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INFLUENCE OF PARENTS' EDUCATION ON CHOICE OF AGRICULTURE SUBJECT AMONG PUBLIC SECONDARY SCHOOLS STUDENTS IN KEIYO NORTH SUB COUNTY, KENYA

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Abstract

Agriculture is one of the vocational subjects taught in Kenyan secondary schools' curriculum. Students acquire knowledge and skills that are essential for future education or employment in the agricultural sector. Despite its importance, the proportion of secondary school students who chose the subject in Keiyo North Sub County has been below 40% over the years. Parents' education level has been cited among factors that influence choice of subjects. This paper examined the influence of parents' level of education on choice of agriculture subject among secondary school students in public secondary schools in Keiyo North Sub-County, Kenya. The study adopted the correlational research design and was guided by social learning theory. A sample of 415 form three students and 45 career guidance teachers were selected using stratified proportionate sampling techniques to participate in the study. Data was collected using a career guidance teachers' and students' questionnaires. The content and face validity of the two instruments were checked by experts from the Faculty of Education and Community Studies, Egerton University. Data was analysed with the aid of the Statistical Package for Social Science. The findings indicated that majority (58.3%) of parents had college or university level of education and agriculture subject was chosen by 45.3% of the students. The results also indicated that parents' level of education was a significant predictor of students' choice of agriculture subject, pseudo $R^2 = .031$, model coefficient $\chi^2 (4, N = 402) = 10.174, p = .038$. It was concluded that parents' education influences students' choice of agriculture subject. The paper recommends that school managers and education policy makers be encouraged to involve parents in students' subject choices in their endeavour to make agriculture subject attractive to learners.

Keywords: *agriculture, choice, parents' education*

Introduction

Agricultural education is the study of technologies and related sciences which leads to acquisition of knowledge, practical skills and attitudes towards agriculture (Jones, 2013). Agricultural education covers topic such as fisheries, crops and livestock production, processing and occupations related to the mechanization and maintenance of agricultural machinery. Formal training in agriculture is important because the knowledge and skills acquired, if applied, leads to improvement in agricultural productivity (Rahaman et al., 2021). This is due to the fact that education influences an individual's knowledge, skills and reception of technologies and innovations for improving productivity. Johnson and Christensen (2019) contend that high levels of education enable farmers to analyze challenges in their farms and solve them using appropriate technologies, thus enhancing productivity.

Agriculture is one of the vocational subjects in the Kenyan secondary school curriculum among others such as music, home science, French, and sign language (Wachira, 2018). It was a compulsory subject in the first two years of secondary school education under the 8-4-4 education system but an elective in the third and fourth years (Konyango et al., 2018). It means students had to make a choice whether to take it or not. Secondary school agriculture plays a vital role in integration of theory and practice, and therefore helps to improve learners' skills in the subject (Muchena, 2015). According to Kenya Institute of Curriculum

Development (2017), the objectives of secondary school agriculture are to promote interest in agriculture as an industry, create awareness of opportunities which exist in the sector and enhance skills needed in carrying related activities.

Agriculture is an important subject because of its role in enhancing food security. Despite its importance, the number of secondary school students who enroll for Kenya National Examination Council (KNEC) agriculture has generally low been low over the years (KNEC, 2021, 2023). KNEC (2020) records indicate that the number of students who enrolled for agriculture in 2019 was 289,315 out of 699,706. In 2021, only 332,115 students out of 826, 807 registered candidates enrolled for agriculture (KNEC, 2024). The reports further indicate 899, 453 candidates registered for KCSE in 2023 but only 369,341 sat for agriculture. Chemjor (2016) attributes low enrolment to the fact that many students avoided agriculture when provided with alternatives since they felt that careers related to the subject involve a lot of dirt, were for those with limited education or in the rural areas.

Low enrolment in agriculture has also been observed in Keiyo North Sub County as shown in the Table 1.

Table 1: ***Students' enrolment KCSE in Agriculture in Keiyo North Sub County***

Year	Number of KCSE Candidates	Number of KCSE Agriculture Candidates	Percentage of students who chose agriculture
2018	2513	912	36.3
2019	2794	1047	37.5
2020	2892	1143	39.5
2021	3325	1211	36.4
2022	3529	1348	38.2

Source: Keiyo North Sub-County Director of Education (2022)

An examination of data in Table 1 indicates that the percentages of students who chose agriculture have been consistently low as they ranged between 36.3% and 39.5%. This is in line with Yeap et al. (2021) study which noted that enrolment in vocational subjects like home science and agriculture have traditionally been low. The study attributed this observation to learners' view that educational provisions of vocational subjects focused on training rather than engaging in "education", as they were directed to occupational learning for types of work that required only lower-level skills.

Empirical studies show that students' selection of agriculture is influenced by many factors (Dzever, 2015; Wachira, 2018). Paud et al. (2023) demonstrated that learning experiences and teaching methods were significant predictors of students' career choice in agriculture. Muchena (2013) established that career aspirations, inadequacy of teaching-learning resources and negative attitudes were significant contributors to low enrolment in agriculture. The negative attitudes towards agriculture were attributed to the fact that many students felt that the subject was related careers that involved a lot of dirt. Performance in agriculture in the national examinations has also been cited as one of the factors that influence students' choice of a subject (Mogaka, 2019). Poor performance in agriculture also discourages students from selecting the subject. A study by Chemjor (2016) concluded that peer influence, played a significant role in students' choice of agriculture. Parents' characteristics

such as their level of education have also been associated with their children's decisions in subject (Olusalo et al., 2015).

Published works show that parental level of education is a correlation of students' subject and career choices (Kim & Kim, 2021; Rammolai-Segokgo et al. 2022). Chazan (2022) defines education as the systematic process of gaining knowledge and skills through well-structured study and instruction programmes. One's level of education can be expressed as the total number of years spent in formal training or the level of education reached, which are primary, secondary, tertiary/college and university (Dietrich et al., 2021). Neugebauer and Daniel (2022) noted that there was a relationship between parental education and students' choice of field of study in higher education in Norway. The relationship was stronger among children of professionals, educated parents with masters and higher-level degrees. Students who did not choose the same field as their parents nonetheless tended to choose educational fields close to those of their parents. Norom et al. (2020) observed that parents with high levels of education know its benefits and do not like their children to be left behind. Such parents tend to influence what their children do in school as a way of ensuring that their children acquire high levels of education and enjoy the benefits associated with it.

The discussions in the previous paragraphs indicate that student's enrolment in agriculture is low. They also reveal that parental characteristics influence students' choice of agriculture while others do not support that narrative. It is possible the low enrolment in agriculture observed in Keiyo North Sub County could be due to the influence of the level of education of students' parents. This paper examined the influence of parents' education level on secondary school students' choice of agriculture in Keiyo North Sub-County. The study was deemed necessary because of dearth in literature that links parents' education and students' selection of agriculture in public secondary schools in Keiyo North Sub County.

Objective

The objective of this paper was to determine the influence of education level of students' parents on their choice of agriculture subject in public secondary schools in Keiyo North Sub-County, Kenya. A null hypothesis which states that parents' education does not significantly influence students' choice of agriculture subject was drawn from the objective and tested.

Methodology

This study adopted the correlational research design. The design is concerned with exploring relationship between variables without manipulating them (Pawar, 2020). The design was appropriate because this study explored the association between parents' education level and students' choice of agriculture subject without any manipulation of variables. The study was conducted in public secondary schools in Keiyo North Sub County, Elgeyo-Marakwet County. The location was selected because despite the importance of agriculture in Keiyo North, the proportion of students who choose this subject has been low over the years as evidenced by the percentage of candidates who have been sitting for KCSE agriculture subject, which ranged between 36.3% and 39.5%. (KNEC, 2020, 2022). The accessible population were 50 career teachers and 1448 form three students in public secondary schools (SCDE, 2022). The accessible population is shown in Table 2.

Table 2: Distribution of Career Teachers and Students Population by School Category.

Category of schools	Career Teachers	Students
National	13	372
Extra County	16	448
County	9	273
Sub-County	12	355
Total	50	1,448

Source: Sub-County Director of Education Office Keiyo North (2022)

Sampling Procedure and Sample Size

Samples of this study consisted of students and career guidance teachers. The students sample size was determined using Krejcie and Morgan's (1970) formula. The formular is:

$$S= \frac{X^2NP(1-P)}{d^2(N-1)+X^2P(1-P)}$$

Where:

S = required sample size

X = Z (chi-square) value at the desired confidence level (in this case z= 1.96 for 95% confidence level)

N = Population size

P = Population proportion (in this case assumed to be 50% since this would provide the maximum sample size)

d = Degree of accuracy as reflected by amount of error that can be tolerated in fluctuationof P, (set at 5%).

The students' sample size was 306. To cater for attrition, respondent refusal to participate and other similar circumstances, 31 respondents was added, which is 10 percent of the calculated sample size (Cohen et al., 2007). The sample size of the students was thus 337. However, during the study, the actual number of students who took part in the study was 415 because intact classes were used, as it is unethical to break them for purposes of research (Wango, 2009). The number of the career teachers was also be determined using the same formula. Given that their accessible population was 50. The sample size of the teachers was 45.

Proportionate sampling was used to determine the number of students and career teachers that were drawn from each school category. At the school levels simple random sampling was used to select teachers who participated in the study. With regard to students in single stream schools, the form three classes were selected while in situations where there was more than one stream, simple random sampling procedures were utilized to select a class.

Table 3: Sample Distribution of Students

Category of schools	Career Teacher	Students
National	12	87
Extra-County	14	36
County	8	158
Sub-County	11	134
Total	45	415

Two instruments, a semi-structured questionnaire for teacher counsellors and students were used to gather data. The questionnaire was preferred because it is an efficient tool for collecting data from a large sample that is spread over a wide geographical area, is easy to administer, score, and analyse (Tamarozzi et al., 2019; Zangirolami-Raimundo et al. (2018).

The students' questionnaire consisted of five sections, A to C. Sections A, B and C were for generating data on respondents' characteristics, selection of optional subjects and parents' level of education. The career teachers' questionnaire had four sections A to D. Sections A and B were for gathering respondents' profile and provision of career counselling services. Sections C and D were used to collect data on students' choice of optional subjects and the teachers' views on influence of parents' education on choice of agriculture. The two instruments were constructed using both open-ended and close ended items. Ramil et al. (2020) recommends inclusion of closed-ended items in an instrument because they allow consistent responses and data generated is easy to code and analyse. Open ended items were included in the instruments because they enable collection of additional data by asking follow-up questions (Aggarwal & Ranganathan, 2019).

The face and content validity of the career teachers and students' questionnaires were checked by a panel of experts from department of Agricultural Education and Extension of Egerton University. This enabled identification of items that were unclear or ambiguous. The comments of the experts were used to improve the questionnaires before the instruments were used in the field to collect data. The reliability of the students' questionnaire was estimated using the Cronbach alpha method. Lowe (2019) contends that the method is appropriate for estimating reliability when an instrument is constructed using closed-ended polychromous items and is administered once. The instrument was deemed reliable as it yielded a reliability coefficient of 0.890 which is above the 0.7 threshold recommended for educational and social science (Taber, 2018).

All the necessary ethical clearances were obtained from relevant offices. The offices included the National Commission for Science, Technology, and Innovation (NACOSTI), Elgeyo-Marakwet County Director of Education (CDE), Keiyo North Sub-County Director of Education (SCDE) and principals of the targeted schools. This study adhered to research ethical standards. The purpose of the study was explained to the respondents and their consent sought. Dates for administering the instruments were set in consultation with the respondents. The questionnaires were administered to the teachers and students after explaining to them the modalities of filling them. The respondents were given amble time to fill the questionnaires after which were collected. Privacy and anonymity were ensured by asking the respondents not to write their names on the instruments and use of codes during data collection. The collected data was stored in a lockable safe during and after data analysis.

The collected data were checked for errors, cleaned, coded and a file prepared using the Statistical Package for Social Science (SPSS). The coded data was then be keyed into the file. Only valid responses were included in the analysis while missing ones were excluded. This explains the slight variations in sample sizes of the results. Frequencies and percentages were used to summarize and describe qualitative data. The hypothesis was tested at the .05 significance level using binary logistic regression. The binary regression formula is:

$\ln [P/(1 - P)] = b_0 + b_1x_1$ (Hilbe, 2016),

Where

In is natural logarithm

P/ (1 – P) = Odds ratio

P is probability of students choosing agriculture

(1 – P) is probability of students choosing other optional subjects

b_o is the intercept

b_1 factor coefficient

x_1 predictor variable (parental level of education)

The statistical procedure was selected because it is recommended for exploring relationships between factors and dichotomous outcomes (Shield, 2018).

Binary logistic regression analysis makes a number of assumptions about data which if violated negatively affect results (Tabachnick & Fidell, 2017). These assumptions include; the dependent variable is dichotomous and has exhaustive categories, the model has one or more numerical independent variables, independence of observations, and there is a linear relationship between the numerical independent variables and the logit transformation of the dependent variable. The relationship between the factor and the outcome was established using the Chi-square**.** These assumptions were not violated

The independent variable, parents' education level was categorical data, whereas regression assumes variables are at ratio or interval scale. Dummies were created for each category of the independent variable for regression to correctly test association between constructs. The number of dummies was m – 1 (where m is the number of conditions it can take) (Te Grotenhuis & Thijs (2015). Parents' education level (none, primary, secondary, tertiary/college, university) was converted into dummies since it was not continuous but categorical data. The education levels; none, primary and secondary schools, and tertiary/college were converted into dummy variables while university was used as the baseline (reference). University level of education was selected as the baseline category because it was the highest level and parents with such levels of education are assumed to be more informed and better placed to guide their children on careers related issues (Shayo, 2020)

Results and Discussion

The objective of this inquiry was to find out the influence of parents' level of education on students' choice of agriculture. It entailed establishing parents' level of education, provision of career guidance services to students, strategies used by schools to assist learners' select optional subjects and persons consulted before choosing the electives. It also entailed establishing choice of elective subject and trends, reasons for choosing/not choosing agriculture and the association between parents' education level and students' choice of the subject.

Parents' highest level of education was determined by asking the students to indicate that of the parent perceived to contribute most to their education.

Table 4: Highest level of Education of parents perceived to contribute most towards students' education (n = 369)

Education Level	Frequency	Percentage
None	7	1.9
Primary	34	9.2
Secondary	113	30.6
College/Tertiary	112	30.4
University	103	27.9

These results show that parents with secondary school level of education posted the highest percentage (30.6%). An examination of the results shows that majority (58.5%) of the parents had attained college/tertiary and university levels of education while only a small percent (1.9%) did not have any education at all. These findings are an indication that the level of education of parents of the students was high. Similar observations were made by a study conducted in Norway by Neugebauer and Daniel (2022). However, these findings are contrary to those of Nzina et al. (2024) which established that majority (64.0%) of parents of secondary school students in Makueni County, Kenya, had only attained primary school education level.

The study ascertained whether the level at which students are provided with career guidance services in schools before establishing their vocation subject's choices. This data was provided by the career teachers. Data on provision of counselling services was provided by the career teachers. Table 5 presents a summary of the level at which counselling services are provided to students

Table 5: Level at which schools provide career counselling services to students (n = 45)

Level	Frequency	Percentage
Form 1	5	11.1
Form 2	11	24.4
Form 3	3	6.7
Form 4	4	8.9
All the 4 classes	18	40.0
Forms 1 and 2	4	8.9

Table 5 reveals that career counselling services are provided to students of all classes, from form one to four (40.0%). Analysis by class show that form 2 (24.4%) posted relatively percentage followed by form one (11.1%). The high percentages imply the two classes are given more attention with regard to provision of counselling services. Boitt, (2016) contends that form ones are freshers and require a lot of support while form twos are perceived to be most stubborn as they are at the peak of adolescence.

The career counselling teachers also provided data on how frequent students were provided with counselling services.

Table 6: Frequency of provision of counselling services to students (n = 44)

Provision of career counselling services	Frequency	Percentage
Once a term	33	75.0
Once a year	6	13.6
Never	1	2.3
Weekly	4	9.1

The results show that most (75.0%) schools provide counselling to students once a term. This may not be enough given the many social, academic and psychological challenges which students undergo while in school. Perhaps the infrequent provision of guidance and counselling services could be due to the heavy workload of teachers. Kaye (2023) noted that most teachers have heavy workloads as they had to teach, perform administrative and co-curriculum duties assigned to them.

Data on strategies used by schools to assist students' select optional subjects were also given by the career guidance teachers. They were asked to rate frequency of use of those strategies. The rating was done using a three point scale, never, sometimes and often.

Table 7: Strategies used by schools to assist students select optional subjects

Strategies	N	Never	Sometimes	Often
Making students aware of opportunities in post-secondary school training institutions and the labour market	45	2.2	26.7	71.1
Involving parents in their children career choices	45	8.9	62.2	28.9
Engaging career guidance consultants	45	11.1	60.0	28.9
Organizing career education days	45	17.8	51.1	31.1
Availing mass media (TV, radio, newspaper) to students	44	34.1	47.7	18.2

The teachers reported that making students aware of opportunities in post-secondary school training institutions and the labour market (71.1%) and organizing career education days (31.1%) were among the strategies used by schools to assist students' select optional subjects. The other strategies were involving parents in their children career choices (28.9%) and engaging career guidance consultants (28.9%). Assisting students to select subjects and make career decisions in essential given most learners find it a challenge as they do not know much about conditions in the labour market (Chemjor, 2016).

The students were asked to indicate who they consulted before choosing elective vocational subjects.

Table 8: Persons consulted by students before choosing elective subjects in form three (n = 402)

Person consulted	Frequency	Percentage
Career teacher	101	25.1
Father	18	4.5
Mother	40	10.0
Both parents	184	45.5
Guardian	13	3.2
Fellow student	13	3.2
Subject teacher	32	8.0
No body	27	6.7
Others (siblings, relatives, friends)	15	3.7

Table 8 reveals that both parents (45.5%) and career teachers (25.1%) were the most consulted by students before they chose the elective subjects. A few (10.0%) of the students

consulted their mothers. These findings support those of Rasak et al. (2023) which noted that parents and teachers are among persons frequently consulted by students before they make career choices.

The students also indicated the vocation subjects which they selected.

Table 9: Selection of vocational subjects by students (n = 402)

Vocational subject	Frequency	Percentage
Agriculture	182	45.3
Home science	31	7.7
Business studies	105	26.1
Computer studies	21	5.2
Arts and design	8	2.0

These results reveal that 45.3% of the sampled students chose agriculture while the rest (54.7%) selected other vocational subjects. It means that majority of secondary students do not take agriculture. This is in concurrence with the reports of KNEC (2020) which showed that only 41.5 percentage of registered candidates sat for agriculture in the year 2019.

Various reasons were advanced by students why they selected agriculture. The reasons given are presented in Table10.

Table 10: Reasons why students selected agriculture (n = 182)

Reason for selecting agriculture	Frequency	Percentage
A requirement in the career I intend to pursue	109	59.9
Best subject/gets good grades	29	15.9
Has many applications in life (food, feeds industries)	17	9.3
Passion/interest	9	4.9
Booster subject	7	3.8
Advised to do so	5	2.7

The main reasons for choosing agriculture were that it was a requirement for the careers the students intended to pursue (59.9%). The other reason was that agriculture was their best subject and also did well in it (15.9%). These findings support those of Dlamini (2017) which showed that career aspirations and good performance in a subject motivate students to select it.

Majority of students did not choose agriculture. This category of students gave reasons why they did not choose agriculture.

Table 11: Reason for not selecting agriculture (n = 220*)*

Reason for **not** choosing agriculture	Frequency	Percentage
Career path does not require agriculture	96	43.6
Difficult/Poor grades/lack of interest	37	16.8
Not an option in my class	23	10.5
Does best in other subjects	21	9.5
Too wide	6	2.7
Advised not to select agriculture	4	1.8

The main reasons for not selecting agriculture were that their career paths did not require agriculture (43.6%), others found the subject difficult, leading to low grades (16.8%). Some (10.5%) of the students indicated that agriculture was not an option in their classes. These findings are in tandem with Olusola et al. (2015) observation that often, students' career aspiration informs their subject choices. They also observed that students tend to avoid subjects that they find difficult and perform poorly.

Career guidance teachers' views on choice of vocational subjects was also sought by asking them to state selection trends for the period 2019 to 2023.

Table 12: Selection of vocational subjects' trends for the period 2019 to 2023 according to the teachers (n = 45)

Subject	N	Increasing	No change	Fluctuating	Decreasing
Agriculture	43	55.8	4.7	34.9	4.7
Arts and Craft	29	37.9	24.1	37.6	-
Business Studies	38	50.0	5.3	36.8	7.9
Computer studies	35	62.9	5.7	28.6	2.9
Home Science	32	56.3	9.4	25.0	9.4

Table 12 shows computer science (62.5%) posted the highest increase in enrolment and was followed by home science (56.3%). Agriculture (55.8%) also posted considerable increment in the number of students choosing it. The high increment in students' selection of computer science could perhaps be due to prefoliation of Information, Communication and Technology in all facets of life of man in the 21st century.

The career guidance teachers explained the observed increment in agriculture enrolment for the years 2019 to 2023.

Table 13: Explaining increment in agriculture enrolment trends (n = 45)

Explanation	Frequency	Percentage
Past performance in KCSE agriculture	13	28.9
Diverse opportunities presented by agriculture	9	20.0
Passion/interest Attitude change towards agriculture	7	15.6
Agriculture is friendly, most students are not new to it	4	8.9
Promotion/sensitisation of importance of agriculture	3	6.7
Wide/difficult/not popular	2	4.4

Various reasons were advanced to explain the observed changes in choice of agriculture. The main ones were past performance in KCSE agriculture (28.9%), diverse opportunities presented by agriculture (20.0%) and students' attitudes, passion/interest towards agriculture (15.6%). These reasons are in concurrence with those of a study by Mogaka et al. (2019) which found that students' interest and schools' performance in KCSE agriculture influenced learners' choice of the subject.

The career guidance teachers' perspectives on influence of parents' education on students' choice of agriculture was also sought. Majority (81.0%) of the teachers were of the view that parents' level of education influenced their children choice of agriculture while the rest (19%) held contrary opinions. They further provided reasons why they felt parents' level of education influenced their children choice of agriculture.

Table 14: Reasons why parents' level of education influenced their children choice of agriculture (n = 36)

Reason	Frequency	Percentage
Ability to advice is affected by level of education	12	33.3
Parents' education informs their attitudes towards agriculture and the advice they give their children	5	13.9
Educated parents are more aware of career paths, post-secondary school education and labour market	4	11.1
Educated parents know role and importance of agriculture to the country's economy	2	5.6
Educated parents are more interested in their children's education and careers	2	5.6

The reasons why the teachers felt that parents' level of education influenced their children choice of agriculture was that ability to advice is affected by one's level of education (33.3%). The other reasons were, parents' education informs their attitudes towards agriculture and the advice they give their children (13.9%) and educated parents are more aware of career paths, post-secondary school education and labour market (11.1%).

The teachers who were of the opinion that parents' level of education does not influence their children's choice of agricultur*e* also gave reasons why they felt so.

Table 15: Reasons why parents' level of education does not influence their children choice of agriculture (n = 9)

Reason	Frequency	Percentage
Subject choices depend on students' interests and abilities	4	44.4
Some students make their own decisions without consulting anybody	2	22.2
Illiterate parents are not in a position to advice on careers	2	22.2

The reasons for the teachers view that parents' level of education does not influence their children's choice of agriculture were that subject choices depend on students' interests and abilities (44.4%) and some students make their own decisions without consulting anybody (22.2%). Illiterate parents are not in a position to advice on careers (22.2%) was also cited as

one of the reasons why the teachers felt that parents' level of education does not influence their children choice of agriculture.

The influence of parents' level of education on students' choice of agriculture was determined by testing the paper hypothesis which stated that the influence of parents' education on student's choice of agriculture subject is not statistically significant. The hypothesis was tested using the binary logistic regression. The hypothesis was tested by regressing education level dummy variables on students' choice of agriculture. The results of the regression test are given in Table 16.

Table 16: Results of binary logistic regression test on parents' education and students' choice of agriculture

Scale	B	S.E.	Wald	Df	p-value	Exp(B)
Education			10.017	4	.040	
None	-.421	.861	.239	1	.625	.656
Primary school	.613	.399	2.359	1	.125	1.846
Secondary school	.691	.277	6.194	1	.013	1.995
Tertiary college	.022	.281	.006	1	.936	1.023
Constant	-.495	.203	5.945	1	.015	.609
Model coefficient $\chi^2(4, N = 369) = 10.174, p = .038$						
Nagelkerke Pseudo $R^2 = .036$						
Classification = 59.1%						
Homer and Lemeshow test = $\chi^2(3, N = 369) = .001, p = .999,$						

The results indicate that model coefficient was statistically significant, $\chi^2(4, N = 369) = 10.174$, $p = .038$ and explained 3.6% (Nagelkerke $R^2 = .036$) variance in students' choice of agriculture. The model correctly classified 59.1% of cases. The Hosmer and Lemeshow test results were statistically insignificant, $\chi^2(3, N = 369) = .001$, $p = .999$, an indication of a good fit to the data. The results also show that secondary school education level was a significant predictor (B = .691, Wald, = 6.194, df = 1, p = .013, Exp(B) = 1.995) of choice of agriculture. Each unit increase in secondary school education was associated with increase in the odds of a student whose parent has university education choosing agriculture by a factor of 1.995. However, none (B = -.421, Wald, = .239, df = 1, p = .625, Exp(B) = .656), primary school (B = .613, Wald, = 2.359, df = 1, p = .125, Exp(B) = .1.846) and tertiary/college (B = .022, Wald, = .006, df = 1, p = .936, Exp(B) = 1.023) education levels were not significant predictors of students' choice of agriculture. In general, the model coefficients show that education was a significant predictor of students' choice of agriculture (Wald, = 10.017, df = 4, p = .040). These results imply that parents' education level is a factor in determining the likelihood of a secondary school student choosing agriculture. They fail to support the first hypothesis which stated that parents' education level does not influence students' choice of agriculture.

The binary logistic regression test indicated parents' education was a significant predictor of students' choice of agriculture. Majority of the career guidance teachers also perceived that parents' education influenced their children choice of agriculture. These findings are in harmony with Norom et al. (2020) noted that that parents with high levels of education such as masters degrees and above encourage their children to go for perceived high end careers like law, engineering and medicine. The results also support those of Opoti et al. (2020) which observed that parents' level of education influenced students' career aspiration in

northern education zone of Cross River State., Nigeria. Njenga et al. (2018) study conducted in Kajiado County in Kenya also demonstrated that high parental educational level had an influence on the career choice of students. The study noted that a father's level of education had the most significant influence on children's subject selection and career choice in homesteads that were headed by men.

However, these findings do not support those of Iregis (2015) who observed that parents' level of education was not a significant predictor of selection of home science due to the many challenges encountered during the teaching and learning of the subject. Hashim and Embong's (2015) study in Malaysian indicated that parents' educational level had no influence over their children's choice of a career in accounts. Lewa and Ndungu's (2012) study in the coastal lowland, Kenya, also concluded that there was no relationship between education and choice of farming as a career. Mjege (2013) argues that parents' level of education does not affect subject selection of their children if most of them have little knowledge of available careers and how they are related to subject choices in high school.

These results indicate that parental level of education influences students' choice of agriculture. This is so because parents' level of education is part of their experiences that guide how they shepherd their children to careers. It means that the informal home education a child goes through under the watch of educated parents influences their behaviour and career aspirations. Working more closely with educated parents may assist career guidance teachers make agriculture more attractive and motivate students to choose the subject.

Conclusion and Recommendations

This paper concludes that parents' level of education influences students' choice of agriculture subject. Students tend to select and study what is related to their parents' education and profession. If a parent is an agriculturist, their children will aspire to study agriculture and become one.

On the basis of the conclusions, this paper recommends that school managers and education policy makers should encourage parents' involvement in students' subject choices. This can be achieved by organizing parents and career days and using such forums to discuss subject selection, student career paths among other related topics.

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