

**UNIVERSITY FOR DEVELOPMENT STUDIES**

**ROLE OF STAKEHOLDERS IN INFLUENCING THE CHOICE TO PURSUE  
AGRICULTURAL SCIENCE IN SHS AMONG FEMALE JHS STUDENTS IN  
THE TOLON DISTRICT**

**OBRANI LYDIA**

**2024**



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THE TOLON DISTRICT**

**OBRANI LYDIA**

**(MPhil. AGRICULTURE SCIENCE EDUCATION)**

**(UDS/MPE/0008/20)**

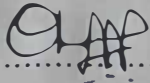
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AGRICULTURE AND CONSUMER SCIENCE EDUCATION,  
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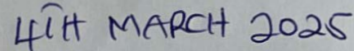
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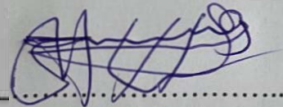
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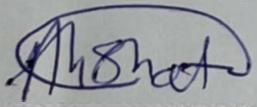


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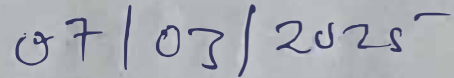


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## ABSTRACT

The agricultural sector is a cornerstone of Ghana's economy, contributing significantly to GDP and employment. However, there exists a notable disparity in female participation in agricultural science at the secondary school level, which presents challenges to sectoral growth and gender parity. This study investigates the factors influencing female students' decisions to pursue agricultural science and examines the roles played by various stakeholders in shaping these decisions. Study design is mixed method in nature and employed a questionnaire and the primary research instrument. A multistage cluster sampling design was utilized with sampling size determined using the Cochran's formula and participants were selected using random sampling to ensure a representative and unbiased sampling. Primary data were collected from 138 female students, 38 teachers, and 138 parents in the Tolon district of Ghana's Northern region. The study applied descriptive statistics, Likert scales, Kendall's coefficient of concordance, and logistic regression for data analysis. Results indicate that peers, teachers, and parents significantly influence students' educational choices. Gender biases, insufficient career guidance, and prevailing social norms were identified as key obstacles contributing to low enrollment of female students in agricultural science. Specifically, factors such as class size, perception of agriculture as a challenging subject, and the stereotype that agriculture is primarily a male domain negatively impact female students' decisions to pursue agricultural science at the Senior High School level. Conversely, factors such as parental occupation, friends' influence in program selection, and awareness of opportunities in agribusiness positively influence students' choice of agricultural science. The study concluded that low enrolment in agricultural science at the SHS level is attributed to its perception as a masculine program, reserved primarily for males. Additionally, it is viewed that agriculture offers limited career prospects due to the inadequate scope of education and career enlightenment received before the selection of educational courses. Based on these findings, the study recommends that the Ghanaian government, particularly through the Ministries of Food and Agriculture and Education, formulate policies aimed at encouraging female students to pursue agricultural studies in senior high schools. Furthermore, local agricultural institutions should organize regular career guidance sessions focused on agriculture, and parents should actively support their children in pursuing academic paths aligned with their interests and strengths.



Keywords: Agriculture, Agric education, Junior High School, Senior High School, Tolon, stakeholders, Northern region, females.



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## DEDICATION

I, Obrani Lydia, dedicated this thesis to Almighty God, my family (Tendeku and Obrani) for the prayers, support and sustenance of my education, my daughter Ena-Melike and to all mothers who are striving for excellence.



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## ACRONYMS

|              |  |
|--------------|--|
| <b>AER</b>   | Agricultural Education and Research                      |
| <b>ARI</b>   | Animal Research Institute                                |
| <b>ASTI</b>  | Agricultural Science and Technology Indicators           |
| <b>AWARD</b> | African Woman in Agricultural Research and Development   |
| <b>CSIR</b>  | Council for Scientific and Industrial Research Institute |
| <b>GDP</b>   | Gross Domestic Product                                   |
| <b>GSS</b>   | Ghana Statistical Service                                |
| <b>ILO</b>   | International Labor Organisation                         |
| <b>JHS</b>   | Junior High School                                       |
| <b>KILM</b>  | Key Indicators of the Labour Market                      |
| <b>MOE</b>   | Ministry of Education                                    |
| <b>MOFA</b>  | Ministry of Food and Agriculture                         |
| <b>NGOs</b>  | Non-Governmental Organisations                           |
| <b>RUT</b>   | Random Utility Theory                                    |
| <b>SARI</b>  | Savanna Agricultural Research Institute                  |
| <b>SCT</b>   | Social Cognitive Theory                                  |
| <b>SDGs</b>  | Sustainable Development Goals                            |
| <b>SHS</b>   | Senior High School                                       |
| <b>SRI</b>   | Soil Research Institute                                  |



|            |                                    |
|------------|------------------------------------|
| <b>TPB</b> | Theory of Planned Behavior         |
| <b>UDS</b> | University for Development Studies |
| <b>UN</b>  | United Nations                     |



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of Study

In Ghana, as in other developing economies, agriculture is a driver of socio-economic development and poverty reduction. The agricultural sector is the second-largest contributor to the nation's Gross Domestic Product (GDP) after the services sector. In 2019, it was estimated that the sector employed approximately 33.5% of the country's workforce (Ankamah et al., 2021).

Despite the significant role agriculture plays in the economic development of Ghana, it is currently experiencing a decline. This decline is prevalent among the women group of the population who are confronted with severe resource constraints in terms of access, creating a gender disparity in comparison to their male counterparts (World Bank, 2017). The socioeconomic and cultural dimension of being a male or female affect the distribution of resources and wealth, influencing an individual's choice of work and profession, and transcending into policy formulation and implementation at the political level (Ogato et al., 2009; World Bank, 2017).

The contribution of female farmers towards agriculture production and overall agriculture development is very significant. Compared to their counterparts, female farmers produce more than half of the world's food, representing variant figures across various regions (Doss and Team, 2011). In terms of the labor force, women farmers constitute about 40% of developing countries, with a higher number of 50% in Africa and between 60-80% in sub-Saharan Africa (Palacios-Lopez et al., 2015; Tologbonse et al., 2013).





In Ghana, women make up more than 50% of the agricultural labor force and are responsible for producing an estimated 70% of the country's food stock (SEND, 2014).

Despite the significant roles that women play in agricultural production, their representation in agricultural education and research is low in sub-Saharan Africa, including Ghana (Beintema and Di Marcantonio, 2009). Gender inequality is a significant societal issue within Ghana's educational policy, which encompasses the establishment of objectives for achieving equal access and enrollment for both male and female students. An illustrative example of this is the subject of home economics, which predominantly attracts female students throughout Ghana's education system. This is indicative of the social norms, values, and beliefs that are instilled during the process of socialization from an early age (*Janhonen-Abruquah et al., 2017*). . According to Ogato et al., (2009), agriculture has been viewed not to be a suitable career path for women in the past as women have been confined to roles like catering and maintain the household and childbearing. However, men have mostly held official political roles in communities whereas women manage the resources of the community.

Janhonen-Abruquah et al., (2017), asserts that in as much as agricultural education offers a career path that is viable to women, female students in the field face significant challenges, such as establishing their worth, reducing gender barriers and dismissing the myths about their capabilities. Female students that pursue courses in agriculture often go through challenges such as parental and peer pressure, inadequate information about their career choices, lack of media role models, low compensation

in agriculture as compared to other fields, biases against women's ability to excel in scientific studies, and barriers to accessing agricultural education (Owusu et al., 2021).

Educational institutions increases these challenges faced by females by failing to offer accurate and comprehensive career information, pressuring counselors to advocate for nontraditional career choices without providing support systems for nontraditional students, overlooking the implementation of strict policies against sexual harassment, lack of equitable treatment of women in nontraditional career choices, disregarding training of staff in sex equity, and ignoring the need for targeted recruitment and specialized orientation programs for women in nontraditional careers. Also, there is usually a lapse in the revising of course materials to include both genders and a lack of documented initiatives that aim to achieve gender equality.

The improvement of women's access to advanced education in agricultural is faced with two main challenges these are: the challenges women go through in their pursuit for careers in agriculture and the poor educational achievement amongst girls. Stakeholder participation and opportunities for agricultural training at junior and secondary education levels are still limited regardless of the of the crucial role of agriculture in the economy of the country.

## **1.2 Problem Statement**

The number of female students choosing this field after Junior High School (JHS) is still low regardless of the efforts made to encourage more females to study agricultural science in the Senior High Schools (SHS). This is concerning, as agriculture is an important sector for the development of the nation, and female representation in the field still remains disproportionately low. While previous studies have explored the





factors influencing students' career choices, there is limited research on the role of stakeholders in influencing the choice to pursue agricultural science in SHS among female JHS students graduating from JHS. Studies in the past have either focused on factors that influence female students' enrolment to study agriculture or general sciences at higher levels such as Senior High Schools (SHS). For studies that focus on agricultural sciences, emphasis is usually placed on the SHS population, but it is imperative to note that Junior High Schools (JHS) represent an important educational transition point for students, and it will be important to understand the contextual factors that influence their choices to pursue agricultural science at this transitional point. Furthermore, Tolon district presents a unique proposition for this study because it hosts several important agricultural institutions such as Savannah Agricultural Research Institute (SARI), University for Development Studies (UDS), Ministry of Food and Agriculture (MOFA), Animal Research Institute (ARI), Soil Research Institute (SRI), Avnash Industries, other Non-Governmental Organizations (NGOs) participating in the agricultural sector. It is important to assess whether these institutions are important stakeholders and present some influence on these students to pursue agricultural science as a course.

This gap in knowledge prompts inquiries regarding the extent to which the perspectives and support of key stakeholders—such as parents, teachers, peers, and institutions—affect female JHS students' choice to pursue agricultural science in SHS. Therefore, it is necessary to investigate the role of these stakeholders who influence the decision-making processes of female JHS students to pursue agricultural science in SHS.

The research will mainly provide Insights into policies and interventions aimed to improve the representation of females in agriculture and eventually contribute to

development in the agricultural sector in Ghana. Therefore there is the need for additional research that focuses mainly on stakeholder's role in influencing the choice to study agricultural science in SHS amongst female students that graduate from JHS, more specifically in the Tolon district, with attention to the different perspectives and the potential impact of gender on career choices.

### **1.3 Purpose of Study**

To assess the educational choices of female JHS students and the role that stakeholders play in influencing their choice to pursue agriculture science in Senior High Schools in the Tolon District of the Northern Region.

### **1.4 Main Objective**

To assess the educational choices of female JHS students and the role of stakeholders play in influencing their choice to pursue agriculture science in Senior High Schools in the Tolon District of the Northern Region of Ghana.

#### **1.4.1 Research Objectives**

The specific objectives of the study are to:

- i. Identify and rank the educational choices of female JHS students in the Tolon District of the Northern region of Ghana.
- ii. Analyze the roles stakeholders play in the educational decisions of female JHS students in Tolon District of the Northern region of Ghana.
- iii. Analyze factors influencing female students' decision to pursue agriculture science in SHS.



## **1.5 Main Research Question**

What are the factors influencing the educational choices of female JHS students and the role of stakeholders play in influencing their choice to pursue agriculture science in Senior High Schools in the Tolon District of the Northern Region of Ghana?

### **1.5.1 Specific Research Questions**

The specific research questions are;

- i. What are the educational choices of female JHS students in the Tolon District of the Northern region of Ghana?
- ii. What are the roles stakeholders play in the educational decisions of female JHS students in Tolon District of the Northern region of Ghana?
- iii. What factors influence female students' decision to pursue agriculture science in SHS?

## **1.6 Significance of the Study**

The study is significant in the following ways:

Firstly, the study's findings contribute in promoting Gender Equality: By highlighting the barriers faced by female students in pursuing agricultural science, the research underscores the need for targeted interventions to promote gender equality within the agricultural sector.

Again, the findings can inform policymakers about the specific factors affecting female participation in agricultural education, guiding them in formulating effective policies that encourage women's involvement in agriculture. This helps in increasing productivity and economic growth.



Also, the study places emphasis on the significance of career support and guidance from stakeholders like teachers and parents. This can improve educational practices that foster greater interest amongst female students in agricultural science.

Finally, the study will add to the literature by providing empirical evidence on the social dynamics that influence female student's educational careers in agricultural science within a Ghanaian context. The study will fill the gap by exploring how various stakeholders affect these decisions and provide insights into developing effective strategies for increasing female enrollment in this critical field.

### **1.7 Research Limitations**

The study was limited by the short duration of time available for the study, resulting in a limited sample size of only ten schools in the district. This sample is not enough considering the number of schools in the district that could have participated in the study. This implies that the findings need to be generalized cautiously. Additionally, the research scope was restricted by limited funding, as there was no designated funding or scholarship available for conducting the study.

### **1.8 Delimitations of the Study**

- i. This study specifically focuses on female students enrolled in secondary schools within the Tolon district of Ghana's Northern region. It does not encompass other regions or districts within Ghana.
- ii. The research includes primary data collected from 138 female students, 38 teachers, and 138 parents from the Tolon district. The study does not extend to male students or stakeholders outside of this specific participant group.



iii. Data analysis methods employed include descriptive statistics, Likert scales, Kendall's coefficient of concordance, and logistic regression. Other statistical or qualitative methods beyond these specified techniques are not utilized.

iv. The study's timeframe is limited to the period during which data was collected and analyzed. It does not extend beyond this temporal boundary to examine longitudinal trends or changes over time.

v. The research is delimited to exploring factors influencing female students' decisions to pursue agricultural science at the secondary school level in Ghana. It excludes broader socioeconomic and educational elements that affect gender disparities in other academic fields or educational levels.

vi. The research complied with ethical guidelines in data collection to guarantee participant anonymity and confidentiality.

vii. Ethical guidelines were duly followed in the collection of data to ensure participant confidentiality and anonymity. However, the ethical concerns pertaining to broader ethical challenges in educational research have not been addressed explicitly beyond these specific practices.

## **1.9 Definition of Key Terms**

The key terminologies in the study are defined below;

### **1.9.1 Stakeholders**

Stakeholders refer to individuals or groups who have an interest or stake in the outcomes of a specific system such as education or agriculture. For instance, Machenaud et al., (2014) states that stakeholders can vary to include consumers,



farmers, policymakers, and educators who can influence policies or are affected by policies and practices within agriculture and education.

### **1.9.2 Agriculture**

Agriculture is defined as the science and practice of cultivating soil, growing crops, and raising animals to produce food, fiber, and other products used to sustain and improve human life. Agriculture constitutes various activities, including planting, harvesting, and livestock management (Food and Agriculture Organization (FAO), 2021).

### **1.9.3 Agricultural Science**

Agricultural science is a multidisciplinary field that involves the study of various aspects of agriculture including plant biology, animal science, soil science, and agricultural engineering. It aims to improve agricultural productivity and sustainability through research and innovation (Pimentel & Pimentel, 2008).

### **1.9.4 SHS (Senior High School)**

Senior High School describes an educational institution that provides secondary education to students typically aged 15 to 18. This level of education prepares students for higher education or vocational training through a broad curriculum (National Center for Education Statistics (NCES), 2022).

### **1.9.5 JHS (Junior High School)**

Junior High School (JHS) serves students aged 12 to 15 and acts as a transitional stage between elementary school and senior high school. It provides foundational



knowledge in various subjects while preparing students for more advanced studies (National Middle School Association [NMSA], 2010).

### **1.9.6 Female**

The term female refers to women and girls in discussions about gender roles, rights, and representation (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2019). In this study, female is limited to girls usually between 15-18 years.

### **1.9.7 Influence**

Influence refers to the capacity to have an effect on the character, development, or behavior of someone or something. In educational settings, influence can come from peers, parents, teachers, and societal norms that shape students' aspirations and choices (Cialdini, 2009).

### **1.9.8 Parent**

A parent is an individual who has a child or children. Parents play a vital role in their children's education by providing support and resources necessary for academic success. They are considered key stakeholders in the educational process (Epstein & Sheldon, 2002).



### **1.9.9 Teachers**

Teachers are professionals who facilitate learning by imparting knowledge and skills to students. They significantly impact student learning outcomes through their teaching methods and engagement with both students and parents (Darling-Hammond, 2000).

### **1.9.10 Education**

Education is a systematic process through which knowledge, skills, values, and beliefs are transmitted from one generation to another. It encompasses formal schooling as well as informal learning experiences throughout life (Dewey, 1916).

### **1.9.11 School**

A school is an institution designed for the teaching of students under the direction of teachers. Schools provide structured environments where learning occurs across various subjects and grade levels (NCES, 2020).

## **1.10 Organization of the Study**

The thesis is organized into five main chapters including the introduction in chapter one. Chapter two focuses on the literature review, while chapter three is on the methodology of the study. Chapter four focuses on data presentation, findings and discussions. Chapter five consists of a summary of findings, conclusions, and recommendation.



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Introduction

This chapter deals with the review of relevant literature related to the topic under study. The review focuses on the following topical themes: agriculture education and research in Ghana, participation of females in agricultural education, perception of female students in agriculture, factors influencing females in agriculture, and stakeholders and communication in agriculture.

#### 2.1. Theoretical Framework

The theories that guide the study are elaborated in this section.

##### 2.1.1 Theory of Planned Behavior (TPB)

Selecting agriculture as a course of study at the senior High School level signifies a rational decision that is shaped by social, individual as well as environmental factors. The theoretical framework's that guide the modeling of female student's choices in agriculture is the Theory of Planned Behavior (TPB) which was developed by Ajzen, (2006) and Random Utility Theory (RUT).

The TPB states that individual attitudes and perceptions of a particular choice at hand is influenced by their intentions or decisions. The intent to choose is also influenced by the perceived control of behavior, which refers to the believes one has on their ability to attain favorable outcomes from the choice they make. If female students view agricultural science as an interesting and rewarding, they are more likely to choose it as a course of study. Furthermore, subject norms in TPB also referred to as societal norms play an important role in influencing the intention of individuals.



These norms influence individual decisions or choices as they reflect disapproval of choice or societal approval.

Random utility models (RUT) which were developed by McFadden (1974) are suitable in the analysis of individual behavior in the context of decision. The fundamental premise of RUT is that individuals tend to make rational decisions by choosing from a specific alternative that provides the highest amount of utility. Hence the probability that one would choose a particular alternative increase as its utility exceeds that of the other available choices. A person faced with the option of choosing either a course in agriculture or a non-agricultural course will only get the option to select agricultural science as when the utility gained from the choice would be much higher than what is obtained from studying a non-agricultural course or otherwise.

thus,  $U_{agric} > U_{non-agric}$

Where agric = agricultural science and non-agric = non-agriculture science

In the context of choosing agriculture science as a course of study at the Senior High Schools (SHSs), the utility or benefit perceived by a female student can be conceptualized with two main components: the deterministic component and the random component. The deterministic component, which is exogenous, encompasses observable characteristics such as students' characteristics, parental background, factors related to farming, and a series of linearly linked parameters. On the other hand, the random component may arise from factors like missing data or variables (omitted variables), errors in measurement, or inaccuracies in specifying the utility function.

This function is specified below:



$$U_{ij} = X\beta + \varepsilon \quad (3)$$

Where,

$$X\beta = v$$

Where  $U_{ij}$  is the maximum utility attainable when alternative  $j$  is chosen by an individual;  $X\beta$  is the deterministic component of the utility function,  $X$  is a vector of observable socio-demographic and economic characteristics, product-specific factors that influence utility,  $\beta$  is the unknown parameter vector to be estimated and  $\varepsilon$  is the stochastic term.

### ***2.1.2 Social Cognitive Theory***

The social cognitive theory aims to explain the interaction between individuals and their environments, encompassing social and cultural settings. Earlier works attributed to Bandura (1986) established the general social cognitive theory as a unifying framework.

Bandura's theory postulates that cognitive factors, such as beliefs and values, play a significant role in determining individuals' behavior (Bandura, 1986). He emphasizes that cognitive processes, including attention, perception, and memory, mediate behaviors rather than being mere stimulus-response associations. Citing Bandura (1986), human agency is influenced by factors, including behavioral, personal, and environmental aspects, shaped by feedback from the environment.

Bandura's work also outlines and emphasizes self-regulation in behavior, claiming that individuals are capable of controlling their behavior through goal setting, self-evaluation, and self-reinforcement. Bandura observes that self-regulation is a key in human agency and plays an integral role in influencing how we behave over time.





Furthermore, Bandura (1997) points out that a key factor that shapes human behavior is self-efficacy, which is defined as one's belief in their capability to carry out a specific task or reach a specified objective. It influences how individuals make choices, exert effort, and maintain persistence when facing challenges. Bandura suggests that self-efficacy grows from a mix of personal experiences, observing others, and receiving encouragement from those around us.

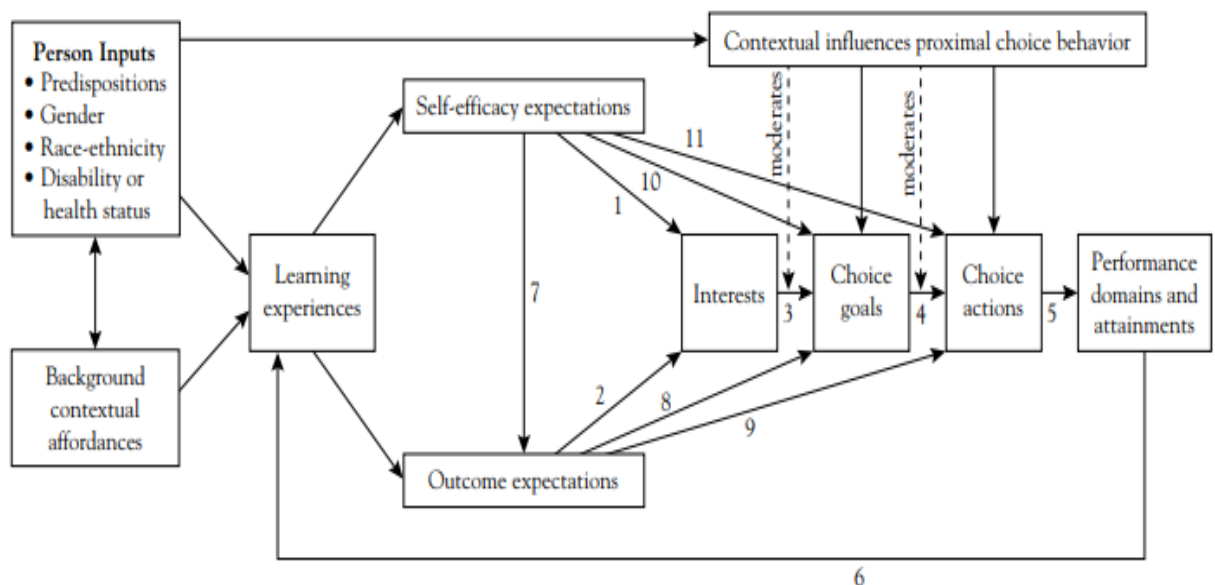
The application of Bandura's theory is vast and diverse to include fields such as education, health care, and psychotherapy. Bandura points out that raising a person's self-efficacy beliefs can promote a positive behavior change and enhance their general well-being. Bandura (1997) asserts that it is essential to provide people with the means to succeed and develop a sense of competence as this enhances their belief in self-efficacy.

Inspired by Bandura (1996), Brown and Lent (1996) developed a social cognitive framework that emphasizes the importance of cognitive and contextual factors in choosing a career. According to Brown and Lent (1996), career choice is a complicated process in which personal factors such as self-efficacy and outcome expectations interact with contextual variables such as available opportunities and social norms. Brown and Lent (1997), encourage career counselors to utilize the social cognitive framework to assist people navigate their career trajectories and make well-informed choices.

The four main elements of the framework are: self-efficacy beliefs, outcome expectations, goals and interests, and contextual factors. Brown and Lent (1997) emphasize the need to assist individuals attain a strong sense of self-efficacy and

maintain positive outcome expectations, as these beliefs play a significant role in shaping their career choices and their perseverance in reaching their goals.

According to Lent (2005), social cognitive theory is essential to explaining how individuals make career decisions. He recognizes that in shaping one's career choices and outcomes, factors such as self-efficacy and outcome expectations, alongside contextual influences like social norms and available support, play a crucial role. Lent (2005), stresses the point that career counselors should assist their clients in developing strong self-efficacy and uphold positive expectations about their future. He also emphasizes the significance of mentorship and social support in career development, calling on counselors to take into account the broad social and cultural contexts that shape clients' career goals and opportunities.



**Figure 2.1 Social Cognitive Theory**

**Source :** *Lent et al. (2002)*

### 2.1.3 Social Cognitive Career Theory

According to *Lent et al. (2002)*, there are four main factors including personal attributes, contextual factors, learning experiences, and performance outcomes that



significantly shape career and academic interests, choices, and performance. These factors interact with each other to influence unique outcomes. *Lent et al., (2002)* argue that self-efficacy and outcome expectations are critical personal factors that can influence individuals' career and academic choices and performance. They also highlight the importance of contextual factors, such as social norms and support, in shaping individuals' interests and aspirations.

*Lent et al. (2002)* further explored contextual factors that potentially influence an individual's career choices and aspirations. Contextual factors, such as cultural and social norms, academic and occupational environments, and social support, can either facilitate or hinder an individual's career development. They propose a social cognitive model that emphasizes the dynamic interaction between personal and contextual factors in shaping career choice.

*Lent et al., (2002)* explain the Social Cognitive Career Theory (SCCT) using the following models;

### **Interest Model**

Interests in career-related activities are a result of one's self-efficacy and expectations of positive outcomes. As individuals progress through childhood and adolescence, they become exposed to a multitude of occupational activities in school, home, and the community, engaging in and receiving reinforcement for them in diverse ways.

These exposures vary based on cultural and environmental factors. By consistently participating in activities, obtaining feedback, and practicing, individuals enhance their skills, establish personal performance standards, develop a sense of their efficacy in specific tasks, and formulate expectations about outcomes.



Individuals are most likely to become interested in activities in which they feel competent and expect positive outcomes. As interest in an activity grows, individuals set goals to increase their involvement. Increased activity participation leads to mastery or failure experiences that ultimately influence self-efficacy, outcome expectations, and interests. To sustain a long-term interest in an activity, individuals need to perceive themselves as competent and anticipate positive results. Conversely, interests are less likely to develop if individuals doubt their abilities or expect negative outcomes. Furthermore, according to the Social Cognitive Career Theory (SCCT), to stimulate interests in areas where individuals have aptitude, they must encounter direct, indirect, and persuasive experiences that enhance strong beliefs in their capabilities and positive expectations of outcomes.

### **Choice Model**

Social Cognitive Career Theory (SCCT) asserts that an individual's career decisions are impacted by various factors including their personal interests, self-efficacy beliefs, outcome expectations, and the environment they are in. Figure 1 depicts the relationship between an individual's career-related interests and their educational and occupational goals. For these goals to be actively pursued, they must be well-defined, specific, deeply ingrained, publicly declared, and supported by important individuals in the individual's life. The individual's performance achievements, whether successful or unsuccessful, play a crucial role in providing feedback that can either strengthen or weaken their self-efficacy and outcome expectations. Ultimately, this feedback aids in the process of revising or confirming the individual's career choices.





Social Cognitive Career Theory (SCCT) posits conditions that enhance the likelihood of individuals pursuing their interests and situations where interests may be compromised in career decision-making. These conditions are collectively categorized as environmental influences in Figure 1, encompassing levels of support, barriers, and opportunities available to individuals. Environmental influences can either facilitate or impede an individual's pursuit of their interests. SCCT suggests that in supportive environments, interests play a stronger role in predicting career choices compared to restrictive environments. In restrictive contexts, practical or culturally accepted considerations may necessitate compromising or bypassing personal interests.

### **Performance Model**

The performance model of SCCT is focused on predicting and explaining two primary aspects of performance: the level of success in educational and occupational pursuits, and the degree of persistence in the face of obstacles. SCCT places emphasis on the influences of ability, self-efficacy, outcome expectations, and performance goals. It is assumed that ability affects performance both directly and indirectly by way of self-efficacy and outcome expectations.

SCCT highlights the motivational roles played by self-efficacy, outcome expectations, and performance goals. Individuals with higher levels of self-efficacy and more positive outcome expectations are more likely to establish higher performance goals, effectively organize their skills, and persist longer in the face of setbacks, thereby controlling their level of ability. Consequently, favorable self-efficacy, outcome expectations, and goals enable individuals to make optimal use of their abilities.

## **2.2. Empirical Review**

This section reviews the empirical literature the roles of teachers, parents, peers and other stakeholders and other factors influencing the choice of programs by female JHS.

### **2.2.1 Agriculture Education and Research in Ghana**

Farming or agriculture encompasses all branches, including the production of agricultural, aquacultural, floricultural, and horticultural produce. This extends to the production of forest produce and the management of livestock, other domesticated animals, and bees for various purposes on a farm. These activities are conducted by a farmer in collaboration (Hemani, 2014)

Research involves seeking additional information about human behavior and patterns, including animals, social, political, and health issues in a formal or informal setting for various purposes. Our views on personalities, society, and the global aspects that define us are shaped by our own socially constructed theories. Research gives us information about thoughts and views, behaviors, traditions, norms, scientific facts, and therapeutic information. The findings of research help us to make decisions, make changes in the areas of research, convince others, and improve upon various sectors affected by research (National Research Council, 2009). Research can take various forms, including, descriptive, qualitative, fundamental, conceptual, analytical, applied, quantitative, empirical, historical, or clinical. Descriptive research involves surveys and fact-seeking inquiries, serving various purposes with its primary goal of understanding current realities. Analytical research utilizes existing facts to thoroughly examine and assess available material. Applied research aims to identify solutions to existing problems in society or organizations.





Fundamental research concentrates on developing theories; for example, the exploration of observable facts in pure mathematics serves as an illustration. Quantitative research focuses on measurable, observable facts, while qualitative research considers the nature and characteristics of the research, such as motivation research (Kothari, 2004). Some research involves utilizing previously published information from other researchers regarding observed facts, a practice referred to as a literature review. The research process begins with problem identification, proceeds to gather existing information about the problem, develops a research plan, and addresses the associated cost.

Education has so many definitions due to diverse perspectives. Education constitutes a structured process aimed at imparting knowledge, skills, beliefs, ideas, and values to prepare individuals for integration into society (Sekor, 2015). According to Wikipedia, the term education is from Latin origins; *educare* which means “to bring up” and *educere*, meaning “to bring forth”. Consequently, Socrates posited that a learner's knowledge already exists but needs to be brought out. In contrast, the Sophists contend that learners are provided with all the necessary knowledge to attain greater heights in society. According to Eric Hofer, education aims to facilitate learning, signifying an ongoing societal process with no predetermined end (Yero, 2002).

Food insecurity poses a significant challenge globally, with Sub-Saharan Africa experiencing a disproportionately high rate of undernourishment, constituting one-quarter of the region's population, exceeding the undernourishment rate for all developing countries combined. Agricultural education has been identified as a key contributor to improving food security, exemplified by findings in Malawi. A survey

conducted at the Bunda College of Agriculture in Blantyre, Malawi, revealed a concerning decline in student enrolment in agriculture, with fewer than 400 students (Engler and Kretzer, 2014).

While studies in Sub-Saharan Africa indicate some shifts in Agricultural Education and Research (AER), changes in trainees' demand patterns are influenced by dynamic roles in both public and private sectors. AER aims at human resource development for rural economies, with non-governmental organizations (NGOs) becoming prominent participants. Senior Civil Servants often attribute agricultural education to the empowerment of farmers for medium-large scale exports (*Havnevik et al., 2007*).

This study draws a parallel between knowledge and food, positioning both as essential to all aspects of life. Education is likened to the agriculture of old, where it provides nourishment to keep individuals healthy and alive. However, the supply of knowledge exceeds its demand, analogous to agriculture. Both agriculture and education involve creating conducive conditions for growth, with institutions and greenhouses serving as protective environments. Innovations have occurred over time in both fields, from primitive to mechanized farming in agriculture and from blackboard to E-learning in education, both considered vocations. Both are crucial tools for a nation's development (CELSTEC, <http://celstec.org>). Education significantly influences the adoption of new technologies, showcasing an increased correlation between the two (Sekor, 2015).

A global survey covering Sub-Saharan Africa, Asia and Pacific, Latin America, North America, West Asia, and North Africa indicates a decline in agricultural research over a 24-year period after 1976. Sub-Saharan Africa experienced a



negative percentage trend since 1991-2000. By comparing developing countries to high-income countries, there was an approximate 62% decline in both sides over nine years from 1991-2000 concerning agriculture, with developing countries leading (Elliott, 2012). Most developed and mid-developed countries have shifted their major labor force to industries, leaving agriculture production to developing countries, impacting their GDP (Sekor, 2015). This shift is attributed to a move away from research focused on agricultural productivity in terms of food staples and a slow pace of public agricultural research (Elliott, 2012).

Research indicates that even though Ghana attained middle-income status seven years ago, its economy still relies on export commodities such as cocoa and gold. Over a ten-year period since 2000, agriculture has consistently been the highest income earner (Baah-Boateng & Twum, 2018).

The Ministry of Parliamentary Affairs reports a gradual increase in the number of seats held by women, albeit at a slower pace compared to males. A survey by the Ghana Education Service in 2000 revealed that, out of 39 heads of tertiary institutions from Chancellor to registrar, only 7.6% were females. In 2005, while the number of male leaders increased, the percentage of females remained constant. Overall, research over the years consistently shows a higher representation of men in leadership and affluent roles (Armah, 2009).

Studies demonstrate that Ghana initiated educational reforms in 1961, but it took 31 years, following the establishment of education as a right, to witness a rise in student enrollment, particularly among children from deprived areas (*Lambert et al., 2012*). Students aspiring to undertake research in agriculture require a strong foundation in



Mathematics and Science, along with basics in Biology and Geography (www.saatsa.ac.za)

### **2.2.2 Participation of Females in Agricultural Education**

The scientific and technological era has led to lower incomes in agriculture, resulting in many countries overlooking the importance of agricultural education theories and their formulation (Sekor, 2015). There is an established belief that incorporating agriculture into the general school curriculum would empower students to substantiate their arguments through practical experience. Facilitators in basic schools affirm the significance of education in agriculture and natural resources (Tsichlis, 2015). Despite free basic education for all, the enrollment of females in secondary and tertiary education is less than a third, with a similar trend in polytechnics, where enrollment in science and technological courses is notably lower in Ghana (Badoo, 2013).

AET is defined as interwoven connected activities in education aimed at increasing a nation's productivity of its natural assets comprehensively. The study reveals that AET spans all aspects of human life, encompassing basic education, secondary education, technical/vocational education, tertiary education, and even adult education (Henschke, 2011). Research findings in secondary schools on agriculture as a course of study in Kenya support the notion that female perceptions of the subject matter are not different from males when learning is initiated (Wamue–Ngare, 2013).

In 2012, the UN's Secretary General stated that if every learner in income-earning countries could grasp the basics, it would uplift one out of every hundred people



from poverty (Sekor, 2015). Households engaged in farming are more likely to value their children's education if they believe it equips them with essential skills in reading and numeracy (Weir, 1999).

Basic education encompasses all aspects of education dealing with the acquisition of basic literacy and numeracy, including primary, secondary, and adult education for individuals below fourth grade (Henschke, 2011). The Northern Region records the lowest adult literacy rate in Ghana. Over the past six years since 2002, Africa has averaged a primary enrollment of 88.5%, while Ghana's average stands at 60.8%. In 2006, primary female enrollment was slightly higher in Africa compared to Ghana, with a 1% difference. Developing countries also recorded higher primary female enrollment than developed countries in the same year (Ndafick, 2014).

A study by the Agricultural Science and Technology Indicators (ASTI) and the African Woman in Agricultural Research and Development (AWARD) programs in 15 Sub-Saharan African countries among 25 agricultural research and higher educational organizations indicated an increase in the professional level of staff from 2000/2001 to 2007/2008, ranging from BSc to Ph.D. levels (Rakotoarisoa, 2011). A survey conducted by the ILO's Key Indicators of the Labour Market (KILM) in 2011 indicated that the contribution of females in developing countries is higher in-service productivity than in agriculture (Rakotoarisoa, 2015).

A survey in some Senior High Schools for agricultural science students in Ghana in 2013 shows that guidance and counseling significantly motivate both male and female students in their career choices and subject combinations (Sekor, 2015).

A survey by the MOE/EMIS (2007) also unveiled that female enrolment in Junior Secondary Schools in Ghana from 2001 to 2005 averaged 45.7%. However, there



was a decline between Basic Education enrolment and Junior Secondary School, with a variation of 2.1% in favour of Basic Education enrolment (Ndafick, 2014).

### **2.2.3 Perception of Female Students in Agriculture**

Research conducted by Lather in 1987 suggests that females often perceive men as having an upper hand in various aspects of life, and this perception is sometimes used against them (Thayer–Bacon, 2003; Henry, 2006).

In a survey of 160 female respondents in four tertiary institutions in Ogun State, Nigeria, regarding their perceptions of farming activities, the majority believed that agricultural procedures involve strenuous physical activities and are tiresome. Additionally, a significant number strongly resisted the notion that societal customs permit female students to engage in intense duties (Gbolahan & Ayodapo, 2013).

A survey conducted in 2015 in five rural centres in India revealed that elderly parents, occupational farmers, and parents who view agriculture as a vocation express a desire for its inclusion in the curriculum (Yadav & Ali 2015). The perception is that an increment in subject requisites of Senior High School graduates in vocational agriculture would lead students toward agribusiness. A study conducted in Texas to understand teachers' views on the newly introduced curriculum in agricultural programs indicated concerns that students' enrollment in agriculture, including non-vocational students, would be significantly affected, as well as program administration and in-service training (Goodman and Steckler, 1989).

Junior High School teachers in Ghana, as revealed in a survey, hold the notion that male students are more intelligent than females and tend to give more attention to



males (*Lambert et al., 2012*). Society has historically perceived humanity in both masculine and feminine aspects (Thayer–Bacon, 2003), resulting in women being silenced, with only the voices of men being heard in society (Tyack and Hansot, 1992).

The classroom environment, whether external or internal, is known to affect female enrollment and completion. Creating a child-centered and gender-sensitive classroom setting, employing and guiding gender-receptive and child-right-oriented teachers with commendable salaries, promoting health, and removing literature on gender inequality, among other internal classroom schemes, are crucial for effective learning (Mittler, 2012). Due to the intimidating nature of caning, some female students in the Central region of Ghana, as revealed in a study, expressed a preference for staying at home rather than going to school (*Lambert et al., 2012*).

Parents play a pivotal role in educational decisions and career development of their children by offering support and motivation. Research conducted in Kenya demonstrates that adolescents turn to their parents for guidance when planning their careers (Edwards and Quinter, 2011). Parental education has been shown to impact the career and academic choices of children, with parents' educational background and profession influencing their children's academic success (Eccles, 2007). Studies in Australia (Pfungst, 2015) and Nigeria (Abiola, 2014) collaborated in the respective studies that educated parents, with significant finances, provide more academic guidance to support their children compared to less affluent parents. Similarly, parental education levels in Albania (Uka, 2015) and the United States (Dustman, 2004) participate in decision making of their children's career paths. American parents with college educations can inspire their children to aspire to achievements that surpass their parents' levels of education and occupation.





The careers of parents significantly shape their children's career decisions. *Bakshi et al., (2012)* revealed that, the professions of Indian parents have a notable impact on the career decisions of their children. This is explained by Bandura in his "Social Cognitive Theory" where individuals acquire knowledge by observing others. Students who observe their parents, having gained experience in interacting with the external world, are likely to emulate their parents' behavior and choices.

A study in Nigeria found that Nigerian girls generally show interest in careers related to literacy, clerical work, arts, music, and social activities, while boys tend to prefer professions associated with outdoor activities, mechanics, computing, business, and industry (*Jamabo et al., 2012*). Gender bias in career choices typically takes shape in their adolescent stages when traditional gender roles become more apparent (*Klapwijk and Rommes, 2009*). Girls may be reluctant to pursue technical occupations associated with masculinity. In England, boys tend to opt for subjects traditionally associated with males, while girls lean toward subjects traditionally associated with females, influencing their decisions regarding gender-specific careers (*Favara, 2012*).

Studies indicate that Junior High School students in Ghana face challenges in selecting their academic paths due to difficulties in recognizing their own strengths. Consequently, they often rely on peer and parental opinions when deciding on their career trajectories (*Acheampong, 2014; Boateng & Gaulee, 2019*). *Palos & Drobot (2010)* study attributed this to limited knowledge on course options available in secondary level, which leads students to rely on actors in their immediate social interactions and environment. Others will resort to peers, teachers/counselors/headteachers and family to determine their career trajectories (*Van & Palos & Drobot 2010; Mansori, 2013; Akomolafe, 2003*). Fathers at home



exert a stronger influence on the educational choices of their wards than mothers, although there is a strong association between the influence of fathers and mothers' choices of courses at the SHS level. Students' desires are sometimes ignored in favor of parental preferences (*Addadey et al., 2022*). There is a widely held belief that offering education in science-related fields entails substantial expenses, leading financially constrained parents to discourage their children from pursuing such disciplines (Herrera & Hurtado, 2011).

Studies by *Addadey et al. (2022)* also establish the role of the teacher/counselor and headteacher as major drivers for students in selecting a study programme to pursue at the secondary level. The study suggested that the main educational actors such as teachers, counselors, headteachers subjectively evaluate their students, which is mostly based on the academic performance and influences them to select a particular programme. Peers and friends exert a significant influence on the decision-making process of their counterparts. Research findings suggest that, in certain instances, peers contribute in stigmatizing and shaping the choices of their colleagues in regard to specific courses. There have been documented cases where individuals have discreetly withheld their chosen course selection from their friends due to the fear of potential ridicule. The perceptions of friends regarding the available courses at the secondary high school level hold considerable sway over the decisions made by students (*Addadey et al., 2022*).

#### **2.2.4 Factors Influencing Females in Agriculture**

The majority of the world's populace, including females, resides in rural areas, with their main assets being land and labor. Therefore, ensuring security in land acquisition for both genders would influence productivity and employment, serving as a necessary tool for the attainment of SDG 5. In 2008, Ghana had a record of 70%



of its female rural population depending on agricultural activities. Under customary law in Ghana, women often have less access to land compared to males in the society. Doss et al, (2013) indicated that female-owned farms were, on average, four times smaller than those owned by males in the Northern region of Ghana. The study posited that, in their patrilineal system of inheritance, women do not inherit lands unless under the control of a man. Apart from facing discrimination in land acquisition, women also lose access to commons they depend on. This has been observed in Northern Ghana, where women were displaced from their lands for sales to investors, impacting their access to commons like "Dawa Dawa" processing and gathering, as well as shrub gathering for charcoal (Nchanji, 2017).

It is recommended that young females aspiring to work in the land sector overcome physical and personal constraints associated with spending long periods in the field. They also need to address limitations related to lower levels of technological education acquisition compared to young men, as societal preferences often favor males in education, especially in science-related courses. Constraints arising from indirect discrimination in recruitment processes, gender-oriented discriminatory practices, and societal labels that associate young females with roles like childbearing, home-keeping, and submission need to be addressed. Additionally, addressing the low access to information channels and job search mechanisms for young females compared to men is crucial, possibly through expert systems and unions (Lamontagne-Godwin et al., 2018). The various gender roles within a household can influence contributions to agriculture (Nyayon, 2015).

A survey across 19 countries, including Ghana, China, and Togo, indicated that women in Cameroon supply the highest amount of labor needed for agriculture,

while India/West Bengal recorded the least with a variation of 69%, and Ghana reported 43%. A survey conducted in India in 1996 in Rajasthan and West Bengal revealed that, on average, as females grow older, their time contribution to agriculture reduces (*Meinzen-Dick et al., 2011*).

According to the Ghana Living Standards (GLSS) survey in 2005, females in rural communities had higher rural employment than females in urban areas in Ghana, and their employment levels were similar to those of males in terms of rural and urban employment. The study further found that the majority of the female working-age population was between the ages of 15-44 years, and most of the female working class had not attended school (*Doss, 2013*).

It has been established that gender segregation significantly affects females in Northern Ghana in terms of poverty and food security, as women are often relegated in decision-making about the use and allocation of resources (*Nyayon, 2015*).

#### **2.2.5 Stakeholders and Communication in Agriculture**

Stakeholder analysis demonstrates a growing understanding of how individuals, groups, and organizations influence the decisions they make (*Brugha & Varvasovszky, 2000*). Effective management of all agricultural stakeholders is crucial for the Ministry of Agriculture to achieve harmony and consistency in development (*Ndilowe, 2013*). Successful development requires appropriate and efficient communication. While subject matter experts may design excellent agriculture programs/projects, these interventions can fail if both gender and other key stakeholders are not adequately informed (*Ndilowe, 2013*). To achieve the Sustainable Development Goals of eradicating gender discrimination and



inequalities in education at all levels, attention to the following factors is necessary (Janhonen-Abruquah et al., 2017).

Junior high school females can be educated through various interpersonal communication channels, which includes interaction with extension workers, lead farmer training models, demonstration fields, community forums, and practical sessions during field days to encourage them (Ndilowe, 2013). Nevertheless, the concept of gender is complex and poses challenges because of its intricate relationships with social structures, cultural norms, and personal perspectives. Furthermore, it is essential to recognize that gender can be interpreted diversely among individuals (Janhonen-Abruquah et al., 2017). Agriculture-related activities are twice as common among women as among men, irrespective of culturally ideal gender roles (Ogato et al., 2009). Therefore, communication, whether print, electronic, or interpersonal, is crucial in transmitting agriculture messages and must be considered for successful agricultural development interventions (Ndilowe, 2013). Educated women are considered capable of supporting their wards in studies, managing family finances, and providing support to their spouses if necessary (Nanda et al., 2022).

Gender disparity in Ghana is attributed to cultural views and beliefs. Achieving gender parity in education at all levels is a Sustainable Development Goal for gender equality (Nanda et al., 2022). In the Ghanaian context, masculinity and femininity are defined based on fundamental biological differences, influencing behavioral expectations aligned with societal norms and values (Janhonen-Abruquah et al., 2017). Gender roles vary based on ethnicity, income, and social standing. Women bear primary responsibility for nearly all reproductive tasks, such as collecting fuelwood, fetching water, cooking, washing, cleaning, and childcare (Ogato et al.,





2009). Men typically assume the role of household heads and act as the primary decision-makers. Albeit, women may also be consulted in decision-making processes. Moreover, women often work longer hours than men and shoulder the responsibilities of both reproductive and productive work (*Ogato et al., 2009*). The distinct socialization experiences of young males and females have lasting effects on their beliefs about gender roles in adulthood. These experiences also influence their decisions regarding academic and professional paths as they grow older (*Janhonen-Abruquah et al., 2017*).

The use of information is influenced by one's knowledge and perception of it (*Akyereko et al., 2022*). Education holds intrinsic benefits that can empower certain girls to chart more promising life paths (*Nanda et al., 2022*). Education is a panacea to intergenerational inequality and poverty, with each additional year of education beyond primary schooling correlating with a 10% increase in individual earnings (*Nanda et al., 2022*). Women have been pivotal in advocating for community-supported agriculture (*Cone & Myhre, 2000*). The importance and practicality of prioritizing education differ for girls and boys (*Nanda et al., 2022*). As agriculture becomes an increasingly lucrative sector, education is seen as essential for nurturing human capital and skills required for desirable careers (*Nanda et al., 2022*). Establishing adequate feedback systems among stakeholders in Agriculture is crucial, as it keeps the ministry on track regarding their requirements (*Ndilowe, 2013*). The importance of communication across all stakeholders/platforms cannot be overstated, as media scholars and practitioners have different perspectives and definitions of development (*Ndilowe, 2013*).

### 2.2.6. Trends of SHS enrolment into the various programme

Over the past decade, Senior High School (SHS) enrolment in Ghana has experienced a remarkable increase, driven by government initiatives such as the Free SHS programme. This growth has been observed across various academic programmes, including Agriculture Science, Business, and General Arts.

From about 25,000 students in 2014 to about 60,000 students in 2024, enrollment in Agriculture Science has grown substantially. The distribution of students by gender shows that historically, males have predominated in this area, making up roughly 65% of enrolled students, while females make up 35%. Despite initiatives to promote greater female involvement in studies pertaining to agriculture, this trend persists (GSS 2022). Also, the number of students enrolled in the Business programme has increased significantly, from roughly 50,000 in 2014 to roughly 95,000 in 2024. The gender distribution in Business programmes is more balanced compared to Agriculture Science, with about 55% being males and 45% constituting females of the enrolments (Statista 2020). The General Arts programme consistently attracts the highest number of students, with enrolment increasing from around 100,000 in 2014 to nearly 190,000 in 2024. In this category, females dominate the enrolment figures, accounting for about 60%, while males make up the remaining 40% (GSS 2022; ResearchGate 2018). The enrolment in Agriculture Science has shown a consistent upward trend over the past decade; however, it remains one of the less popular programmes compared to Business and General Arts. Male students continue to dominate this field, reflecting traditional perceptions of agriculture as a male-oriented discipline.

Despite ongoing efforts to promote gender inclusivity and raise awareness about the critical role of agriculture in national development, female participation remains



relatively low at around 35% (Performance Tracker 2020). This highlights the need for targeted interventions to attract more female students to Agriculture Science programmes. Potential strategies could include scholarships for girls pursuing agriculture-related studies, mentorship opportunities with successful women in agriculture, and campaigns to reframe agriculture as a modern and inclusive career path.

### **2.3 Conceptual Framework**

The conceptual framework for this study is grounded in the social cognitive career theory (SCCT) proposed by Lent, Brown, and Hackett (1994), which posits that career choice is influenced by three primary factors: personal factors, contextual factors, and learning experiences.

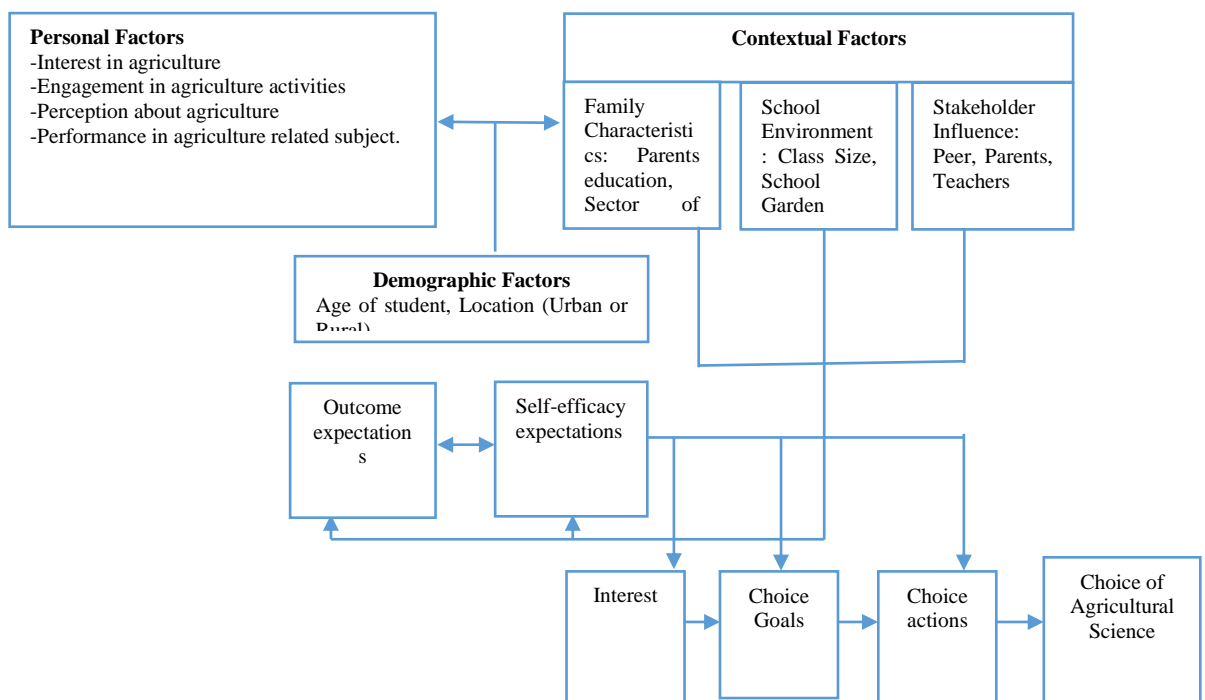
The contextual factors examined in this study are the stakeholders who can influence the decision of female Junior High School (JHS) students to pursue agricultural science in Senior High School (SHS). The stakeholders consist of parents, teachers, and peers. The specific roles that these stakeholders play in influencing the career choice of female JHS students were examined as well as the extent of their influence.

This is done by exploring the factors that influence their perceptions and attitudes toward agriculture and identifying the factors that make agricultural science an attractive career choice for female JHS students.

The outcome variable of this study is the decision of female JHS students to pursue agricultural science in SHS. The independent variables are the stakeholders that influence their decision, their attitudes and perceptions towards agricultural science, and their interest in pursuing it as a career.



Overall, this study aims to contribute to the understanding of the factors that influence the decision of female JHS students to pursue agricultural science in SHS, with a particular focus on the role of stakeholders. This knowledge will inform policies and programs aimed at encouraging more female students to pursue agricultural science as a career, and ultimately contribute to the development of the agricultural sector.



**Figure 2.2 Conceptual Framework of Research**

**Source : Adapted from Lent et al., 2002**

The conceptual framework based on the Social Cognitive Career Theory (SCCT) seeks to explain and establish an interrelated relationship in three main aspects: how basic academic interests develop, how educational choices are made, and how academic successes are obtained.





A student's decision is based on three intrinsically linked factors; (1) self-efficacy expectation which refers to the student's personal beliefs about her capability to perform well in agricultural science; (2) outcome expectations which refer to the student's beliefs about the consequences or outcomes of engaging in a particular activity. Otherwise, the student will consider the outcome of studying agricultural science before deciding to embark on the journey as well as the amount of effort to put into it, (3) personal goals which define the intention of the student (what level of academic performance) before deciding to pursue agricultural science. The SCCT explains that these three variables are linked. Goals are importantly connected to self-efficacy and outcome expectations. In other words, the student will set goals on what subject to pursue based on their capabilities and the outcomes she expects to attain from pursuing that subject.

Closely linked to the above-mentioned factors is interest. A student is likely to develop an interest in agricultural science if she views herself as competent in studying it and expects her effort in the studies to produce valuable results or outcomes. However, her interest is unlikely to develop in it if she doubts her competence and expects negative results.

Additionally, students make goal choices based on their interests reinforced by self-efficacy and outcome expectations. If the students have the intention to pursue agricultural sciences and these interests are strong, clear, and specific, coupled with support from important stakeholders, the student is more likely to take action to achieve their goals. Subsequently, her performance (successes or failures) provides valuable feedback that enhances or undermines her self-efficacy and outcome expectations and ultimately helps revise or confirm choices.

Further, contextual influences such influences (the level of support) from stakeholders including parents, teachers, peers, and cultural factors increasing or decrease the probability of the student pursuing her interest in agriculture. Under supportive contextual, student interest may be a good predictor of choices while the students will have to compromise their choices for more acceptable choices under a repressive contextual influence.



## CHAPTER THREE

### METHODOLOGY

#### 3.0 Introduction

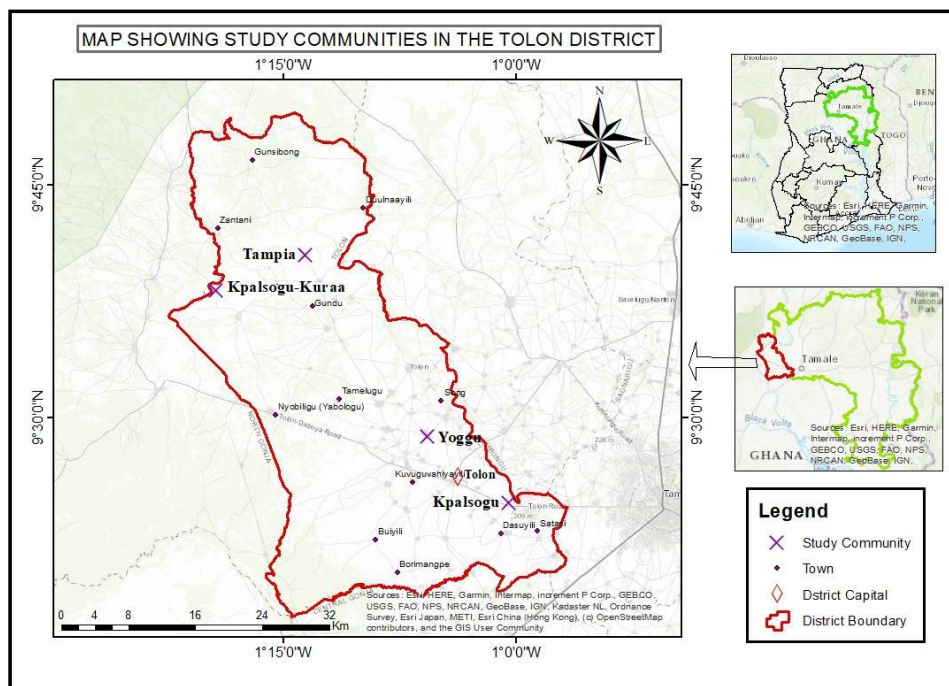
This chapter provides a concise overview of the study area, research design, sample, and sampling procedure. It further presents research instruments and techniques. It also describes the methods of data analysis and ethical considerations.

#### 3.1 Description of Study Area

The study was conducted in Tolon District, located in the Northern Region of Ghana. Spanning an area of 2,741 km<sup>2</sup>, the district has an estimated population of 118,101 according to the 2021 population census by the Ghana Statistical Service (GSS, 2022), with a gender distribution of 49.5% males and 50.4% females. Tolon district is situated between latitude 9° 15' to 10° 02' North and longitude 0° 53' to 1° 25' West. It shares boundaries with North Gonja District to the West, Kumbungu District to the North, Central Gonja District to the South, and East Tamale Metropolitan.

The district's landscape mainly comprises grassland interspersed with guinea savannah woodland, featuring drought-resistant trees such as acacia, mango, baobab, shea-nut, Dawa Dawa, and neem. The predominant soil type is sandy loam, with alluvial deposits in the lowlands supporting the cultivation of crops like rice, yam, cowpea, millet, sorghum, and groundnut. Agriculture is the primary occupation of the majority of Tolon District's residents.





**Figure 3.1 Map of Tolon District**

In terms of educational infrastructure, Tolon District is equipped with 43 kindergartens, 127 primary schools, 24 Junior High Schools, and 2 Senior High Schools, and 1 university campus, which is the University for Development Studies campus at Nyankpala in the Tolon District. Almost all the educational institutions in the district are publicly owned with a few private sector involvement.

Despite the availability of educational resources, there are variations in school participation rates between genders. While the primary school participation rate is 67.8% for boys and 57.7% for girls, the Junior High School’s participation stands at 61% for boys and 21% for girls.



### **3.2 Research Philosophy**

The research philosophy adopted in this study is rooted in pragmatism, a paradigm that emphasizes practicality, flexibility, and the pursuit of knowledge through methods best suited to addressing specific research questions (Dewey, 1938; Rorty, 1999). Pragmatism as a philosophy prioritizes real-world applications and practical outcomes over rigid adherence to theoretical frameworks, allowing for the integration of both qualitative and quantitative approaches to provide a comprehensive understanding of complex phenomena (Creswell & Plano Clark, 2011). Central to this philosophy is the idea that research questions should guide methodological choices, with the ultimate goal of generating actionable insights that address real-world challenges (Tashakkori & Teddlie, 2010). This perspective acknowledges the complexity of social realities and encourages viewing issues from multiple angles to ensure a richer analysis (Patton, 2015). In my thesis, this pragmatic approach shapes every aspect of my work—from the formulation of research questions to the selection of methods and the interpretation of findings—ensuring that my study remains grounded in its relevance and practical contributions to the field.

### **3.3 Research Design**

In research, design is fundamental as it outlines the framework and strategy for addressing study questions. Lune & Berg (2017) describe the research design as a broad plan that guides the study's procedures. Creswell and Creswell (2018) explain that research designs fall within qualitative, quantitative, and mixed methods categories, offering specific guidance for conducting research. To mitigate bias, careful decisions must be made throughout the design process, as noted by Maggetti et al., (2017). Maxwell (2012) argue that no single research design is universally



superior. The research design adopted for this study is the concurrent mixed design. Concurrent research design involves simultaneous data collection and analysis of both quantitative and qualitative data. Kalaian (2011), referenced by Dzandza (2019), identifies three types of mixed methods research: exploratory, explanatory, and triangulation. Creswell (2014) also recognizes these categories but uses different terminology to describe them.

Dzandza (2019) highlights that the triangulation mixed method design allows researchers to simultaneously apply both quantitative and qualitative approaches, integrating data from both to verify results. Creswell (2014) refers to this design as "convergent parallel mixed methods." This approach facilitates the collection of both data types at the same time, aiding in addressing research questions. Creswell and Clark (2011), cited in Dzandza (2019), emphasize the efficiency of this design, especially when data collection time is limited. Triangulation is a robust method that supports the simultaneous and separate analysis of data types, allowing for a comprehensive examination of the research problem from multiple viewpoints (Creswell, 2015).

This study, however, has adopted concurrent research design.

### **3.3 Research Approach**

The mixed method approach was chosen for this study because it leverages the strengths of both quantitative and qualitative data, addressing the limitations inherent in each method, as noted by Creswell et al., (2009). This approach provides a richer and more nuanced understanding of the research question than using either method alone (Kalaian, 2011, cited in Dzandza, 2019a). Harwell (2014) asserts that employing diverse inquiry methods is crucial for thoroughly exploring research



challenges. Creswell and Clark (2011), also cited in Dzandza (2019), discuss the benefits of mixed methods research, including enhanced evidence and the integration of various perspectives.

Despite its advantages, coordinating mixed method studies can be complex, requiring meticulous planning of research elements, sample segmentation, phase timing, and data integration strategies. Combining qualitative and quantitative data can be particularly challenging during analysis (Almalki 2016). Dzandza, citing Creswell and Clark (2011), acknowledges the difficulties in managing triangulation, such as handling different sample sizes and integrating various data types, but emphasizes that the benefits outweigh these challenges.

Adopting a mixed methods approach in research design is crucial due to the complex nature of the study's objectives. This approach integrates both quantitative and qualitative methods, offering a comprehensive understanding of the factors influencing female students' decisions to pursue agricultural science. Quantitative data provides measurable insights into patterns and relationships, such as the impact of gender biases or parental occupation, while qualitative data delves deeper into the underlying reasons and contexts. Interviews and focus groups with students, teachers, and parents can uncover detailed explanations that quantitative methods alone might miss.

Quantitative methods effectively identify trends and generalize findings across the sample, but they may overlook specific contextual reasons behind these trends. Qualitative methods complement this by offering rich, contextual insights into how stakeholder roles and perceptions contribute to students' decisions. For instance, understanding how teachers' attitudes or parents' support influence students requires



detailed qualitative data, which can reveal the subtleties of barriers like gender biases and social norms that are not fully captured through quantitative analysis.

The use of mixed methods allows for triangulation, which enhances the validity and reliability of the findings. By comparing quantitative results with qualitative insights, researchers can confirm findings and identify any discrepancies. This process helps in validating the factors affecting female students' decisions and can highlight areas requiring further investigation or reveal unexpected influences. Triangulation ensures that the results are robust and well-supported by multiple data sources.

A mixed methods approach leads to more holistic recommendations for policymakers and educational institutions. Quantitative analysis identifies broad patterns and significant factors, while qualitative analysis provides a deeper understanding of how these factors are perceived and experienced. This combination allows for the development of targeted interventions, such as career guidance programs or specific policy changes, tailored to address both general and context-specific issues effectively.

Finally, examining the perspectives of various stakeholders—students, teachers, and parents—benefits from a mixed methods approach. Quantitative surveys assess the extent of influence and perceptions across different groups, while qualitative interviews provide in-depth insights into individual and group perspectives. This comprehensive approach ensures that policy recommendations and program designs are well-informed, addressing both broad trends and specific contextual challenges to effectively support female students in pursuing agricultural science.





### 3.3 Population, Sample, and Sample Procedure

Parents, teachers, and all final-year females in JHS in the Tolon district constitute the population of the study. A reconnaissance survey conducted by the researcher before the data revealed that 27 Junior High Schools (JHS) were found to be present in the district. For data collection and representativeness, all schools will have an equal chance of being selected by simple random selection. A list of all JHS will be obtained from Ghana Education Service Directorate in the district. The Statistical population involved is the entire Junior High schools' students (N = 821) which include 27 schools who are all final year students. Of these, 10 schools were selected. The number of females to be interviewed in each school will be selected based on the class size to make a total of 138 students and their guardian as sample size by using Cochran's formula and multistage cluster sampling and random selection and all the 8 teachers who teach them. Therefore, the population for the study is 138 final year female students, 138 guardians of the female students selected and 8 subject teachers from each of the 10 selected schools teaching the selected final year female students.

From Cochran's formula, using the Cochran 1977,

$$n_0 = \frac{p(1-p)z^2}{e^2} = \frac{(0.5)(1-0.5)(2.58)^2}{(0.1)^2} = 166$$

Therefore,  $n_0$  is 166 final year students

$n$  = sample size

$p$  = the population proportion (0.5)

$e$  = acceptable sampling error (0.1)

$z$  =  $z$  value at 99% confidence level (2,58)

The sample population n is given by:  $n = \frac{n_o}{1 + \frac{n_o - 1}{N}} = \frac{166}{1 + \frac{166 - 1}{821}} = 138$

Therefore, the sample size for the research is 138 final year students.

Where: n = Sample size

N = Total number of students

$n_o$  = Cochran's sample size

The research will employ 99% confidence level, 0.5 population proportion and 10% sample error.

To obtain population based on class size,  $n_c = \frac{C}{T} \times S$

Where  $n_c$  = Proportion by class size

C = Class size,

T = Total population

S = Sample size

**Table 3.1 Sample Size Determination**

| JHS schools code | Class size (C) | Proportion by class size ( $n_c$ ) |
|------------------|----------------|------------------------------------|
| 1                | 14             | 8                                  |
| 2                | 34             | 20                                 |
| 3                | 12             | 7                                  |
| 4                | 49             | 29                                 |
| 5                | 27             | 16                                 |
| 6                | 18             | 10                                 |
| 7                | 12             | 7                                  |
| 8                | 36             | 21                                 |
| 9                | 17             | 10                                 |
| 10               | 18             | 10                                 |
| Total (T)        | 237            | 138                                |
| Sample size (S)  | 138            |                                    |

Source: Author's Construct (2023)



### **3.4 Research Instrument**

The researcher developed and validated a questionnaire to serve as the primary data collection tool for this study. The questionnaire was given to my supervisor and other lecturers in the department for their expert opinions. After they made their corrections, I worked on revising it. I then administered the revised questionnaire to some Junior High Schools (JHS), outside of the selected schools for the main data collection, for pilot testing. The issues identified by the students were addressed, and the updated questionnaire was returned to my supervisor for validation before it was finally used for data collection. The questionnaire was structured into four main sections. The first section encompassed socio-demographic characteristics of the respondents. The second section focused on students' educational preferences. The third section examined the influence of stakeholders on students' educational decisions, utilizing a five-point Likert scale where responses ranged from Strongly Agree (5) to Strongly Disagree (1). The midpoint of 3 (calculated as  $(5+4+3+2+1) / 5$ ) was used as a critical threshold. The fourth section explored factors influencing students' program choices.

### **3.5 Data Collection**

This study utilized both primary and secondary data collection methods. Primary data was gathered through personal interviews facilitated by semi-structured questionnaires. The secondary data was collected by reviewing journals and data from the Ghana Education Service.

#### **3.5.1 Techniques for Collecting Primary Data**

The primary data for this research was gathered through a field survey conducted by the researcher. Quantitative data was primarily collected using both close-ended and



open-ended questionnaires, while qualitative data was obtained through in-depth interviews and direct observation. Interview guides were utilized during personal interviews to gather personal characteristics and other pertinent information from female Junior High School students. The information obtained from these interviews encompassed both qualitative and quantitative data.

### 3.6 Method of Data Analysis

The study data was analyzed employing Kendall's Coefficient of Concordance (W), Likert scale, binary logistic regression model.

#### 3.6.1 Analysis of educational choices of female JHS students in Tolon District of the Northern region of Ghana.

Kendall's Coefficient of Concordance (W) was employed to assess the level of agreement or association among constraints assigned to students for ranking. This coefficient quantifies agreement on a scale from zero to one, where a higher value indicates stronger agreement in the rankings.

Students were required to rank the type of program they will pursue at Senior High School based on priority. These included Agricultural Sciences, Business, General Sciences, Visual Arts, Home Economics, General Arts, Technical, and Vocational. These rankings were used to obtain the W between the judges (constraints/students).

For the set ranking the W is given by: 
$$W = \frac{n[\epsilon T^2 - (\epsilon T^2)/n]}{nm^2(n^2 - 1)} \quad (1)$$

Where: T = Column totals,

n = Number of students

m = Number of constraints ranked



Since  $K$  is equal to a number of constraints ranked, the following quantity is approximately normally distributed as a chi-squared on  $N-1$  degrees of freedom:

$$X^2(N - 1) = K(N - 1)W \quad (2)$$

Using equation (2), the  $W$  obtained was used to calculate the  $\chi^2$  to determine whether the rankings agree or not at the 5% or 1% level of significance. For this test, the hypotheses were:

Null hypothesis ( $H_0$ ): the rankings disagree.

Alternative hypothesis ( $H_1$ ): the rankings agree.

The  $H_0$  was rejected when the calculated test statistic ( $TSc$ )  $>$  ( $TSt$ ) i.e. tabulated test statistic or  $- TSc < - TSt$ , otherwise, it was accepted. Alternatively, the asymptotic significance level is used. This is based on the asymptotic distribution of a test statistic. Typically, a value of less than 0.05 is considered significant.

### **3.6.2 Analysis of roles stakeholders play in the educational decision of female JHS students in Tolon District of the Northern region of Ghana.**

This was analyzed using descriptive statistics. A five-point Likert scale was utilized to gather data to assess the roles stakeholders play in the educational decisions of female students. The scale ranged from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). According to *Owusu et al. (2021)*, to determine the significance of each item on the scale, a cut-off point was established based on the score range. The range was calculated by subtracting the lowest possible score (1) from the highest possible score (5), resulting in a range of 4 ( $5 - 1 = 4$ ). The midpoint of this range, calculated as half of the range ( $4/2$ ), was 2. To set the cut-off point, this midpoint (2) was subtracted from the highest possible score (5), resulting in a cut-off point of 3 ( $5 - 2$



= 3). Therefore, any mean score above 3 indicated a high composite weight, while any mean score below 3 indicated a low composite weight for each item on the scale.

### 3.6.3 Analyze factors influencing female students' decision to pursue agriculture science in SHS

The binary logistic regression model will be used to analyze the factors influencing the choice of agriculture science course as a study in the senior high school. The Logit model is a non-linear model that transforms the latent variable into 0, 1 interval to give a desired property of probability. This is because the Logit model is analyzed in the general framework of probabilities. This is made possible by the link-function. The Logit model assumes the cumulative distribution function of the logistic distribution which has a flatter tail (McFaddan, 1973). This is applied when the latent (unobserved) variable  $Y^*$  is linearly related to a set of explanatory variables and a stochastic term given by the equation below:

$$Y_i^* = \beta_0 + \sum_{i=1}^n \beta X + \varepsilon_i \quad (4)$$

Where  $Y^*$ =latent variable,  $X$ =observable characteristics of students,  $\beta$ = unknown parameters to be estimated, and  $\varepsilon$ =error term.

The observed dependent variable  $Y$  is given as:

$$Y_i = \begin{cases} 1 & \text{if } Y_i^* > 0 \\ 0 & \text{if } Y_i^* \leq 0 \end{cases} \quad (5)$$

$Y$  is coded 1 if yes for selecting agricultural science as a course at the secondary level and 0 if otherwise.

The probability of a student selecting agriculture science is then given below:



$$Pr Pr (Y_i = 1) = \frac{e^{\beta_0 + \beta'X}}{1 + e^{\beta_0 + \beta'X}} \quad (6)$$

Empirically, the logit model for determining the factors that influence students' selection of agriculture science is given by:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_1 X_1 + \beta_1 X_1 + \beta_1 X_1 \dots \dots \beta_k X_k + \varepsilon_i \quad (7)$$

**Table 3.2 Description, Measurement of Variables and A Priori Expectation**

| Variables    | Variables Description and Measurement                           | A priori Expectation |
|--------------|---|----------------------|
| Age          | Age of student in years   | +/-                  |
| Residency    | Dummy =1 if student is located in urban area, 0 otherwise       | +/-                  |
| FatherEdu    | Father's educational Level in years                             | +/-                  |
| MotherEdu    | Mother's educational Level in years                             | +/-                  |
| Sector_Emp   | Dummy =1 if parent is employed in formal sector, 0 otherwise    | +/-                  |
| ClassSize    | Number of students in a class                                   | -                    |
| FamR_Agric   | Family Relative in agric related field                          | +/-                  |
| EngFarm      | Dummy = 1 if student engages in farming activities, 0 otherwise | +/-                  |
| LAgrc        | Dummy = 1 if student like Agric, 0 otherwise                    | +                    |
| Sch_Garden   | Dummy = 1 if school has a garden, 0 otherwise                   | +/-                  |
| InfPar       | Dummy = 1 if parent Influence choice of course, 0 otherwise     | +/-                  |
| FrnInfluence | Dummy =1 if Influence of friend                                 | +/-                  |



|                |   |     |
|----------------|---|-----|
|                | on choice, 0 otherwise  |     |
| TcherInfluence | Dummy = 1 if teacher influences choice, 0 otherwise   | +/- |
| FamInfluence   | Dummy =1 if family influences choice, 0 otherwise   | +/- |
| SocCInfluence  | Dummy =1 if social character influences choice, 0 otherwise   | +/_ |
| KwAgric        | Dummy = 1 if knowledge of agric as course, 0 otherwise  | +/- |
| AgricDiff      | Dummy = 1 if perception of agric is difficult, 0 otherwise  | -   |
| AgricMale      | Dummy = 1 if perception of agric as male course, 0 otherwise  | -   |
| PerfAgric      | Dummy = 1 if good performance in agric, 0 otherwise   | +   |
| FavSubj        | Dummy = 1 if Favorite subject is Agric, 0 otherwise   | +   |
| UDS            | Dummy = 1 if Student has knowledge of the activities of UDS, 0 otherwise.   | +   |
| SARI           | Dummy = 1 if Student has knowledge of the activities of SARI, 0 otherwise.  | +   |
| ARI            | Dummy = 1 if Student has knowledge of the activities of ARI, 0 otherwise.   | +   |
| SRI            | Dummy = 1 if Student has knowledge of the activities of SRI, 0 otherwise.   | +   |
| Institutions   | Dummy = 1 if student has knowledge of activities of any agribusiness institutions in the area or elsewhere, 0 otherwise | +   |

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**Source: Author's Construct (2023)**



### 3.7 Ethical Considerations

Ethical considerations are fundamental to all research endeavors and are increasingly recognized for their essential role in ensuring the integrity of the research process. In this study, the researcher strictly adhered to the ethical guidelines established by the research community and that of University for Development Studies, which emphasizes the importance of ethical conduct in research.

Prior to the commencement of this research, consent was sought and given by the Ethics Committee of the University for Development Studies and the Ghana Education Service. In the course of data collection, the researcher ensured awareness and understanding of the nature and purpose of the study and their level of participation needed. The researcher-maintained respondents' anonymity and confidentiality throughout the study by not requiring participants disclose their identities, thereby safeguarding their privacy.

It was also specified that their participation in the study was entirely voluntary and not obligatory; their privacy and confidentiality were assured.

The participants were notified of their rights and freedoms, including the right to opt out of the study without any consequences. This aspect of informed consent is crucial as it empowers participants and respects their autonomy.

In furtherance of academic integrity and preventing plagiarism, the researcher ensured that all sources referenced in the study were duly acknowledged.



## CHAPTER FOUR

### RESULT AND DISCUSSION

#### 4.0 Introduction

In this chapter, the findings and their corresponding discussions regarding 138 final year JHS female students, 138 guardians of these students, 80 school teachers from the Tolon District in the Northern Region of Ghana have been presented. This chapter is divided into five sections, which cover the objectives of the research. Section one presents the demographic characteristics of the respondents. Section two looks into the educational choices of female JHS students in the Tolon District. Section three reveals and discusses the roles of the stakeholders towards the educational choices of female JHS students in the district. The factors that influence female students' decision to pursue agriculture science in SHS are examined in section four, while section five explores the roles of stakeholders in the decision-making process of students to pursue agriculture science in SHS.

#### 4.1 Demographic Characteristics of Respondents

This section presents the findings regarding specific social and economic characteristics of the sampled population. The socioeconomic attributes selected are considered pertinent for the study's objectives based on existing literature. These characteristics include the age of female students, educational levels of their fathers and mothers, guardians' occupations, occupations of other family members, type of residence, and class sizes, as detailed in Table 4.1.



**Table 4.1: Demographic Characteristics**

| Variable                                  | Categories                       | %  |
|---|----------------------------------|----|
| <b>Age</b>                                | 16-20 years                      | 85 |
|   | 21-25 years                      | 13 |
|   | Above 25 years                   | 2  |
| <b>Father's educational level</b>         |                                  |    |
|   | No formal educational background | 45 |
|   | Non-formal education             | 17 |
|   | Basic education                  | 13 |
|   | Secondary education              | 12 |
|   | Tertiary education               | 13 |
| <b>Mother's educational level</b>         |                                  |    |
|   | No formal education              | 56 |
|   | Non-formal education             | 17 |
|   | Basic education                  | 11 |
|   | Secondary education              | 11 |
|   | Tertiary education               | 5  |
| <b>Occupation of guardian</b>             |                                  |    |
|   | Agriculture related              | 90 |
|   | Non-agriculture related          | 10 |
| <b>Other family member in agriculture</b> |                                  |    |
|   | Yes                              | 70 |
|   | No                               | 30 |
| <b>Type of Residence</b>                  |                                  |    |
|   | Urban                            | 51 |
|   | Rural                            | 49 |
| <b>Class size</b>                         |                                  |    |
|   | 1-15                             | 16 |
|   | 16-30                            | 33 |
|   | 31-45                            | 30 |
|   | 46-60                            | 21 |

Source: Field Survey (2023)

#### 4.1.1 Age of Respondents

Results in Table 4.1 shows that the overwhelming majority (86%) of the students interviewed fall in the age category of 16-20 years while 13% are between 21-24 years and 2% are above the age of 25 years. The official school starting age of pupils in Ghana is 6 years. As such final year students of JHS were expected to be 15 years



old since they would have spent 9 years in basic school. Thus, all the students surveyed were older than expected.

#### **4.1.2 Educational Level of Parents**

The analysis shows that 45% of the students interviewed indicated their fathers have no formal educational background while 23 of the fathers representing 16% have gone through non-formal education which includes vocational training or skill development programmes that are not part of the formal academic system. For basic education, 12% of the fathers have basic education qualifications while 13% each reported that fathers have secondary and tertiary education respectively.

Similarly, the majority of the students' respondents' mothers do not have formal education representing 56% of the total population followed by non-formal education representing 17%. While 11% of respondents' mothers have basic and secondary education each, only 5% have tertiary education. Compared to their male counterparts, more mothers than fathers have formal education. The results reveal that, majority of the students interviewed have their parents who have no formal educational background. Educational background of parents has a significant influence on students' academic career choices and selection of programmes to offer in furthering their education. Parents have often participated in selecting academic programmes for their wards who are moving from JHS to SHS. However, this can only be possible if the parents themselves have some education as this will make them appreciate the prospects of the various academic programmes at the SHS level and the ability of their wards to pursue one programme or the other.

The critical role of parents' levels of education in this study is worth taking note of. This is because numerous studies have demonstrated the role of parental educational



background in the selection of career and academic choices by their wards. This study considers the findings of Eccles (2007) conducted in the United States worthwhile. Eccles (2007) found that in the United States, parents' educational background and profession were linked to their children's academic success. Dustman (2004) also made similar findings in how British students considered parental education a decisive factor in their career decisions. Further, the findings of this study could relate the influence of parents' levels of education to the findings of a research by Pfingst (2015) in Australia and Abiola (2014) in Nigeria which both studies revealed that highly educated parents are well-placed to provide informed academic guidance to their children compared to less affluent parents. Therefore, parental educational background has an influence in determining whether their female wards choose agriculture as a course of study in the SHS or not. With such a low educational background, it is obvious that parents' participation in the selection of courses to pursue at the SHS level by their wards is limited.

#### **4.1.3 Occupational Background of Parents**

Occupational background of parents also plays a critical role in students' academic programme selection. Different academic programmes at the SHS level have different financial demands on parents and since occupation relates to parents' income; occupational background of parents would most likely affect students' choice of academic programmes to offer at the SHS level. As a result, the occupational background of parents was assessed and presented in Table 4.1. Results from the analysis reveal that the majority of the students representing 90%, have their guardians engaged in occupations related to agriculture. The remaining 10% are involved in other occupations.



Similarly, the majority of the other family members are also engaged in agriculture related fields, which is 70% out of the population. Overall, the analysis from the study shows that a significant proportion of the students surveyed, (97% of the respondents), have family members engaged in agriculture. This suggests that agriculture plays a prominent role within the families of these respondents. It has a potential influence of family involvement in agriculture on respondents' own attitudes, behaviors, or experiences related to the agriculture field.

This finding agrees with the findings of Bakshi et al. (2012) who found that the professions of Indian parents had a notable impact on the career choices of their children. This is attributable to Bandura's Social Cognitive Theory which highlights the concept of vicarious learning, where individuals acquire knowledge by observing others. Students will likely model their behavior and choices after observing their parents, who have acquired life experience with the outside world.

#### **4.1.4 Residential Status of Respondents**

It can be observed in Table 4.1 that most students representing 51% were from urban areas while 49% hailed from rural areas, where farming was observed as the predominant occupation for a significant portion of the population. According to Thieman *et al.* (2016), a significant factor that influences students' decision to study agriculture can be attributed to their parents' or guardians' occupation. Because a significant number of households reside in areas where farming is the dominant occupation, it implies that students are more likely drawn to agriculture science due to their exposure to farming practices and the importance of agriculture in their communities.

#### **4.1.5 Class Size**

The analysis revealed that most schools surveyed in the study have class sizes between 16-30 pupils, with 61% having 12-49 students per class, meeting the Ghana Education Service's (GES) recommended 45 pupils per class to ensure effective teaching and learning. The nature of the class size gives almost every student the opportunity to actively participate in class by asking questions and also receiving personalized attention from teachers. This is consistent with the findings of Osai et al (2021). who observed that large class sizes are associated with various challenges, such as decreased academic performance, limited teacher-student interaction, and overcrowded classrooms. These factors can impede effective teaching and learning experiences. Again, *Aholi et al. (2018)* noted that schools with limited resources may face challenges in providing practical experiences and essential tools for agricultural education, potentially impacting students' attitudes towards the subject. This implies that they are less likely to choose it as a course of study

#### **4.2 Educational Choices of Female JHS Students**

The first objective of the study was to analyze the educational choices of students. By this, the study sought to understand the choices of courses female students wish to pursue in the SHS. The programmes offered in the various Senior High Schools in Ghana are Agricultural Sciences, Business, General Sciences, Visual Arts, Home Economics, General Arts, Technical, and Vocational. These courses were given to the final year female students to rank in order of their preference.





#### 4.2.1 Programme Choice of Students in SHS

The results of the analysis of respondents' rank scores, show in Table 4.1, indicate that female students are likely to select Home Economics as their first choice (ranked 1<sup>st</sup>), followed by General Arts (ranked 2<sup>nd</sup>), followed by Business (ranked 3<sup>rd</sup>), then General Science (ranked 4<sup>th</sup>), and then Agricultural Science (ranked 5<sup>th</sup>), Technical, and Vocational (ranked 6<sup>th</sup>) and Visual Arts (ranked 7<sup>th</sup>) in that order. The first three preferred courses ranked corroborate with the findings of Jamabo et al. (2012) that females prefer careers related to literacy, clerical work, arts, music, and social activities. It was also realized that General Science, Agricultural Science, Technical, and Vocational and Visual Arts were ranked from fourth to seventh choices which also corroborate the findings of Klapwijk and Rommes (2009) that for girls, gender bias may lead to reluctance to pursue technical occupations since they are often associated with masculinity.

**Table 4.2 Program Choices of Students In SHS**

| Choices/Programs         | Mean Rank | Rank            |
|--------------------------|-----------|-----------------|
| Home Economics           | 2.95      | 1 <sup>st</sup> |
| General Arts             | 3.12      | 2 <sup>nd</sup> |
| Business                 | 3.62      | 3 <sup>rd</sup> |
| General Science          | 4.01      | 4 <sup>th</sup> |
| Agricultural Science     | 4.30      | 5 <sup>th</sup> |
| Technical and Vocational | 4.98      | 6 <sup>th</sup> |
| Visual Arts              | 5.03      | 7 <sup>th</sup> |

*N=138, Kendall's Wa=0.148, Chi-Square=122.180, df=6, Asymp. Sig.=0.00*

**Source: Field Survey (2023).**

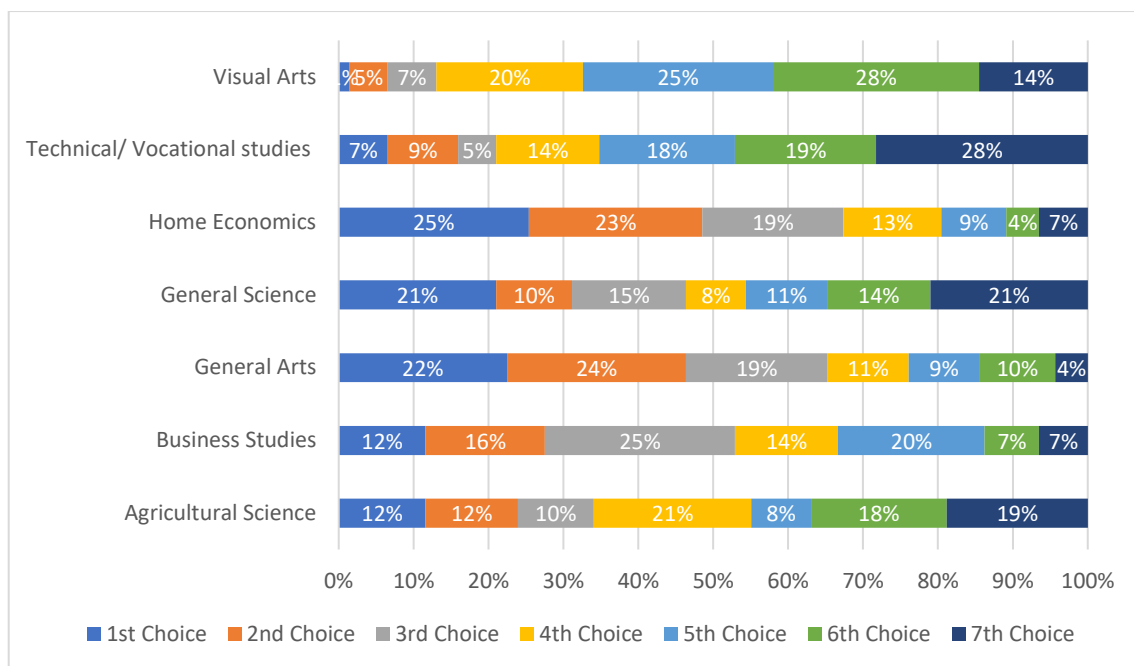
Figure 4.1 further highlights that, most of the females selected Home Economics as their first-choice option which represents 25% of the female JHS students. This choice implies an interest in subjects related to home management, family life, nutrition, and consumer studies. With 22%, General Arts is one of the more popular



choices among the female JHS students. This choice might indicate an interest in humanities, social sciences, and arts-related subjects. This is followed directly by General Science, another popular choice, selected by 21% female JHS students as their first preference. The combined effects of these confirm the findings of *Jamabo et al. (2012)* which indicates that females are more likely to pursue careers related to literacy, clerical work, arts, music, and social activities. It is even surprising to find such a high percentage of female students opting for General Science if the findings of *Jamabo et al. (2012)* still apply to the current situation.

From the studies, agricultural science had 12% of the female JHS students selecting it as their first-choice educational option. Also, the same percentage of females representing 12% female JHS students choose Business Studies as their first-choice option. Both agriculture science and business studies had the same percentage of the population. Technical/Vocational Studies has 7% female JHS students who have chosen Technical/Vocational Studies as their first preference. Lastly, Visual Arts followed with the lowest of only 1% female JHS students choosing it as their first choice. This suggests a smaller interest in creative and visual arts subjects. These findings are in tandem with those of *Jamabo et al. (2012)* where females are more likely to choose courses relating to literacy, clerical work, arts, music, and social activities as well as the findings of *Favara (2012)* which saw females chose subjects traditionally associated with females in England.

The Kendall's  $W_a$  value of 0.148 indicates that there is a relatively of agreement among the respondents This further suggest that there is some consistency in the rating and also some significant level of disagree among them. Also, the chi square value of 122.80 (df=6) and the significance value of 0.000 all indicate that level of agreement among the respondents is statistically significant.



**Figure 4.1 SHS Program Selection by Choice**

**Source: Field Survey (2023)**

#### 4.2.2 Reasons for Selecting the First choice

Students were asked to provide reasons for their first choice of programme of study at the SHS. Analysis of the reasons assigned for the first choice of programme is presented in figure 4.2. From the study, it emerged that most of the students, representing 51% of students, selected their first choice because they will be comfortable with the subject. The most frequently selected reason, comfort with the subject, suggests that a significant number of students are basing their first-choice preference on their existing familiarity, interest, or aptitude for the chosen field.

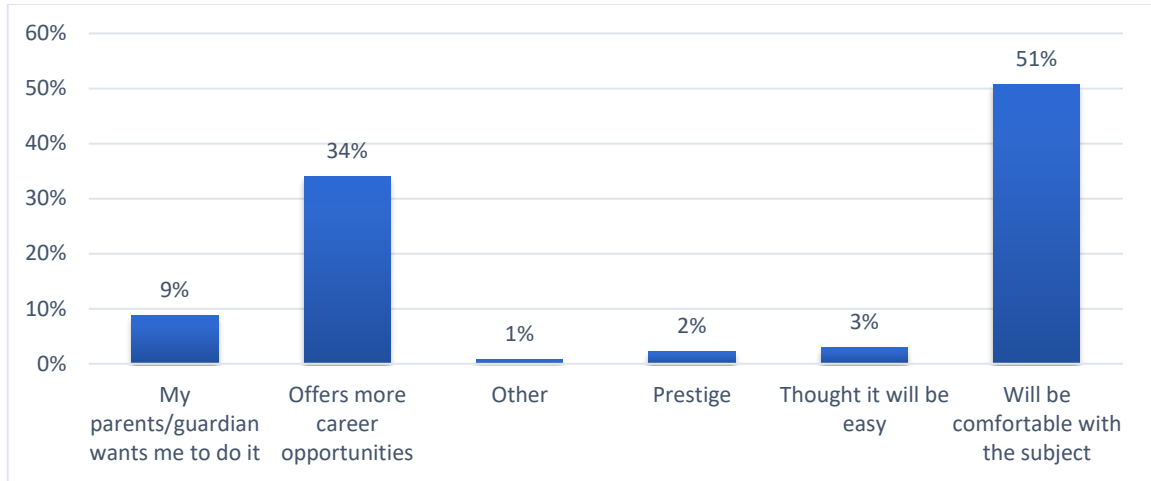
Also, 34% of the respondents cited career opportunities as the reason for their choice of programme. It is motivated by the belief that their first-choice preference offers better career prospects. This implies a forward-looking approach where students are considering potential employment opportunities associated with their chosen field. This is followed by My parents/guardian wanting me to do it. This reason suggests

that 9% of the respondents have chosen their first-choice preference based on the wishes or guidance of their parents or guardians. This emphasizes the influence of parents' expectations or wishes towards the educational choices of their children. This highlights the impact of parental expectations or desires on the educational preferences of their wards. Interestingly, 3% of respondents selected their first-choice course due to perceived ease or less difficulty as compared to other available courses.

Additionally, 2% of respondents selected their first-choice courses based on perceived prestige, indicating societal recognition and status as a significant factor in their decision-making process. In general, the analysis provides insights into the reasoning for students' education preferences. The reasons range from parental influence and career prospects to personal comfort with the subject and perceptions of ease. The high frequency of respondents citing comfort with the subject suggests that a majority of students are choosing fields they feel confident and capable in.

Furthermore, analysis highlights the complex interplay of personal motivations, external influences, and practical considerations that shape students' decisions regarding their educational paths. This underscores the importance of providing guidance and information to help students make informed choices that align with their interests and aspirations.





**Figure 4.2 Reasons for Selecting First-Choice Courses**

**Source: Field Survey (2023)**

#### 4.2.3 Reason for Selecting Second Choice

The major reasons for selecting the second-choice courses were given as “will be comfortable with the subject” and “offers more career opportunities” both accounting for 40% and 38% respectively. The other 10% of respondents selected their second-choice preference due to their perceived ease of study in comparison to the other options.

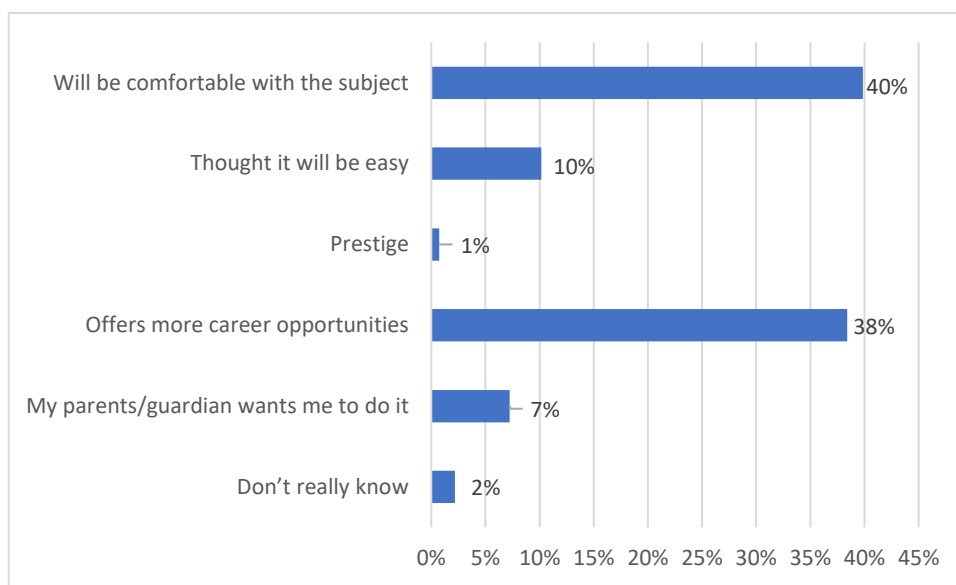
In comparing the two reasons for making the first and second choices, a trend is established which underscores a preference of courses that are perceived to be less demanding, manageable or less daunting.

Also 7% of respondents have chosen their second-choice preference based on the wishes or guidance of their parents or guardians. Similar to the first-choice preferences, this indicates the influence of parental expectations on the educational decisions of some respondents. 3% of respondents indicated that they do not have a clear reason for selecting their second-choice preference which suggests a certain level of uncertainty or lack of strong motivation for this particular choice. 2% of respondents have chosen their second-choice preference based on the perceived



prestige or reputation associated with that particular field of study which also mirrors the first-choice preferences and indicates that prestige remains a factor for some students.

The reasons provided for first and second choices suggest that, given the opportunity and without the influence of parents and guardians, students will select courses that are less daunting and comfortable relative to their experience. The high frequency of respondents citing comfort with the subject underscores the importance of selecting fields that align with their existing knowledge and abilities. This again emphasizes the role of guidance and information in helping students navigate their options and make choices that align with their goals and capabilities.



**Figure 4.3 Reasons for Selecting Second Choice Courses**

**Source: Field Survey (2023)**

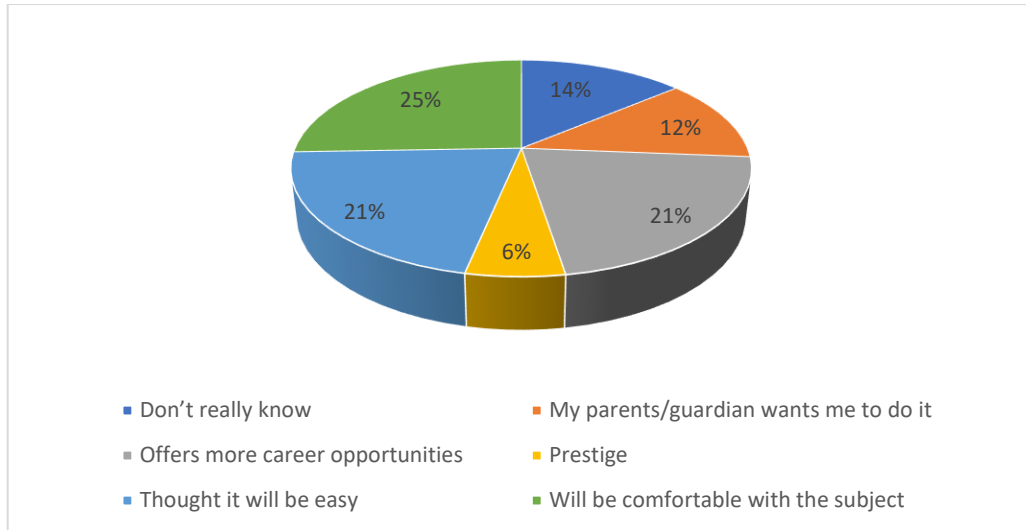
Figure 4.4 provides information on the reasons for selecting the third-choice educational preferences among a group of respondents. From Figure 4.4, it is observed that 25% of the respondents have selected their third-choice preference because they perceive it to be easier or less challenging compared to other options.





This continues to reflect a preference for subjects perceived as manageable. Again, 21% of them are motivated by the belief that their third-choice preference offers better career prospects. While the percentage is lower than the second-choice preferences, it still suggests a significant consideration of future employment opportunities. This has the same percentage (21%) “*thought it will be easy*”. Furthermore, 14% of them indicated that they do not have a clear reason for selecting their third-choice preference. This suggests a relatively higher degree of uncertainty or lack of strong motivation for this particular choice compared to the first and second choices. Again, 12% of the respondents have chosen their third-choice preference based on the wishes or guidance of their parents or guardians. While slightly lower than the second-choice preferences, this indicates continued parental influence on educational decisions. Likewise, 12% of them have chosen their third-choice preference based on the perceived prestige or reputation associated with that particular field of study. Prestige remains a factor, albeit with a lower frequency compared to other reasons.

From the findings, it can be said that there are mix factors students consider when making course choices. However, the high frequency of respondents citing comfort with the subject underscores the continued importance of selecting fields that align with their knowledge and abilities, even for choices that are further down their preference list. The analysis also highlights the evolving nature of decision-making as students consider alternative choices. It also underscores the need for comprehensive guidance and support to help students navigate their educational options and make informed decisions that align with their aspirations.



**Figure 4.4 Reason for Selecting Your Third Choice Course**

**Source: Field Survey (2023)**

### **4.3 Role of Stakeholders in the Educational Decisions of Female JHS Students**

The Likert scale was used to examine the roles stakeholders play in the educational decisions of female JHS students in the Tolon District of the Northern region of Ghana. The stakeholders considered are friends, teachers and guardians of the female students.

Several factors were considered to understand the influence of friends on students' educational decisions. Students rated their agreement with several statements related to the role of friends in educational decisions. These statements include: *my friends are a great source of motivation for me, my friends influenced me in choosing my course in SHS, the friends I admire most motivate me to be who I am, the way I learn is as a result of how my friends learn, what I hope to be in the future is influenced by my friends*. As observed in Table 4.3, the results from the Likert scale indicate that among these statements, most students strongly agreed with the statements that



my friends are a great source of motivation for me and the friends I admire most motivate me to be who I am. This suggests that students perceive their friends as a key source of motivation and a significant influence on their educational choices.

These findings affirm the research findings of Boateng & Gaulee (2019) that JHS choice of secondary education courses. These findings also support the assertion of Palos & Drobot (2010) that pupils usually seek the support of their peers due to their limited knowledge concerning the pupils in Ghanaians follow the views of their peers in their educational choices

**Table 4.3 The Role of Friends in Educational Choices of Female Students**

| Perception  | Mean | Median | Mode | Std. Deviation | Decision        |
|---|------|--------|------|----------------|-----------------|
| My friends are great source of motivation for me        | 3.72 | 4      | 4    | 1.165          | High perception |
| My friends influenced me in choosing my course in SHS   | 3.28 | 4      | 4    | 1.159          | Low perception  |
| The friends I admire most motivate me to be who I am    | 3.61 | 4      | 4    | 1.155          | High perception |
| The way I learn is as a result of how my friends learn  | 3.43 | 4      | 4    | 1.189          | Low perception  |
| What I hope to be in future is influenced by my friends | 3.34 | 4      | 4    | 1.259          | Low perception  |

*Strongly disagree=1, Disagree=2, Indifferent=3, Agree=4, Strongly Agree=5*

*Weighted mean= 3.47; Cronbach's Alpha=0.87*

**Source: Field Survey (2023)**

Table 4.3 provides a clearer view of the complexities of peer influence and how it impacts educational decisions of female students. The analysis also underscores the significance of giving students guidance and counseling as they navigate their educational pathways, taking into account the different factors that contribute to their course choices.



Therefore, acknowledging the significant role that close friends play in motivation and personal development, it is essential to cultivate an environment that encourages supportive and inspiring friendships, which in turn enhance students' overall development and well-being. However, factors such as the nature of friendships, the level of shared learning experiences, and students' attitudes towards learning can impact the level of influence friends have on educational choices of female students. Again, the analysis reveals the potential influence of peer learning styles on students' learning preferences, highlighting the need to promote diverse learning strategies and foster a supportive learning environment that accommodates various learning styles and preferences. This finding hence underscores the need for comprehensive career guidance and exploration to help students make informed decisions about their future paths. These findings collaborate with the findings of Boateng & Gaulee (2019) and Palos & Drobot (2010). Addadey et al. (2022) reported how some students had to conceal their choices from their friends for fear of stigmatization due to the various perceptions friends hold about some SHS courses.



**Table 4.4 The Role of Peer Influence in the Educational Choices of Female JHS Students**

| Perception  | Strongly Disagree (%) | Disagree (%) | Indifferent (%) | Agree (%)    | Strongly Agree (%) |
|---|-----------------------|--------------|-----------------|--------------|--------------------|
| My friends are great source of motivation for me        | 4<br>(2.9)            | 27<br>(19.6) | 13<br>(9.4)     | 54<br>(39.1) | 40<br>(29)         |
| My friends influenced me in choosing my course in SHS   | 8<br>(5.8)            | 36<br>(26.1) | 21<br>(15.2)    | 55<br>(39.9) | 18<br>(13)         |
| The friends I admire most motivate me to be who I am    | 6<br>(4.3)            | 24<br>(17.4) | 21<br>(15.2)    | 54<br>(39.1) | 33<br>(23.9)       |
| The way I learn is as a result of how my friends learn  | 10<br>(7.2)           | 26<br>(18.8) | 21<br>(15.2)    | 57<br>(41.3) | 24<br>(17.4)       |
| What I hope to be in future is influenced by my friends | 11<br>(8)             | 31<br>(22.5) | 25<br>(18.1)    | 42<br>(30.4) | 29<br>(21)         |

**Source: Field Survey (2023)**

From the result as revealed in table 4.5, Teachers indicated that with high perception that they play roles such as interacting with students to know their preferred career choice needs, provide relevant educational information, provide special attention to students who struggle with their career choice and suggest careers for their students. However, they do not believe that their role extends to having vested interest in specific career choices or providing professional sessions such as seminars and resource persons to guide them. The latter reported low perception for teachers. The results hence suggested that teachers as stakeholders see their role as facilitator but the ultimate responsibility for the student’s decision does lie on them. These findings are supported by an earlier study by Addadey et al. (2022). According to them, the teacher/counselor and headteacher play very significant roles for course selections by students. They assert that teachers, headteachers and counselors assess and/or evaluate their students and often guide them toward specific courses based on their performance, strengths and weaknesses.



**Table 4.5 The Role of Teachers in the Educational Choices of Females JHS Students**

| Perception  | Mean | Median | Mode | Std. Deviation | Decision        |
|---|------|--------|------|----------------|-----------------|
| I suggest future careers for my students                                    | 4.1  | 4      | 4    | 0.757          | High perception |
| I am interested in what careers my students choose                          | 3.95 | 4      | 4    | 0.767          | Low perception  |
| I interact with my students to know their preferred career choice needs     | 4.07 | 4      | 4    | 0.789          | High perception |
| I give relevant education and occupational information to my students       | 4.04 | 4      | 4    | 0.836          | High perception |
| I give special attention to students who struggle with career choice issues | 4.17 | 4      | 4    | 0.798          | High perception |
| I organize career seminars and invite resource persons for my students      | 3.64 | 4      | 4    | 1.039          | Low perception  |

*Strongly disagree=1, Disagree=2, Indifferent=3, Agree=4, Strongly Agree=5*  
*Weighted mean= 3.99; Cronbach's Alpha=0.72*

**Source: Field Survey (2023)**

The study findings also confirmed in Table 4.6. Most teachers corresponding to 82% either agreed or strongly agreed that they participated in providing guidance with regards to career choices which suggest that teachers are committed actively to aiding students be able to explore and plan for their future careers. This finding emphasizes on the importance of having a dedicated career guidance and counselling sessions in the education sector and also highlights on proactive teachers and educators' engagement with students impacts them positively and aid them in their career development as well as in their decision-making processes.

Additionally, most of the teachers corresponding to 76% either agreed or strongly agreed that they engage in offering of such information actively. The findings of the study again show that majority of stakeholder's that are in this field are actively committed to supporting students' career and educational journeys by imparting valuable insights and knowledge to them. Furthermore, the majority of teachers corresponding to 76% either agreed or strongly agreed that they actively engage in



offering such information. The importance of providing accurate and updated information in decision-making in the educational sector cannot be overestimated. This role played by teachers will go a long way to empower the students to make informed decisions about their future.

Again, the majority of respondents that is 80% either agreed or strongly agreed that they are committed to offering specialized attention and guidance. The findings suggest that teachers play an important role in providing personalized support to help students navigate career-related challenges.

In addition to the above roles, a good majority of teachers either agree or strongly agree that they are actively involved in arranging career seminars and inviting experts. The relatively small number of disagree and strongly disagree responses suggests that most stakeholders in this context are committed to providing opportunities for students to learn about potential career paths and engage with professionals.



**Table 4.6 The Role of Teachers in Suggesting Educational Choices to Students**

| Perception  | Strongly Disagree (%) | Disagree (%) | Indifferent (%) | Agree (%) | Strongly Agree (%) |
|---|-----------------------|--------------|-----------------|-----------|--------------------|
| I suggest future careers for my students                                    |                       | 4            | 21              | 70        | 43                 |
|   |                       | 2.9          | 15.2            | 50.7      | 31.2               |
| I am interested in what careers my students choose                          | -                     | 6            | 26              | 75        | 31                 |
|   |                       | 4.3          | 18.8            | 54.3      | 22.5               |
| I interact with my students to know their preferred career choice needs     | -                     | 4            | 26              | 64        | 44                 |
|   |                       | 2.9          | 18.8            | 46.4      | 31.9               |
| I give relevant education and occupational information to my students       | -                     | 6            | 27              | 60        | 45                 |
|   |                       | 4.3          | 19.6            | 43.5      | 32.6               |
| I give special attention to students who struggle with career choice issues | -                     | 3            | 25              | 56        | 54                 |
|   |                       | 2.2          | 18.1            | 40.6      | 39.1               |
| I organize career seminars and invite resource persons for my students      | 8                     | 8            | 36              | 60        | 26                 |
|   | 5.8                   | 5.8          | 26.1            | 43.5      | 18.8               |

**Source: Field Survey (2023)**

Table 4.7 presents the mean rank of parents' role in educational choices of their wards. The mean rank indicates that, out of the eight (8) identified, five (5) has high perception of parents' perceived role whilst three (3) are low perceptions. The results from the analysis shows parents plays the roles of suggesting the best future career for their child or children, they do not force their wishes above the career interest of their child/children, their child will never make any decision without their approval, fathers greatly influence the career aspirations of their sons and mothers greatly



influence the career aspirations of their daughters. This means guardians play roles in influencing the decision of making educational choices.

**Table 4.7 The Role of Parents in the Educational Choices of Female Students**

| Perception   | Mean | Median | Mode | Std. Deviation | Decision        |
|--|------|--------|------|----------------|-----------------|
| I suggest the best future career for my child or children                        | 3.96 | 4      | 4    | 0.915          | High perception |
| I try to make my child/children pursue my own career path                        | 3.48 | 4      | 4    | 1.082          | Low perception  |
| I do not force my wishes above the career interest of my child/children          | 3.83 | 4      | 4    | 0.845          | High perception |
| My child will never make any decision without my approval                        | 3.93 | 4      | 4    | 0.803          | High perception |
| I am aware that I have great influence on my child's career aspirations          | 3.72 | 4      | 4    | 0.98           | Low perception  |
| I have no interest in the career my child chooses                                | 3.35 | 4      | 4    | 1.175          | Low perception  |
| Fathers greatly influence the career aspirations of their sons                   | 3.91 | 4      | 4    | 0.824          | High perception |
| Mothers greatly influence the career aspirations of their daughters              | 3.85 | 4      | 4    | 0.854          | High perception |
| <i>Strongly disagree=1, Disagree=2, Indifferent=3, Agree=4, Strongly Agree=5</i> |      |        |      |                |                 |
| <i>Weighted mean= 3.75; Cronbach's Alpha=0.72</i>                                |      |        |      |                |                 |

**Source: Field Survey (2023)**

Further, the results in Table 4.8 provide insights into the roles of stakeholders, particularly parents or guardians, in offering guidance and suggestions for the best future careers for their female JHS students. The majority of respondents either agree or strongly agree that they actively engage in helping their children make informed decisions about their career paths. A few individuals have disagreed or expressed indifference, it suggests that the majority of stakeholders in this context are actively committed to offering resilient support and counsel to their children.

This analysis underscores the very importance of a parent or guardian's involvement in career decision-making processes involving their children. Thus, indicating the positive effects that guidance, both informed and supportive can offer to students



trying to explore their aspirations, strength and interest as well as making important decisions about their future educational and career journeys.

The data analysis revealed the impact of parental role in influencing their children's choice of careers. The greater percentage of the respondents either agree or strongly agree that they are involved in guiding their children's career decisions along the lines of their own careers. The relatively small number of disagree and strongly disagree opinions shows that most of the stakeholders in this context tend to regard their own career paths as relevant or valuable considerations in influencing their children.

This analysis underscores the potential influence of parents or guardians on their children's career aspirations. It also highlights the need for balanced guidance that considers the interests, strengths, and aspirations of the individual student, while also acknowledging the importance of parents' experiences and perspectives in the decision-making process.

The data from the study gives insights into how parents or guardians respect and support their children in their career interests. Most of the respondents either strongly agree or agree that they put the aspirations of their children first. Hence, this suggest that majority of stakeholders in this context respect and value the individual career choices chosen by their children.

Additionally, the study results provide insights to the parents and guardians with regards to their perceived control over their child's decision-making processes. Most of the respondents either strongly agree or agree that they play a little role in the approval of their children's decisions.



The relatively small number of disagree and indifferent responses suggests that most stakeholders in this context feel that they have a significant say in their child's decision-making, especially when it comes to matters such as education and career choices.

The result also provides insights into the roles of parents or guardians, in their understanding of their influence on their child's career aspirations. The majority of respondents either agree or strongly agree that they recognize their role in shaping their child's career goals. This suggests that parents understand the impact they have on their child's career aspirations.

Again, the majority of respondents either agree or strongly agree that they are interested in understanding and supporting their child's career aspirations. This as well suggests that most stakeholders in this context do see value in showing interest and engagement in their child's career choices.

The results indicate that fathers have a crucial influence on the career aspiration of their daughters. The majority of parents surveyed either agree or strongly agree that fathers significantly shape their daughter's career goals. This suggests that they acknowledge the importance of fatherly guidance in influencing their children's career aspirations.

The findings also emphasize the impact mothers have on their children's career goals. Majority of respondents either agree or strongly agree that mothers significantly influence their daughter's career aspirations.

From the study, the data represents the roles of stakeholders, specifically parents, in the educational decision-making process of female Junior High School (JHS) students in the Tolon District of the Northern region of Ghana. The responses are



divided into two categories: "No" and "Yes.". The data shows that 54% of the respondents indicated that parents do not decide which program to offer in Senior High School (SHS) for their daughters. This suggests that a significant portion of the female JHS students have a level of autonomy or influence in selecting the educational program they want to pursue in SHS. It could indicate that these students are actively involved in making decisions about their educational paths and have a say in choosing their preferred courses. On the other hand, 46% of the respondents indicated that parents do play a role in deciding the program their daughters should offer in SHS. This suggests that for a considerable number of students, parental influence and guidance are significant factors in determining the educational path they take after JHS. Parents may base their decisions on various factors such as career aspirations, perceived opportunities, and their own beliefs about what would be best for their children.

**Table 4.8 Parents Determine Students' SHS Courses**

**Do Your Parents decide which programme to offer in SHS?**

|     | Percentage |
|-----|------------|
| Yes | 54         |
| No  | 46         |

**Source: Field Survey (2023)**

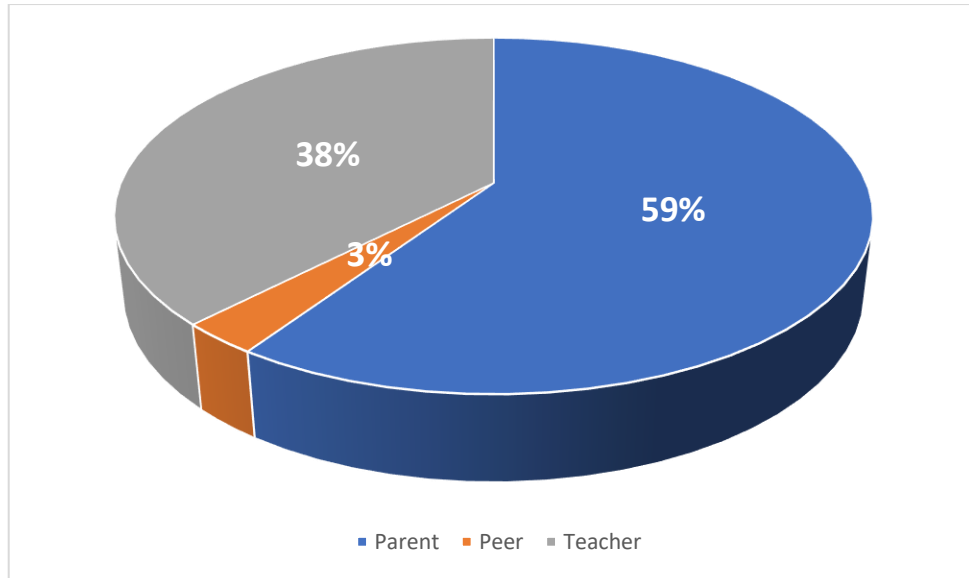
The data presented sheds more light on the various stakeholders involved in the educational-decision process for female JHS students in the Tolon District. The researcher asked respondents to identify which stakeholder they think holds the ultimate authority in their educational choices. The findings revealed that 59% of the





respondents feel that parents have the final say in such decisions. This suggests that a significant majority of the female JHS students in the Tolon District perceive parents to have a substantial influence over the choices they make regarding their education. Parental decisions may be based on factors such as cultural expectations, financial considerations, and aspirations for their child's future. This is followed by teachers with 38% of the respondents. This suggests that a significant portion of the students perceive their teachers to play a role in guiding and influencing their choices. Teachers can provide academic advice, share insights about different fields of study, and offer guidance on potential career paths. Only 3% of the respondents indicated that peers have the final say in their educational decisions. This suggests that peer influence has a relatively minor role in shaping the educational choices of these female JHS students. Peer influence could encompass the opinions, interests, or preferences of friends and classmates.

From study, the data underscores the prominent role of parents in the educational decision-making process of female JHS students in the Tolon District. Parents are perceived to have the highest level of influence and often have the final say in the choices made by these students. While teachers also play a notable role in guiding and advising students, peer influence appears to have less impact on their decisions. This analysis highlights the significance of understanding the dynamics between stakeholders and their influence on students' educational trajectories. It emphasizes the importance of fostering open communication and collaboration among parents, teachers, and students to ensure that educational decisions are well-informed and aligned with the students' aspirations and potential.



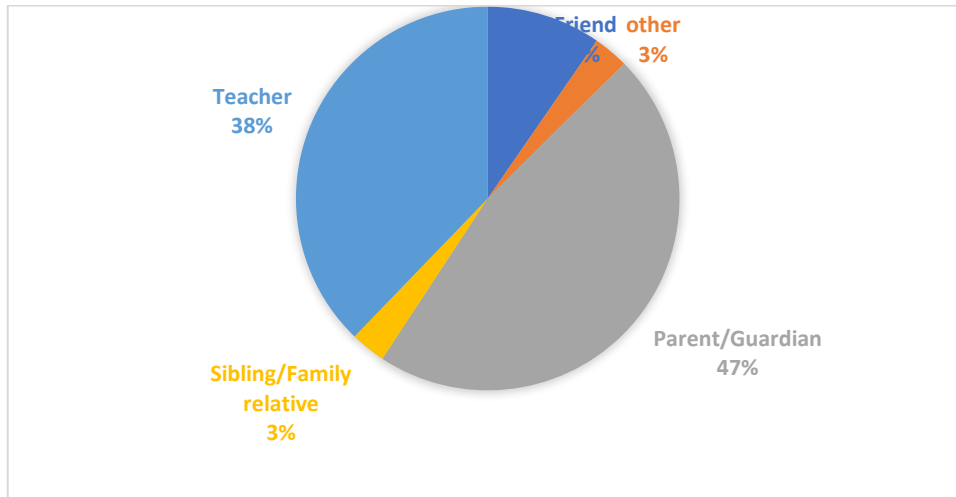
**Figure 4.5 Determinant of Final Decision on Course to Offer**

**Source: Field Survey (2023)**

From the analysis, Parental or guardian consultation was the most common choice, with 47% of the respondents indicating they would consult their parent or guardian first. This highlights the significant role that parents or guardians play in students' educational decision-making processes. This is followed by teachers with 38% of respondents who would consult a teacher as their first choice when selecting their SHS course of study. 9% of the respondents indicated that they would consult a friend first when choosing their course of study in SHS. This suggests that a small portion of students consider their friends as important sources of advice and influence when making educational decisions. 3% of the respondents would consult a sibling or family relative when deciding on their SHS course of study. This suggests that some students value the input of older family members who may have relevant experience or insights. Also, 3% of the respondents chose "Other" as their preferred choice for consultation. These people were the headmaster or principal.



Overall, the data reveals that parents or guardians are the primary choice for consultation among female JHS students in the Tolon District when deciding on their course of study in SHS. Teachers also hold significant influence in students' decision-making process, while friends, siblings, and other sources play relatively smaller roles.



**Figure 4.6 Stakeholder First Consulted by Students in Choosing Courses**

**Source: Field Survey (2023)**

#### **4.4 Factors Influencing Female Students' Decision to Pursue Agriculture Science in SHS**

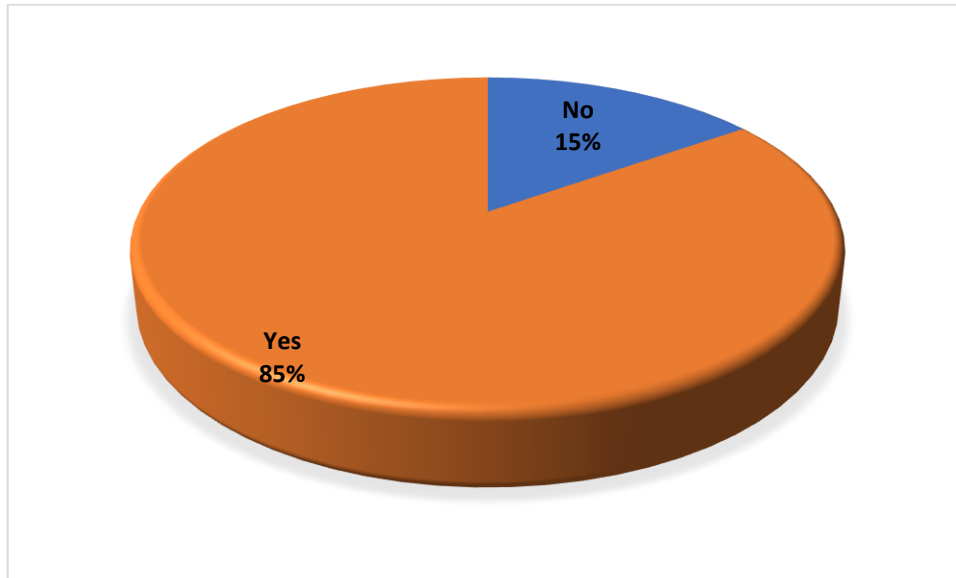
This section presents findings of factors influencing female students' decision to pursue agriculture science in the Senior High School.

##### **4.4.1 Respondent Awareness of Agriculture at Senior High School**

Result indicates that 117 respondents (85%) were aware that agriculture science is a course of study at the SHS level. This indicates that the majority of the students are informed about the existence of agriculture science as a potential field of study in their future educational journey. However, a minority of 21 respondents, representing 15%, indicated that they are not aware that agriculture science is a course of study at the SHS level. This suggests that a small portion of the female



JHS students lack awareness of the availability of agriculture science as an educational option in SHS.



**Figure 4.7 Knowledge of Agriculture as a Course in the SHS**

**Source: Field Survey (2023)**

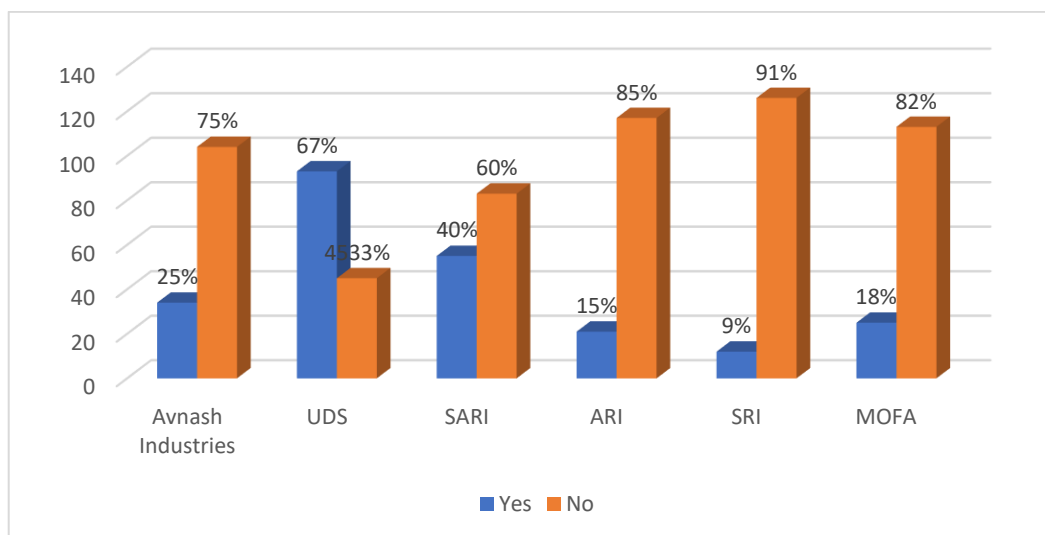
#### **4.4.2 Knowledge of Existence of Agriculture Institution in the District**

This section aims to examine whether students in the study area are aware of the existence of agricultural and agribusiness-related institutions. Additionally, it seeks to determine if they have knowledge of the activities carried out by these institutions. The objective is to ascertain whether these institutions, which are involved in agriculture, have an impact on students' decision to enroll in agricultural science at senior high school. The institutions in question are Savannah Agriculture Research Institute (SARI), University for Development Studies (Nyankpala campus), Animal Research Institute (ARI) and Ministry of Food and Agriculture (MoFA). The University for Development Studies (UDS) is a Ghanaian university established in 1992. It has multi-campuses with one of its campuses located at Nyankpala in the Tolon District and offering a range of agricultural courses. The Savannah Agricultural Research Institute (SARI) is one of the thirteen research institutes



of the Council for Scientific and Industrial Research Institute (CSIR) in Ghana. SARI is also located at Nyankpala in the Tolon district which focuses on research in agriculture. Avnash company is a rice processing company located at Nyankpala in the Tolon district and employs many people in the area. The Department of Agriculture in the Tolon district operates under the Ministry of Food and Agriculture (MOFA) in Ghana. It is anticipated that the awareness of these institutions and their activities in the agricultural sector would have an impact on students' decisions to study agricultural science.

The results in Figure 4.8 show that 75% of the respondents indicated that they are not familiar with or do not have knowledge of the activities of Avnash Industries. This suggests that a significant portion of the respondents surveyed are not aware of Avnash as an institution existing in the Tolon district which engages in agricultural activities. Meanwhile, 25% of the respondents are familiar with or have knowledge of the existence and activities of Avnash Industries



**Figure 4.8 Knowledge of Existence of Agricultural Institutions**

**Source: Field Survey (2023)**



The analysis revealed that the majority (67%) of the respondents are aware of the presence and activities of UDS, Nyankpala campus, in the district while 33% of the respondents indicated that they are not aware or familiar with it. This suggests that a significant number of respondents have knowledge of the University for Development Studies (UDS), but there is also a notable portion that is not familiar with it. Again, 40% of the respondents are familiar with or have knowledge of the presence and activities of the Savanna Agricultural Research Institute (SARI) while 60% of them indicated that they are not familiar with or do not have knowledge of the activities of Savanna Agricultural Research Institute (SARI). This suggests that a significant portion of the respondents surveyed are not aware of SARI.

The results from Figure 4.8 also indicate the majority (85%) of the respondents do not have knowledge on the existence of ARI as an agriculture institution in the Tolon district while 15% of them indicated that they had no idea of the existence and activities of the institution. The results suggest that a significant number of respondents do not have knowledge of the Animal Research Institute (ARI), while a smaller number are familiar with it.

From Figure 4.8, it is also observed that a majority (91%) of the respondents surveyed are not aware of Soil Research Institute (SRI) while 9% of them are familiar with or have knowledge of the (SRI). This indicates that a smaller subset of the respondents has awareness of SRI.

In Figure 4.8, it is observed that 82% of the respondents indicated that they are not familiar with or do not have knowledge of the activities of the Department of Agriculture under the Ministry of Food and Agriculture (MOFA). While 18% of

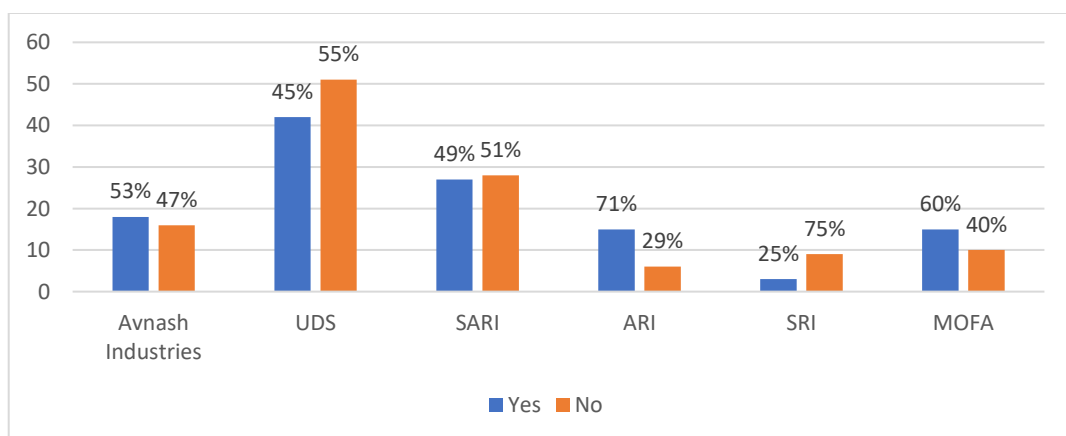
them are familiar with or have knowledge of the Department of Agriculture under the Ministry of Food and Agriculture (MOFA).

#### 4.4.3 Influence of Agricultural Institutions in the Choice of Agricultural Science

This section assesses whether students' awareness of educational and agribusiness firms would motivate them to study agriculture

From the analysis, out of the 25% of the respondent who indicated they were aware with the existence and operations of Avnash Industries in Figure 4.8, 53% of them indicated that the activities of the industry do motivate or influence them to want to offer agricultural while 47% of them indicated that the activities of the industry do not motivate or influence them to want to pursue agricultural science as shown in Figure 4.9.

The analysis shows 54% of the 67% who had known about the activities of UDS indicated that the presence and activities of the school do motivate or influence them to want to pursue agriculture science as a course of study while 47% of them indicated that the activities of the UDS do no motivate influence them to want to offer agricultural science in their choices.



**Figure 4.9 Knowledge of Existence of Agricultural Institutions Influences the Selection of Agriculture**



**Source: Field Survey (2023)**

The finding suggests that there is a relatively even split between respondents who feel motivated or influenced by the entity's activities to pursue agricultural science and those who do not.

From Figure 4.9, it is shown that 49% of the respondents with knowledge of the existence and activities of SARI, indicated that the activities of SARI, influence their choice of agriculture science as a course of study. The respondents indicated that the activities of the SARI do not motivate or influence them to pursue agricultural science while almost equal number of respondents (51%) of the respondents indicated that the activities of the SARI do not motivate or influence them to want to offer agricultural science.

The data provided indicates responses regarding the influence or motivation ARI activities have on individuals' decisions to pursue agricultural science. From Figure 4.9, it is shown that 71% of those who know about the activities of the institute are motivated to offer agricultural science and 29% of them indicated that the activities of the entity do not motivate or influence them to want to offer agricultural science. This suggests that a greater number of respondents feel motivated or influenced by the entity's activities to pursue agricultural science compared to those who do not.

Out of the number of respondents who knew SRI, only 25% of them would like to offer agriculture science while 75% of them say it does not influence them to want to offer agricultural science. The data suggests that a significant majority of respondents do not feel motivated or influenced by the entity's activities to pursue agricultural science, while a smaller number do.





The data provided indicates responses regarding the influence or motivation that the activities of the Department of Agriculture under the Ministry of Food and Agriculture (MOFA) have on individuals' decisions to pursue agricultural science. From Figure 4.9, it is observed that 60% of the respondents who know about the existence and activities of the Department indicated that the activities of the Department do motivate or influence them to want to offer agricultural science. The other 40% of them indicated that the activities of the Department of Agriculture do not motivate or influence them to want to offer agricultural science. The data suggests that a greater number of respondents feel motivated or influenced by the activities of the Department of Agriculture to pursue agricultural science compared to those who do not.

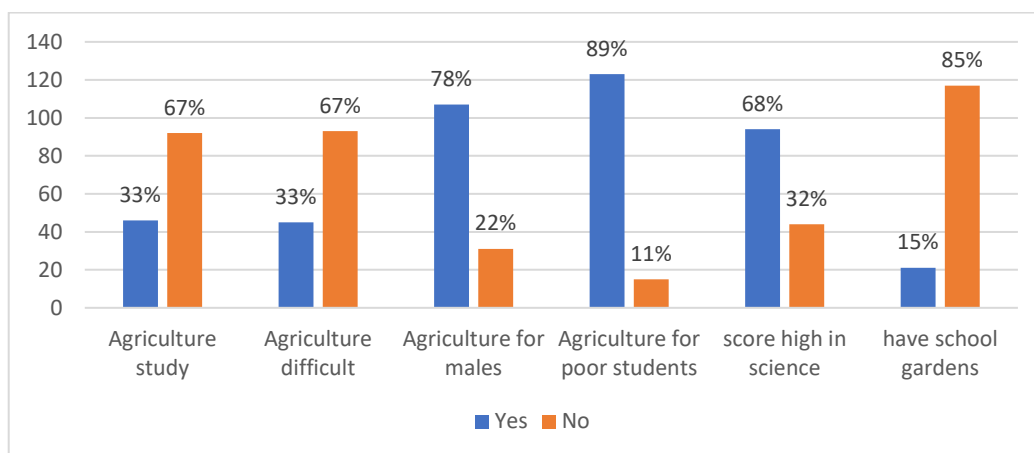
#### **4.4.4 Preference of Studying Agriculture Science in SHS**

The results of students' preference or otherwise of studying agriculture science in SHS is presented Figure 4.10. The results indicate that 67% of the respondents indicated that they would not like to select agriculture sciences as a course of study in SHS while 33% of them indicated that they would like to select agriculture sciences as a course of study in SHS.

Majority of the females believe agriculture is not difficult to study which represents 67% of the respondents while 33% believe it is a difficult course to offer. This is because agriculture is all about farming. The data suggests that there is a relatively even split between respondents who perceive agricultural sciences as difficult and those who do not.

From Figure 4.10, it is also shown that 22% of the respondents indicated that they do not think agricultural sciences is exclusively for males while 78% of them

indicated that they think agricultural sciences is for only males. The result suggests that a larger number of respondents are of the notion that agricultural sciences is exclusively for males, while a smaller number believe that it is not. This indicates that a majority of the surveyed individuals perceive gender as a barrier to pursuing agricultural sciences.



**Figure 4.10 Preferences for Selecting Agriculture Science**

**Source: Field Survey (2023)**

The study also considered individuals' perceptions of whether agricultural sciences is a discipline for students with lower academic performance. The findings as shown in Figure 4.10 indicates that 89% of the respondents do think agricultural sciences is exclusively for students with lower academic performance. Meanwhile, 11% of the respondents indicated that they do not think agricultural sciences is for students who do not perform well. The data suggests that a significantly larger number of respondents accepts the notion that agricultural sciences is exclusively for underperforming students, while a smaller number believe that it is not. This indicates that the majority of the surveyed individuals do associate agricultural sciences solely with poor academic performance.



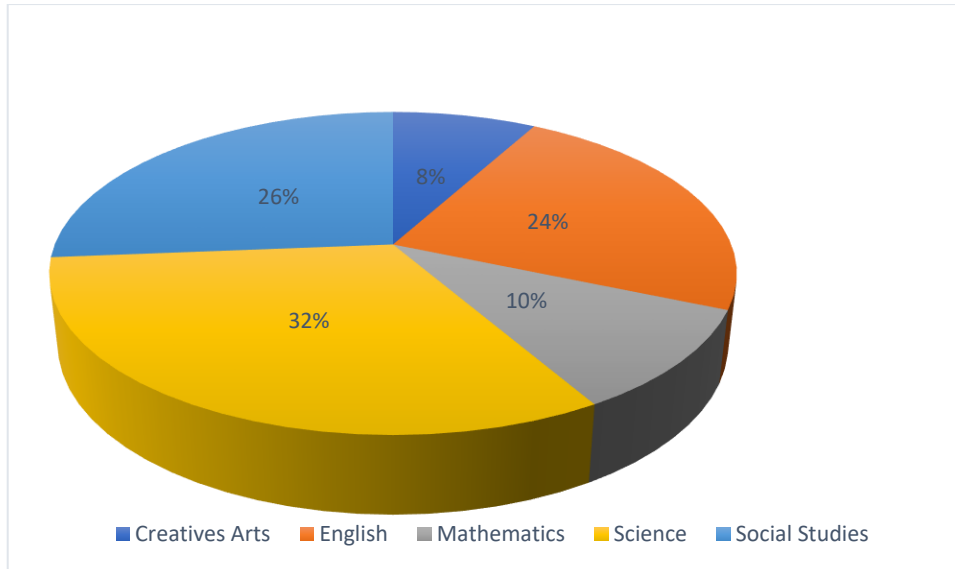
Majority (68%) of the respondents indicated that they do score high marks in general sciences exams but 32% of the respondents gave an opposite response which indicated that they do not score high marks in general sciences exams. This suggests that having a good performance in general science is not a requirement for studying agriculture science in Senior High School (SHS).

From Figure 4.10, the majority (85%) of the respondents indicated that they do not have a school garden while 15% respondents indicated that they have a school garden. The data means school gardens are not what many students consider before choosing a particular school.

#### **4.4.5 Favorite Subjects of Students**

The study sought to find out the favorite subjects of the respondents and the results is shown in Figure 4.11. From Figure 4.11, it is observed that the majority (32%) of the respondents indicated that science is their favorite subject, followed by social studies with 26% of them indicating it was their favorite subject. Furthermore, 24% of the respondents indicated that English is their favorite subject, 10% of the respondents indicated that Mathematics is their favorite subject and the remaining 8% of them that creative arts is their favorite subject. The data suggests that Science, Social Studies, and English are the most favored subjects among the respondents, while Creative Arts and Mathematics are less favored in comparison.





**Figure 4.11 Favorite Subjects of Students**

**Source: Field Survey (2023)**

#### **4.5. Factors Influencing the Choice of Agriculture Science Course as a Study in the Senior High School**

Results from the logistic regression model as shown in Table 4.9, was used in determining the factors influencing female students' decision to pursue agriculture science in Senior High School Among females' Junior High School students in the Tolon District. The variables considered in the model include Know\_AgricSci (knowledge of agriculture science), Agric\_Difficult (perception of agriculture as a difficult subject, Occupp (occupation of parents) ParDecides (parents decides) Tea Influence (teachers influence), FrnInfluence (friends influence), Agric\_Male (agriculture a course for only males) and Institutions (the role of agribusiness institutions, e.g. Avnash, UDS, SARI, SRI and ARI). In the model as observed in Table 4.9, six out of eight explanatory variables were found to be statistically significant and discussed.

**Table 4.9 Logistic Regression Results**

| Independent Variables  | Coefficient | Standard Error | Marginal Effect | Standard Error |
|--|-------------|----------------|-----------------|----------------|
| <b>Dependent Variable = Select_AgricSci</b>                            |             |                |                 |                |
| Know_AgricSci  | 1.259**     | 0.897          | 0.190**         | 0.096          |
| Agric_Difficult  | -1.418**    | 0.593          | -0.239***       | 0.087          |
| Occupp   | 1.837***    | 0.511          | 0.322***        | 0.082          |
| ParDecides   | -0.332      | 0.451          | -0.063          | 0.085          |
| TeaInfluence   | -0.068      | 0.535          | -0.013          | 0.105          |
| FrnInfluence   | 1.354***    | 0.505          | 0.275***        | 0.105          |
| Agric_Male   | -2.313***   | 0.723          | -0.316***       | 0.071          |
| Institutions   | 1.85***     | 0.57           | 0.293***        | 0.075          |
| Model Diagnostic   |             |                |                 |                |
| Pseudo R2 = 0.2464    Log likelihood = -71.3789    Prob > chi2= 0.0208 |             |                |                 |                |

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

From Table 4.9, it is shown that a student who knows about agriculture (Know\_AgricSci) is more likely to choose agriculture as a course in senior high school. Specifically, the marginal effect of 0.190 implies that an increase in the student's knowledge of the subject increases the probability of choosing agriculture science by 19%. This is statistically significant at the 5% level. Additionally, the estimates indicate that students who perceive agriculture as difficult (Agric\_Difficult) are less likely to choose it at the senior high level. The marginal effects of -0.239 indicate that as the perception of agricultural science difficulty increases by a unit, students are about 23.9% less likely to choose agriculture science in senior high school. Furthermore, the positive coefficient of parent's occupation



variable (*Occupp*) implies that students whose parents work in the agriculture sector are more likely to select agriculture science as a course. The marginal effect (0.322) implies that a student is about 32.2% more likely to select agriculture as a course if their parent works in the agriculture sector. The results in Table 4.9 further show that friends influence students' course selection decisions. Specifically, the marginal effect of *FrnInfluence*, which is 0.275, implies that there is a 27.5% probability that friends would influence students' decision to choose agriculture science. This is statistically significant at 1% level. Again, the coefficient of the variable *Agric\_Male*, which represents the perception that agriculture is for males, is positive and implies that female students who perceive agriculture as male dominated are less likely to choose it as a course. The marginal effect (-0.316) implies that as the perception that agriculture is for males increases by a unit, female students are about 31.6% less likely to choose agriculture as a course. This is statistically significant at 1% level. Finally, the variable *Institution* which denotes student awareness of agribusiness and agricultural institutions (e.g, Avnash, UDS, SARI, SRI, ARI, MOFA), is positively significant at 1% level. This implies that students who are aware of the existence and activities of these institutions are more likely to choose agriculture as a course in senior high school. The marginal effects show that as the students' knowledge of the existence and activities of these institutions increases by a unit, the probability that they will choose agriculture science as a course in senior high increases by 29.3%.



#### 4.6 Roles of Stakeholders in Female JHS Students' Choice to Pursue Agriculture Science in SHS in the Tolon District

This section discusses the role played by various stakeholders, including students, teachers and guardians, in the choice of agriculture science as a course by female students in senior high school. This discussion is based on the unique perspectives of each stakeholder group, providing a comprehensive understanding of the factors that drive course selection.

##### 4.6.1. Perception of Students on the Role of Teachers in their Choice of Courses at the Senior High School

From the analysis, students have a high perception that none of the identified stakeholders, teachers or parents, play major roles in their choice to pursue agriculture science in SHS. Rather, students have a high perception of their personal interest in the programme, aspiration and school of interest as the reasons why they will want to pursue agriculture science. Out of the three variables, the main influence to pursue agriculture science is the school of interest, followed by their aspiration and then personal interest in the programme.

**Table 4.10 Perceptions on Influence of Stakeholders in Course Selection**

| Perception                     | Mean | Median | Mode | Std. Deviation | Decision        |
|--------------------------------|------|--------|------|----------------|-----------------|
| School of interest             | 4.58 | 5      | 5    | 0.772          | High perception |
| Parent opinion                 | 4.11 | 4      | 4    | 0.91           | Low perception  |
| Teachers' opinion              | 4.02 | 4      | 4    | 0.841          | Low perception  |
| Personal interest of programme | 4.27 | 4      | 5    | 0.867          | High perception |
| Aspiration in life             | 4.31 | 4      | 5    | 0.8            | High perception |

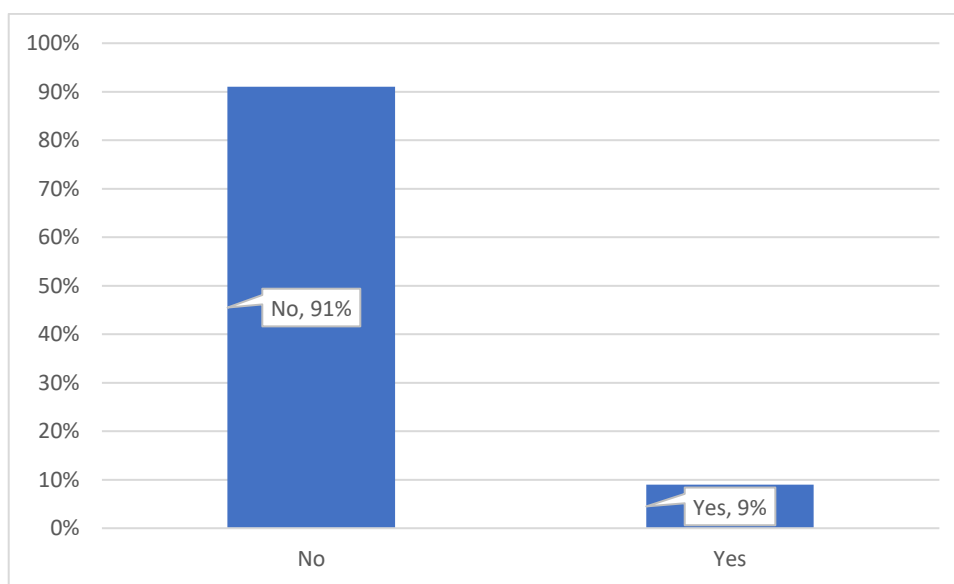
*Strongly disagree=1, Disagree=2, Indifferent=3, Agree=4, Strongly Agree=5*

*Weighted mean= 4.25; Cronbach's Alpha=0.76*

**Source: Field Survey (2020)**



Analysis of the survey data as shown in Figure 4.12, reveals that 126 respondents, representing 91%, do not actively encourage their children to pursue agricultural science in Senior High School (SHS). Only 12 guardians, representing 9% consciously support their children in choosing agricultural science as a course of study. These supportive parents/guardians mentioned actions like advising their wards on the benefits of studying agricultural science, thus highlighting the lucrative and respected positions held by individuals who have pursued this field. Some also take their children to agricultural institutions like SARI to observe facilities and interact with professionals, allowing them to observe the respect commanded by the employees and the quality of their lifestyle. Additionally, some expose their children to agro-chemical shops to demonstrate the demand for agricultural products and potential returns on investment in the agricultural sector.



**Figure 4.12 Role Parents Play to Motivate their Children to Offer Agriculture**

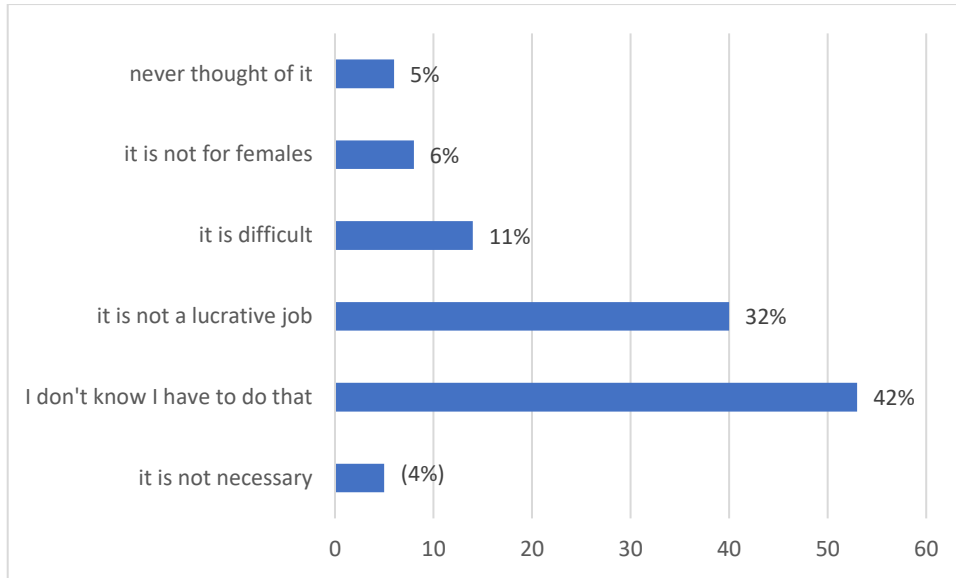
**Source: Field Survey (2023)**



#### **4.6.2. The Role of Guardians in Female Students Choice of Agriculture Science as a Course**

This section seeks to examine the reasons why guardians do not actively encourage their children to pursue agriculture science as a course in Senior High School (SHS). From the majority Figure 4.13, it is observed that the majority (42%) of the guardians who do not actively encourage their children to pursue agricultural science as a course in Senior High School (SHS) explained that they were unaware that this was something they should do. Also, about 32% of them mentioned that the reason for their lack of support is the belief that a career in agriculture is not financially rewarding and hence there is no need to encourage their children to pursue that subject. Again, in Figure 4.13, it is observed that 11% of the respondents believed that agriculture science is a difficult subject, while 6% of them expressed the opinion that this course is not suitable for females. Again, 5% of them mentioned that they had never thought about this idea, and 4% stated that they did not consider it necessary to do so. Consequently, they did not actively encourage females to pursue agriculture science as a course of study in Senior High School (SHS). Thus, to encourage parents/guardians to also encourage their children to pursue agriculture science as a course in senior high school, these misconceptions about agriculture science need to be dealt with among the parents/guardians.





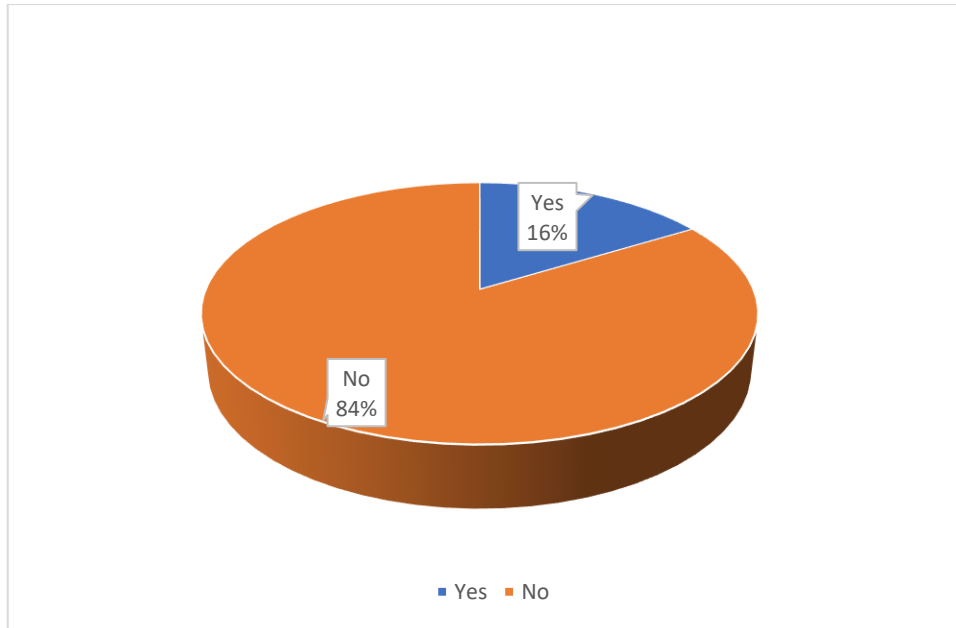
**Figure 4.13 Reasons Guardians Play no Roles to Motivate Selection of Agriculture**

**Source: Field Survey (2023)**

#### **4.6.3 Roles of Teachers in Females Choice of Agriculture in Senior High School**

The analysis of the survey data as shown in Figure 4.14 shows that 84% of the teachers stated that they do not play a significant role in encouraging female students to consider taking agricultural science as a course of study in the SHS. In contrast, 16% indicated that they do play a role in fostering interest among female students in studying agriculture science. Some of the roles they play include teaching the importance of agriculture and the diverse areas within the agriculture industry. They also bring mentors from the field to speak to students and advise them to read on the advantages of exportation of agricultural produce and the benefits it brings. Additionally, they inform students about the various job opportunities available in the field of agriculture and how lucrative it can be.

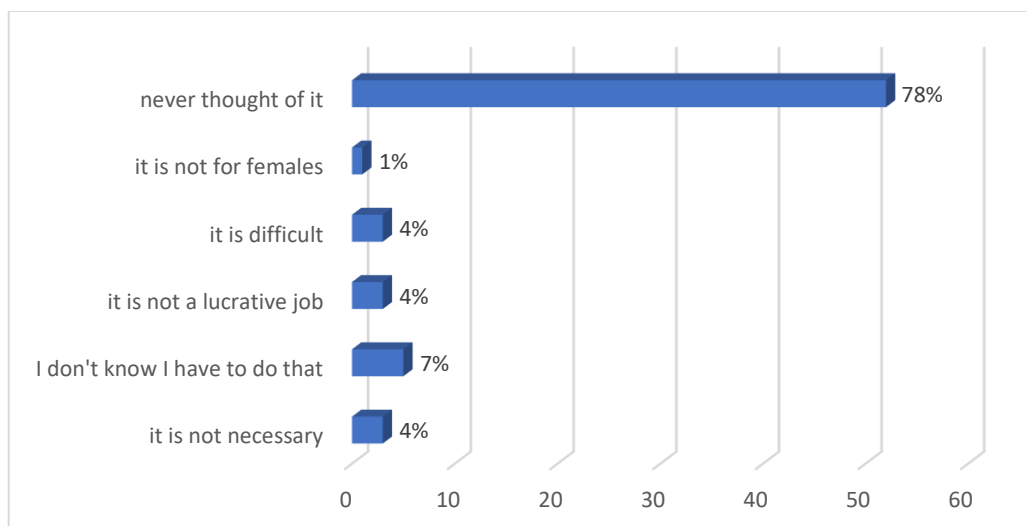




**Figure 4.14 Roles to Motivate Females to Choose Agriculture Science**

**Source: Field Survey (2023)**

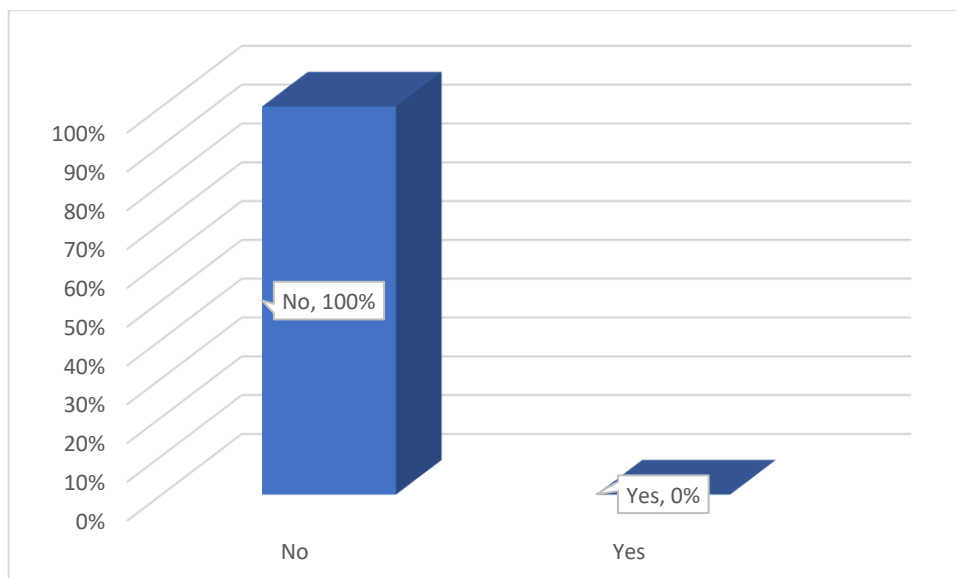
However, as shown in Figure 4.15, a majority (78%) of the teachers who did not play a significant role in encouraging students to consider agricultural science as a course of study stated that they had never thought of it or considered it to inform the students about the course. Additionally, 7% of them mentioned that they did not know they needed to do that, 4% of them thought it would be difficult for female students, another 4% said it is not a lucrative job, and 4% said it was not necessary. Only 1% of the teachers thought the course was not meant for female students.



**Figure 4.15 Reasons for Teachers not Playing Roles in Choosing Agriculture in SHS**

**Source: Field Survey (2023)**

The analysis of the data shows that all the female students surveyed said they have never been advised by any friend to pursue agriculture science in the SHS even though friends have a positive influence in the decisions they make.



**Figure 4.16 Friends Advised and the Offering of Agriculture in SHS**

**Source: Field Survey (2023)**

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATION

#### 5.0 Introduction

This chapter presents the conclusion and recommendations made for stakeholders in industry and policymaking and suggests directions for future research. It concludes by drawing insights into the study's findings while acknowledging its limitations.

#### 5.1 Summary

The results from Kendall's ranking show that female students are likely to select Home Economics as their first choice followed by General Arts, Business, then General Science, and then Agricultural Science, Technical, and Vocational ranked 6<sup>th</sup> and Visual Arts ranked 7<sup>th</sup> in that order. The first three preferred courses corroborate the findings of *Jamabo et al. (2012)* that females prefer careers related to literacy, clerical work, arts, music, and social activities. Additionally, General Science, Agricultural Science, Technical, and Vocational and Visual Arts were ranked from fourth to seventh choices, supporting the findings of Klapwijk and Rommes (2009) that for girls, gender bias may lead to reluctance to pursue technical occupations since they are often associated with masculinity.

The study found that friends are a source of motivation to them in terms of selecting their educational choice. These findings affirm the research findings of Boateng & Gaulee (2019) that JHS pupils in Ghana follow the views of their peers in their educational choices. These findings also support the assertion of Palos & Drobot (2010) that pupils usually seek the support of their peers due to their limited knowledge concerning the choice of secondary education courses. The findings underscore the importance of understanding the complexities of peer influence and



its impact on educational decisions. It also highlights the significance of providing comprehensive guidance and support to students as they navigate their educational pathways, considering the various factors that contribute to their course choices.

Teachers play significant roles in the educational decisions of female JHS students, including interacting with their students to understand their preferred career choices. This involves inquiring about their future and providing necessary advice. Teachers also impart relevant educational and occupational information to the students. Additionally, they offer special attention to students who face challenges in making career choices and suggest potential future careers for them. According to *Addadey et al. (2022)*, the teacher/counselor and headteacher play very significant roles in students' course selections. They revealed that teachers/counselors/headteachers evaluate their pupils and try to influence them to choose a particular course based on the performance, strengths and weaknesses derived from the evaluations.

The results also show that parents play the roles in suggesting the best future career for their children. They do not impose their wishes above the career interest of their children, their child will never make any decision without their approval, fathers greatly influence the career aspirations of their sons and mothers greatly influence the career aspirations of their daughters.

Nine out of twenty explanatory variables were found to be statistically significant. The results revealed that class size, perception of agriculture as a difficult subject, perception of agriculture as a course for only males have negative effect on students choice of agriculture science as a course of study at the Senior High School level



among females Junior High School students., whereas occupation of guardian, friends deciding programme to study.

From the analysis, students have a high perception that none of the identified stakeholders, teachers or parents plays major roles in their choice to pursue agriculture science in SHS. Rather, students perceive their personal interest of programme, aspiration, and school of interest as the reasons why they will want to pursue agriculture science. Out of the three variables, the main influence to pursue agriculture science is the school of interest, followed by their aspiration and then personal interest of programme. The results show that 126 respondents, representing most of the parents, do not play any specific role in encouraging their wards to build the interest of offering agricultural science as a course of study in the SHS.

Also, the results show that 84% of the teachers responded they do not play any major role for females to feel like offering agriculture science. The results show that all the female respondents representing the 138 (100%) female students said they do not have any friend they can remember who have ever advised them to pursue agriculture science in the SHS even though friends have positive influence in the decisions they make.

## **5.2 Conclusions**

The study concludes that various stakeholders have differing roles to play in the selection of academic courses in SHS. Without appropriate guidance, students tend to rely on their own inclinations and aspirations to make career choices, which may lead to unfavorable outcomes in the long run. The low enrolment in agricultural science at the SHS level is attributed to its perception as a masculine program, reserved primarily for males. Additionally, it is viewed that agriculture offers limited



career prospects due to the inadequate scope of education and career enlightenment received before the selection of educational courses.

### 5.3 Recommendations

Based on the findings, the study makes the following recommendations:

- i. The government of Ghana through the Ministry of Food and Agriculture and the Ministry of Education should develop policies aimed at encouraging female students to pursue agriculture in the SHS. This could involve integrating agriculture into the curriculum starting from the primary school level through Junior High School (JHS), with a practical component.
- ii. Educational authorities should implement programs to raise awareness among teachers and parents about their significant roles in influencing students' course selections. This includes training teachers to provide better guidance and support for students interested in agricultural science.
- iii. Schools should create initiatives that encourage positive peer influence among students regarding course selection. This could involve mentorship programs where students who have pursued agricultural science can share their experiences and insights with their peers.
- iv. Parents should be encouraged to engage more actively in discussions about their children's academic interests and career aspirations. Providing them with resources on the importance of agricultural science and its diverse career opportunities can help them support their daughters' choices more effectively

### 5.2 Implications for Industry and Policy

The findings from the study carry significant implications for both industry and policy. They suggest that the Tolon district will likely continue to experience a lower number of females opting for agricultural science at the SHS levels. Consequently,



this trend may lead to a reduction in the availability of females within agricultural institutions, perpetuating the perception that agriculture is a male-dominated field of study and career. This, in turn, hampers the sector's access to female human resources. The results also indicate the need for policies aimed at fostering the interest of females in pursuing agriculture, thereby encouraging greater female participation in agricultural institutions in the future.

### **5.3 Suggestions for Future Research**

It is recommended that those interested in this area of research consider conducting similar studies in other regions of Ghana. This would provide academicians with the opportunity to compare research results across different regions. Additionally, the lack of interest among female students in the Tolon district in pursuing agricultural science might be attributed to the fact that they have lived in farming communities for many years without witnessing any significant impact of farming on their incomes and livelihoods.

It's crucial to note that the data collected does not directly address the specific factors influencing female students' decisions to pursue agricultural science in SHS. A more comprehensive survey or study, incorporating additional questions and factors, would be necessary to gain a deeper understanding of the motivations behind their educational choices.



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## APPENDIXES

### QUESTIONNAIRE FOR STAKEHOLDERS

#### Introduction

This study is conducted by Lydia Obrani. It is an MPhil Agricultural Science Education Degree at the University for Development Studies. The purpose of this questionnaire is to acquire enough information from participants on; **the role of stakeholders and the educational choices of female JHS students to pursue agriculture science in Senior High Schools**

This study is solely for academic purpose and participation is voluntary. Please note that all information you provide will be treated confidential and will be used solely for academic purposes. Thank you for choosing to participate.

#### PART 1: DEMOGRAPHIC CHARACTERISTICS

1. Name of School .....
2. Sex : Male [1]      Female [2]
3. Age : Less than 10years [1]      16-20 [2]      21- 25[3]      above 25[4]
4. Form/ Class:    JHS 1[1]      JHS 2 [2]      JHS 3[3]
5. What is your class size.....
6. Community of residence.....
7. What is the level of education of your father    None [1]    Non-formal [2]    Basic [3]  
Secondary [5]    Tertiary [6]
8. What is the level of education of your mother    None [1]    Non-formal [2]    Basic [3]  
Secondary [5]    Tertiary [6]
9. Occupation of guardian.....
10. Do you have any other family member engage in agriculture field?    Yes [1] or No [2]  
if others specify.....



**PART TWO: PROGRAMME CHOICES OF SHS PROGRAMME BY JHS STUDENTS**

11. Rank the following course choices in terms of your first choice to last choice

| Course                        | Rank |   |   |   |   |   |   |
|-------------------------------|------|---|---|---|---|---|---|
|                               | 1    | 2 | 3 | 4 | 5 | 6 | 7 |
| Business Studies              |      |   |   |   |   |   |   |
| Agricultural Science          |      |   |   |   |   |   |   |
| General Science               |      |   |   |   |   |   |   |
| Home Economics                |      |   |   |   |   |   |   |
| Visual Arts                   |      |   |   |   |   |   |   |
| General Arts                  |      |   |   |   |   |   |   |
| Technical/ Vocational studies |      |   |   |   |   |   |   |

12. What is your reason for selecting your first choice above

Will be comfortable with the subject [1]    Offers more career opportunities [2]    My  
 parents/guardian wants me to do it [3]    Prestige [4]    Thought it  
 will be easy [5]    Don't really know [6]

If others specify.....  
 .....

13. What is your reason for selecting your second choice above

Will be comfortable with the subject [1]    Offers more career opportunities [2]    My  
 parents/guardian wants me to do it [3]    Prestige [4]    Thought it  
 will be easy [5]    Don't really know [6]

If others specify.....  
 .....



14. What is your reason for selecting your third choice above

Will be comfortable with the subject [1] Offers more career opportunities [2] My  
parents/guardian wants me to do it [3] Prestige [4] Thought it  
will be easy [5] Don't really know [6]

If others specify.....  
.....

**PART 3: ROLE OF STAKEHOLDERS AND JHS STUDENTS' CHOICE OF SHS PROGRAMME**

15. Do Parents decide for which programme to offer in SHS? Yes [1] No [2]

If yes how?.....

If no, why?.....

16. Do Teachers influence your choice of programme to pursue in SHS? Yes [1] No [2]

If yes how?.....

If no, why?.....

17. Do friends/Peer influence your choice of programme to study in SHS? Yes [1] No [2]

If yes how?.....

If no, why?.....

18. Among the above identified, which of them do you think have the final say?

Parent [1] Teacher [2] Peer [3]

19. Do you play any specific role for your friend to offer agriculture science in SHS? Yes [1] No [2]

20. Students perception on peers influence on the choice of course at SHS



| Statement   | Strongly Agree | Agree | Indifferent | Disagree | Strongly Disagree |
|---|----------------|-------|-------------|----------|-------------------|
| My friends are great source of motivation for me        |                |       |             |          |                   |
| My friends influenced me in choosing my course in SHS   |                |       |             |          |                   |
| The friends I admire most motivate me to be who I am    |                |       |             |          |                   |
| The way I learn is as a result of how my friends learn  |                |       |             |          |                   |
| What I hope to be in future is influenced by my friends |                |       |             |          |                   |

21. Do you play any specific role for your students to offer agriculture science in SHS?

Yes [1] No [2]

If yes how?.....

If no why?

Never thought of it [1] it is not for females [2] it is difficult [3] it is not a lucrative

job [4] I don't know I have to do that [5] it is not necessary [6]

22. Teachers perception on their influence on Students choice of programme at SHS

| Statement   | Strongly Agree | Agree | Indifferent | Disagree | Strongly Disagree |
|---|----------------|-------|-------------|----------|-------------------|
| I suggest future careers for my students                                    |                |       |             |          |                   |
| I am interested in what careers my students choose                          |                |       |             |          |                   |
| I interact with my students to know their preferred career choice needs     |                |       |             |          |                   |
| I give relevant education and occupational information to my students       |                |       |             |          |                   |
| I give special attention to students who struggle with career choice issues |                |       |             |          |                   |
| I organize career seminars and invite resource persons for my students      |                |       |             |          |                   |



23. Do you play any specific role for your child to offer agriculture science in SHS? Yes

[1] No [2]

If yes how?.....

If no why?

Never thought of it [1] it is not for females [2] it is difficult [3] it is not a lucrative

job [4] I don't know I have to do that [5] it is not necessary [6]

24. Parents perception on their influence on Students choice of programme at SHS

| Statement   | Strongly Agree | Agree | Indifferent | Disagree | Strongly Disagree |
|---|----------------|-------|-------------|----------|-------------------|
| I suggest the best future career for my child or children               |                |       |             |          |                   |
| I try to make my child/children pursue my own career path               |                |       |             |          |                   |
| I do not force my wishes above the career interest of my child/children |                |       |             |          |                   |
| My child will never make any decision without my approval               |                |       |             |          |                   |
| I am aware that I have great influence on my child's career aspirations |                |       |             |          |                   |
| I have no interest in the career my child chooses                       |                |       |             |          |                   |
| Fathers greatly influence the career aspirations of their sons          |                |       |             |          |                   |
| Mothers greatly influence the career aspirations of their daughters     |                |       |             |          |                   |

25. Have you heard of any of the following institution

| Institutions                                   | Yes | No | Activities |
|--|-----|----|------------|
| Avnash Industries                              |     |    |            |
| University for Development Studies (UDS)       |     |    |            |
| Savanna Agricultural Research Institute (SARI) |     |    |            |
| Animal Research Institute(ARI)                 |     |    |            |
| Soil Research Institute(SRI)                   |     |    |            |



|                                  |  |  |  |
|----------------------------------|--|--|--|
| Department of Agriculture (MOFA) |  |  |  |
|----------------------------------|--|--|--|

26. Have any of these institutions influence/motivate you to pursue agricultural sciences in SHS? Yes [ 1 ] or No [2 ]  
 If yes how?.....  
 If no why?.....

27. In selecting your course of study of agricultural sciences in SHS, which of the following would you consider?

| Statement                      | Strongly Agree | Agree | Indifferent | Disagree | Strongly Disagree |
|--------------------------------|----------------|-------|-------------|----------|-------------------|
| School of interest             |                |       |             |          |                   |
| Parent opinion                 |                |       |             |          |                   |
| Teachers opinion               |                |       |             |          |                   |
| personal interest of programme |                |       |             |          |                   |
| Aspiration in life             |                |       |             |          |                   |

28. Who would you consult first in choosing your course of study in SHS? ?  
 Parent/Guardian [ ] (2) Teacher [ ] (3) Friend [ ] (4) Sibling/Family relative [ ] (5)  
 other (specify) [ ]

**PART 4: FACTORS AND DECISION TO PURSUE AGRICULTURE SCIENCES IN SHS BY JHS STUDENTS**

29. Do you know agriculture sciences is a course of study at the SHS? Yes [1] No [2]
30. Would you like to select agriculture sciences as a course of study in SHS? Yes [1] No [2]
31. Give reason for your decision.....
32. Do you think agricultural sciences is difficult? Yes [1] No [2]
33. Do you think agricultural sciences is for only males? Yes [1] No [2]



34. Do you think agricultural sciences is for students who do not perform well? Yes [1]  
No [2]

35. Do you score high marks in general sciences in exams? Yes [1] No [2]

36. What is your favorite subject? Mathematics [1] Science [2] English [3]  
Social Studies [4] Creatives Arts [5]

37. Do you have a school garden? Yes [1] No [2]

38. Which of the following category will influence your choice of selecting a programme  
in SHS?

Friends [1] Parents [2] Teacher [3] Family relative [4] Social personality [5]

**Thank You!!!**

