, 1964; Harding et al., 2007; McCabe, 1997; Newstead et al., 1996). Harding and colleagues found that engineering students were more likely to engage in academic dishonesty than humanities students. In another study of 31 top-ranked universities in the US involving engineering, business, science, and humanities students on academic dishonesty, business students were ranked the highest with 87%, engineering 74%, science 67% and humanities 63% (Meade, 1992). Teixeira and Rocha (2010) in a cross country study on academic dishonesty, reported that the average magnitude of copying among economics and business undergraduate students is 62% which was quite high. Brown, Weible and Olmosk (2010) also reported that the percentage of academic dishonesty in undergraduate business classes in 2008 was close to 100 percent compared to 49 percent in 1988.

In the light of this, could it be that gender, age, programme of study of the students have something to do with their academic dishonest behaviour? What really is the effect of these demographic variables (gender, age and programme of study) on academic dishonesty among students in Ghanaian universities? This study therefore, investigated the effect of demographic variables on the prevalence of academic dishonesty among undergraduate university students in public universities in Ghana.

1.1. Objectives

The specific research objectives of the study were to:

- Find out the effect of gender on students self-reported academic dishonest behaviour.
- Determine the effect of age on academic dishonesty among university students.
- Ascertain the effect of programme on undergraduates' academic dishonesty.

1.2. Hypotheses

The following hypotheses were generated to guide the study:

- H₀: There is no statistically significant difference of gender effect on academic dishonesty (self-reported).
- H₁: There is a statistically significant difference of gender effect on academic dishonesty (self-reported).
- H₀: There is no statistically significant difference of age effect on academic dishonesty (self-reported).
- H₁: There is a statistically significant difference of age effect on academic dishonesty (self-reported).
- H₀: There is no statistically significant difference of programme effect on academic dishonesty (self-reported).
- H₁: There is a statistically significant difference of programme effect on academic dishonesty (self-reported).

2. Research Methods

The study employed a survey-inferential design to sample the opinion of all final year undergraduate students enrolled on full time programmes in Ghanaian public universities. Among the ten public universities in Ghana, five of them were considered in this study. These were the University of Ghana (UG); Kwame Nkrumah University of Science and Technology (KNUST); University of Cape Coast (UCC); University of Education Winneba (UEW) and University for Development Studies (UDS). The accessible population of 25, 165 encompassed all the final year undergraduate students from the five public universities in Ghana.

Multistage sampling was used to select the sample for the study. The first stage was the selection of three universities (UG, UCC and UEW) out of the five public universities targeted using the simple random sampling, precisely the lottery method. The second stage involved the selection of departments. Purposive sampling was used to select departments for the study by harmonising their characteristics to obtain a representative sample that cut across both the sciences and humanities. Ten departments were selected from 40 academic departments in each of the two universities, namely University of Cape Coast and University of Education, Winneba. However, University of Ghana enrolment statistics was organised around programmes in the university. In all, 10 departments were selected from each of the two public universities- UCC and UEW and 5 programmes were selected from UG. The third stage was the selection of the students from the selected departments/programmes. To this end, a sample size of 1, 200 student-participants were selected for the present study, with 400 participants selected from each university using simple random sampling method.

Given the three universities and different numbers of departments/programmes involved, stratified proportional random sampling was used to obtain a representative sample for the study taking into account the different strata. This was necessary in order to facilitate valid generalisation. The number of departments/programmes sampled from each university and the number of participants in the departments/programmes was calculated using proportional random sampling. The 19-item Prevalence of Academic Dishonesty Instrument (PADI) which was developed by de Lambert, Ellen, and Taylor (2003) and validated by the researcher, was adapted and used to collect data for the study. It is in the Likert format, with responses ranging from 'Never' (4)– 'Very Often' (1). An alpha reliability of .89 was established for this study. Data collection was carried out personally by the researcher. Independent sample t-test was used to test for hypothesis 1. Hypothesis 2 and Hypothesis 3 were tested using One-Way Analysis of Variance (ANOVA).

3.Results

3.1. Effect of Gender on Academic Dishonesty

The concentration here is to find out whether gender has effect on academic dishonesty. The students were first asked to indicate their gender and this data was used to compare their self-reported academic dishonest behaviours. The statistical tool employed to test this hypothesis is independent sample t-test. The results are presented in Table 1.

Gender	Freq.	Mean	Std. dev.	df	t-value	Sig
Male	709	1.63	.394	1198	1.726	.085
Female	491	1.59	.342			

Table 1: Results of Independent Samples T-Test on Gender Effect on Academic Dishonesty
Source: Field Survey, (2016). *P< 0.05 (2-Tailed Significant Results)

As can be observed in the Table 1, comparison of the mean of academic dishonesty (self-reported) of the female and the male respondents suggest that, academic dishonesty is prevalent among male respondents (mean=1.63) than female respondents (mean=1.59). To test whether the difference in the mean score of male and female students is statistically significant as far as prevalence of academic dishonesty is concerned, independent samples t-test performed revealed that there was no statistically significant difference in the mean of self-reported academic dishonesty between male and female respondents [t (1198) = 1.726, p = 0.085]. To further examine the effect of gender on the prevalence of academic dishonesty, the Eta squared was calculated. It was given by the formula.

$$\text{Eta squared} = \frac{t^2}{t^2 + (N_1 + N_2 - 2)}$$

$$\frac{1.73^2}{1.73^2 + (709 + 491 - 2)} = 0.0025$$

Cohen (1988), proposed that effect size of .01 is a small, .06 is moderate and .14 is large effect. The computed effect size of .0025 suggests that only .25% of the variance in the prevalence of academic dishonesty was explained by gender. This showed that the magnitude of the mean difference between male and female respondents was very small. Consequently, the null hypothesis that "there is no statistically significant difference of gender effect on academic dishonesty (self-reported)" is retained.

3.2. Effect of Age on Students' Academic Dishonesty

This section of the study examines the effect of age on undergraduate university students' academic dishonesty by age. The focus here was to ascertain how students' age groups differ with respect to academic dishonest behaviour. A one-way analysis of variance was conducted, and the results presented in Tables 2.

		Sum of Squares	df	Mean Square	F	Sig.
Prevalence of Academic Dishonesty	Between Groups	5.515	4	1.379	10.174	.000*
	Within Groups	161.947	1195	.136		
	Total	167.462	1199			

Table 2: One-Way ANOVA Result on the Differences among Students' Academic Dishonest Behaviour by Age Levels
Source: Field Survey, (2016)

*P< 0.05 (2-Tail Significant Results)

The results show a statistically significant difference at the 0.05 probability alpha level in academically dishonest behaviours for the five age groups [F (4,1195) =10.2, p=.0001]. Based on the results, the null hypothesis "there is no statistically significant different of age effect on academic dishonesty (self-reported)" is therefore rejected. Despite reaching statistical significance, the actual difference in mean score between the groups was quite small. The effect size, calculated using eta square was 0.033 which Cohen (1988) classified as small.

$$\text{Eta Square} = \frac{\text{sum of squares between groups}}{\text{total sum of squares}} = \frac{5.515}{167.462} = 0.033$$

To ascertain which age ranges significantly differ statistically in academic dishonesty, a Post Hoc analysis was conducted using Tukey HSD test and the result is presented in Table 3.

Age of Comparisons	Mean diff.	Sig.
16-20 Vrs 21-24	.012	.998
16-20 vrs 25-28	.050	.828
16-20 vrs 29-32	.53	.908
16-20 vrs 33 and above	.422*	.000
21-24 vrs 25-28	.038	.720
21-24 vrs 29-32	.041	.919
21-24 vrs 33 and above	.422*	.000
25-28 vrs 29-32	.002	1.00
25-28 vrs 33 and above	.460*	.000
29-32 vrs 33 and above	.462*	.000

Table 3: Results of Post Hoc Test on the Comparative Difference of Age Effect on Academic Dishonesty of Students

Source: Field Survey, (2016)

* $P < 0.05$ (2-Tailed Significant Results)

The results of the post hoc comparisons using Turkey HSD test on the comparative difference of age on academic dishonest behaviour indicated that the mean score for age Group 5 (33 and above) ($M=2.03$, $SD=0.856$) was significantly different from Group 3 ($M = 1.57$, $SD = .38$) and Group 4 ($M = 1.57$, $SD = .33$). Group 1 ($M = 1.62$, $SD = .37$), Group 2 ($M = 1.61$, $SD = .34$), Group 3 ($M = 1.57$, $SD = .38$) and Group 4 ($M = 1.57$, $SD = .33$) did not differ significantly from each other. For example, the students with the age range of 33 and above with the mean of 2.3 differ significantly in their engagement in academic dishonest behaviours than the rest of the students from the other age grouping. The results suggest that, the students with the age group of 25-28 and 29-32 did not differ in their academically dishonest behaviours. The rest of the mean difference between other age groups was negligible or existed due to chance.

3.3. Differences among Students' Academic Dishonesty by Programme

The focus here was to ascertain how students' programme groups differ with respect to academic dishonest behaviour. Students were asked to state their programme (Arts, Business, Science and Education). Hypothesis 3 was tested using one-way analysis of variance (one-way ANOVA). The statistics of the test are shown in Table 4.

	Sources of Variance	Sum of Squares	Df	Mean Square	F	Sig.
Prevalence of Academic Dishonesty	Between Groups	2.722	3	.907	6.588	.000*
	Within Groups	164.740	1196	.138		
	Total	167.462	1199			

Table 4: One-Way ANOVA Result on the Differences among Students' Academically Dishonest Behaviour by Programmes of Study

Source: Field Survey, (2016)

* $P < 0.05$ (2-Tailed Significant Results)

The results of the ANOVA test presented in Table 8 on the differences among students' academic dishonest behaviour based on programme show that, undergraduate students differ statistically significantly in academic dishonest behaviour when their classified by programme [$F(3, 1196) = 6.588$, $p < 0.05$]. The effect size is calculated using Eta squared was 0.02 which is small (Cohen, 1998). Consequently, the null hypothesis that 'there is no statistically significant difference of programme effect on academic dishonesty (self-reported) is rejected. To identify the programmes that were responsible for the significant ANOVA, a post hoc test analysis was conducted using Tukey HSD. The results are presented in Table 5.

Programme Comparisons	Mean diff.	Sig.
Arts vrs Business	.043	.563
Arts vrs Education	.111*	.000*
Arts vrs Science	.078	.117
Business vrs Education	.068	.015
Business vrs Science	.035	.819
Education vrs Science	.033	.777

Table 5: Tukey HSD Post Hoc on the Comparative Influence of Programmes on Academic Dishonesty

Source: Field Survey, (2016)

* $P < 0.05$ (2-Tailed Significant Results)

The results of the Post Hoc comparisons using Turkey HSD test on the comparative difference of programme on academic dishonest behaviour indicated that the mean score for Arts ($M = 1.67$, $SD = 0.48$) was significantly different from Education ($M = 1.56$, $SD = .30$). Business ($M = 1.63$, $SD = .33$), Science ($M = 1.60$, $SD = .30$), and Arts ($M = 1.67$, $SD = 0.48$) did not differ significantly. For example, the mean difference (.111) of Arts and Education was statistically significant, indicating that the difference in the mean values of Education students and Arts students was not due to chance. However, the differences in the rest of the programmes (Arts vrs Business, Arts vrs Science, Business vrs Education, Business vrs Science and Education vrs Science) was not statistically significant. These mean differences were due to chance.

4. Discussion

The prevalence of academic dishonesty among males and females does not differ. This agrees with the study results of Anderman and Midgled (2004) who found insignificant effect on self-reported cheating when gender of students was used as a control variable. The finding however, disagrees with Jacobson et al.'s (1970) finding that women cheat more than men. It also debunks the observation that, male adolescents get more involved in academic dishonest behaviours than their female counterparts (Esere & Arewah, 2000). Again, the finding contradicts the study that revealed that male and female students are significantly different in their involvement in academic dishonest behaviours (Yahaya, 1999). One possible explanation for this finding is that, female students are taking equally the same risk to engage in academic dishonesty as their male counterparts. This is an indication that female students are equally venturing into this maladjustment behaviour, perhaps to be at par with their male counterparts. Another explanation for this finding is that in the Ghanaian society it is expected usually that men play leading role in the upkeep of the household but women nowadays are also shouldering responsibilities for the upkeep of the home. In this regard, passing a university examination and acquiring the requisite academic qualification is a matter of "do and die" so, both male and female students at the university go to all lengths to get an excellent university qualification. It seems women are therefore, competing with their men counterpart in academic dishonesty in order to get a well-paid job and perhaps to identify themselves with the slogan "what men can do women can do it better". This might make them breadwinners of their households as well.

From the data, 16-20 and 21-24 age groups have means a little above 1.6 whilst 25-28 and 29-32 age groups have means a little below 1.6 which indicates that the two groups (25-28 and 29-32) differ the least. However, the age group (33 and above) had a mean above 2.0 showing clearly that, they differ significantly in their engagement in academic dishonest behaviour than any other age group. This finding is in sharp contradiction to studies done by Franklyn-Stokes and Newslead (1995) and Haines et al, (1986). Finn and Frone (2004) explained that differences in the levels of motivation, ability, experience, moral obligation and maturity are lower among younger students than older students. These could influence their desire to commit academic dishonest behaviours. The results also contradict the findings of McCabe and Trevino (1997) which established that older students have a lower inclination to commit academic dishonest behaviours than the younger students. This finding also contradicts Harding et al's (2007) study which found that younger students were academically dishonest than the older students.

It is obvious that university students at that age (33 and above) might be preoccupied with responsibilities of managing their family and therefore having less time for academic work. The reple effect is that many of these students miss classes and resort to shortcuts associated with academic infractions. Some older students are likely to involve themselves in academic dishonest behaviours because they have poor time management skills. University work is challenging, and some older students may underestimate the time to complete tasks in the university. Others engage in other activities and by so doing, run out of time and therefore take shortcuts. Sometimes, these students apart from their family responsibilities/engagements at that age, also inappropriately prioritise social or extra-curricular events over their academic work. The problem could range from having issues with their spouse, funeral issues to deal with and ill-health of people in their families. This makes academic dishonest behaviour a thought-out, premeditated act and above all an impulsive act for them.

Arts students differ statistically significantly in the academic dishonest behaviour than any other programme. These findings however, contradicts the study by McCade (1997) where Science and Business students reported the highest rates of academic dishonesty. Harding et al (2007) established that science students were more likely to engage in academic dishonest behaviours than Arts students (Humanities). Teixeira and Rocha (2010) also documented that business school students routinely engaged in academic dishonest behaviours during their university days which disagreed with the current finding. At the same time, Meade (1992) ranked business students high on self-reported levels of cheating, followed by engineering and humanities students. One possible explanation for this finding that Arts students engage in academic dishonest behaviour than other programmes is that, most of the assessment tasks for the Arts programmes are subjective so there is a high likelihood of the students' desire to please the assessor with their responses. This might compel some of them to engage in the act of academic dishonesty to better their performance.

In Ghana, the Education programme students have ready job market irrespective of the degree classification attained; and most of them too are on study leave from the Ghana Education Service (GES) so they might not be desperate to earn high scores during examinations and hence might not engage so much in the dishonest behaviours. Moreover, the Education students take a course in measurement and evaluation and most of them ending up being teachers, perhaps might be aware of the harmful effect of academic dishonesty on the society. More importantly, as educators their academic dishonest behaviour may increase students' predisposition towards academic dishonesty. This may initiate a snowball effect in many higher educational institutions in Ghana. It is argued that teachers are not mere transmitters of knowledge but agents of sound moral development. Classroom interaction with honesty in mind, should be fundamentally and

inevitably moral in nature as teachers have the responsibility and authority in upholding and maintaining academic integrity.

5. Conclusion and Recommendations

Among the undergraduate students in public universities in Ghana, gender as a control variable did not play a role in their academic dishonest behaviour. Age of the students had influence on students' academic dishonesty with older students likely to indulge in academic dishonesty than any of the age group. It is believed that this might result from pre-occupied responsibilities of managing their family, affording them less time for actual study. Again, Arts students are more likely to engage in academic dishonesty. This might be due to the subjective nature of their assessment tasks. Based on the strength of the findings and conclusion, it is recommended that University authorities should introduce core course in measurement and evaluation or examination ethics for all students irrespective of programme, to acquaint students with the negative effects of academic dishonesty. University authorities, academic counsellors and counselling centres in the universities should organise seminars, workshops and other educative and sensitisation programmes for students, especially older students to keep a daily planner to assist in scheduling time for each academic work as well as other family responsibilities. Time management when capitalised on may yield to the benefit of these older students to maximise their academic success and by so doing minimise, if not eradicate, academic dishonesty.

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