

# **Supervision Response Differential by Cadre of Supervisors among Agricultural Postgraduate Students in Southwestern Nigeria**

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## **Abstract**

The study investigated supervision response differential by cadre of supervisors among agricultural postgraduate students in south western Nigeria. Using structured questionnaire, data was collected from 120 agricultural graduate students across federal universities in south western Nigeria through a multi stage sampling procedure. Data was collected on respondents' personal characteristics, extent of satisfaction with supervision, quality of supervision exposed to, constraints faced in the course of supervision and behavioural response to supervision. Data collected were summarized using descriptive statistics such as frequencies, percentages and means while independent sample t-test was used to test the hypotheses. Mean age of respondents was 32.5+ 6.99years. Half or more of the respondents' (61.7%) were male, Christians (79.2%), single (50.0%), graduated with second class upper division in their first degrees (59.2%) and were supervised by professors (45.8%). More than half (56.7%) of the respondents indicated high level of satisfaction with their supervision. Students supervised by lecturer cadre supervisors however indicated better extent of satisfaction (66.7%) than others supervised by professors (55.4%) and senior lecturers (54.1%). Quality of supervision received was high among only 56.7% of the respondents. Also, more respondents supervised by supervisors of lecturer cadre (61.1%) indicated high quality of supervision received than supervisees of professors (56.9%) and senior lecturers (54.1%). Furthermore, behavioural change was high among a fair proportion (58.3%) of the respondents. While behavioural change was high among most supervisees of

professors (64.6%) and senior lecturers (56.8%), it was however, low among majority (61.1%) of supervisees of lecturer cadre supervisors. Most severe of the constraints faced by supervisees include autocratic supervisors ( $\bar{x}=1.55$ ), imposition of research topic ( $\bar{x}=1.53$ ) and poor contact with supervisors ( $\bar{x}=1.43$ ). Immoral demands from supervisors ranked least among the constraints faced ( $\bar{x}=1.09$ ). There was no significant difference in behavioural change observed between students supervised by different cadre of supervisors ( $F= 1.542$   $p\leq 0.05$ ). Thus, while lower cadre supervisors were more responsive to supervisory responsibilities, the higher cadre supervisors impacted more, though marginal behavioural change impart on their supervisees.

**Keywords:** Supervision response, postgraduate students, supervisor, quality of supervision, supervision constraints.

## Introduction

Universities exist as a place to teach, carry out research and engage in community service, as knowledge centres and major contributors to the manpower resources of a nation's economy (Ogbulogo *et al*, 2014). In contemporary times where social structures, as well as values and attitudes are changing; competition is growing, people are becoming increasingly mobile while the global economic centre of gravity is changing at a speed not seen before; governments have to address problems such as climate change, potential pandemics and food security that are global in scope and require a coordinated global response. Nation states are subject to competing forces based on complex political, economic, religious, geographic and historical factors compounded by social networking and other new technologies. In all these, universities remain the vanguard of engaging in effective research so as to help in the formulation and implementation of policy and also improving the frontiers of knowledge thereby, translating to sustainable development of the nation as a whole. It is therefore imperative that the quality of researches carried out is that which can meet the ever increasing and multifarious demands of the society.

The world over, the purpose and role of a university education is not to produce students equipped to move into a particular job or type of job; it is to prepare students to live in a complex and unpredictable world in which they will need to respond to situations, challenges and opportunities,

which are unpredictable, take advantage of them; and produce graduates that are flexible, resilient and have the self-confidence necessary to take responsibility for their own actions. One major way this role is achieved is through carrying out research. Jones (2009) affirmed this position when he asserted that research particularly at graduate level, plays a very important role in education. In Nigeria and indeed in most parts of the world, more emphasis is laid on quality of research output at graduate level than at the lower levels due to the strategic roles of higher level education is expected to play in entrepreneurship development, technological and political advancement of any people (UNESCO, 1998). Good research is also expected to serve the purpose of policy formulation, implementation and also improvement of knowledge frontiers; thus providing an appropriate springboard for development.

Therefore, competitiveness exists globally in this aspect of education, in higher degrees, particularly in terms of quality of research output, but, this is not the case in most developing countries' education sector. For instance, in Nigeria, it has been observed that graduate research students often experience difficulties, which delay or prevent them from completing their dissertations or even when they are able to do this, it is usually of a low quality (Lessing and Schulze, 2003). Over the years, there has been a trend that portends the dwindling of quality research in spite of the increasing number of academia. It is therefore not surprising that there is poor correlation between the high volume of research turn-outs from Nigeria's tertiary institutions and impact on the nation's numerous economic challenges, especially in the agriculture sector, which perhaps remain her only alternative for foreign exchange earnings following the current global drop in crude oil prices. This systematic decline in the quality of Nigeria education system is believed to have started in the 1980s (Abari and Abdulazeez, 2016) and it is seemingly on the rise in the present day. Arguably, the bane of education quality in Nigeria largely rests on the low quality of research outputs churned out year in year out, which have no or dismal impact on the nation unlike ways that research outputs have driven development in other countries.

According to Hockey (1994), a research product of high quality requires bright, dedicated and well-trained students as well as effective supervision. Helm (1989) also noted that the dwindling quality of research output is a result of problems in major aspects of research such as design,

data collection, processing and the report writing especially among students.

On the scope of finding solutions to the problems of poor supervision as a fundamental root cause of the aforementioned challenges in the Nigerian education sector, there exists the schools of thought that academics of lower cadres are better in research supervision and teaching than higher cadre professionals. This is due to the perception that lower cadre lecturers are usually young, and so, are more energetic, enthusiastic, friendly and are ready to make impact in order to gain recognition early in their career. On the contrary, the recent approval of the increase in the retirement age of senior academic staff in Nigerian universities from 65 to 70 years is predicated on the argument that their wealth of experience, exposure and mastery of the profession are more relevant for the overall goal attainment of the Nigerian education sector among which is quality research outputs. These schools of thought thus assumes that cadres of lecturers involved in the supervision of students might be a contributory factor to effectiveness of supervision in the long run, and consequently, the quality of the output of students' research, and the impact such students are able to make on their societies. The need to move these thoughts beyond rhetorics through the provision of relevant empirical justification for informed future actions in the Nigerian education sector informed this study.

### **Objectives of the study**

The general objective of the study is to determine how agricultural postgraduate students in southwestern Nigeria differ in their responses to supervision according to the cadre of their supervisors. The specific objectives are to:

- evaluate the perceived quality of supervision received by the respondents,
- determine the extent of respondent's satisfaction with their supervision experience,
- identify the constraints the respondents faced in the course of their supervision,
- ascertain the extent of behavioural change (knowledge, attitude and practice: ability to conduct independent research) achieved by students through supervision; and
- determine the background characteristics of the students.

### **Hypothesis of the study**

There is no significant difference in behavioural change observed among the students supervised by different cadre of lecturers.

### **Methodology**

The study was conducted in southwestern Nigeria, which comprises six states: Ekiti, Lagos, Ogun, Ondo, Osun and Oyo. A multi stage sampling procedure was used for the study (Table 1). For the first stage, simple random sampling technique was used to select three states (Oyo, Osun and Ogun) from six states in southwestern Nigeria. Federal universities within the states offering courses in agricultural science at the postgraduate level were further selected purposively as they are the pioneers of agricultural graduate programmes in the states and they are also recognised for human capacity development in the field of agriculture in Southwestern Nigeria. These universities include: Federal University of Agriculture Abeokuta (FUNAAB), Obafemi Awolowo University (OAU) and University of Ibadan (UI). Simple random sampling technique was also used to select 50% of the departments in the Faculty of Agriculture from each selected institution in UI and OAU, and College of Animal Sciences in FUNAAB. List of registered postgraduate agricultural science students in the selected institutions was collected from the PG coordinator in each of the selected departments. The list was stratified into two categories with the help of the coordinators as: (i) Category A; students whose study programmes were adjudged to be less than 60% complete; and (ii) Category B; students adjudged to be at 60% and above to completion stage. Proportional sampling technique was afterwards used to select 50% of the students at Master of Science (M.Sc.), Mphil/Ph.D, and Post graduate diploma programmes from the category B students with due recourse to their supervisors cadre, to give a total sample size of 128 respondents (Only 120 questionnaires were however returned, processed and reported in this study).

The data collection instrument used was structured questionnaire, which comprised of open and close ended questions. The first section of the questionnaire contained the personal and background characteristics of the respondents while the second part of the questionnaire contained statements on measures of respondents extent of satisfaction with their supervision, quality of supervision to which the students were exposed, extent of behavioural change (Knowledge, attitude and practise: ability to

conduct independent research) achieved by students through supervision and the constraints that respondents face in the course of their supervision. Respondents were provided with a list of statements from which they were asked to indicate their level of satisfaction with supervision on a three-point scale of very satisfied, moderately satisfied and not satisfied. Responses were assigned scores of 3, 2 and 1, respectively. The mean score was used to categorise respondents into high and low levels of satisfaction. Statements on quality of supervision were adapted from existing indicators in literature and respondents reacted to them on varied scales. These statements covered the expected areas of academic training and development such as frequency and mode of contact with supervisor, the nature of decision making process on supervisee's research work, exposure to opportunities for research competence development such as undertaking peer review, attending seminars, workshop and conferences. Supervision quality index was generated and used to adjudge the quality of supervision, which respondents were exposed to as good or poor. In order to ascertain the severity of constraints being faced, respondents were provided with a list of possible constraints from which they ticked as severe, not severe or not at all a constraint. The mean score for each constraint item generated was used to rank the constraints according to their severity among the respondents. Having been under academic supervision for at least eighteen months, behavioural changes are expected, as a result of the impact of supervision. Respondents were therefore asked to rate themselves on a scale of 1-5 (1= Poor, 2-Average, 3- Good, 4-Very good, 5- Excellent), on how well they could perform basic research tasks like the ability to formulate research problems, ability to apply problem solving skills to obtain realistic valid solutions, ability to carry out independent research, improve planning and utilization of resources, help organizations to make optimal decisions, conduct experiment or collect data, perform data analysis, draw inferences and implications from data, interpretation of data to draw valid conclusions and ability to communicate effectively. Additional variables such as conference attendance, grants received and paper publications were also incorporated to gauge a respondent's behavioural responses to supervision. These were identified as the expected competencies graduate students should have learned (UK GRAD Programme, 2001; Melin and Janson 2006).

The data collected were analysed using simple frequency counts, percentages, mean and ranking as well as t-test inferential statistic. For the purpose of this study, supervisors below Senior Lecturer ranks were

denoted as Lecturer cadre supervisors, Senior Lecturer ranks were denoted as Senior Lecturer while Readers and Professors were denoted as Professorial Cadre supervisors.

**Table 1: Sampling procedure for the study**

| States randomly selected                                                                 | Oyo        | Osun | Ogun             |
|------------------------------------------------------------------------------------------|------------|------|------------------|
| Universities Purposively selected                                                        | UI         | OAU  | FUNAAB (COLANIM) |
| No. of agric-related departments                                                         | 7          | 6    | 5                |
| Departments randomly selected (50%)                                                      | 4          | 3    | 3                |
| No. of PG (PGD, Mphil/PhD) on enrolment and M.Sc. students rounding off their programmes | 152        | 31   | 72               |
| No. of PG students selected (50%)                                                        | 76         | 16   | 36               |
| Total no. of respondents sampled                                                         | <b>128</b> |      |                  |

## Results and discussion

### *Respondents' personal characteristics*

Table 4.1 shows that more than half of the respondents (52.5%) were less than 30 years of age with the mean age of 32.5+ 6.99 years, suggesting that most of the graduate students in the study were youths. This could be adduced to the high rate of unemployment in Nigeria, which had resulted in increased application for graduate studies. This is expected to be advantageous for the nation as youth are able to use their vibrant phase of life in carrying out quality research. Majority (61.7%) were male suggesting that agricultural post graduate programmes in Southwestern Nigeria are largely dominated by males. A great proportion (79.2%) were Christians, while others (20.8%) were Moslems. Also, worthy of note is that while 49.2% of them were married, 50% of them were single. Invariably, most of the agricultural graduate students are youths and this should positively impact on the rigour needed for qualitative research.

More than half of the respondents (59.2%) had second class upper class degree while a few (15.0%) had first class degrees. It can also be inferred from this study that majority of the enrolees for graduate studies in agriculture are above average academically, suggesting that they have potentials for carrying out qualitative research provided the environment is conducive. This is in line with the assertion of Dzulkifli (2012) who linked students' quality of education and supervisory qualities of lecturers to students' academic achievement.

On the basis of supervisor cadre, professors had the highest percentage of supervisees (45.8%), followed by senior lecturers (30.8%) and then lecturers (15.0%). It is therefore evident from the result that the numbers of students allocated to supervisors decreased from the highest to the lowest cadre. This result could be attributed to the fact that higher cadre lecturers are generally perceived to have better capacity for student's supervision than lower cadre colleagues.

**Table 2: Personal characteristics of respondents**

| Variables                  | F  | %    | Mean  | SD   |
|----------------------------|----|------|-------|------|
| <b>Age</b>                 |    |      |       |      |
| ≤30                        | 63 | 52.5 | 32.51 | 6.99 |
| 31-40                      | 38 | 31.7 |       |      |
| 41-50                      | 18 | 15.0 |       |      |
| Above 50                   | 1  | 0.8  |       |      |
| <b>Sex</b>                 |    |      |       |      |
| Male                       | 74 | 61.7 |       |      |
| Female                     | 46 | 38.3 |       |      |
| <b>Religion</b>            |    |      |       |      |
| Christianity               | 95 | 79.2 |       |      |
| Islam                      | 25 | 20.8 |       |      |
| <b>Marital status</b>      |    |      |       |      |
| Married                    | 59 | 49.2 |       |      |
| Single                     | 60 | 50.0 |       |      |
| Separated                  | 1  | 0.8  |       |      |
| <b>Class of degree</b>     |    |      |       |      |
| Second class lower         | 31 | 25.8 |       |      |
| Second class upper         | 71 | 59.2 |       |      |
| First class                | 18 | 15.0 |       |      |
| <b>Cadre of supervisor</b> |    |      |       |      |
| Lecturers                  | 18 | 15.0 |       |      |
| Senior lecturers           | 37 | 30.8 |       |      |
| Professors                 | 55 | 45.8 |       |      |

*Respondent's extent of satisfaction with their supervision*

Table 3(a) on the respondents' reaction to statements on satisfaction with their supervision shows that respondents were generally satisfied with most of the items on the satisfaction scale. Respondents indicated overwhelming satisfaction with statements on supervisors' receptiveness ( $\bar{x}=2.67$ ), their allocation to supervisors ( $\bar{x}=2.63$ ), level of communication between them and supervisor ( $\bar{x}=2.61$ ) and supervisors' responsiveness to the supervisees' needs ( $\bar{x}=2.58$ ). On the other hand, statements such as

supervisor's support ( $\bar{x}$ =2.18), exposure to skills of writing, presentation and publishing ( $\bar{x}$ =2.37) and supervisors' consistency at correcting student's write-ups ( $\bar{x}$ =2.38) ranked lowest on the respondents' satisfaction rating scale.

Using this data as a proxy for gauging the supervisors' response to supervisory roles, it can be inferred that while supervisors maintained good interpersonal relationships with their supervisees, more important aspects of supervision aimed at developing the supervisees' ability for independent research through relevant exposure in writing, presentation and publishing of articles or research findings still requires improvement.

Table 3 (b) reveals that more than half (56.7%) of the respondents indicated a high level of satisfaction with their supervisor's style. Students supervised by lecturer cadre supervisors however indicated better extent of satisfaction (66.7%) than others supervised by professors (55.4%) and senior lecturers (54.1%). This suggests that satisfaction indicators such as supervisors' receptiveness towards students, level of communication and responsiveness to students needs decreases with supervisor's cadre. In other words, lower cadre lecturers appear to be more readily available and accommodating towards supervisees when compared with the higher cadre colleagues. This finding could be attributed to the relatively higher zeal, energy and enthusiasm in the academia that younger lecturers often time show especially when newly employed. This zeal and enthusiasm in most instances diminishes with longer period in the system (Simon, 1996). Another probable reason is the fact that higher cadre lecturers e.g. Professors are often engaged with administrative responsibilities, which tend to limit the time devoted to their expected teaching and research responsibilities. However, while Garcia-gallego *et al.* (2015) reposed this view by reporting a negative correlation between university lecturers work load and teaching/research quality, James *et al* (2007) argued that older workers are more positively perceived in terms of their capabilities than the younger ones.

**Table 3(a): Distribution of respondents based on extent of satisfaction with their supervision**

| Statements                                                        | VSF (%)   | MSF (%)   | NSF (%)   | Mean |
|-------------------------------------------------------------------|-----------|-----------|-----------|------|
| Procedure for supervisors' allocation                             | 58 (48.3) | 52 (43.3) | 10 (8.3)  | 2.40 |
| Allocation to supervisor                                          | 81 (67.5) | 33 (27.5) | 6 (5.0)   | 2.63 |
| Supervisor's receptiveness                                        | 84 (70.0) | 32 (26.7) | 4 (3.3)   | 2.67 |
| Supervisor's responsiveness to supervisory needs                  | 78 (65.0) | 34 (28.3) | 8 (6.7)   | 2.58 |
| Level of communication between supervisor and supervisee          | 80 (66.7) | 33 (27.5) | 7 (5.8)   | 2.61 |
| Communication flow between supervisor and supervisee              | 67 (55.8) | 49 (40.8) | 4 (3.3)   | 2.53 |
| Supervisor's contact with supervisee                              | 61 (50.8) | 50 (41.7) | 9 (7.5)   | 2.43 |
| Supervisor's level of support                                     | 46 (38.3) | 50 (41.7) | 24 (20.0) | 2.18 |
| Supervisor's disposition to review work                           | 66 (55.0) | 44 (36.7) | 10 (8.3)  | 2.47 |
| Supervisor's consistency with making correction                   | 57 (47.5) | 51 (42.5) | 12 (10.0) | 2.38 |
| Supervisor's mode of making corrections                           | 61 (50.8) | 48 (40.0) | 11 (9.2)  | 2.42 |
| Exposure to skills of writing, presenting and publishing journals | 57 (47.5) | 50 (41.7) | 13 (10.8) | 2.37 |

VS- very satisfied, MS- moderately satisfied, NS- not satisfied

Figures in parentheses are percentages

**Table 3 (b) Categorization of respondents' supervision satisfaction based on the cadre of supervisors**

| Level of satisfaction | Score | Cadre of Supervisors |                 |           | All respondents | Mean + SD  |
|-----------------------|-------|----------------------|-----------------|-----------|-----------------|------------|
|                       |       | Lecturer             | Senior Lecturer | Professor |                 |            |
| Low                   | 17-29 | 6 (33.3)             | 17 (45.9)       | 29 (44.6) | 52 (43.3)       | 29.65±5.31 |
| High                  | 30-36 | 12 (66.7)            | 20 (54.1)       | 36 (55.4) | 68 (56.7)       |            |

\*Figures in parentheses are percentages

### Quality of supervision received

Tables 4 (a) and 4 (b) shows the reactions of respondents to statements eliciting information on how qualitative their supervision experience had been. An important finding from Table 4 (a) is the overwhelming agreement by respondents (87.5%) that supervisors take interest in their non-academic welfare either regularly or occasionally. Interest of supervisors beyond the student's research work to include his/her welfare in other important areas of life such as family, work, health etc. is very important in order to build confidence and create conducive knowledge sharing atmosphere between the students and supervisors. This is more so important as studies have shown that the success or failure of students in their work is largely dependent on some key factors among which is

relationship with supervisor (knowels, 1999; Mbakwem and Okeke, 2007; Awe, 2009).

In Table 4(b), it was found that 56.7% of the respondents were supervised by a supervisory committee. Implicitly, 43.3% of the respondents were solely supervised by an individual. Use of supervisory committee for overseeing students research work particularly at the postgraduate level study has been adjudged as best practice for all stakeholders (Chiappetta-Swanson and Watt, 2011). Apart from its few associated challenges, the approach enhances robustness of research output, fosters interdisciplinary, multidisciplinary and transdisciplinary collaboration among researchers. In addition, a report by the University of British Columbia has established a relationship between the use of supervisory committee and timeliness of completion of research work (<http://exp.med.ubc.ca/current-students-2/supervisory-committee/>). This may perhaps explain the untimely completion of research work by 37.6% of the respondents (Figure 1).

On the whole, Table 4 (c) reveals that quality of supervision received by 56.7% of the respondents was high. This proportion with high quality supervision is however below the expected critical mass needed to promote sustainable development in any nation. Also, more respondents supervised by supervisors of lecturer cadre (61.1%) indicated high quality of supervision exposure than supervisees of professors (56.9%) and senior lecturers (54.1%). The foregoing shows a similar trend with findings on respondent's satisfaction with their supervision in Table 3 (b).

**Table 4 (a): Distribution of respondents based on the quality of supervision exposed to**

| Statements (Paraphrased)                                                                       | Response options |                    |             | Mean |
|------------------------------------------------------------------------------------------------|------------------|--------------------|-------------|------|
|                                                                                                | Always F (%)     | Occasionally F (%) | Never F (%) |      |
| 1 Supervisor takes final decisions at all times                                                | 36 (30.0)        | 78 (65.0)          | 6 (5.0)     | 2.60 |
| 2 He allows students to take final decisions while offering guidance                           | 55 (45.8)        | 58 (48.3)          | 7 (5.8)     | 2.40 |
| 3 Supervisor consciously link students to other people that can improve his/her research       | 36 (30.0)        | 61 (50.8)          | 23 (19.2)   | 2.10 |
| 4 Supervisor gives articles or other students work to supervisee for peer review and editorial | 22 (18.3)        | 78 (65.0)          | 20 (16.7)   | 2.01 |
| 5 Supervisor builds up on previous correction of research work.                                | 71 (59.2)        | 45 (37.5)          | 4 (3.3)     | 2.56 |
| 6 He encourages and monitor attendance at seminars and conferences or workshop                 | 54 (45.0)        | 45 (37.5)          | 21 (17.5)   | 2.27 |
| 7 Supervisor give challenging tasks to supervisee                                              | 60 (50.0)        | 49 (40.8)          | 11 (9.2)    | 2.41 |
| 8 He delegates supervisee to present papers                                                    | 28 (23.3)        | 51 (42.5)          | 41 (34.2)   | 1.89 |
| 9 Supervisor's interest in non-academic welfare of supervisee                                  | 82 (68.3)        | 23 (19.2)          | 15 (12.5)   | 2.83 |

*\*Figures in parentheses are percentages*

**Table 4 (b) Distribution of respondents based on the quality of supervision exposed to**

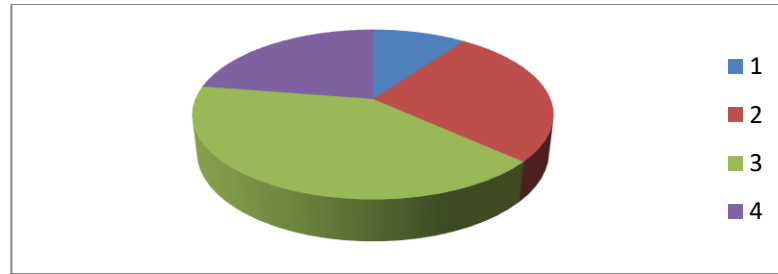
| Statements (Paraphrased)                                            | Response options |           | Mean |
|---------------------------------------------------------------------|------------------|-----------|------|
|                                                                     | YesF (%)         | NoF (%)   |      |
| 10 Existence of supervisory committee                               | 68 (56.7)        | 52 (43.3) | 0.57 |
| 11 Supervisor being curious about deviations from established plans | 90 (75.0)        | 30 (25.0) | 0.75 |
| 12 He exposes supervisee to academic journals                       | 87 (72.5)        | 33 (27.5) | 0.73 |
| 13 Face to face contact with supervisor                             | 117 (97.5)       | 3 (2.5)   | 0.97 |
| 14 Contact through phone                                            | 72 (60.0)        | 48 (40.0) | 0.60 |
| 15 Contact through social media                                     | 28 (23.3)        | 92 (76.7) | 0.23 |

*\*Figures in parentheses are percentages*

**Table 4 (c) Distribution of respondents based on quality of supervision received by cadres of supervisors**

| Quality of supervision | Score | Cadre of Supervisors |                       |                | All respondents | Mean+ SD   |
|------------------------|-------|----------------------|-----------------------|----------------|-----------------|------------|
|                        |       | LectureF (%)         | Senior Lecturer F (%) | ProfessorF (%) |                 |            |
| Low                    | 18-31 | 7 (38.9)             | 17 (45.9)             | 28 (43.1)      | 52 (43.3)       | 31.54±5.13 |
| High                   | 32-41 | 11 (61.1)            | 20 (54.1)             | 37 (56.9)      | 68 (56.7)       |            |

*\*Figures in parentheses are percentages*



**Figure 1: Distribution of respondents based on time of completion of thesis**

- 1- Beyond maximum period stipulated for completion (10.0%)
- 2- Beyond minimum period stipulated for completion (26.7%)
- 3- Just on minimum time of completion (40.8%)
- 4- Before the minimum required time of completion (22.5%)

**Behavioural change achieved among the respondents due to supervision (perceived effectiveness of supervision)**

Table 5 (a) shows that most of the respondents were above average on all the items tested on the scale. More positive improvement was indicated for outcomes such as ability to communicate effectively ( $\bar{x}=4.41$ ), conduct experiment or collect data ( $\bar{x}=4.16$ ) and formulate research problems ( $\bar{x}=4.08$ ). Respondents abilities to plan and utilize resources ( $\bar{x}=3.95$ ), carry out independent research ( $\bar{x}=3.90$ ) and perform data analysis ( $\bar{x}=3.78$ ) ranked least on the scale, though not poorly achieved by the respondents. Figures 2, 3 and 4 however suggests that these improved abilities or capacity have not been translated to practice or better still, put to use by a considerable proportion of the respondents. For instance, about 16.7% of the respondents did not attend any academic conference all through their period of supervision (Figure 2). Also, majority (66% and 53%) of the respondents did not submit any abstract for conferences nor any articles for publishing in journals (Figures 3 and 4 respectively). This is perhaps the greatest tragedy of development in most developing countries where competencies acquired by trained professionals are poorly put to use particularly in areas where they are needed. The reason for this is not far-fetched as several studies have shown that increased enrolment for graduate studies in Nigeria and Asia is not mainly as a result of interest in academic work or for professional improvement, but to acquire more paper qualifications in order to gain competitive advantage over others in the labour market (Fadairo and Ogundipe, 2016; Yang, Lin and Lin, 2011).

Furthermore, Table 5 (b) presents the summary of all behavioural change indicators used in this study according to cadre of the respondents' supervisors. Behavioural change was above average among a fair proportion (58.3%) of the respondents. However, while behavioural change was high among most supervisees of professors (64.6%) and senior lecturers (56.8%), it was however, low among majority (61.1%) of supervisees of lecturer cadre supervisors. This finding represents a shift in the trends observed in Figures 3 (b) and 4 (c) where students of lecturer cadre supervisors were better in terms of satisfaction with their supervision and exposure received from supervision than students of professorial cadre supervisors. One can therefore infer that while professors are less able to satisfy the expectations of students in terms of attention, robust interpersonal relationship and so on; they are more able to impart improved capacities on their supervisees more than their lower cadre colleagues. The reason for this may not be unconnected with the wealth of experience in the academic profession possessed by most professors. The foregoing therefore gives credence to the government's approval of increased years of service for professorial cadre lecturers from 65 to 70 years, which is premised on their high relevance in the system (Daily Trust Newspapers, 2012).

**Table 5 (a): Distribution of behavioural change (perceived) among the respondents**

| Statements                                                                  | 1F (%)  | 2F (%)   | 3F (%)    | 4F (%)    | 5F (%)    | Mean |
|-----------------------------------------------------------------------------|---------|----------|-----------|-----------|-----------|------|
| Ability to formulate research problems                                      | 5 (4.2) | 2 (1.7)  | 5 (12.5)  | 55 (45.8) | 43 (35.8) | 4.08 |
| Ability to apply problem solving skills to obtain realistic valid solutions | 1 (3.3) | 4 (3.3)  | 1 (16.7)  | 52 (43.3) | 10 (33.3) | 4.00 |
| Ability to carry out independent research                                   | 7 (5.8) | 4 (3.3)  | 2 (18.3)  | 48 (40.0) | 39 (32.5) | 3.90 |
| Improve planning and utilization of resources                               | 3 (2.5) | 5 (4.2)  | 24 (20.0) | 50 (41.7) | 38 (31.7) | 3.95 |
| Help organizations to make optimal decisions                                | 4 (3.3) | 4 (3.3)  | 22 (18.3) | 47 (39.2) | 43 (35.8) | 4.01 |
| Conduct experiments or collect data                                         | 6 (5.0) | 4 (3.3)  | 13 (10.8) | 39 (32.5) | 58 (48.3) | 4.16 |
| Perform data analysis                                                       | 6 (5.0) | 10 (8.3) | 29 (24.2) | 35 (29.2) | 40 (33.3) | 3.78 |
| Draw inferences and implications from data                                  | 5 (4.2) | 5 (4.2)  | 19 (15.8) | 43 (35.8) | 48 (40.0) | 4.03 |
| Interpretation of data to draw valid conclusions                            | 4 (3.3) | 10 (8.3) | 12 (10.0) | 43 (35.8) | 51 (42.5) | 4.06 |
| Ability to communicate effectively                                          | 3 (2.5) | 1 (0.8)  | 13 (10.8) | 30 (25.0) | 73 (60.8) | 4.41 |

*\*Figures in parentheses are percentages*

*1- Poor, 2- Average, 3- Good, 4- Very good, 5- Excellent*

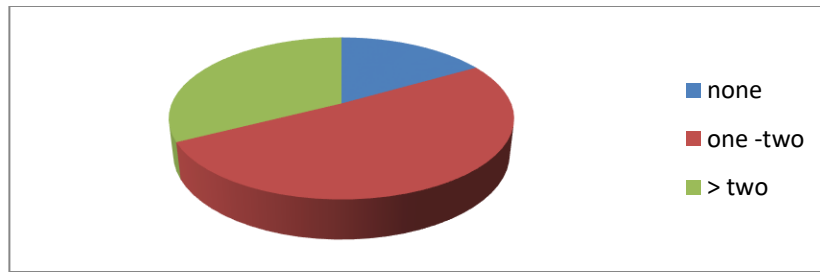


Figure 2: Distribution of respondents based on number of academic conferences attended

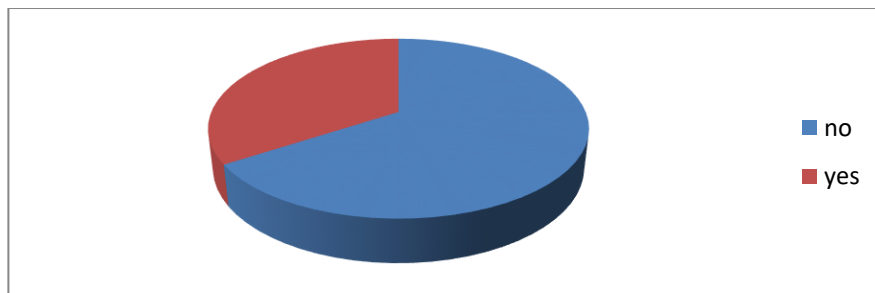


Figure 3: Distribution of respondents based on submission of abstract for conferences

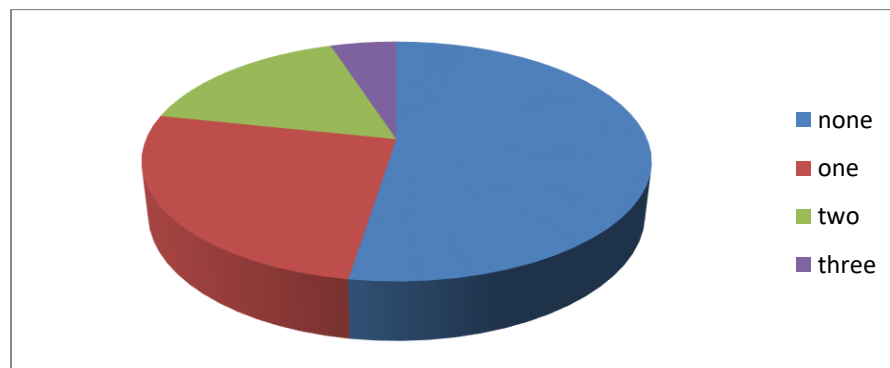


Figure 4: Distribution of respondents based on number of articles published in journals

**Table 5(b) Effectiveness of supervision by cadre of supervisors**

| Perceived effectiveness | Score | Cadre of Supervisors |                          |                    | All respondents | Mean $\pm$ SD    |
|-------------------------|-------|----------------------|--------------------------|--------------------|-----------------|------------------|
|                         |       | Lecturer<br>F (%)    | Senior Lecturer<br>F (%) | Professor<br>F (%) |                 |                  |
| Low                     | 10-40 | 11 (61.1)            | 16 (43.2)                | 23 (35.4)          | 50 (41.7)       | 40.38 $\pm$ 8.42 |
| High                    | 41-50 | 7 (38.9)             | 21 (56.8)                | 42 (64.6)          | 70 (58.3)       |                  |

*\*Figures in parentheses are percentages*

### **Constraints faced by respondents in the course of their supervision**

As shown in Table 6, autocratic nature/style of supervision ( $\bar{x}$  =1.55), imposition of research topic ( $\bar{x}$  =1.53) and poor contact with students ( $\bar{x}$  =1.43) ranked highest among the constraints faced by respondents while spoon feeding of supervisee ( $\bar{x}$  =1.18), demand for gratification ( $\bar{x}$  =1.12) and immoral demands from supervisor ( $\bar{x}$  =1.09) ranked lowest among the constraints faced by the respondents. The results on autocratic style of supervision by some supervisors does not bode too well for human capacity development. This is because effective supervision would only take place when the supervisor offers guidance to the subordinates in getting the job done and also give opportunities for subordinates to express and explore their skills and abilities rather than being autocratic (Adebakin and Gbadamosi, 1996).

In similar vein, imposition of research topic on students may not give room for students to discover, explore, nurture, and cultivate their inherent research innovativeness. Where research topics are imposed on students, motivation and interest tends to be low. Research borne out of identification of a specific problem by students themselves make them better positioned to steer the research agenda. They are therefore able to conduct research passionately, which could translate into great innovations and inventions that could help in sustainable development of the nation. This problem is another plausible explanation for the untimely completion of research work among many graduate students in Nigeria.

On the other hand, the result reveals that the noise about immorality between lecturers and students in Nigeria tertiary institutions may not be as severe as it is perceived, most especially agricultural related studies. This is therefore contrary to the opinions of Adams, Kottike and Padgit (1983); Morley and Lussier (2009) that high level of immoral

demands from students, especially sexual harassment was a major controversial issue facing colleges and universities.

**Table 6 Distribution of respondents based on constraints faced in the course of supervision**

| Items                                               | NCF (%)    | MC F (%)  | SCF (%)   | Mean |
|-----------------------------------------------------|------------|-----------|-----------|------|
| Imposition of research topic                        | 71 (59.2)  | 34 (28.3) | 15 (12.5) | 1.53 |
| Poor contact with supervisor                        | 78 (65.0)  | 32 (26.7) | 10 (8.3)  | 1.43 |
| Ineffective communication with supervisor           | 83 (69.2)  | 28 (23.3) | 9 (7.5)   | 1.38 |
| Autocratic Supervisor                               | 71 (59.2)  | 32 (26.7) | 17 (14.2) | 1.55 |
| Supervisor having no interest in the research       | 105 (87.5) | 7 (5.8)   | 8 (6.7)   | 1.19 |
| Immoral demands from supervisor                     | 112 (93.3) | 5 (4.2)   | 3 (2.5)   | 1.09 |
| Supervisor spoon feeds supervisee                   | 104 (86.7) | 10 (8.3)  | 6 (5.0)   | 1.18 |
| Supervisor criticizes to condemnation               | 94 (78.3)  | 18 (15.0) | 8 (6.7)   | 1.28 |
| Supervisor demands for gifts                        | 109 (90.8) | 7 (5.8)   | 4 (3.3)   | 1.12 |
| Supervisor has poor mastery of research             | 99 (82.5)  | 15 (12.5) | 6 (5.0)   | 1.22 |
| Supervisor not willing to offer guidance            | 98 (81.7)  | 19 (15.8) | 3 (2.5)   | 1.21 |
| Supervisor sends supervisee on official assignments | 97 (80.8)  | 17 (14.2) | 6 (5.0)   | 1.24 |

*\*Figures in parentheses are percentages*

NC- Not a constraint    MC- Mild constraint    SC- Severe constraint

**Hypothesis 1: There is no significant difference in the perceived effectiveness of supervision among lecturers of different cadres**

The result of the one-way ANOVA on Table 7 shows that there was no significant difference in behavioural change (effectiveness of supervision) noticed among supervisees of the three cadres of supervisors, hence, the null hypothesis is accepted. This suggests that impact made on the students in the course of their supervision, though was marginally higher among the Professors, but not significant enough as to differentiate between the level of impacts made by Senior Lecturer and Lecturer cadres supervisors. In this vein, the restriction of the recent approval of increased years of service to Lecturers of Professorial cadre alone in Nigeria universities; which is based on the argument that they are more experienced and made wider impact may not be empirically appropriate.

**Table 7: Analysis of variance showing the differences in perceived effectiveness of supervision among lecturers of different cadres**

|                | Sum of square | Df  | Mean square | F     | P    |
|----------------|---------------|-----|-------------|-------|------|
| Between groups | 217.080       | 2   | 108.540     | 1.542 | .218 |
| Within groups  | 8235.045      | 117 | 70.385      |       |      |
| Total          | 8452.125      | 119 |             |       |      |

### Conclusion and recommendations

The study conclude that postgraduate agricultural students supervised by lecturer cadre supervisors were more responsive to supervision in terms of satisfaction with supervision experience and exposure received than students supervised by professorial cadre supervisors. However, professorial cadre supervisees were more able to translate their supervision experience to practical use (behavioural change) than their counterparts supervised by lower cadre supervisors. In addition, though effectiveness of professorial cadre supervisors in terms of supervision impact was marginally higher, it was not significant enough to differentiate it from the impact achieved by their lower cadre colleagues.

The study recommends that strict autocratic procedures for students' supervision in most universities in southwestern Nigeria be addressed as appropriate and that more emphasis be placed on encouraging students to apply the gains of their supervision experience through conference attendance, paper publication and so on before they finish their graduate studies. Also, the restriction of increased years of service to Professorial cadre lecturers alone in Nigeria universities should be revised by the government to place all cadres of lecturers on the same advantage if it is considered to have any merit at all.

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