PREDICTORS OF DAY SENIOR HIGH SCHOOL STUDENTS’ PERFORMANCE IN MATHEMATICS AND ENGLISH LANGUAGE IN THE ASHANTI MAMPONG MUNICIPALITY OF GHANA: THE COMBINED EFFECT OF INDEPENDENT AND INTERVENING VARIABLES

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ABSTRACT

The main thrust of this study was to establish some predictor and intervening variables that influence day Senior High School (SHS) students’ performance in Mathematics and English Language in the Ashanti Mampong Municipality. Descriptive and correlational research designs were used and questionnaire was used to collect data. The sample size was 465 day students via a multi-stage sampling procedure. The findings of the study established that parents’ level of education, parents’ involvement, parents’ academic ambition for their children, peer influence, students’ academic ambition and students’ academic effort have a positive relationship with day students’ performance in Mathematics and English Language. Based on the findings of the study, the researchers failed to reject the null hypothesis. Based on these findings, parents should get involved in their wards’ education. Also, parents should be interested in the kind of friends their children make. Again, parents should transmit and inculcate high academic ambition in their children and should ensure that a chunk of their wards’ time is spent on their books.

Keywords: Parents’ Education, Parents’ Involvement, Parents’ Academic Ambition for their Children, Peer Influence, Students’ Academic Ambition, Students’ Academic Effort and Academic Performance

INTRODUCTION

Students’ academic achievement has always been a subject of interest to every educational institution. Although formal education is not the only road to success in the working world, much effort is made to identify, evaluate, track and encourage the progress of students in school.
In Ghana public discussions frequently focus on educational standards. The public's unhappiness becomes more prominent when students’ outcomes do not match the government and parental investment following the annual release of the West African Senior School Certificate Examination Results. In fact, there is a general perception among the Ghanaian public that the performance of students in West African Senior School Certificate Examination is very poor, despite endless proposals by the public, parents and government to improve the situation. Stakeholders have always been concerned about why the system is turning out graduates with poor results.

Education gives people greater economic advantage hence, it is important to improve its quality and student achievement, particularly at SHS level. Cheng (1996) held that, although different stakeholders in a school may have different organizational goals, students’ achievement in the public examinations is still a common denominator or common “currency” for measuring school effectiveness. Academic achievement most especially of senior high school students has been largely associated with many factors. Most day students in senior high schools in Ghana are daily confronted with the challenges of coping with academic activities under serious emotional strains occasioned by the long walk to school, poor school environment, and being taught by unmotivated teachers. Coupled with this, is an uncooperative-to-study attitude of parents who more often toil to provide for the needs of the family. These would definitely not augur well for academic accomplishment.

Academic performance is undoubtedly a research after the heart of educators, teachers, psychologists, policy makers, parents and guardians and social workers. Over the past four decades, researchers have identified a large number of variables that predict increases in students’ achievement (Walberg & Paik, 2000). Unfortunately, despite this extensive knowledge base about what works, there is still a great debate about how to improve students’ achievement (Carpenter, 2000). In fact, attempts to predict academic outcomes of learners, have come with more questions than answer. In recent times, prior literature has shown that learning outcomes, thus academic achievement have been determined by such variables as; family, schools, society and motivation factors (Aremu, 2005). In the same vein, Parker, Duffy, Wood, Bond and Hogan (2005) noted that many of the previous studies have focused on the impact of demographic and socio-psychological variables on students’ academic performance. In spite of the seeming exhaustiveness of literature on the determinants of academic performance of learners, there seems to be more area of interest to be investigated. This becomes obvious in view of the continuous interest of researchers; and continuous attention of government and policy makers and planners.

Predicting and measuring academic achievement is usually expressed in terms of school grades and performance on standardized tests. While grades and test scores are potential markers of
student learning, Coleman et al (1966) noted that they are not “culture free” but rather culture-bound. Still, they are widely used for purposes of students’ assessment in schools. Researchers have investigated many variables that predict academic achievement. These variables can be categorized into three major groups: characteristics of the student, characteristics of the student’s environment, and demographic/background factors. It is crucial to note, however, that relationships exist across these variables as well. Characteristics of the student’s environment that predict academic achievement include those of the home and school, such as parental involvement (Steinberg, Dornbusch, & Brown, 1992), quality of instruction (Cool & Keith, 1991), and quantity of instruction (Alexander & Entwisle, 1988). Demographic/background variables are often used as control variables or as independent variables with one or more intervening variables and explain the largest part of the total variance in academic achievement.

STATEMENT OF THE PROBLEM

The concept of academic performance has become a source of concern to researchers, especially as the academic performance of students keeps declining (Ukpong, 2007). Academic performance is defined by a student examination grade at the end of a particular term, semester or programme (Hoyle, 1986). It could also be seen as the level of performance in a particular field of study. Higher scores indicate better academic performance and lower scores show poor academic performance (Egbule, 2004). As a matter fact, many factors have been linked to the poor performance of students’ in Senior High School Certificate Examination in Ghana. If fact, this has become a recurrent phenomenon which has militated against the smooth transition from the Senior High level to the tertiary level (Adetunde & Asare, 2009). Undoubtedly, the excessive failure of students in both internal and external examinations can be attributed to a host of factors specifically parent factors and student factors (Huitt, 2007; Ajayi, 2006). The utility of this study hence rests on the need to examine how day students’ performance in Mathematics and English Language is influenced and determined by both predictor and intervening variables since little work has been done in this area. For the purposes of this study, student academic achievement is defined by how well a student performs on test items in Mathematics and English Language designed by the researchers.

REVIEW OF LITERATURE

Parents’ Education

Parents are the most immediate relation of a child. Educated parents better understand the educational needs and their children’s aptitude. They, thus help their children in their early education which affects their proficiency in their relative area of knowledge. Parents’ education or academic background definitely contributes immensely towards the academic life of children. According to Grissmer (2003), parents’ level of education is the most important factor affecting
students’ academic achievement. Taiwo (1993) submitted that parents’ educational background influence the academic achievement of students. This, according to him, is because the parents would be in a good position to act as second teachers to their children; and even guide and counsel them on the best way to perform well in education and provide the necessary materials needed by them.

Musgrave (2000) argued that children who come from an educated home would like to follow the steps of their family and by this, work actively in their studies. Jeynes (2002) also averred that a child from a well-educated family with high socio-economic status is more likely to perform better than a child from an illiterate family. This, he suggests apparently because, children from an educated family are seen to have lots of support such as a decent and good environment for academic work, parental support and guidance, enough textual and academic materials and decent feeding. Eamon (2005) again claims that virtually in all nations, children of parents high on the educational, occupation and social scale have far better chance of getting into good secondary schools and from there into the best colleges and universities than equally bright children of ordinary workers or farmers. In fact, the most important factor associated with the educational achievement of children is not race, ethnicity or immigrant status; instead the most critical factor is parents’ education (Considine & Zappala, 2002).

**Parental Involvement**

According to the No Child Left Behind Act, 2102(4) (2001), “parental involvement means the participation of parents in regular, two-way, and meaningful communication involving student academic learning and other school activities including ensuring that (a) parents play an integral role in assisting their child’s learning; (b) parents are encouraged to be actively involved in their child’s education at school; and (c) parents are full partners in their child’s education and are included, as appropriate, in decision making and on advisory committees to assist in the education of their child”. Parental involvement is the degree to which a parent is committed to his or her role as a parent and to the fostering of optimal child development (Nyarko, 2011). In fact, it typically concerns the amount of effort put into child-oriented education versus other activities (Nyarko, & Vorgelegt, 2007).

The impact of parental involvement in a child’s academic growth and development cannot be overemphasized (Sheldon & Epstein, 2005). For example, supportive and encouraging parental involvement is typically associated with higher achievement levels (Simpkins, Weiss, McCartney, Kreider, & Dearing, 2006), whereas parental punishment are negatively associated with school success (Niggli, Trautwein, Schnyder, Ludtke, & Neumann, 2007). Indeed, positive parent involvement continues to remain a strong predictor of academic achievements. Adekola (2008) asserted that academic achievements of students are the result of parental factors. Epstein
(2005) also affirmed that the more intensively parents are involved in their children’s learning; the more beneficial are the achievement effects. Specifically, children whose parents are more involved in their education have higher levels of academic performance than those whose parents are involved to a lesser degree (Donkor, 2010; Georgiou, 2007). Thus, parent involvement in a child's early education is consistently found to be positively associated with a child's academic performance (Hill & Craft, 2003).

### Parents Academic Ambition for their Children

At the onset of any activity, students differ in learning as a function of their prior experiences, personal qualities and social supports. The latter includes the extent to which parents encourage them to learn, facilitate their access to learning resources and teach them strategies that enhance skill acquisition. Parental ambition is what parents hope and want their children to achieve in the desired future. Parent’s academic ambitions for their children might influence their children’s academic achievements both directly and indirectly (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). In fact, parents’ academic ambition for their children has been identified to have a telling effect on the children’s academic performance (Osiki, 2001).

Lots of studies show a significant effect of parental ambition and academic performance of their wards (Agliata, 2007; Kobayashi, 2005). For example, according to Bloom (1956), parental ambitions are one of the extra-curricular factors that might influence children's academic performance. Bee (1992) also pointed out that parents who have high ambitions of their child to do well in academic matters have children who show most rapid cognitive progress. Zhan (2005) in a similar study found that parents’ academic ambition for their children partially mediated the relationships between assets and children’s educational achievements showing the importance of parental ambitions on education of the children after holding family income and other parent characteristics constant. Oishi and Sullivan (2005) concluded that some students have fulfilled their parents’ academic ambition for them to a greater degree than others simply because the cultural difference in well-being is mediated by perceive fulfillment. In fact, it is well documented that parental ambitions aspirations and expectations for their wards influence the children's expectancies for success, which in turn affect their academic performance positively (Harackiewicz, 1996).

### Peer Influence

The need for social belonging is inherent in humans and this moves us to become attached to and feel affiliated to others. Indeed, the need for affiliation is based on genetics or experience (Ryan, 2000). Castrogiovanni (2002) defined peer group as a small group of similar age, fairly close friends, sharing the same activities. In general, peer groups or cliques have two to twelve members, with an average of five or six. Peer influence therefore is defined as when people of
your own age encourage or urge you to do something or to keep from doing something else, no matter if you personally want to do it or not (Ryan, 2000). Indeed, it involves changing one’s behaviour to meet the perceived expectations of others (Burns & Darling, 2002).

Stakeholders, educators and parents always harbored the idea that peer groups provide a variety of positive experiences for adolescents. Boujlaleb (2006) alleged in a study that peers have a more powerful influence on adolescents as compared to families. Indeed, according to Haynie (2002), adolescents get their self-esteem from the group they belong to and they cannot imagine themselves outside the gathering. Carman and Zhang (2008) in their study indicated that the adolescents who have a high level of conformity to unconventional peer behavior tend to have lower GPAs than those who have lower levels of conformity. Tope (2011) in his study, however, asserted that peer group could either positively or negatively influences the academic performance in school. Chen, Chang and He (2003) also examined the association between peer factors and academic achievement of Chinese children. Their results suggest that teens’ academic achievement was positively associated with popularity, measured by sociometric nominations. Understandably, attempts to directly estimate peer effects on educational achievement have been relatively inconclusive. Fuligni, Eccles, Barber and Clements (2001) for instance, found no relationship between peer effect and academic achievement while Wentzel and Caldwell (1997) reported positive influences of higher achieving peers at least for some students.

**Students’ Academic Ambition**

The importance of setting up goals for behaviour was first suggested and defined by Dembo (1931). The ability to set goals and pursue these goals is sometimes referred to by educators as student’s academic ambition (Dembo, 1931). Lewin, Dembo, Festinger and Sears (1944) demonstrated that ambitions can be linked to the seeking of success and the avoidance of failure. Pettigrove (2007) defined ambition as the persistent and generalized striving for success, attainment, and accomplishment. In short, ambition is about attaining rather than achieving, though of course there is a certain relationship between the two (Maurin, 2002). Ambition is thus discussed by numerous philosophers, with those seeing it as virtuous apparently outweighing those who perceive it as vicious (Pettigrove, 2007).

Students who choose to set difficult goals for themselves tend to become task oriented, with a sense of purpose for their lives (Quaglia & Cobb, 1996). Certainly, academic ambition can influence students' learning, preparation for life choices, academic motivation and achievement. Quaglia and Cobb (1996) conceived academic ambitions as the "student's ability to identify and set goals for the future, while being inspired in the present to work toward those goals" (p. 130). Ambition thus, represents the perception that an activity is important as a means to future
goals. It reflects individuals' perceptions that it is both possible and desirable to think in future terms and to plan for the future (Quaglia & Cobb, 1996).

Individuals’ ambitions are considered important because they might influence key choices, and outcomes such as educational achievement (Goodman & Gregg, 2010). In fact, many studies suggest that young people with higher educational ambitions have greater motivation and higher educational attainment than their peers (Desforges & Abouchaar, 2003). For example, Blaver (2010) examined Hispanic young people and found that self-reported competence in maths was associated with future educational ambitions, and also with mathematics performance. In fact, the relationship between educational outcomes and academic ambitions seems to be a complex one. Ambition thus, can both be a predictor of educational achievement and an outcome of it, and might be influenced by self-efficacy, personal traits, experiences and mediating family factors (Gutman & Akerman, 2008), or linked to beliefs about ability (Phillipson & Phillipson, 2007).

**Students’ Academic Effort**

Many students believe that they succeed for a variety of reasons, and their beliefs and interests are very important in determining how they deal with failure, the risks they are willing to take, and the ways in which they interact with new opportunities. It is without doubt that the academic achievement of students depends on a number of basic factors, of which effort is paramount (Tella & Tella, 2010). Effort refers to the overall amount of energy expended in the process of studying (Zimmerman & Risenberg, 1992). Carbonaro (2005) defined school effort as the amount of time and energy that students expend in meeting the formal academic requirements established by their teachers and/or school. He identified three different types of school effort, thus rule oriented effort (showing up in and behaving in class), procedural effort (meeting specific class demands such as completing assignments on time) and intellectual effort (critically thinking about and understanding the curriculum).

Refreshingly, when students attribute their academic success to effort or receive feedback that attributes their success to effort, they develop a higher self-efficacy and expectations for future skill development (Siegle & McCoach, 2007). Indeed, a number of researchers have in the context of achievement goals explored the contribution of effort and persistence on students’ academic performance (Opare & Dramanu, 2002). Research evidence shows that effort makes a positive contribution to the prediction of academic performance outcomes (Bouffard, Boisvert, Vezéau, & Larouche, 1995). In truth, in analysis, effort is found to relate positively to academic performance (Phan, 2008). Pintrich (2004) for instance, found effort to be the only direct predictor of learning outcomes amongst all general strategies.
Academic Performance

Academic instruction is arguably the primary business of education. To this end, schools are expected to influence students’ learning, socialization, and even vocational preparedness. Despite the attention paid to a broad definition of educational outcomes, however, academic performance remains central. Students’ academic performance is a term that appears frequently married in higher education discourse. Academic performance is a multidimensional construct composed of the skills, attitudes, and behaviors of a learner that contribute to academic success in the classroom (Hijazi & Naqvi, 2006). It is a satisfactory and superior level of performance of students as they progress through and complete their school experience (Tinto, 1993). The implication of this definition is underscored by research which repeatedly demonstrates that the vast majority of students who withdraw from school do so for no reason other than poor academic performance (Hijazi & Naqvi, 2006; Tinto, 1993).

Although the importance of academic achievement is rarely questioned, reaching unanimity regarding its measurement has been elusive. The measurement of students’ academic performance continues to be a controversial topic among policymakers, measurement experts, and educators (Elliot, 2007; Johnson, 2003). Researchers have used a variety of ways to measure academic achievement such as report card grades, grade point averages, standardized test scores, teacher ratings, other cognitive test scores, grade retention and dropout rates (Burns & Darling, 2002). However, for the purposes of this study, student academic achievement is defined by how well a student performs on test items in Mathematics and English Language designed by the researchers.

Purpose of the Study

A lot of research has been done on factors affecting academic performance of resident senior high school students. However, there is scarce information on academic performance of non-resident senior high school students in Ghana (Adetunde & Asare, 2009; Nyarko, 2011). It appears however that in Ghana, research on factors affecting students’ day Senior High School students academic performance at the secondary level appears to be relatively limited (Opare & Dramanu, 2002; Adetunde & Asare, 2009). Given the inadequate attention allotted to the factors explaining academic achievement, especially at the secondary level among day students, the purpose of the study was to find out the extent to which some identified predictor and intervening variables influence day SHS students’ academic achievement in Mathematics and English Language. The two subjects were considered apparently because for some time now, yearly chief examiners reports on students’ performance on these two subjects keep declining.
Significance of the Study

A lot of research has been done on factors predicting academic success of university students. However, the shortfall of most researchers in ignoring day students at the SHS level is alarming. The study has bettered our understanding of the factors affecting academic achievement at SHS level. Specifically, the study has enlightened us that factors that influence student academic success can be predictors and/or intervening variables. The findings of this study have also been beneficial to the stakeholders in the educational enterprise. For instance, the findings have informed parents, teachers and head teachers to realize their crucial role of not only imparting knowledge to students but also helping them have stronger academic ambition for themselves through words of encouragement.

Research Questions

1. To what extent does fathers’ level of education relate to day students’ performance in Mathematics and English Language?
2. To what extent does Mothers’ level of education relate to day students’ performance in Mathematics and English Language?
3. To what extent does parental involvement relate to day students’ performance in Mathematics and English Language?
4. To what extent does parents’ academic ambition for their children relate to day students’ performance in Mathematics and English Language?
5. To what extent does peer influence relate to day students’ performance in Mathematics and English Language?
6. To what extent does students’ academic ambition relate to their performance in Mathematics and English Language?
7. To what extent does students’ academic effort relate to their performance in Mathematics and English Language?

Hypothesis

H0: The predictor and the intervening variables will together determine day students’ performance in Mathematics and English Language

METHODOLOGY

Design of the Study

Descriptive and correlational were the research designs used. First, the researchers looked at how the predictor and intervening variables, thus fathers’ and mothers’ education, parental involvement, parents’ academic ambition for their children, peer influence, students’ academic...
ambition and students’ academic effort explain day students’ performance in Mathematics and English Language. Second, the researchers explored the relationship between these variables and day students’ performance in Mathematics and English Language.

Population and Sampling Procedures

The population of this study comprised day form two Senior High School students in Amaniampong SHS, St. Monica’s SHS, St. Joseph SHS, Oduko Boatema SHS and Kofiase Seventh Day Adventist SHS of the Ashanti Mampong Municipality of Ghana. The form two students were selected because they had been in the school at least for more than a year and were not under any final examination pressure. Multi-stage sampling procedures, thus simple survey, purposive, and simple random sampling procedures were used to select schools, class, and number of students for the study respectively. The total population of the day form two students of the five SHSs was 1230 comprising 305 students from St. Monica’s SHS, 345 students from Amaniampong SHS, 225 students from St. Joseph SHS, 155 students from Oduko Boatema SHS and 200 students from Kofiase SDA SHS. A sample size of 465 day students was therefore chosen.

Research Instrument

Questionnaire was the main data collection instrument. Questionnaires were used because they are the main method of data collection and also the population was literate. Also the coverage of the questionnaire is wide, as researchers can reach respondents more easily and is unaffected by problems of ‘non-contacts’. Again, the popularity of questionnaires is probably based on some advantages among which are its low cost in terms of both money and time involved (Sarantakos, 1997). In all, 32 items made up the questionnaire of which 10 items were open-ended questions and the remainder close-ended ones.

Data Analysis

All the research questions were answered using Pearson zero-order correlation matrix. However, the hypothesis of the study was tested by means of multiple regression procedures.

RESULTS AND DISCUSSIONS

Research Question 1: To what extent does fathers’ level of education relate to day students’ performance in Mathematics and English Language?

This research question sought to find out the relationship between fathers’ level of education and day students’ performance in Mathematics and English Language. Zero-order correlation was therefore used to assess the relationship between fathers’ level of education and day students’ performance in Mathematics and English Language. The result is presented in Table 1.
Table 1: Fathers’ level of Education and Day Students’ Performance in Mathematics and English Language

<table>
<thead>
<tr>
<th>Fathers’ Level of Education</th>
<th>Academic Perf. (Maths)</th>
<th>Academic Perf. (English)</th>
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<tbody>
<tr>
<td></td>
<td>Pearson Correlation .505**</td>
<td>.558**</td>
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<tr>
<td></td>
<td>Sig. (2-tailed) .001</td>
<td>.001</td>
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<td>N 465</td>
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**. Correlation is significant at the 0.01 level (2-tailed).

Data in Table 1 reports the Zero-order correlation coefficients between fathers’ level of education and day students’ performance in Mathematics and English Language. The Zero-order correlation coefficients obtained are \( r = 0.505^{**} \) and \( r = 0.558 \) for Mathematics and English Language respectively. These are positive with significance or p-value = 0.001 which is less than alpha = 0.01. This suggests that fathers’ level of education was significantly related to day students’ performance in Mathematics and English Language.

Research Question 2: To what extent does mothers’ level of education relate to day students’ performance in Mathematics and English Language?

Research question two also sought to establish the relationship between mothers’ level of education and day students’ performance in Mathematics and English Language. Zero-order correlation was therefore used to assess the relationship between fathers’ level of education and day students’ performance in Mathematics and English Language. Table 2 depicts the findings.

Table 2: Mothers’ Level of Education and Day Students Performance in Mathematics and English Language

<table>
<thead>
<tr>
<th>Mothers’ Level of Education</th>
<th>Academic Perf. (Maths)</th>
<th>Academic Perf. (English)</th>
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<tr>
<td></td>
<td>Pearson Correlation .534**</td>
<td>.595**</td>
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<td></td>
<td>Sig. (2-tailed) .001</td>
<td>.001</td>
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<td>N 465</td>
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**. Correlation is significant at the 0.01 level (2-tailed).

The results in Table 2 illustrate the Zero-order correlation coefficients obtained for mothers’ level of education and day students’ performance in Mathematics and English Language as \( r = 0.534^{**} \) and \( r = 0.595^{**} \) in that order. The coefficients are positive with significance or p-value = 0.001 which is less than alpha = 0.01. This implies that mothers’ level of education share a significantly relationship with day students’ performance in Mathematics and English Language.
The results from this study share similar views with a number of studies. Indeed, most of the literature surveyed established that parents’ education is positively related to the academic performance of children (Condine & Zappala 2002; Eamon 2005; Jeynes 2002). For example, Grissmer (2003) asserted that fathers’ level of education is the most important factor affecting students’ academic achievement whilst Duncan and Brooks-Gunn (1997) also indicated that mothers’ level of education was positive, and significantly associated with children’s cognitive and educational outcomes. Musgrave (2000) said that children who come from educated homes would like to follow the steps of their fathers and mothers and by this, work actively in their studies. Dill (2006) concluded that children whose parents are high on the educational scale have far better chance of getting into good secondary schools and from there into the best colleges and universities than equally bright children of ordinary workers.

Research Question 3: To what extent does parental involvement relate to day students’ performance in Mathematics and English Language?

This research question was aimed at ascertaining the extent to which parental involvement relate with day students’ performance in Mathematics and English language. The result of the Zero-order correlation between parental involvement and day students’ performance in Mathematics and English language is presented in Table 3.

<table>
<thead>
<tr>
<th>Parental Involvement</th>
<th>Academic Perf. (Maths)</th>
<th>Academic Perf. (English)</th>
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<tr>
<td></td>
<td>Pearson Correlation</td>
<td>.489**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>465</td>
</tr>
<tr>
<td></td>
<td>Academic Perf. (English)</td>
<td>.494**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
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<td></td>
<td>N</td>
<td>465</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

According to the results in Table 3, the Zero-order correlation coefficients obtained in Mathematics and English Language are $r = 0.489**$ and $r = 0.494**$ respectively. Both are positive with significance or $p$-value $= 0.000$ which is less than alpha $= 0.01$. This suggests that parental involvement was significantly related to academic performance in Mathematics and English Language.

The findings of the current study corroborate studies done by a number of researchers (Nyarko, 2011; Nyarko & Vorgelegt, 2007). Indeed, in their separate researches, they in one way or the other opined that there is positive relationship between parental involvement and academic performance of children. These findings also corroborate the views shared by Adekola, (2008) and Epstein (2005). In their individual works, they both averred that the more intensively parents...
are involved in their children’s learning; the more beneficial are the achievement outcomes. Specifically, they stated that children whose parents are more involved in their education have higher levels of academic performance than those whose parents are involved to a lesser degree (Donkor, 2010; Georgiou, 2007).

Research Question 4: To what extent does parents’ academic ambition for their children relate to children’s performance in Mathematics and English Language?

The interest in this research question was to establish the extent to which parents’ academic ambition for their children is related to their children’s academic performance in Mathematics and English Language. This relationship was assessed via the Zero-order correlation. The result is presented in Table 4.

Table 4: Parents’ Academic Ambition for their Children and the children’s Performance in Mathematics and English Language

<table>
<thead>
<tr>
<th>Parents’ Academic Ambition</th>
<th>Academic Perf. (Maths)</th>
<th>Academic Perf. (English)</th>
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<tr>
<td></td>
<td>Pearson</td>
<td></td>
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<tr>
<td></td>
<td>.641**</td>
<td>.658**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.001</td>
<td>.001</td>
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<tr>
<td>N</td>
<td>465</td>
<td>465</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

With reference to the results in Table 4, the Zero-order correlation coefficients between parents’ academic ambition for their children and the children’s performance in Mathematics and English Language are $r = 0.641**$ and $r = 0.658**$ respectively. These coefficients are both positive with significance or p-value = 0.000 which is less than alpha = 0.01. They established the fact that parents’ academic ambition for their children was significantly related to the children’s academic performance in Mathematics and English Language.

The findings of the study are consistent with a plethora studies (Bandura et al., 2001). For instance, Zhan (2005) established that parents’ academic ambition for their children partially mediated the children’s educational achievements. Bee (1992) also in her study maintained that parents who have high expectations of their children to do well in academic matters have children who show most rapid cognitive progress. As a matter of fact, this goes a long way to inspire children to work assiduously in their academic pursuits. The results of this study again fall in line with the views expressed by Maurin (2002). He found that parental ambitions for children were associated with 19 and 12 percent of the variance in the children’s academic performance respectively. Hill (1990) further opined that parental academic beliefs for their children influence the children's perceptions of their own abilities, their attitudes, and
expectations for success and failure. Indeed, these directly affect the children's cognitive performance.

**Research Question 5:** To what extent does peer influence relate to day students’ performance in Mathematics and English Language?

As the need for social belonging and the feeling for affiliation with others continue to permeate every aspect of human life, it becomes worthwhile to examine its impact. To this end, this research question aimed at finding out how peer influence relates to day students’ performance in Mathematics and English Language. The Zero-order correlation matrix was used to ascertain the relationship between peer influence and day students’ performance in Mathematics and English Language. The results are presented in Table 5.

**Table 5: Peer Influence and Day Students’ Performance in Mathematics and English Language**

<table>
<thead>
<tr>
<th>Peer Influence</th>
<th>Academic Perf. (Maths)</th>
<th>Academic Perf. (English)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.379**</td>
<td>.384**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.001</td>
<td>.001</td>
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<tr>
<td>N</td>
<td>465</td>
<td>465</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between peer influence and day students’ performance in Mathematics and English Language as presented in Table 5 shows that the Zero-order correlation coefficients obtained for Mathematics and English Language are r = 0.379** and r = 0.384** respectively. Both coefficients are positive with significance or p-value = 0.001 which is less than alpha = 0.01. The implication of the findings remain that peer influence was significantly related to day students’ performance Mathematics and English Language.

The findings of this current study uphold views shared by a number of research works such as Wentzel and Caldwell (1997). Notwithstanding this present study findings contradict a number of studies (Boujlaleb, 2006; Haynie, 2002). The findings of this study are also consistent with that of Chen et al. (2003) who in their work report that teens’ academic achievement was positively associated with popularity, measured by sociometric nominations. Indeed, these results are encouraging because they provide evidence of peer influence bolstering positive teen outcomes, specifically academic performance. The findings of this study again share similar thoughts with Carman and Zhang (2008). They in their study on the topic “classroom peer effects and academic achievement”, found a significant positive peer relationship with academic performance. Tope (2011) in a similar study asserted that peer group could positively influence
the academic performance in school. However, Fuligni et al. (2001) found no relationship between peer effect and academic performance.

**Research Question 6:** To what extent does students’ academic ambition relate to their performance in Mathematics and English Language?

Ambitions in any facet of human endeavours turn out to be the driving force behind goal directed behaviour. In this regard, the study desired to establish the relationship between students’ academic ambition and their performance ambitions in any facet of human endeavours turn out to become the driving force behind that particular behaviour. In this regard, this study desires to establish the relationship between the academic ambition of the child and the child’s academic performance. The Zero-order correlation was therefore used to ascertain the relationship and the result is found in Table 6.

**Table 6: Students’ Academic Ambition and their Performance in Mathematics and English Language**

<table>
<thead>
<tr>
<th></th>
<th>Academic Perf. (Maths)</th>
<th>Academic Perf. (English)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ Academic Ambition</td>
<td>Pearson Correlation .815**</td>
<td>.804**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed) .001</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>N 465</td>
<td>465</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

According to results in Table 6, the Zero-order correlation coefficients established between students’ academic ambition and their performance in Mathematics and English Language are r = 0.815** and r = 0.804** respectively. Both are positive with significance or p-value = 0.001 which is less than alpha = 0.01. This shows that students’ academic ambition was significantly related to their performance in Mathematics and English Language.

Findings from this study are consistent with a plethora of studies. In fact, all of these studies stressed that there is a positive relationship between the students’ academic ambition and their academic performance (Desforges & Abouchaar, 2003; Goodman & Gregg, 2010; Jacob & Wilder, 2010). Individuals’ ambitions are certainly considered important because they might influence key choices, and outcomes such as educational achievement. For example, Cuthbert and Hatch (2008) using the data from the longitudinal study of young people in England, found that the ambitions of students are associated with their educational attainment. Blaver (2010) in a study on Hispanic young people and concluded that self-reported competence in Mathematics was associated with future educational ambitions, and also with Mathematics performance.
Research Question 7: To what extent does students’ academic ambition relate to their performance in Mathematics and English Language?

Academic effort refers to the overall amount of energy expended in the process of studying whereas persistence means the continuous investment of energy in learning even when obstacles are encountered. This definition leaves little doubt that academic effort plays a crucial role in the academic performance of students hence its inclusion in this study. Zero-order correlation was run to assess the relationship and the results are shown in the Table 7.

<table>
<thead>
<tr>
<th>Students’ Academic Effort</th>
<th>Academic Perf. (Maths)</th>
<th>Academic Perf. (English)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.788**</td>
<td>.775**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.001</td>
<td>.001</td>
</tr>
<tr>
<td>N</td>
<td>465</td>
<td>465</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

In Table 7, the Zero-order correlation coefficients obtained between students’ academic effort and their performance in Mathematics and English Language are r = 0.788** and r = 0.775** respectively. Both are positive with significance or p-value = 0.001 which is less than alpha = 0.01. These results submit that students’ academic effort was significantly related to their performance in Mathematics and English Language.

Findings from this study are consistent with a number of studies (Opare & Dramanu, 2002; Phan, 2008; Grave, 2010). Carbonaro (2005) in a similar way asserted that students who put forward significant effort in all the three categories will perform well academically. That is effort has a positive link with test scores and academic performance in both direct and indirect ways. Caballo et al. (2004) in their study also postulated that high student effort leads to greater educational values, which in turn indirectly affects students’ academic performance. Again, Assouline et al. (2006) in their study found out that brilliant students tend to attribute quality work to effort, though ability was also a major attribution factor for many of these students. However, Plant et al. (2005) findings opposed the findings of this study. They in their study established an adverse relationship between the total amount of study time and grade point average.

Testing the Hypothesis

Efforts were made to test the hypothesis that guided the study. In this regard, multiple regression procedures were used to test the hypothesis. The null hypothesis hence states that…
Ho: The predictor and the intervening variables will together determine day students’ performance in Mathematics and English Language. The results of the regression of the dependent variable on the predictor and intervening variables are shown in Tables 8 and 9.

Table 8: Mathematic Test Score on the Independent and Intervening Variables

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Mathematics Test Score</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 3</td>
</tr>
<tr>
<td></td>
<td>β</td>
<td>R</td>
<td>β</td>
</tr>
<tr>
<td>Fathers’ Education</td>
<td>.345 (.057)*</td>
<td>.231 (.043)*</td>
<td>.165</td>
</tr>
<tr>
<td>Mothers’ Education</td>
<td>.455 (.066)*</td>
<td>.368 (.080)*</td>
<td>.224</td>
</tr>
<tr>
<td>Parents’ Involvement</td>
<td>.398 (.093)*</td>
<td>.294 (.086)*</td>
<td>.155</td>
</tr>
<tr>
<td>Parents’ Academic.</td>
<td>.285 (.021)*</td>
<td>.195 (.021)*</td>
<td>.105</td>
</tr>
<tr>
<td>Students’ Academic.</td>
<td>.748 (.027)*</td>
<td>.712</td>
<td></td>
</tr>
<tr>
<td>Students’ Academic Effort</td>
<td>.578</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.901</td>
<td>1.803</td>
<td>2.507</td>
</tr>
<tr>
<td>R</td>
<td>.667</td>
<td>.853</td>
<td>.892</td>
</tr>
<tr>
<td>R2</td>
<td>.464</td>
<td>.675</td>
<td>.689</td>
</tr>
<tr>
<td>AR2</td>
<td>.453</td>
<td>.666</td>
<td>.674</td>
</tr>
</tbody>
</table>

The results from Table 8 reveal the multiple regression analysis. The analysis was run in Models. Model 1 gives the coefficients of the predictor variables, the standard error, the level of significance, the correlation (R), the R2 and the adjusted R2. Model 2 contains the coefficients of the predictor and one intervening variable, the standard error, the level of significance, the correlation (R), the R2 and the adjusted R2. Lastly, Model 3 shows the coefficients of the predictor and two intervening variables, the standard error, the level of significance, the correlation (R), the R2 and the adjusted R2.

When Mathematics test score was regressed on the predictor variables in Model 1, all the independent variables were found to be significant predictors of day students’ performance in Mathematics. Also in Model 2, when the Mathematics test score was regressed on the same independent variables and one mediating variable, thus the students’ academic ambition, again all the predictor variables including the intervening variable were significant. Lastly, when students’ academic effort was introduced in Model 3, the independent variables including the two intervening variables were all significant predictors.

Furthermore, in Table 8, when the intervening variables were introduced in Models 2 and 3, the coefficients of all the independent variables shrunk. For instance, when students’ academic ambition was introduced into Model 2, fathers’ education and parents’ involvement all shrunk by...
33% and 26% respectively. Also, with the introduction of students’ academic effort in Model 3, fathers’ level of education, mothers’ level of education and parents’ involvement shrunk by 29%, 39% and 47% in that order. The implication is that the independent variables make significant effect when it passes through the mediating variables. This suggests that the values lost by the shrinkages constitute the contribution of the mediating variables to the independent variables.

The findings from Table 8 eventually reveal that all the independent variables and the intervening variables were consistent predictors of day students’ performance in Mathematics.

**Table 9: English Language Test Score on the Independent and Intervening Variables**

<table>
<thead>
<tr>
<th>Predictors</th>
<th>English Language Test Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
</tr>
<tr>
<td>Fathers’ Education</td>
<td>.315 (.055)*</td>
</tr>
<tr>
<td>Mothers’ Education</td>
<td>.410 (.065)*</td>
</tr>
<tr>
<td>Parents’ Involvement</td>
<td>.338 (.090)*</td>
</tr>
<tr>
<td>Parents’ Academic Ambition</td>
<td>.225 (.021)*</td>
</tr>
<tr>
<td>Students’ Academic Ambition</td>
<td>.732 (.027)*</td>
</tr>
<tr>
<td>Students’ Academic Effort</td>
<td>.588</td>
</tr>
<tr>
<td>Constant</td>
<td>1.401</td>
</tr>
<tr>
<td>R</td>
<td>.683</td>
</tr>
<tr>
<td>R2</td>
<td>.464</td>
</tr>
<tr>
<td>AR2</td>
<td>.457</td>
</tr>
</tbody>
</table>

* The results from Table 9 show the multiple regression analysis. The analysis was run in Models. Model 1 gives the coefficients of the predictor variables, the standard error, the level of significance, the correlation (R), the R2 and the adjusted R2. Model 2 contains the coefficients of the predictor and one intervening variable, the standard error, the level of significance, the correlation (R), the R2 and the adjusted R2. Lastly, Model 3 shows the coefficients of the predictor and two intervening variables, the standard error, the level of significance, the correlation (R), the R2 and the adjusted R2.

According to Table 9, when the English Language test score was regressed on the predictor variables in Model 1, all the independent variables were significant predictors of day students’ performance in English Language. Besides in Model 2, when the English Language test score was regressed on the same independent variables and one intervening variable, thus the students’ academic ambition, all the predictor variables including the intervening variable were still significant. Last but not least, when students’ academic effort was introduced in Model 3, the
independent variables including the two intervening variables continued to be significant predictors.

Additionally, in Table 9, as soon as the intervening variables were introduced in Models 2 and 3, the coefficients of all the independent variables shrunk. As a matter of fact, when students’ academic ambition was introduced into Model 2, fathers’ level of education, mothers’ level of education and parents’ involvement all shrunk by 36%, 13% and 22% correspondingly. Moreover, when students’ academic effort was also introduced in Model 3, fathers’ level of education, mothers’ level of education and parents’ involvement all shrunk by 38%, 18% and 48% respectively. This suggests that the independent variables have significant effect when the intervening variables are present and positive. It therefore proposes that the values lost by the shrinkages constitute the contribution of the mediating variables to the independent variables.

Henceforth, the findings from Table 9 ultimately reveal that all the independent variables and the intervening variables were consistent predictors of day students’ performance in English Language.

The findings from this present study are consistent with various research works. For instance, Grissmer (2003) asserted that fathers’ level of education is the most important factor affecting students’ academic achievement whilst Duncan and Brooks-Gunn (1997) also indicated that mothers’ level of education was positively and significantly associated with children’s cognitive and educational outcomes. Also, Nyarko (2011); Nyarko and Vorgelegt, (2007) and Opdenakker and Damme (2005) in their studies averred that children perform better in school when parents are involved. Zhan (2005) again established that parents’ academic ambition for their children partially mediated the children’s educational achievements. Tope (2011) in a similar study asserted that peer group could positively influence the academic performance in school. Caballo et al. (2004); Carbonaro (2005) and Desforges and Abouchaar (2003) all postulated that students’ academic ambition and students’ academic efforts have a strong and positive association with students’ academic performance.

With reference to the findings emanating from the present study and their supporting literature we failed to reject the null hypothesis which states that “The independent and the intervening variables will together determine day students’ performance in Mathematics and English Language.

Summary of Key Findings

1. The study revealed a strong and positive association between father’s education and the child’s academic performance.
2. Mother’s education was established to have a strong and positive relationship with the child’s academic performance.

3. The study revealed that there is a strong and positive relationship between parental involvement and the child’s academic performance.

4. The study discovered that there is a positive relationship between parents’ academic ambition for their child and the child’s academic performance.

5. The study established a positive association between peer influence and the child’s academic performance.

6. This study discovered that there is a strong and positive relationship between child’s academic ambition and the child’s academic performance.

7. The findings from the study showed that there is a strong and positive relationship between the child’s own effort and his/her academic performance.

CONCLUSION

In this study, steps were taken to ascertain how day students’ performance in Mathematics and English Language is influenced and determined by some selected predictor and intervening variables. The current study therefore, established a positive relationship between parents’ level of education, parents’ involvement, parents’ academic ambition for their children, peer influence, students’ academic ambition and students’ academic effort and day students’ performance Mathematics and English Language. This presupposes that students’ academic performance was strongly influenced and determined by both predictor and intervening variables. The findings further suggest that when these variables are present and positive, there is the likelihood that students will perform creditably well. We therefore conclude that parents should get involved in their children’s education and encourage their children to be academically ambitious and when they do, they must work hard in order to succeed in their ambition. Also, parents should monitor the background of the kinds of friends their children keep and advise them accordingly. Again, educated parents were found to influence the students’ academic ambition, hence educated parents must be more committed to their ward’s education.

RECOMMENDATIONS

On the basis of the findings and conclusions discussed on this current study, the following recommendations are made.

1. In this study, parents’ level of education and involvement were found to influence their children’s academic performance. It is therefore recommended parents should be encouraged to get involved in their children’s education.

2. Besides parents’ involvement, the child’s academic ambition and effort are seen to play a crucial role in the academic attainment of the child. It is therefore recommended that
parents and care givers to motivate their children to be ambitious academically and devote much effort to their studies.

3. Moreover, peer effect should be moderated by parents. This is because the present study showed a relationship between peer influence and academic performance. Parents must henceforth beware and take interest in their children’s friends and advise them when and where appropriate.

REFERENCES


