Vol. 6 No. 3, November (2023)
JOURNAL OF ENVIRONMENTAL AND TOURISM EDUCATION
ISSN: 2659-0794 (PRINT) ISSN:2659-0808(ONLINE)
Content Available at: **https://jeate.net/index.php/Jete/issue/archive**

Stress Factors And Students' Academic Performance In Physics Among Senior Secondary School Students In Calabar Municipality

Agbor, Comfort Nkongho A
E-mail;
commyspaco@yahoo.com
Tel: 08035018447

Ogbor Comfort Omari B
Email:
comfortogboromari@gmail.com
TEL: 070678843355

Agomobi Dikpen Magdalene C
agomobimagdalene@gmail.com
Tel: 08066636877

Departmentof Environmental Education, Faculty of Arts and Social Science, University of Calabar, Calabar. Cross River State, Nigeria.

Keywords
Stress factor, Students, Physics, Secondary schools, Academic Performance

Correspondence

Received: 02/11/23
Revised: 20/10/23
Accepted: 20/11/23
Published: 24/11/23

Abstract

This paper examined the influence of academic stress on students' academic performance in physics in Calabar Municipality. To achieve the purpose of this study, two research questions and to hypotheses were formulated to guide the study. Literature review was carried out accordingly, ex-post facto research design was adopted for the study. A sample of 93 respondents were selected randomly from a population of 1,864 for the study. The sample was selected through stratified and simple random sampling techniques. The questionnaire and the physics achievement test were the instruments used for data collection. Independent t-test Pearson's product moment correlation were the statistical technique employed to test the hypotheses under study. The hypotheses were tested at 0.05 level of significance. The result of the study indicated that there is a significant relationship between family background and academic performance of students in physics there is also a significant relationship between class size and academic performance of students. Based on the findings of the study, it was recommended

	among others that parent should basic provide the basic needs of their children in order to help them show positive interest in their studies, small class size are needed to improve on the interaction between tutors and students.

Introduction

Stress and anxiety have been identified by scholars as being the major factors causing the poor performance of students in secondary school physics examinations. Psychologists and educationists alike attribute academic stress to a number of factors ranging from the functional nature of the family, family status, heavy concentrated learning activities in senior secondary schools, class size, physical facilities, school location, etc. Students in secondary/high schools are faced with myriads of on-going normative stressors (i.e. normal day to day hassles, including those imposed by ongoing academic demands). Secondary/High school in this context refers to junior/lower secondary education and senior/upper secondary education (UNESCO, 2012).

It is important to note that stress in itself is an inherent force that has been a part of man right from time immemorial; and will always play a defining role at all levels of his development. Psychologists have identified stress as a modern garbage with which all humans, irrespective of age, race, tribe or gender prejudice, have to deal with at every stage of life to enhance performance (Ajake, 2017). The conditions and circumstances under which a child is born and reared usually play a significant role in defining his/her personality (self-concept) as well as determine the achievement momentum in almost every of his/her life's endeavours, including academics. Some students have been found to commonly self-report experiencing on-going stress.

Unfortunately, the Nigerian educational system has been bedeviled by myriads of challenges; some of which occur as a result of negligence on the part of government and other relevant authorities in the educational sector. And this whole episode is being played out around the Nigeria student(s), especially those at the secondary school level. This unfortunate development has over the years resulted in poor performances of students at both internal and external examinations such as the West African Senior School Certificate Examination (W.A.S.S.C.E.) and Senior Secondary School Examination (S.S.C.E.) conducted by WAEC and NECO. This issue of poor performance has become a very disturbing concern to all well-meaning individuals and organisations; including government, education policy makers, parents, teachers and even the students themselves. Agoro and Oyediran (2009), have pointed out that the deplorable state of public science education and the perceived consequences for our nation's economic and intellectual vitality, has over the last few years attracted not only the attention of educators and politicians, but increased the number of professional scientists and engineers.

The issues of concern here are not only limited or restricted to selected subjects, but all, including physics, which is a core science subject, that forms the bedrock of scientific and technological breakthrough of the most powerful nations of the world. Ogunleye and Babajide (2011) supported the fore-going by stating that a good part of the scientific knowledge is undoubtedly derived from the principles of physics. Njiru and Karuku (2015), also acknowledged the fact that, physics plays a central role in many different sectors of a nation's industrial sector, such as; telecommunications, architecture, engineering, electricity production, transmission and distribution; generating employment for people who are in occupations that are engaged in physics as a scientific discipline (teachers, scholars and other researchers); and further added that, physics is an indispensable part of any nation's economic development. Indeed, the knowledge of Physics has led to so many inventions such as the production of hydroelectric power, gas turbine and thermonuclear power-plant, telephones, refrigerators, heaters and cookers. The invention of modern technologies such as Information and Communication Technology (ICT), which has made the world a global village, is also part of the benefits of Physics. Other benefits of physics that are derivable from the knowledge of physics according include the construction of modern vehicles, rockets, nuclear bombs, missiles, diodes, computers, surgical and astrological instruments, etc.

Interestingly, Nigeria and other developing African countries have in recent times realized more than ever before the importance of physics as a basic requirement for their economic, scientific and technological development (Adegoke, 2009). The implication of this according to Adegoke (2009) is that, developing countries cannot develop or sustain any form of technology unless a solid foundation for effective and efficient physics education is laid. Ogunneye and Lasisi (2008), supported the foregoing by emphasizing that physics and mathematics are the two major prerequisites for the study of engineering, technology, medicine, pharmacy, etc. which makes nations of the world record global respect.

It is in the light of the foregoing, that the issue of poor academic performance becomes very worrisome. Nkwo, Akinbobola and Ediyang (2008), observed that, the achievement momentum of students in the classroom teaching and learning of physics varies according to certain factors such as; students' background, learning environment among others. And that such variations/differences lead to "labelling" of students as under-achievers (limited learners), slow learners, dropouts (all being descriptions of weak and low ability group); and the "talented", (also described as the high ability group).

A careful observation shows that several stress factors leading to poor academic performance abound in the environment where the child is nurtured, especially a developing country like Nigeria. The following stressors will therefore be the focus of this research: students' family background, and class size in relation to students' academic performance in Physics. One of the cardinal sources of academic stress is the home front or family background of an individual. Ideally, the conditions or challenges faced by the students at all stages of development plays a very significant role in their academic endeavours as well as their performances. Poor academic performance in national examinations has been attributed to many factors that are mainly family based such as - those that are faced with challenging/changing hard economic times

debilitating/unreliable resources of family finances which is also associated with parents educational attainment and occupation; which makes it almost impossible for them to cope with their responsibilities of ensuring a healthy and literate family. For example, family size determines the quality of feeding and medical care children enjoy as well as the attention given to their academic work to help them remain focused. Children from privileged parents often have increased opportunities both at home and at school. Beginning from pre-conception, prenatal to the post-natal stages of development, the child is exposed to various degree of stressors such as provision/lack of healthy and balanced diets (for both mother and child), material needs like clothes, adequate/lack of parental care (emotional and psychological needs), provision of educational materials (including school fees, textbooks and other learning materials), etc. Generally, the poor socio-economic background of the family impacts negatively on the academic performance of students.

Class size is also another worrisome factor that must be addressed if students' performance in S.S.C.E. must be enhanced. Class size is a description of the number of students that a class should accommodate for optimum academic achievement. Expectedly, an overcrowded class will definitely make the teaching and learning of physics a difficult task.

Ideally, the impact of the ongoing academic-related stress to students' performance and well-being is yet to be explored fully and comprehensibly. Indeed. the stress factors affecting students at all stages of their academic life are widespread. This research is therefore targeted at investigating some of the academic stress factors such as poor family background, and class size; as they affect students' academic performance in Physics at the Senior Secondary School level of education in Calabar Municipal.

Theoretical Framework

Fight-or-flight by Walter Cannon (1932)

The theory of fight-or-flight also known as "acute stress response", states that animals react to threats with general discharge of the sympathetic nervous system. The theory was first described by Walter Cannon (1932). This response was later recognised as the first stage of a general adaptation syndrome which regulates stress responses among vertebrates and other organisms. When an organism perceives a threat, the body is rapidly aroused and motivated via the sympathetic nervous system and endocrine system. This mobilizes the organism to either attack the threat or flee; hence, it is called the flight - or - fight response or reaction or "stress response" (Cannon, 1932; as cited in Ajake, 2017).

According to Ajake (2017), when a threat is perceived, the nervous system responds by releasing a fluid of stress hormone, including adrenaline and Cortisol. This hormone arouses the body for emergency action. Hence, the heart pounds faster, the muscles tighten, blood pressure rises, breath quickens and the senses become sharper. These physical changes tend to

increase one's strength and stamina, thus speeding up the reaction (response) time and enhancing focus, thereby preparing the individual to either fight or flee.

The stress response is the body's way of protecting an individual; and when working properly, helps one stay focused, energetic and alert. The stress response also helps an individual rise to meet challenges by keeping him/her on his/her toes during class debates and quiz competitions, sharpens an individual's concentration in an effort to win a game and/or drives a person to study hard for examination rather than watching the television or getting involved in leisure activities. But there is a point where stress is no longer helpful, and can start to cause major damage to one's health, mood, productivity, relationships and quality of life. This is the stage at which stress is said to be dangerous to one's health, as it begins to cause debilitating effects to an individual's performances and quality of output in life generally. Ajake (2017), writes that, "perhaps the most fundamental reason for the increased interest in health psychology and behavioural medicine is the dramatic shift seen in the leading causes of death throughout the world - especially in the twenty-first century.

Purpose of The Study

The study is aimed at determining the extent to which academic stress affects students academic performance on physical. Specifically, the study seeks to:

1. Examine the relationship between family background and the students' performance in physics;
2. Examine the relationship between school locations on students' academic performance in physics.

Research Questions

The following research questions were formulated to guide the study

1. What is the relationship between family background and students' academic performance in physics?
2. How does class size relate with the academic performance of students in physics?

Research Hypotheses

The following research hypotheses were formulated to guide the study:

1. There is no significant relationship between family background and the academic performance
2. Class size does not significantly relate with the academic performance of students in physics.

Literature Review

Students' family background and academic performance in physics

The family background has been acknowledged as having a great importance in shaping the performance of children in schools worldwide (Kamau, 2013) opined that academic performance is usually resulted from the motivation that children get from the people they interact with in their initial stages of life. Studies in the US have shown that years of schooling

completed and educational achievement of students, varied widely by family backgrounds; and that students who came from less disadvantaged families had higher average test scores and were more likely to have never been held back a grade as compared to students from the more disadvantaged families.

Generally, the family background being an umbrella in the initiation of the child into the world should provide favourable conditions, which also will improve the academic performance of the children irrespective of the constraints encountered in their academic pursuits (Mekonnen, 2014). The difficult level and/or the nature of most subjects (physics not being an exception), offered in secondary schools affects the rate of assimilation by different students given their different backgrounds with their peculiar challenges to contend with. Physics, according to the Nigeria Educational Research and Development Council (NERDC); is one of the science subjects which remains one of the most difficult subjects in the school curriculum. According to Mekonnen (2014), "studies have revealed that the academic performance of Nigerian students in ordinary level physics has been generally and consistently poor over the years. Physics is an important science subject that makes immense academic demands on the students in its learning. The learning of physics is difficult at best and almost impossible at worst; but because of its enormous importance to science and technology, there is huge interest in students' achievement in physics".

Igiri and Effiong (2015), observed that several factors such as family background and environment influences academic achievement. These factors can further be divided into parents' marital status, the educational level, the income level or socio-economic status of parents and the birth order of students. They added that the last two determine the home environment influence on the students' academic achievement. And of course, this is true for all the social strata of the society; except that the effect is accepted on a relative scale which allows one stratum of the society to achieve academically higher grades than the one below it; although, slight differences exist theoretically or practically from time to time.

When analyzing a family's SES, the household income earners' education and occupation are examined, as well as combined income of an individual Animasahun (2011), revealed that the home environment has a considerable effect when explaining science achievement. Arguably, the background and socioeconomic status of students' family may have a potential influence on the academic performance of students. What is meant by students' background in this context can be said to mean one of two things. It may refer to natural or hereditary factors - genetics characteristics within an individual which either inhibit or facilitate his ability to learn. These factors limit the potentials of an individual. The second meaning refers to the social background of an individual - the people around him and his general environment (Asuquo, Owan, Inaja, Okon and Ogodo, 2010). According to Asuquo, et al (2010), the social environment factors include - the parents' occupational status, parents' attitudes towards their children's education, and the expectations they have for their children. And further added that children from a higher socio-economic background have advantage(s) over those from a socio-

economically lower class citing that in a higher class schools, there may be a television set, radio set, pictures, reading writing materials, etc. all of which help to prepare a child for learning.

Asuquo et al (2010), further hypothesized that parents of upper socio-economic classes showed positive attitudes towards their children's schooling and have high expectations and standards for their children; who in turn become highly motivated for success owing to the parents' ability to provide for example, textbooks and other equipment for schooling; thus, stimulating a positive attitude towards learning. Igri *et al.,* (2015), stated that there is no doubt that parents' attitude(s) help to condition their children's attitudes; and that parents who showed complete disregard for education and the importance of social behavior on any form of social enhancement is bound to have low educational progress.

Also, the upper class children are fed with balanced diets always and thus have good health and a good mental posture for learning. Again, the values they are exposed to at home are similar (most of the time) to what they find in school, and therefore find it easy to adjust to school life. Moreover, the feeling of belonging to a comfortable class further helps in building more confidence in him and to show their best (Asuquo et al, 2010). Thus, most literatures have established that children whose parents are well placed in the society, scored substantially higher grades in physics than those from the lower socio-economic group.

Furthermore, it has been x-rayed that some factors, which are attributed present in the family contribute greatly to the academic performance of students among which are parental educational background, income, exposure, parental relationship with each other, strength of family population, religion, sex differentiation, occupation, etc. interplay to determine to a large extent the readiness of a child to learn; although the influences of other factors like mental and physical disabilities can also account for poor academic performance in physics (Mekonnen, 2014). Ali 1998), as cited-in Akinbobola & Edinyang (2008), identified other factors militating against the academic achievement of students as including the problems of malnutrition, poverty, unstable home background, pre-natal and post-natal disorders, unchallenging previous learning environment (experience), teachers' and students' difficulty in constructing a balanced understanding of concepts or language of instructions; as well as undisciplined upbringing and parental lifestyle. Poor reading culture and even the lack of interest to study, not only physics, but a general syndrome of apathy towards academic quest; has become common feature among Nigerian secondary school students. This may be as a result of the false hope they have in the now rampant examination malpractice culture, in almost (if not all) secondary schools across the nation.

Animasahu (2011) as well documented that the family plays a meaningful role in a child's academic performance and development. Family socio-economic status variables have emerged as predicators of academic achievement. The researcher opined that, how well an individual performs at the level of primary and secondary level largely determines the individual's final destination.

For instance, it has been reported that parents in East Africa often try to influence the activities relating to their children's schooling performance by investing money and time in their children, setting objectives and priorities for them to follow as well as serving as role models to them Kamau (2013).

Indeed, the socio-economic status of a family may determines the quality of education given to a child and the level of sophistication of life's skills a child attains in habits, attitudes and values. And as expected, only highly sophisticated, well placed and high-income earning families can afford the prestigious schools with such enabling academic environments. Moreover, low income earning families with plenty feeding problems may produce children with poor physically and mentally developed challenges which usually pose serious problems to the school's effort at optimizing the children's development. Thus, the family standard can be said to be the very last singular predicator of children's educational development; since the family is responsible for the child's first exposure to educational activities such as books, videos and many other educational helps the child needs.

Kamau (2013), also observed that, in Kenya, the key determinants undermining students' motivation to study are financial constraints, education level of parents and the marital status of the parents. Accordingly, Pamela and Kean (2010) have reported that, those students whose parents had a tertiary level of education performed significantly better in tests of science, reading and mathematical ability compared to those whose parents had only basic education. Thus, across these three disciplines, the average grades achieved by students with well-educated parents ranged from 7% higher than those achieved by poorly educated parents in developing countries to 45% higher in most developed countries. They concluded therefore that the parents' education has some influences on students' beliefs and behaviours, leading to positive outcomes. Studies by Kamar (2008), as cited in Kamau (2013), has also shown that parents of moderate to high income and educational backgrounds held beliefs and expectations that were closer than those of low income families to the actual performance of their children. Low income families instead had high expectations and performance beliefs that did not match or correlate well with their children's actual school performance.

School location and academic performance of students in physics

School location has been defined as the environment in which a school is situated Iyanu (2018). Also identified basically two types of school locations - Urban and Rural school locations. Accordingly, school location factor is considered because of the importance of infrastructural development which is often not widely and evenly spread in most urban and rural communities. Infrastructure such as electricity, roads, ICT, and water-supply are not adequately supplied in the rural areas when compared to their urban counterparts. The reason for the difference may be that there are larger populations, government presence; and industries as well as a more concentrated economic activities in the urban areas. As a result of the importance of school location, Adesoji and Olatunbosun (2018), revealed that school location predicts students' achievements in science; while Ariyo (2011), revealed that there was a significant difference

between the effects of urban and rural areas on the students' academic performance/achievement in all school subjects. Mekonnen (2014), also stated that, there is evidence that, students from urban backgrounds had significantly better academic performance and research indicators than those from rural and remote backgrounds.

School Location (in terms of whether or not the school has a difficult terrain, the proximity or distal, rural or urban description), can also be a stress factor affecting the academic performance of students in physics. School location has been pointed out as one of the factors affecting students' academic achievement. According Akpan (2001), teachers are differently distributed to schools with the tendency for the more qualified teachers to be predominantly deployed to schools located in the urban towns, particularly the state capital and other larger cities, where school facilities and services tend to be more concentrated. More findings abound on the disparity in quality of teachers in urban schools relative to those rural areas, which consequently affects students' academic attainment. rural schools) not only as well prepared academically as pupils from other schools but they generally had a better attitude to work. Having been accustomed to working most of the time on their own, they could be given more responsibilities for the organization of their work.

Writing on the importance of location, Ojoawo (1989) cited in Owoeye at (2011) found out that school location is one of the potent factors that influences the distribution of educational resources. Throwing more light on locational influence, conceptualized urban environments as those environments which have a high population density containing a high variety, beautiful and common place views. Hotels, recreational centres, markets, banks and good road network are some of the common features of urban environments. Ezike further identified the rural environments as being characterized by low population density containing a low variety and isolated place views. Earlier in his contribution, Lipton (2000) corroborated that "rural community is characterized by low population, subsistent mode of life, monotonous and burdensome". Moreover, inadequate amenities, deficient facilities, playgrounds without equipment, libraries without books gloried laboratories are some of the common features of rural schools. Most teachers usually reject/decline postings to rural areas due to the shortage of standard social life. Owolabi (1990) accentuated that highly qualified prefer to serve in urban than in rural areas.

Furthermore, critical analysis on locational factors shows that, provision of education in rural areas is normally accompanied by several difficulties such as rejection of postings to remote villages by qualified teachers, un-corporative attitudes from villagers who refuse to send their children to school owing to the benevolence of having them assist in subsistent farming, hesitation by parents to entrust female children to the care of male teachers, shortage in the number of available school-age children in some areas, difficult terrain causing adverse effects on the coordination of school transport due to lack of roads or reliable means of communication making it almost impossible to get books and other teaching materials to the rural schools, among others (Hallak, 2000).

Related studies have further indicated that students from rural schools place placed more importance on personal qualities (e.g. being dependable and having the ability to get along with others) and less importance on specific areas of academic achievement (e.g. being proficient with basic English and Mathematics skills). It follows, then that lower educational aspirations and less importance placed on academics by students in rural schools could lead to poor academic achievement in physics than their urban counterparts. In the words of Haas (1992), such rural students tend to exhibit a sense that "school is not for me".

Methodology

The ex-post facto research design was used for this study, the area of the study is Calabar Municipality. The population consisted of all senior secondary school. Students offering physics in Calabar municipality in cross River State, Nigeria. Stratified and simple random sampling techniques were used to select the sample. The sample of this study consisted of 93 students drawn from a population of 1,864 students. The respondents comprised both males and females in the study area.

Table 1

Sample distribution of respondents in the randomly selected schools in Calabar Municipality.

S/N	School	No of Respondents
1.	Margaret Ekpo Secondary School IBB, Calabar	16.8 = 17
2.	Government Secondary School, Nyahasang, Calabar	14.8 = 15
3.	Government Secondary School Akim, Calabar	24.0 = 24
4.	Government Secondary School Barracks Road, Calabar	36.8 = 37
	Total	= 93

Field work

Results

Question 1

What is the relationship between family background and students academic performance in physics. To answer this questions pearson's product moment correlation was used as shown in Table 2

Table 2

Pearson's Product Moment Correlation Coefficient Analysis of the relationship between family background and academic performance of students in physics (N=93)

Variables	X	SD	R	p-value
Family background	9.42	2.45		
			.076	.001
Academic performance of students in physics	20.00	4.16		

Significant at 0.05 level; df=91

The result of the analysis in Table 2 revealed that family background produced a mean score of 9.42 with a standard deviation of 2.45 while academic performance of students in physics

produced a mean score of 20.00 with a standard deviation of 4.16. The result further revealed that the calculated r-ratio of .076 obtained with a p-value of .001 at 91 degrees of freedom met the condition required for significance at .05 level. Based on this, the null hypothesis which stated that there is no significant relationship between family background and academic performance of students in physics was rejected indicating that there is a significant relationship between family background and academic performance of students in physics.

Question 2

What is the relationship between school location on students academic performance in physics. To answer this question, independent t-test was employed for data analysis as shown in table 3

Table 3

Summary of data and independent t-test on the influence of school location on academic performance of students in Physics.

Variable	NX	SD	t	p-value
Urban	54	6.98	2.99	
			3.17	.002*
Semi-urban	39	4.77	1.86	

p<.05, DF=91

The result in table 8 shows that the calculated F-value of 4.786 was not significant at p-value of .509 with 2 and 91 degrees of freedom at .05 level of significance. With this result, the null hypothesis was retained. This result therefore implies that class size does not significantly relate with academic performance of students in physics.

Conclusion

From the findings of the study, it was concluded that there is a significant relationship between family background and school location on students academic performance and there was no significant relationship between class size and students academic performance analysis.

Recommendations

Based on the findings of the study the following recommendations were made:

1. Parent should provide the basic needs of their children in order to help them show positive interest on their studies thereby contributing positively to their academic performance.
2. Facilities should be made available in the rural schools as their urban counterpart to enhance a good learning environment that can lead to their academic performance.

References

Agoro, A. A. & Oyediran, A. M. (2009). Integrated Science Teachers' involvement in the use of Hand-on Laboratory Methods in Teaching of Integrated science. *Journal of the Science Teachers Association of Nigeria. 44*(1 &2), 71.

Agu, P.A. & Iyamu, C. O. (2018). School Characteristics as Correlates of Senior Secondary School Physics Students' Achievement in Federal Capital Territory Abuja, Nigeria. *International Journal of Innovative Research and Advance Studies (IJIRAS). 5*(9), 96 - 97.

Ajake, U.E. (2017). Manage Your Stress: A Practical Approach. Canada: FriesenPress. P. l-16.www.friesenpress.com.

Ajayi, I. A. & Ayodele, J. B. (2011). Introduction to Educational Planning, Administration and Supervision. Ado- Ekiti. Yemi Printing Services.

Akpan, C. P. (2011). Fundamental of School Business Management. Calabar: Prim Choice Konsult. Pp.173.

Animasahun, R. A. & Animasahun, V. O. ((2011). Psycho-Socio-demographic Factors Predicting Poor Academic Performance in Science Subjects among Senior Secondary School Students in Osun State, Nigeria. *African Journal of Educational Research.* 15 (1&2), 158 -159.

Ariyo, A. O. (2011). Gender differences and School Location factors as correlates of Secondary school Students' Achievement in Physics. The 2011 Movi International Academic Conference, 259-263.

Asuquo, P. N., Owan, V. O., Inaja, A. E., Okon, M. O. & Ogodo, F. A. (2010). Sociology of Nigeria education. Calabar: University of Calabar Press.

lgiri, C. E. & Effiong, O. E. (2015). The Influence of Family background on the academic achievement of students in basic science. *International Letters of Social and Humanistic Sciences.* 59, 20-27. https://doi.org/l 0.18052/www.scipress.com/ILSHS.59.20.

Isangedighi, A. J. (2012). Educational Research in Context. In A.J. Isangedighi, (Ed.). Essentials of research and Statistics in Education and Social Sciences, (pp. 1-23). Calabar: Eti-Nwa Associates.

Josiah, M. M., Inyang, U. S. & Umaru, M. G. (2018). Analysis of Secondary School Students' Achievement in Senior Secondary Certificate Examination Physics in Jos Metropolis, Plateau State. ResearchGate. Pp. 50-53.Researchgate.net/public.

Kamau, L. M. (2013). Relationship between family background and academic performance of secondary school students: a case of students of Siakago Division, Mbeere North District, Kenya. A thesis from the University of Nairobi Research Archive, erepository.uonbi.ac.ke/.

Mekonnen, S. (2014). Problems Challenging the Academic Performance of Physics Students in Higher Governmental Institutions in the Case of Arbaminch, Wolayita Sodo, Hawassa and Dilla Universities. *Natural Science. 6* (5), 362-375.

Njiru, S.M. & Karuku, S. (2015). An Exploration of Factors that Contribute to Low Performance in Physics: A case of a Secondary School in Kenya. *International Journal of Innovation and Scientific Research.* 17(2), 381-382.

Ogunleye, B. O. & Babajide, V.F.T. (2011). Commitment to Science and Gender as Determinants of Students Achievement and Practical Skills in Physics. *Journal of the Science Teachers Association of Nigeria. 46*(1), 125.

Owoeye, J. S. & Yara, P. (2011). School Location and Academic Achievement of Secondary in Ekiti State. ResearchGate.net/figure. Pamela, P. & Kean, L. (2010). A comparative study of students' performance in Mathematics among students from wealthy home and poor home background in Minna Metropolis. Available: https://www.academia.edu (Accessed 04 December 2018).

UNESCO (2012). Shaping the Education of Tomorrow: 2012 Full Length Report on the UN Decade of Education for Sustainable Development. Wals, Arien E.J. www.UNESCO.ORG