Peer Group Pressure and parental Socio-Economic Status as Correlate of Students’ Achievement in Physics

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Abstract

This paper investigated the relationship between of peer group pressure and parental socio-economic status on students’ achievement in physics. Achievement of students generally depends on numerous factors out of which parents socio-economic factors and peer group pressure are pertinent to. The study is descriptive in nature adopting the use of questionnaire and structured physics achievement test for data collection. The population consisted of all Senior Secondary School II Physics Students and their Parent in Shomolu Local Government of Lagos State. A simple random sampling technique was used in selecting a sample of one hundred (100) students, ten (10) from each school and forty (40) parents of the students from the Local Government (five private five government senior secondary schools) Lagos State. Thee instrument; Physics achievement Test (r=0.85, Parents Questionnaire(r=0.80 and students questionnaire (0.82) were used in testing five hypotheses in the study. The findings indicated that peer group pressure enhanced negative relationship on students’ achievement in physics, parental socio-economic status relates positively to achievement of the students, influence educational standard of the students and achievement to an optimum degree in physics, opinion of parents from public school was positively related to that of private school but not significant, and scores of students in private schools was negatively related to that of public schools but not significant. It was upon the findings that the researcher recommended that the peer groups should be motivated toward academic excellent; Government should promote positive impact of peer group in various schools; and provide reliable job opportunities for parents in order to improve their socio-economic status that will boast their children upbringing and academic performance in all the subjects.

Keywords: Parent, Peer Group, Parental socio-economic status, Physics Achievement.

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Background to the Study
Education is the best legacy a nation can give to her citizens especially the youth (Nnadi, Dimnwobi, Nwokoye, Osigwe & Ekesiobi, 2016). This is because the development of any nation or community depends largely on the quality of education of such a nation. It is generally believed that the basis for any true development must commence with the development of human resources. Formal education remains the vehicle for socioeconomic development and social mobilization in any society (Shittu, 2004).

Science and Technology education is bedrock of development of any developed countries (Babajide, 2014). The researcher further noted that science education is the field concerned with the exposition of students to the science content, skill and process of acquiring scientific knowledge for practical application to solve human's problems. The field of science education comprises science content and teaching pedagogy. Science education in the Nigerian educational system comprises Physics, Chemistry and Biology subjects at Senior Secondary level. Physics is the study of matter in relation to energy. Microsoft Encarta (2009) defined Physics as a major science dealing with the fundamental constituents of the universe, the forces they exert on one another and the results produced by these forces. Students' achievement is pivoted by numerous factors in life depending on the upbringing backgrounds, exposure and subjection of students deliberately and simultaneously. AbdullahiMlozi and Nزالايمى (2015) explained that intelligence is not the only determinant of the achievement of the student. Rather, achievement of student is always associated with many components of learning environment. It is worth noting that students' achievement is affected by numerous factors namely, gender, age, students schooling, father/guardian social economic status, residential area of students, and school factors. There are several important areas that are most commonly linked to achievement including student role performance factors, school factors and family factors. Student's role performance is how well an individual fulfills the role of a student in an educational setting. Sex, race, school effort and extracurricular activities are all important influences on student role performance and have been shown to affect test scores. A research study has revealed that socio-economic status, parental involvement and family size are particularly important family factors that affect achievement (Crosnoe, Johnson & Elder, 2011).

Health Research Funding (2015) described a peer group as a social group consisting of people who are equal in such respects as age, education or social class. These people usually share a common interest and background. They can also be very diverse, with people from different social and economic backgrounds, race, culture, etc. Peer relationships provide a unique context for social and emotional development of a person enhancing persons' reasoning abilities, concern for others, cooperating with people. Modern research echoes these sentiments, showing that social and emotional gains are indeed provided by peer interaction (Marsh, 2005).

Peer pressure is influence on a peer group, this may encourages others to change their attitudes, values, or behaviors to conform to groups. Social groups affected include
membership groups, in which individuals are "formally" members, or social cliques in which membership is not clearly defined. A person affected by peer pressure may or may not want to belong to these groups.

The relationship between family socio-economic status and the academic performance of children's is well established in sociological research. While there is disagreement over how best to measure socio-economic status, most studies indicated that children's from low socio-economic status families do not perform well at school compared to children from high socio-economic status families (UNESCO, 2004; Graetz, 2007). Reasons for such poor performance in school by children from low socio-economic factor were highlighted by Nwokocha and Amadike (2005), Yunusa and Akanle (2008) as reported by Nnadi, Dimnwobi, Nwokoye, Osigwe & Ekesiobi (2016) are changing life pattern in families due to economic hardship which is responsible for low economic status families not to meet up with their responsibilities of the provision of basic amenities for their children such as adequate meal, educational materials students from such homes therefore miss classes, unable to do their assignment and sometimes drop out from school.

McNeal (2001) in his study also pointed out that parental involvement has greater effects on children from a higher socioeconomic level. Parental influence greatly contributes to the occupational preference of secondary school students. Most parents like to force their children to enter certain occupations against the children's wishes and abilities. This might be due to the fact that they (the parents) want these children to either inherit their books for maintaining their status or live the life they themselves would have loved to live. (Osa-Edoh & Alutu, 2011).

Khata, Machtmes, Kunju, Buntat and Nordin (2011) investigated the influence of parental educational status on achievement of students in science. The result showed a statistical significant effect of parent educational status on achievement in science. Also, Adeyemo and Babajide (2012) investigated the influence of socio-economic disadvantage on student's achievement in physics in Lagos state and found no significant relationship of parental influence on achievement of students in physics. Osuafor and Okwonkwo (2013) examined the influence of family background on students achievement in biology the result showed no significant effect of family background of achievement of students in biology. On the other hand, Aromolaran, Oyeyinka, Olukotun and Benjamin (2013) examined the influence of mother's level of education, living togetherness of parent, student class and weekly allowance of students on student's achievement of students in Yaba Technology, the results showed that all the variables investigated all contributed to students achievement. Agulanna and Nwachukwu (2004) posited that students differ from one another in social class or socio-economic status. Socio-economic status according to these researchers is a relative standing in society based on an individual's income, power, occupation, education and prestige. According to them the children of bankers, doctors, teachers, merchants and soon have different upbringing from the children of peasant farmers, domestic workers, cleaners, labourers, petty traders and so on. They went further to state that “differences exist between high, middle and lower class families in kinds of activities they engage in”. 

Babajide Veronica Folasade T.
Also, there is a general believe that students in private schools perform better than those in public schools. For instance Gbadegesin, Kemi and Emmanuel (2015) observe that Students in private schools did better than their counterparts in public schools academically. The wellbeing of teachers had a significant impact on the students' performance in both private and public schools. Those in private schools had a better edge than those in public schools. There was availability of more materials in private schools, which aided the level of understanding of students and this invariably improved their academic performance compared to those in public schools. Other result findings showed a contradictory results there is the need to investigate the opinions of parents of children from both public and private schools as well as the achievement of students in both types of school in physics.

The problem of this study is poor students' achievement in Physics that may likely emanate from the influence of peer group pressure and parental social economic status. It has been observed that many parents are happy to pass the responsibility of parenthood to teachers and school principals, thus abdicating their paternal and maternal responsibility. Teachers are seen as “glorified babysitters” whereas “Charity begins at home”. Presently, majority of students are derailing academically based on their peer group instructions, exposures and dictations both at their respective schools and home. Students are easily carried away negatively against their parents and teachers instructions. This study therefore investigated the influence of peer group pressure and parental social economic status on students' academic achievement in Physics.

The main objective of this study is to investigate the influence of peer group pressure and parental social economic status on students' academic achievement in Physics. The specific objectives of this study are to examine:

1. Relationship between peer group pressure on students' achievement in Physics;
2. Relationship between parental social-economic status on students' academic achievement in Physics;
3. Contribution of peer group pressure and parental social-economic status on students' academic achievement in Physics
4. Relationship between the response of parents in private and public schools.
5. Relationship between the scores of students in public and private schools.

The study tested the following hypotheses at .05 level of significance

H$_1$. There is no significant relationship between peer group pressure and students' achievement in Physics at Senior Secondary schools.

H$_2$. There is no significant relationship between parental socio-economic status on students' achievement in Physics at Senior Secondary schools.

H$_3$. There are no significant contributions of peer group pressure and parental social-economic status on achievement of students in physics.

H$_4$. There is no significant relationship between the response of parents in private and public schools.

H$_5$. There is no significant relationship between the achievement of students in private and public schools in physics.
This study is significant in the sense that it has revealed the existing relationship between peer group and achievement of students in physics. This would assist students on how to choose their peers that will be of benefit to their achievement in physics rather than those that will hinder their achievement.

The study has also revealed the relationship between parents' socio-economic background and achievement in physics. This would guide parents on how to work hard to improve their social status and science in general. For a better achievement in physics and earn better income in order to provide basic amenities and school materials for their children and monitor their academic progress. Parents would be able to monitor the effects of peer group pressure on their respective children both at home and school. It will also make the parents keep an eye on their children, thereby not becoming hoodlums and street fighters.

Teachers as chief classroom managers will immensely benefit from this study whenever they have access to the findings of this study. It will expose them to the existing relationship of peer group pressure and parental social economic status on students' achievement in Physics which can be used to generalize on all other subjects at school activities. This study also would enlighten teachers on all what it entails to inculcate worthwhile skill and knowledge on the concept of science and technology effectively through positive peer group pressure and parental social economic status. Additionally, this study will enable the school to achieve its goal of producing academic excellent students and responsible citizens who will be good leaders of tomorrow.

Also, curriculum planners and educational managers will benefit from the study whenever it is available to them. It will help them to make continuous financial provision for periodic training of teachers/principals, Instructional materials, construction of modern school buildings equipped with latest infrastructures. In conclusion, the result of this study would be of help to other researchers who may be seeking for related information while carrying out a similar research work in future if the result is made available to them in Educational Resource Centers.

**Methodology**

The study was an descriptive survey research design carried out in Somolu Local Government, Lagos state. It involves five (5) private and five (5) government Senior Secondary Schools in the Local Government. The population of the study comprised of all physics students and their parents in Somolu Local Government private and government Senior Secondary Schools, Lagos State.

The sample consisted of 10 student from each school (50 from private and 50 from public school) using simple random sampling techniques and 40 parents of the students from Somolu Local Government. Two instruments: Physics Achievement Test containing 20 items, 20 structured parent and student's questionnaire each were used for the collection of data. The questionnaire consisted of two sections each, section A focused on demographic information of students while section A focused on demographic information.
information, section B attained information on the influence of peer group pressure and for parent questionnaire, section A focused on demographic information and section B contained information on parental socio-economic status.

The instruments were validated and the empirical validity were also ensured: physics achievement was subjected to test re-test (r = 0.85) Cronbach alpha was used for parents (r = 0.80) and student questionnaire (r = 0.82). The instrument was administered to students in their respective schools and parent questionnaires were giving to students to take home and returned the following week. Data collected were collated and input in SPSS version 20 and analyzed in line with the stated hypotheses.

**Presentation of the results**

**H1.** There is no significant relationship between peer group pressure and students’ achievement in Physics at Senior Secondary schools. This hypothesis was subjected to Pearson Correlation Analysis and the result is presented in the table below:

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Peer Group pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAT Pearson Correlation</td>
<td>-0.004</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.968</td>
</tr>
<tr>
<td>N</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table 1: Relationship between peer group pressure and students' academic achievement**

Not Significant at P<0.05

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Parental Socio-economic</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAT Pearson Correlation</td>
<td>0.281</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.005</td>
</tr>
<tr>
<td>N</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table 2: Relationship between parental socio-economic status on students' academic achievement**

The table2 above shows a positive (0.281) and significant relationship indicating that there is a positively moderate relationship between parent, socio economic status on students' achievement in physics. Thus H2 is rejected and hence there is significant relationship between parental socio-economic status on students' academic achievement in Physics at Senior Secondary schools.

*Babajide Veronica Folasade T.*
H.3. There are no significant contributions of peer group pressure and parental socio-economic status on academic achievement of students in physics.

Table 3: Contributions of peer group pressure and parental socio-economic status on academic achievement

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>94.027</td>
<td>2</td>
<td>47.014</td>
<td>4.769</td>
<td>.011b</td>
</tr>
<tr>
<td>Residual</td>
<td>956.213</td>
<td>97</td>
<td>9.858</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1050.240</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 shows the regression analysis of the contributions of peer group pressure and parental socio-economic status on students' achievement in physics. The result shows a square mean of 47.014 which is a significant at p<0.050=.011. Thus the null hypothesis is rejected and hence there will be a significant Contributions of peer group pressure and parental socio-economic status on students' achievement in physics. The percent contribution is 7.1% (model summary).

Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std Error of the Estimate</th>
<th>Change Statistics</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R Square Change</td>
<td>F Change</td>
</tr>
<tr>
<td>1</td>
<td>.299a</td>
<td>.090</td>
<td>.071</td>
<td>3.13972</td>
<td>4.769</td>
</tr>
</tbody>
</table>

H.4. There is no significant relationship between the response of parents in private and public schools.

Table 4: Relationship between the opinion of parents of children in private and public

<table>
<thead>
<tr>
<th>Correlations</th>
<th>PARENTV</th>
<th>PARENTB</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARENTV</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.976</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>50</td>
</tr>
<tr>
<td>PARENTB</td>
<td>Pearson Correlation</td>
<td>.004</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.976</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>50</td>
</tr>
</tbody>
</table>
Table 5: Relationship between the Score of Private School Students and Public School Students

<table>
<thead>
<tr>
<th>Correlations</th>
<th>PATV</th>
<th>PATB</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATV Pearson Correlation</td>
<td>1</td>
<td>-0.113</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.435</td>
<td>.435</td>
</tr>
<tr>
<td>N</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>PATB Pearson Correlation</td>
<td>-0.113</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.435</td>
<td>.435</td>
</tr>
<tr>
<td>N</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

Not Significant at P<0.05

Table 5 shows a negative (-0.113) relationship but not significant relationship between the achievement of students in private and public secondary school in physics at p < .05. Thus the null hypothesis is accepted

**Discussions**

Peer groups pressure does not enhance significant cordial relationship among students' achievement in physics. The relationship is negatively, meaning that peer group pressure facilitates learning efficiency negatively, encourage students to change his or her attitudes in order to conform to group norms, expose teens to human behavior diversity, do not improve students' scientific attitudes and skills, encourage drugs that facilitate routine memory, and do not immensely contributes to students' academic success students' achievement in Physics. These findings are in accordance with the observation of Wikipedia (2015), Steinberg et al. (1992), Kindermann (1993) and Clasen & Brown (1985). Wikipedia (2015) observed that negative attributes (disadvantages) of peer groups is Peer pressure. The term peer pressure is often used to describe instances where an individual feels indirectly pressured into changing his/her behavior to match that of his/her peers. Taking up smoking and underage drinking are two of the best known examples.

**Parental social-economic status**: Parental social-economic status boost achievement of students in physics, influence educational standard of students, encourage students discipline towards learning and influence the students' achievement to an optimum degree in Physics among others. These findings are in conformity with the finding of Nnadi, Dimnwobi, Nwokoye, Osigwe and Ekesiobi, (2016) who found that socioeconomic factor correlated positively and significantly with performance of students. Also in line with the findings of Onocha (1985), Adams (1996), Malik (2009) and Singh & Singh 'Vyast' (2014). In summary, Onocha (1985) concludes 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 is because the child from an educated family has a lot of support such as a decent and good environment for academic work, parental support and guidance, enough textual and academic materials and decent feeding. He or she is likely to be sent to good schools where well-seasoned teachers will handle his/her subjects. Nature of school environment, students' residential environment and background of students' family are
different socio-economic factors that affect student's academic achievement in Physics. These findings are in accordance with the opinions of World Health Organization (2014), Mick Zais (2011), Barry (2005), and Eamon (2005). World Health Organization (2014) stated that a healthy school environment can directly improve children's health and effective learning and thereby contribute to the development of healthy adults as skilled and productive members of society. Furthermore, schools act as an example for the community. Students, school employees, families, and community members should all learn to recognize environmental health threats that may be present in schools and homes.

Also, the findings from the test of hypotheses revealed that:
There is a significant relationship between peer group pressure and parental socio-economic status on students' academic achievement in Physics. These findings are in line with the observations of Wikipedia (2015) and Machebe (2014). Wikipedia (2015) observed that negative attributes (disadvantages) of peer groups is Peer pressure. The term peer pressure is often used to describe instances where an individual feels indirectly pressured into changing his/her behavior to match that of his/her peers. Taking up smoking and underage drinking are two of the best known examples; while Machebe (2012) has made the conclusion that the socio-economic status of parents influences the academic performance of students to a certain degree in the schools.

Hill et al. (2004) have suggested that the socioeconomic status of parents not only influences the development of children at home but it also develops a competition among the students belonging to persons of different social and economic strata. The children of parents belonging to low socio-economic status feel depressed against the students from higher socioeconomic status. Laosa (2005) states that “the differences among the students exists due the family backgrounds such as nutrition and health status, environment at home, income of parents, their educational level and experiences, means of recreation in the family are the main factors that affect the educational and social achievement of students”. In their findings, Oni and Omoegun (2007) have concluded that a significant difference exists among the rate of deviation behaviour among the students belonging to different socioeconomic statuses. Muhammad (2010) is of the opinion that “the cultural heritage of a society and other values reach to a generation from the previous one. The only means in this transfer is education and the parents are responsible for training the children for this. Machebe (2012) has made the conclusion that the socio-economic status of parents influences the academic performance of students to a certain degree in the schools. Singh & Singh 'Vyast' (2014) explained further that the methods of rearing the wards depend mainly on the occupations of the parents. The families belonging to higher socio-economic status are more successful in making their wards to go to school for study. This is due to the reason that these families have resources which are helpful to promote the development of young children.

Conclusion
The study has found that peer pressure related negatively but not significant to student's achievement in physics while parent socioeconomic status is positively significantly
related to student's achievement in physics. Parent socioeconomic status and peer group pressure jointly contributed positively and significantly to students' achievement in physics. Also, type of school does not significantly related to achievement of students in physics.

**Recommendations**

1. Teachers and School authorities or management should be trained and retrained periodically on guidance and counselling, and violence management amongst the youth in Nigerian Schools.
2. Peer Groups in schools and residential environments should be motivated toward academic excellent in their various schools and homes.
3. Students should be encouraged to join correct peer group in their respective schools and homes.
4. Government at various levels and non-governmental organisation should promote positive impact of peer groups in our various schools and environments.
5. Parents should work hard to have good sources of income before having children and provide basic amenities, good meal school materials conducive home environment for their children that will enhance the learning of science in general and physics in particular.
6. Parent should monitor their children academic activities and peer group, through effective supervision of assignments, checking students school work at home and occasional school visit.

**Suggestions for further Studies**

School environments, residential environments and parental socio-economic status serve as determinant of students' achievement academically, socially, spiritually and economically.

For the purpose of further research, the following suggestions are hereby suggested:

1. Study on similar or same topic should be carried out in other parts of Lagos State and other states Secondary Schools. This will enhance getting further solutions to the influence of peer group pressure and parental social-economic among secondary schools students, teachers and management and provides a basis for wider generation.
2. Oral interview should also be used together with questionnaire in future studies for the illiterate parents and students who have impairment or difficulty in writing to contribute their responses on the influence of peer group pressure and parental social economic status on students' academic achievement in Physics.
References


