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# Investigating the factors influencing the attitudes of students toward the study of mathematics

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**Abstract:** The purpose of the study was to investigate the factors influencing the attitude of students towards the study of mathematics in selected Junior High Schools in Asokore in the Sekyere East District of the Ashanti Region of Ghana. The study was based on the ABC Attitude Model. Random sampling was used to select 102 respondents (students) in Asokore in the Sekyere East District for the study. A questionnaire was the sole instrument employed in the study. Descriptive statistics were used to analyze the data. It was found that school administrators and the mathematics teachers in JHSs in Asokore in Sekyere East District are doing well to motivate students' to improve their achievement in mathematics, whereas most parents are not complementing the effort of the schools and the teachers by providing for their wards needs and encouraging them to learn mathematics. It was also found that even though most students agreed that mathematics is useful even at work places, they still think that mathematics is boring and makes them nervous, and therefore do not like to learn it. In addition, it was established that mathematics is not the students' favorite subject; therefore, they do not like mathematics classes and solving mathematics questions.

**Keywords:** Achievement, attitude, mathematics, nervous

# Menyelidiki faktor-faktor yang mempengaruhi sikap siswa terhadap pembelajaran matematika

**Abstrak:** Tujuan dari penelitian ini adalah untuk mengetahui faktor-faktor yang mempengaruhi sikap siswa terhadap pembelajaran matematika di SMP terpilih di Asokore di Distrik Sekyere Timur di Wilayah Ashanti Ghana. Penelitian ini didasarkan pada Model Sikap ABC. Random sampling digunakan untuk memilih 102 responden (siswa) di Asokore di Distrik Sekyere Timur untuk penelitian. Kuesioner adalah satu-satunya instrumen yang digunakan dalam penelitian ini. Statistik deskriptif digunakan untuk menganalisis data. Ditemukan bahwa administrator sekolah dan guru matematika di SMP di Asokore di Distrik Sekyere Timur memotivasi dengan baik siswanya untuk meningkatkan prestasi mereka dalam matematika. Kebanyakan orang tua tidak melengkapi upaya sekolah dan guru dengan menyediakan kebutuhan lingkungan siswa dan mendorong mereka untuk belajar matematika. Ditemukan juga bahwa meskipun sebagian besar siswa setuju bahwa matematika berguna bahkan di tempat kerja, mereka masih berpikir bahwa matematika itu membosankan dan membuat mereka gugup sehingga tidak suka mempelajarinya. Selain itu, ditetapkan bahwa matematika bukanlah mata pelajaran favorit siswa sehingga mereka tidak menyukai pelajaran matematika dan menyelesaikan soal matematika.

**Kata Kunci:** Pretasi, sikap, matematika, gugup

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## INTRODUCTION

The world consider mathematics as the foundation for all disciplines. It is either applied directly or indirectly in every discipline. Mathematics is essential to every sector of countries' economies. No country can develop without the use mathematics. Besides, no individual can live a meaningful life without using mathematics (Abramovich et al., 2019; Pangadongan et al., 2022). Moreso, mathematical ability helps in understanding other subject including arts, social sciences, pure and applied sciences (Agormor et al., 2022; Ajai & Ogungbile, 2023; Patena & Dinglasan, 2013). This explains why mathematics is highly regarded by every country. Mathematics is made core subject in basics and second cycle schools in Ghana and across the world. Students' mathematics performance in Sub Saharan Africa (SSA) is ranked way below the average point in international assessments (Bethell, 2016). Bethell further indicated that the development of countries in SSA requires major improvements in Science, Technology, Engineering, and Mathematics (STEM) education. It unfortunate that despite the relevance of mathematics to an individual and nations, students still perform poorly in mathematics in Ghana at both the basic and secondary level of the education system (Mensah, 2017).

There are so many factors responsible for students' achievements in mathematics according to studies in different countries (Lin et al., 2013). One of this factors is the students' attitude towards the learning of mathematics. Bramlett and Herron (2009) found that there is a positive relationship between students' achievements in mathematics and their attitude towards mathematics. Hwang and Son (2021) also confirmed that the attitude of students in studying mathematics highly contributes to the students' achievement in the subject. Attitude is referred to as an acquired tendency of a person to respond negatively or positively to a situation, an object , subject or a person (Sarmah & Puri, 2014). Attitude is also defined by Psychologists as any strong belief or feeling of approval or disapproval to people and situations (Mata et al., 2012). People show favorable or unfavorable attitudes to things and people. One's attitude can be changed or improved over time (Syyeda, 2016). Based on the definition of attitude, students' attitude could determine how students' relate to a subject. Negative attitude of students will hampers effective learning and eventually their achievement and positive attitude of students also improves their performance in the subject (Joseph, 2013; Lelasari et al., 2021; Nusantari et al., 2020). Therefore, students' attitude is a key factor which cannot be ignored when considering factors that affect students' performance.

Various factors which affect students' attitude to learning mathematics have been reviewed in numerous literature. Factors relating to students, teachers, size of class, mathematics anxiety, infrastructural problems and governmental have been considered as an influence to students' mathematics learning and achievements (Mohamed & Tarmizi, 2010). Hwang and Son (2021) in their study identified three groups of people who influences students' attitude in mathematics. This people are mathematics teachers, school administrators, and parents or guardian. The teaching methods of the mathematics teachers, availability of educational materials in the schools which is the responsibility of the school administrator and the parental support were found to contribute to students' achievement in mathematics.

The failure rate in the Basic Education Certificate Examination (BECE) in mathematics in Junior High Schools in the entire Asokore Community in Sekyere East District- Ashanti

Region for sometimes now is quite alarming because, from the record of District Examination Officer from 2016 to 2020 students performance in Mathematics in BECE is not up to 50%. Per the Ministry of Education (MOE), Mathematics is one of the core subjects taken in primary, Junior High and Senior School in the Ghana Education Service. Its knowledge is applied in all subjects including everyday life. Unfortunately, it is evident from statistics that performance in mathematics had remained low over the years. Per the records from the District examination officer the Mathematics performance in BECE is not satisfactory, from 2016 BECE performance in Mathematics was 45%, 2017 –40%, 2018—43%, 2019—48% and 2020 –47% and also all the terminal exams the performance is not encouraging because those who failed in Mathematics are more than those who pass.

Through the District Director of Education and Asokore paramount chief, vacation classes were introduced for students and workshops organised for mathematics teachers in the basic schools in the Asokore town. These were intervention measures taken to arrest the situation. Despite these efforts, students' performance in the mathematics remains low in both terminal examinations and BECE. There is the need to investigate the cause of this problem. Since students' attitude is a determinant of students' performance, it is very imperative to find out the factors influencing students' attitudes in mathematics in the area and work on it. Bramlett and Herron (2009) and Hwang and Son (2021) suggested further investigation be made into factors affecting students' interest in mathematics. This study sought to investigate the factors influencing students' attitude in studying mathematics in Asokore in Sekyere East District- Ashanti Region of Ghana.

The general research objective was to investigating the factors affecting the students' attitude in mathematics in Asokore in the Sekyere East District Ashanti Region; in pursuance of this, the following specific objectives were considered: to assess the factors influencing the attitude of student towards the study of mathematics, to determine the perceptions of students about the study of mathematics, to assess the effect of factors affecting students' attitude towards the study of mathematics on student's mathematics performance.

## METHOD

The design used in this research was descriptive design. A descriptive research approach attempts to methodically explain attitudes towards issues (Bryman & Bell, 2015). In this study, the descriptive design was used to help the researcher obtain data on factors influencing the attitude of students towards the study of mathematics in selected Junior High School.

Samples were selected from Junior High Schools within the Asokore Circuit in the Sekyere East District in Ashanti Religion of Ghana. The Asokore Circuit in the Sekyere East was selected based on convenience and purpose. On purpose because they have problem and on convenience because the lead researcher resides in the town. Sample of 102 participants were selected at randomd for this study in soliciting information from JHS students in Asokore in Sekyere East District.

The data was collected by administering questionnaire to students. The questionnaire was divided into four sections. The first section gathered students' demographic information. Section two collected data on factors influencing the attitude of students towards the study of mathematics. Section three and four obtain data on perceptions of

students about study of mathematics and students' attitude towards mathematics respectively. In all, the questionnaire consist of 32 items.

Before the data collection for this study began, a formal letter was written to the headmaster of the selected schools for permission undertake research in their schools. The participants were told the purpose of the study. The respondents were assured that the information collected was to be treated with utmost confidentiality and was to be used for the research purpose only and they willingly participated in the study.

Descriptive analysis was used in analyzing the data collected. Simple descriptive statistics, percentages was used to analyse the data.

Abd Gani et al. (2020) defined reliability as the level of consistency with which a research instruments measure characteristics at different times. There is the need to conduct a research which findings are very reliable. The internal consistency was measured by using the Cronbach's alpha. This confirmed how the items were closely related in terms of grouping. Research a coefficient of 0.70 or higher are usually considered to be acceptable. After data collection, Cronbach's alpha was found to be 7.6. Content validity as per Kothari (2004) is the extent to which the research instrument provide the answers to the research question. Several steps were taken to valid data. First of all, research instruments in previous studies were studied to design the research instrument. Secondly, the research instrument was piloted the necessary adjustment were made. The adjusted questionnaire was used in collecting data from the respondents.

## RESULTS

The analyses presented in tables have been outlined in order of the research objectives starting with the analysis of the demographic data.

Table 1. Demographic details of respondents

| Gender | Total number | Percentage |
|---|---|---|
| Male | 57 | 55.9 |
| Female | 45 | 44.1 |
| Total | 102 | 100 |

It was observed from Table 1 above that out of the 102 respondents 57 were males representing 55.9% and 45 were females representing 44.1%. There was therefore a fair representation of females in the study.

Table 2. Education level of respondents

| Educational Level | Total number | Percentage |
|---|---|---|
| Junior High Form One | 47 | 46.1 |
| Junior High Form Two | 30 | 29.4 |
| Junior High Form Three | 25 | 24.5 |
| Total | 102 | 100 |

Table 2 above provides the distribution of the respondents' level of education. All the 102 respondents were students at the Junior High School; of which 47 were in JHS 1 representing 46.1%, 30 were in JHS 2 representing 29.4% and 25 were in JHS 3 representing 24.5%.

***The factors influencing the attitude of students' attitude towards the study of mathematics***

In order to identify the factors that influence student's performance in mathematics, part B of the question presents series questions to elicit responses from the students. The summary of the responses are presented in Table 3.

Table 3. Factors influencing the learning of mathematics

| Factors | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Total |
|---|---|---|---|---|---|---|
| | N(%) | N(%) | N(%) | N(%) | N(%) | N(100) |
| There is enough TLMS | 17(16.6) | 10(9.8) | 10(9.8) | 46(45.1) | 19(18.6) | 102(100) |
| Teachers make use of various TLMs | 1(1) | 5(4.9) | 7(6.9) | 46(45.1) | 43(42.2) | 102(100) |
| Teachers apply ICT in the teaching of mathematics | 4(3.9) | 6(5.9) | 22(21.6) | 40(31.2) | 30(29.4) | 102(100) |
| The use of the TLMs make learning a fun | 5(4.9) | 10(9.8) | 11(10.8) | 49(48) | 27(25.5) | 102(100) |
| Mathematics textbooks available | 3(2.9) | 5(4.9) | 17(16.7) | 41(40.2) | 36(35.3) | 102(100) |
| I have positive attitude towards the study of math | 25(24.5) | 32(31.4) | 14(13.7) | 24(23.5) | 7(6.9) | 102(100) |
| I engage in self-regulated learning strategies of the subject | 3(2.9) | 5(4.9) | 26(25.5) | 47(46.1) | 21(20.6) | 102(100) |
| Teacher gives me extra attention when I don't understand certain concepts | 4(3.9) | 15(14.7) | 16(15.7) | 42(41.2) | 25(24.5) | 102(100) |
| Lack of aptitude and poor interest in the subject equally influence attitude in studying mathematics | 8(7.8) | 12(11.8) | 7(6.9) | 51(50) | 24(23.5) | 102(100) |
| Teachers' teaching strategies help me to understand the subject | 4(3.9) | 5(4.9) | 15(14.7) | 40(39.2) | 38(37.3) | 102(100) |
| I developed interest in mathematics because of my | 1(1) | 6(5.9) | 7(6.9) | 40(39.2) | 48(47.1) | 102(100) |

| | | | | | | |
|---|---|---|---|---|---|---|
| teacher's teaching skills | | | | | | |
| Conditions at home influence the learning of mathematics | 1(1) | 9(8.8) | 10(9.8) | 50(49) | 32(31.4) | 102(100) |
| Parents give me enough time to learn at home | 18(17.6) | 25(24.5) | 10(9.8) | 29(28,4) | 20(19.6) | 102(100) |
| Parents encourage me to learn | 28(27.5) | 18(17.6) | 13(12.7) | 25(24.5) | 18(17.6) | 102(100) |
| Parent provide me with the things I need | 26 (25.5) | 34(33.3) | 21(20.6) | 16(15.7) | 5(4.9) | 102(100) |

***There are enough teaching and learning resources:*** *This* question sought to find out if teaching and learning resources are available in the school. It is obvious from the responses that there is enough teaching and learning resources since 70% of the respondents agree to the statement. Only 27 of the 102 respondents disagree and 10 could not decide.

***Teachers' use of Teaching and Learning materials when teaching mathematics****:* This statement was also to find out if the Teachers use Teaching and Learning materials when teaching mathematics. Most of the respondents, thus, over 80% that is 89 out of the 102 respondents agree that the teachers use Teaching and Learning materials when teaching mathematics. Interestingly, only 6 respondents disagree and 7 could not decide.

***Information communication technologies (ICT) based materials largely influence the study of subjects in school***: It is clear from the responses that teachers make use of ICT in their teaching and this to some extent influence the learning of the subject. This is because almost 60% of the respondents agree with only 10% of the respondents disagreeing but the rest remain neutral.

***The use of the teaching and learning materials makes mathematics learning enjoyable*:**On the issue of whether the use of the teaching and learning materials makes mathematics learning enjoyable, the response indicate about 70% of the respondents agree. Only 15 out of the 102 respondents do not enjoy mathematics when the teaching and learning materials are used.

***Textbook on mathematics are available and accessible****: About* 77% of the respondents agree that textbooks on mathematics are available and assessable in the school. Only 3 of the 102 respondents disagree while 17 of the respondents remain neutral. Since the majority agreed, it is considered to be available and assessable.

***I have positive attitudes towards the study of mathematics*:**On the issue of respondents' attitudes towards the study of mathematics, majority of the respondents Agreed or Strongly

Agreed, 52.9% and 24.5% respectively to having a positive attitude towards the study of mathematics. However, 14.7% remained neutral and a total of 7.9% Disagreed to having a positive attitude towards the study of mathematics. This represents 8 out of the 102 respondents.

***I engage in self-regulated learning strategies of the subject:*** A total of 66.7% of respondentsAgreed to (Agreed and Strongly Agreed) usually engaging in self-regulated learning strategies of Mathematics. Whiles 25.5% remained Neutral, 4.9% and 2.9% of respondents Disagreed and Strongly Disagreed respectively.

***Conditions at home influence the learning of mathematics:*** This questionnaire item presents data on conditions at respondents' home as an influence the learning of mathematics. Responses summarized on the table indicate that 18.6%, Disagree that conditions at home influence the learning of mathematics. Moreover, 15.7% were Neutral to the question and majority of them, 65.7% Agree to this questionnaire item. This means that conditions at home influence the learning of mathematics.

***Lack of aptitude and poor interest for the subject equally influence attitude in studying mathematics:*** It has been established that 77.4% of respondents have positive attitudes towards the study of mathematics and 75.5% also Agree that some students have negative attitude towards learning mathematics. This questionnaire item; Lack of aptitude and poor interest for the subject equally influence attitude in studying mathematics, reveals that 73.5% Agrees and 19.6% Disagree. This affirms that students who lack aptitude or have poor interest influence their attitude towards the study of Mathematics. However, only 6.9% thus seven of the respondents were Neutral.

***Students' bad habits and poor study skills influence their attitude towards the study of mathematics:*** it can be inferred the analysis that Students' bad habits and poor study skills influence their attitude towards the study of mathematics since majority of respondents (62 out of 102) Agree to this questionnaire item. Although 17 respondents were Neutral and 23 Disagreed, it does not affect the outcome since they fell below average.

Teachers teaching strategies significantly influenced students' academic performance in Mathematics: On the issue of Teachers teaching strategies, whether it significantly influenced students' academic performance in Mathematics, 78 respondents out of the total representing 76.5% were in Agreement to this questionnaire item. This implies that Teachers teaching strategies play a vital role in students' performance in Mathematics. Only 9 respondents disagree though whiles 15 were undecided.

***I like mathematics because of the way my teachers handles the subject:*** The table indicates that 6.9% of respondents Disagree that they like mathematics because of the way their teachers handle the subject and 6.9% also could not Agree or Disagree either. On the other hand, the remaining 86.3% agree strongly that they like mathematics because of the way their teachers handle the subject.

***I enjoy the teaching of mathematics because of our qualified teachers****:* Qualified Mathematics teachers are indeed an asset to students. The data displayed on the table indicates that 82 out of the 102 respondents enjoy the teaching of mathematics because of their qualified teachers. Nonetheless, 10 respondents remained Neutral and only 10 Disagreed to this questionnaire item.

***The way the teacher presents the lesson and involvement of the students in the lesson strongly affects the students****:* It had been ascertained that 80.4% of respondents enjoyed the teaching of mathematics because of qualified teachers. This follow-up questionnaire item; the way the teacher presents the lesson and involvement of the students in the lesson strongly affects the students which in effect determines teachers' competencies also recorded 82 Agrees out of the 102 responses. An 80.4% majority suggests that the way the teacher presents the lesson and involvement of the students in the lesson strongly affects the students. On the contrary, 12.8% Disagree and 6.9% were Neutral.

***Enough time for study at home****:* As a follow-up to fully ascertain if conditions at home influence the learning of mathematics, this questionnaire item; enough time for study at home was posed. Whiles 65.7 respondents agreed in one way or the other that conditions at home influence the learning of mathematics, 52.0% majority reliably responded in Strong Agreement that they have enough time to study at home. Moreover, 26.5% also agreed with only 15.7% remaining Neutral. However, 5.8% disagreed that they have enough time for study at home.

***The perceptions of students about mathematics***

Table 4 presents the summary of the responses from the students on how they perceive mathematics.

Table 4. Perception of students about mathematics

| Perception | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Total |
|---|---|---|---|---|---|---|
| | N(%) | N(%) | N(%) | N(%) | N(%) | N(100) |
| My teacher teaches according to the syllabus | 3(2.9) | 8(7.8) | 15(14.7) | 56(54.9) | 20(19,6) | 102(100) |
| Enough time to learning mathematics | 2(2) | 11(10.8) | 7(6.9) | 47(46.1) | 35(34.3) | 102(100) |
| Mathematics is for those who are good | 13(12.7) | 14(13.7) | 16(15.7) | 32(31.2) | 17(16.7) | 102(100) |
| Math is only useful in the classroom | 6(5.9) | 6(5.9) | 17(16.7) | 28(27.5) | 45(44.1) | 102(100) |
| Mathematics is boring | 3(2.9) | 3(2.9) | 16(15.7) | 27(26.5) | 53(52) | 102(100) |

| | | | | | | |
|---|---|---|---|---|---|---|
| Mathematics is needed to study other subjects | 1(1) | 2(2) | 24(23.5) | 30(29.4) | 45(44.1) | 102(100) |
| Mathematics makes me nervous | 0(0) | 7(6.9) | 17(16.7) | 24(23.5) | 54(52.9) | 102(100) |
| There is mathematics at the work place | 11(10.8) | 8(7.8) | 11(10.8) | 43(42.2) | 29(28.4) | 102(100) |

***Teacher Teaches According to the Syllabus****:* The table presents a strong conviction that Teachers teach according to the syllabus as 74.5% of the respondents Agree to this against the 10.7% who disagree. Although 14.7% remained Neutral, majority of the respondents responded to Agree (54.9%) and Strongly Agree (19.6%).

***The time allocated for mathematics is enough****:* This questionnaire item seeks to find out if there is enough time allotted for Mathematics. While 13 respondents responded that there is enough time, 7 of them could not decide. However, majority of the respondents (82 out of 120) Agreed that the time allocated for mathematics is not enough although the teachers teach according to syllabus as indicated by 76 of the respondents.

***Mathematics is for those who are good:*** On the issue of whether Mathematics is for those who are good academically, the table presents that 26.4% Disagree. 15.7% are Neutral and majority of the respondents, 57.9%, Agree that Mathematics is for those who are good academically.

***Mathematics is only useful in the classroom****:* Whiles majority of respondents Disagree that mathematics is not used in our daily activities, responses to mathematics is only useful in the classroom recorded 73 out of 102 Agree responses. Only 12 out of the total respondents Disagreed and 17 could not make a conclusive choice as shown on the table. It can be adjudged that respondents think mathematics is only useful in the classroom and not in their daily activities.

***Mathematics is Boring****:* This questionnaire item that sought to find out if mathematics is for those who are good academically, 57.9%, Agree that Mathematics is for those who are good academically. This means that to these respondents, Mathematics may just be a boring subject as majority of the respondents had also indicated strongly that mathematics is only useful in the classroom and not in their daily activities. From the table, only six respondents chose to Disagree that Mathematics is boring. Out of 102 respondents, 80 strongly agreed that mathematics is boring to reaffirm that mathematics is only useful in the classroom and not in their daily activities. However, sixteen of the respondents were neutral to this questionnaire item.

***Mathematics is Needed to Study Other Subjects****:* This questionnaire item seeks to find out if there is a link between what is learnt in mathematics and other subjects to aid transfer of learning. However, 3.0% of respondents disagreed that mathematics is not needed to study

other subjects and 23.5% were undecided. This is an indication that what is learnt in mathematics can be transferred to the subjects to aid understanding. On the contrary, 73.5% representing the majority thinks that mathematics is not needed to study other subjects.

**Mathematics makes me nervous**: From the table, it can be observed that 76.4% majority finds mathematics as a nervous subject or it makes them nervous. As established from the preceding questionnaire items, majority of respondents agree that Mathematics is boring, only useful in the classroom and not in their life activities; it is not also needed to study other subject. Since respondents (57.9%) affirmed that mathematics is for those who are good, it makes those who are weak academically nervous. This stems from the fact that only 6.9% of respondents disagree that mathematics makes them nervous while 16.7 could not determine their stance.

***There is mathematics at the work place****:* The data presented on the table stipulates that 72 out of the 102 respondents agree that mathematics at the work place. This deepens their conviction that Mathematics is not only useful in the classroom. Nonetheless, 19 respondents disagree that that there is no mathematics at the work place as 51 respondents revealed that mathematics is used in their daily activities by Disagreeing to the questionnaire item; mathematics is not used in our daily activities. Out of the 102 respondents also, 11 of them were neutral to this questionnaire item.

***The effect of factors influencing students' attitude towards the study of mathematics on student's mathematics performance***

The part D and the final part of the questionnaire sought to find out how the factors that influence students' attitude towards the study of mathematics affect their performance. The summary of the responses has been presented in table 5 below.

Table 5**.** The effects of factors influencing students' attitude towards the study of mathematics on student's mathematics performance

| Perception | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Total |
|---|---|---|---|---|---|---|
| | N(%) | N(%) | N(%) | N(%) | N(%) | N(100) |
| Mathematics is my favorite subjects | 31(30.4) | 31(30.4) | 5(4.9) | 18(17.6) | 17(16.7) | 102(100) |
| I perform very well in mathematics | 20(18.9) | 45(44.1) | 6(5.9) | 20(19.6) | 11(10.8) | 102(100) |
| I think that mathematics is one of the most important subjects to study | 32(31.4) | 34(33.3) | 6(5.9) | 11(10.8) | 19(18.6) | 102(100) |
| I have a lot of self-confidence when it comes to | 29(28.4) | 29(28.4) | 6(5.9) | 23(22.5) | 15(14.7) | 102(100) |

| | | | | | | |
|---|---|---|---|---|---|---|
| mathematics learning | | | | | | |
| I like to solve mathematics problems | 32(31.4) | 33(32.4) | 2(2) | 24(23.8) | 11(10.8) | 102(100) |
| I look forward to mathematics lessons | 21(20.6) | 25(24.5) | 13(12.7) | 24(23.5) | 19(18.6) | 102(100) |
| I feel a sense of insecurity when attempting math | 13(12.7) | 11(10.8) | 9(8.8) | 37(36.3) | 32(31.4) | 102(100) |

***Mathematics is my favorite subject****:* From the table, there is a strong indication that Mathematics is a least favorite subject of respondents. It is observed that 60.8% majority of the respondents Disagreed that Mathematics is their favorite subject. Whiles only 4.9% remained Neutral, 34.3% agreed that Mathematics is their favorite subject. An earlier response indicates that Mathematics is for those who are good academically hence responses from this questionnaire item further consolidate that assertion.

***I perform very well in mathematics****:* In ascertaining the Mathematical prowess of respondents, the questionnaire item "I perform very well in mathematics" was introduced. However, the table presents that only 30.4% minority Agree they perform very well in Mathematics. The majority of respondents, totaling 63.7% disagree to the "I perform very well in mathematics" item, and 5.9% were neutral.

***I have a lot of self-confidence when it comes to mathematics learning***: When asked "I have a lot of self-confidence when it comes to mathematics learning", majority of the respondents (58 out of 102) strongly Disagreed. However 38 of the respondents boldly confessed to having a lot of self-confidence when it comes to mathematics learning. Meanwhile, 6 respondents had a divided opinion so they chose to be neutral.

***I like to solve mathematics problems****:* Inferences drawn from the table indicates that respondents do not like solving mathematical problems. This might be as result of lack of self-confidence, inability to translate mathematical lessons to real life lessons or the nervousness they derive from mathematics. Majority of the respondents (85.3%) Disagreed to the questionnaire item "I like to solve mathematics problems" to register their strong dissatisfaction in Mathematics. Only 11.8% agreed that they solve mathematics problems.

***I look forward to mathematics lessons****:* The responses from the questionnaire brought to light that 59.8% of respondents are always under a terrible Strain in mathematics class. It implies that such respondents do not look forward to another mathematics lesson. It is evident from the table that majority of the respondents 45.1% Disagree to looking forward to mathematics lessons. However, 12.7% of these respondents were neutral to this item and 42.1% showed a strong conviction that they agree to the questionnaire item.

***My mind goes blank and I am unable to think when working mathematics*****:** As a follow-up to "my mind goes blank and I am unable to think clearly while doing a math test" of which

51 of the respondents agreed, this item (My mind goes blank and I am unable to think when working mathematics) also recorded 72 Agrees, 23 Disagree and 7 Neutral. This means that majority of the respondents do not feel easy when working mathematics as 85.3% had disclosed that they don't like solving mathematical problems.

Do not know the usefulness of the subject as 64.7% Disagree that Mathematics is one of the most important subjects.

## DISCUSSION

The study investigated the factors influencing the attitude of students towards the study of mathematics. The following were the main findings.

The result revealed that students have negative attitude to learning mathematics where 55.9% agreed not to have positive attitude towards mathematics. It has been found that school administrators and mathematics teachers of JHS in Asokore in the Sekyere East District Ashanti Region of Ghana are doing well in motivating the students to improve in mathematics. There no issue with the availability of teaching and learning materials and teaching methods. On the part of parents, 58.8% of the students revealed that their needs are not met while 20.6% remained neutral. Most of the students thinks that they are not encouraged by the parents to learn. 80.4% of the respondents think that conditions at home influence their study of mathematics. This finding is consistent with the findings of (Cai & Wang, 2010; Joseph, 2013). They revealed that students' mathematics achievement is not limited to factors pertaining to the school and that factors outside the schools also affect students learning and achievement.

Secondly, it was found that even though most students agreed that mathematics is useful even at work places, and it is applicable in other subjects, they still think that mathematics is boring and makes them nervous. It was also found that 49 students representing 47.9% of the respondents think that mathematics is studied by those who are academically good. It could be inferred that those who thinks that mathematics is for those who are academically inclined do not do well in mathematics since they think that they are not academically good. This finding was corroborated by Arthur et al. (2017) who also observed that though students' are aware of the relevance of mathematics in life, yet they are still not able to learn it.

Finally, it was established that mathematics is the students' least favourite subject. Their attitude towards mathematics has negatively imparted them. When it comes to the students' self – confidence in mathematics learning, majority of the respondents 56.8% strongly Disagreed or Disagree that they have self – confidence in doing mathematics and 5.9% remain neutral. Besides, it was found that majority of the students do not look forward to mathematics lessons, do not like solving mathematics problem and feel insecure in attempting mathematics questions. This finding are different from that of (Aguilar, 2021). Aguilar also found that do not like mathematics. Hence do not like solving mathematical problems.

## CONCLUSION

The outcome of the analysis demonstrates that students' attitude play a significant role in students' achievement in mathematics. While some of the factors have positive influence on students' attitude, others have negative influence. Among the positive ones

were; availability and usage of teaching and learning resources, teachers' instructional strategies, and students' self-determination. Among the other factors that influence students' attitude negatively were; parents' inability to provide students with basic need and parents not encourage their wards to learn mathematics.

The analysis shows that though most of the students have good perception about mathematics, out of 102 respondents, 80 of them which represents 78.4% thinks mathematics is boring and 78 of the representing 76.4% said mathematics makes them nervous and that only those who are academically inclined can do mathematics.

The analysis of the questionnaires indicates that out 60.8% of the students said mathematics is not their favourite subject. Thus they do not look forward to mathematics lessons and solving mathematics questions. They have a sense of insecurity in solving mathematics questions.

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